

# Shoes

Close to 2000 fragments of turnshoes were found, including soles, uppers, clump soles, rands and other stitching channels. Many of these were small fragments, but a substantial number of soles and uppers were nearly complete. Of the nine surviving examples of soles and uppers still joined together, some have rands and/or clump soles. In 43 other cases, matching soles and uppers were recognised. Unfortunately, the sole and upper types are not always identifiable, as so little survives, but correlation of the recognisable sole and upper types is still very useful. The soles can be divided, by shape, into nine types, while differences in design and method of fastening produce 10 upper types, some with sub-divisions. Most of the types belong predominantly to one phase or another, although earlier and/or later examples usually occur as well. Tunnel stitch holes indicate that many soles were repaired with clumps, often on both seat and forepart. Sole/upper seams have also been re-stitched; in some cases the original stitching channels have been replaced with thongs. In one rare instance, an upper has been patched. Several shoes have been distorted by bunions, with damage done to both sole and upper. Three welted soles were also found; these were unstratified.

## Methods of construction

All the evidence, apart from three welted soles mentioned above, points to turnshoe construction, where as Thornton (1973b, 47) says 'the shoe is made inside out (normally with the flesh side outwards) by sewing the lasting margin of the upper to the edge of a single sole which also acts as an insole. The shoe is then turned the right way round so that the grain side of the leather is on the outside of the shoe and the upper/sole seam is now inside'.

The soles have all the characteristics of turnshoe soles; the stitching channels have edge-flesh holes, with stitch length c4–7mm; the flesh sides are uppermost, while the grain sides show typical signs of wear derived from contact with the ground, particularly on the outside of the seat and on the centre forepart, as, for instance Cat No 2333/A03–0291a (Illus 147). They are distinct from insoles of welted shoes, which have a longer stitch length, c6–10mm, and which bear the impression of feet, but which do not show wear marks caused by direct contact with the ground. Moreover, such insoles usually have the grain side uppermost (Thornton 1973a, 8–12).

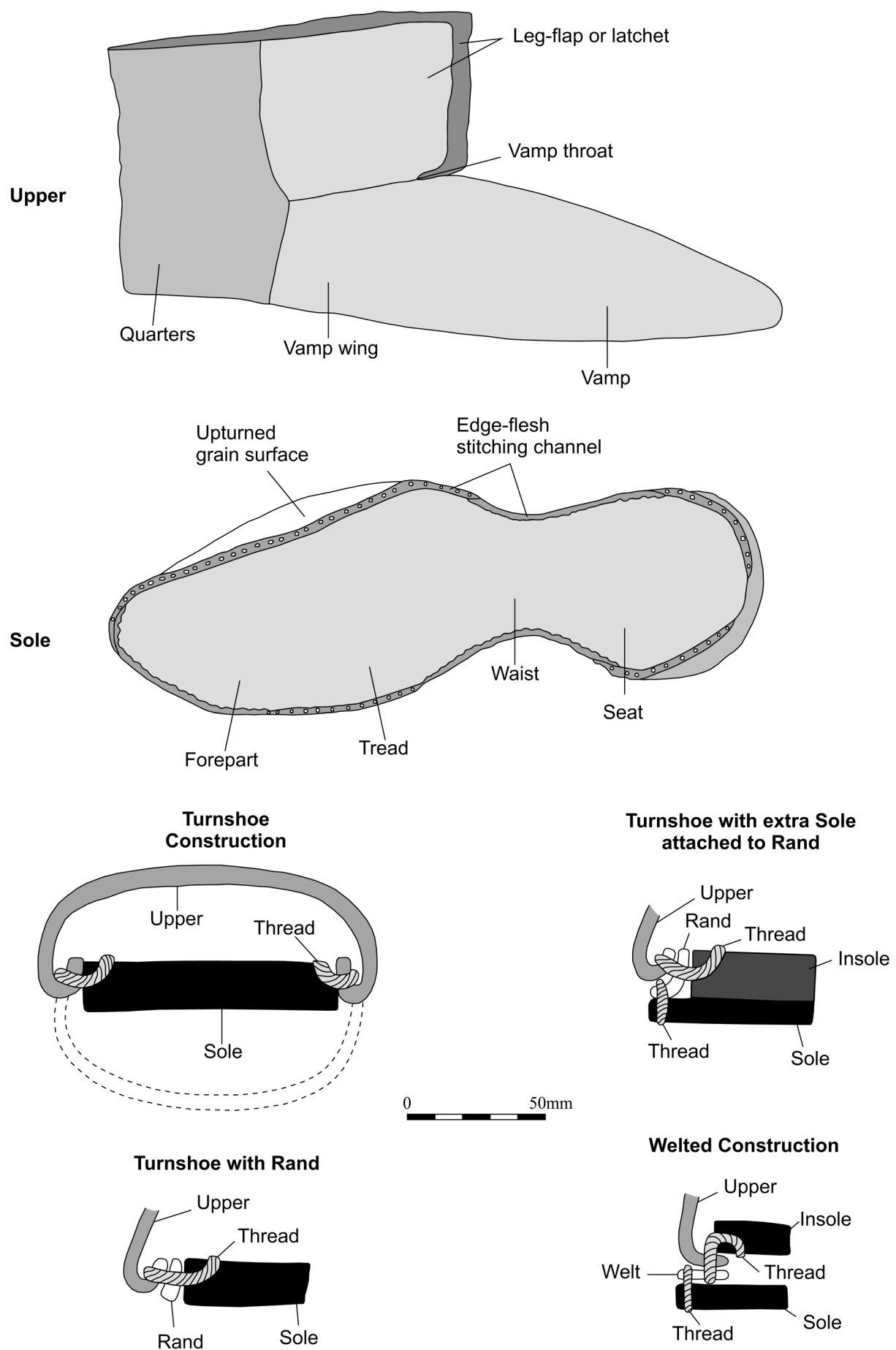
Many fragments of rand have been found, seven still attached to the sole and four of these still joined to the upper as well: rand and sole Cat Nos 783/A9372a and 788/A9546; sole, rand and upper Cat Nos 5241/A03–0216 (Illus 146), 813/A11220b, 3427/A03–0051a–d and 343/A6772c (Illus 145). Thornton (1973b, 46) defines

a rand as 'a long narrow strip of leather of roughly triangular cross-section included in an upper/bottom seam to make it more waterproof or decorative'.

It fills the space between sole and upper and also strengthens the seam, as it lengthens the stitch, allowing it to stretch more. Some of the Perth rands are triangular in cross-section, for instance Cat No 5781/A0800c,d, but many are flat, for example Cat No 5241/A03–0216. The latter is an example of a wide rand apparently used to protect the upper; it extends for c9mm beyond the edge of the sole both at inner waist and at the front of the forepart, with two fragments overlapping at the front, thus protecting it from being scuffed. In his report on the leather from Roushill, Shrewsbury, Thornton (1961, 206) describes what appears to be the nearest parallel, a rand which widens at the back of the seat; in this case, however, the rand appears to project outwards, instead of curving against the upper. Thornton suggested that this may have been a protective measure. There is no evidence for wide rands used to attach extra soles (Thornton 1973a, 9, 11).

Uppers were attached to soles by lasting margins with grain to flesh stitching channels, with oval holes c1.5mm by 3mm, and with stitch lengths of 4–7mm, as on the corresponding channels on the soles. Fragments of uppers were joined together with butted edge-flesh seams, invisible on the grain side, as on Cat No 931/A12305. The stitching is usually very neat, with small rectangular/round holes, diameter c0.5–1mm and with stitch lengths of 2.5–4mm, as on the upper Cat No 931/A12305. Stiffeners were often used to strengthen quarters. The grain side of the stiffener was usually placed against the flesh side of the quarters. One example, however, Cat No 313/A12310, has the flesh side of the stiffener facing the quarters. The lasting margin of the stiffener was sewn into the sole-upper seams and thus pierced with oval grain to flesh stitch holes. The top edge was attached by hem stitching to the flesh side of the quarters, where small tunnel stitches are often visible. The hem stitch leaves a scalloped pattern on the stiffener itself as on Cat No 478/A12309b; an impression of this is sometimes apparent on the quarters (Illus 126).

A hem stitch was also used for the attachment to uppers of top bands and facings. Top bands were straps of leather, folded once and added to the top edge of the upper, as a decorative binding. These straps are discussed farther under the heading 'Straps folded once', as not all straps of this construction are necessarily parts of shoes—some may be bindings for clothes. Facings were apparently used to reinforce the tie-holes of upper Types C and D. No facings actually survive from this site, but the stitch holes used to attach them do, in the form of small tunnel stitches on the flesh side of the leather, on either side of the tie-holes.



Illus 103 *Shoe terminology and construction.*

Examples of V- and Y-shaped facings have been found at Oxford (Hassall 1976, 251) and London (Tatton-Brown 1975, 159–60).

Tunnel stitching on the flesh side of uppers may also have been used to secure a lining: two uppers have diagonal or vertical rows of such stitching (Cat Nos 3670/A7791, Illus 140 and 1287/A6451c,d, Illus 136), while another has a horizontal row, parallel with the lasting margin (Cat No 163/A7787j, Illus 141). A fourth upper contains a scrap of felt, as well as other traces of felt, despite having no stitching which might have held it in place (Cat No 5769/A9821b). Two other uppers had partial liners, consisting of extensions to the quarters that had been turned inwards (Cat Nos 255/A12287a, Illus 130 and 296/A12632b, Illus 130).

Parallels for the latter feature are known from Aberdeen (Thomas 2001a, 243, illus 186 nos 578–579,) and Durham (Carver 1979, 26–35), but other evidence for the medieval use of linings in the British Isles appears to be non-existent, although they are mentioned in Wardrobe accounts (Grew and de Neergaard 1988, 48). The only available parallels are from Continental Europe, but even here they are scarce. The best evidence comes from Schleswig, where 80 examples survive. All, apart from one exception, were associated with high boots, equivalent to PHSAE Type H, and dated from the 14th century onwards. The lower part of the lining was secured by inclusion in the sole–upper seam; on some examples, vertical rows of tunnel stitching were used to hold the leg portion in place. The exception probably belonged to a Halbschuh or ankle-boot. The linings were all made of goatskin. Schnack comments on the paucity of evidence for linings; she could only find parallels from Lubeck, Pleskau and Frankfurt-am-Oder. The last included 15th-century examples of felt linings (Schnack 1992b, 118).

The thread used to stitch these shoes was apparently nearly all wool, as shown by woollen thread which survived in situ on at least 53 examples (see Illus 120, 121, 146). As discussed at greater length by Dr Dransart in Appendix 1, the use of wool is most unusual.

The closest contemporary parallel is from Kirk Close, Perth (Thomas 1987, 176). Examples from London (Pritchard 1991, 219, 221) and Winchester (Thornton 1990c, 708) belong to the 10th and 11th centuries. Eight examples of wool were noted at York; five of these dated to the late 9th to mid 11th centuries, three to the 12th to 13th centuries (MacGregor 1982, 138, 140; Mould et al 2003, 3259–61). Later examples of woollen thread from Dungiven date to the late 16th or early 17th centuries (Henshall and Seaby 1962, 119, 129, 135). The normal thread was linen, but no linen at all has survived from this site.

However, the use of linen for textiles is indicated by glass-smoothers and a possible flax-breaking mallet (see Fascicule 4, The glass; Fascicule 2, The worked wood). A single thread of linen was recovered from South Methven Street, Perth and flax seeds, probably waste from oil production, were found at both Kirk Close and South Methven Street (Robinson 1987, 206). The almost complete lack of linen from medieval Perth is almost certainly explained by the fact that bast fibres do not survive well buried in damp conditions (Bennett 1987, 159; Thomas 1987, 176).

A study of the dating of the examples of wool shows that it occurred in all phases and thus was not just used at one particular period, which might have suggested a temporary shortage of linen. Thongs were sometimes used to attach clump soles and to repair sole–upper seams but were not employed in the original construction, as they had been in earlier periods, as, for instance, in Anglo-Saxon Winchester (Thornton 1973a, 7). Silk was found on two boots, both of 12th-century date. On Cat No 229/A7588c (Illus 140) silk was used as a decorative binding for the top edge, while the top band of Cat No 172/A7580 (Illus 148) was stitched with a row of pink silk between two rows of white. Silk, though a luxury, was relatively common in 12th-century Europe (The textiles, this volume). Other examples of uppers stitched with silk have been found in London (Pritchard 1988, 77) and Bergen (Pedersen 1992, 143–50).

These shoes were probably made on wooden lasts, although none were found at the High Street site. An example from York was shaped for the left foot, and still had a few scraps of leather nailed to it (MacGregor 1982, 144–5, Fig 74). Similar finds are also known from Haithabu (Groenman-vanWaateringe 1984, 18, Abb. 5), Schleswig (Schnack 1992b, 34), Oslo (Schia 1977, 321) and Novgorod (Brisbane 1992, 183). Even when lasts do not survive, their use is indicated by the presence of lasting marks, such as a small hole on an upper (Type Bi), Cat No 461/A10511; this upper also had a small tunnel-like depression, possibly caused by bracing the boot to the last. Small nail holes have also been found on soles from Newcastle (Dixon 1988, 94; 1989, no 83) and Schleswig (Schnack 1992b, 34–5).

As mentioned above, three unstratified welted soles were found. These almost certainly date from the 16th century or later, as welted shoe construction was only developed in Britain after cAD1500. In this method, a wide rand or welt was used to link upper and insole to a separate outer sole. Firstly, the upper was lasted, or shaped on to the last, and secured by nails or bracing thread. Next, upper and insole were sewn to the welt. Thirdly, the outer sole was stitched to the last. This method simplified construction, as the finished shoe

**Table 8** *The chronological distribution of the use of wool as a yarn.*

| period            | I | II | III | IV | V  | unstratified |
|-------------------|---|----|-----|----|----|--------------|
| instances of wool | 1 | 23 | 4   | 7  | 14 | 4            |

no longer required turning, thus enabling it to be much more substantial. Repairs to the outer sole–welt seam were also easy (Thornton 1973a, 11; 1973b, 48). The welt is distinguished from the earlier rand by having two grain to flesh stitching channels, not one. The upper still has a grain to flesh stitching channel on its lasting margin, but with a longer stitch length of 6–10mm. Early insoles are very similar to a turnshoe sole, with an edge–flesh stitching channel, but again with a longer stitch length and usually with the grain side up. Later insoles are stitched through a rib on the flesh side. Outer soles have a grain to flesh stitching channel (Thornton 1973a, 11; 1973b, 48).

### Repairs (Illus 104)

Evidence for repair survives on many fragments; soles were frequently patched, sole/upper seams were occasionally re-stitched or replaced with thongs and in a very few cases the upper was patched.

Worn soles were repaired with clumps, which were approximately of seat or forepart shape and which were attached to the relevant area by tunnel stitching, whose holes are visible on both clumps and original soles. For example, sole Cat No 222/A7436a has part of a seat clump still attached; tunnel stitch holes indicate that the forepart has also been repaired (Illus 104). The clumps on this sole, and on another, Cat No 286/A03–0017a, were attached by thongs, which survive (Illus 104). Clump soles also occur separately, as eg, a right forepart clump with pointed toe, Cat No 3865/A03–0068 (Illus 104), and a seat clump Cat No 3511/A03–0251 (Illus 104). Another seat clump Cat No 5855/A03–0133f, has been formed out of two fragments, most probably scraps from soles, joined together with a butted edge–flesh seam: a most unusual and very economical repair (Illus 104). Some soles were repaired more than once, as, for instance Cat No 625/A9885a (Illus 104), where both seat and forepart have been repaired at least twice; one crack along a line of tunnel-holes may have been caused by strain from the repair stitching itself. Similarly, the centre forepart of Cat No 452/A10048a has cracked and worn along the line of stitching for a clump that covered an earlier tear across the front of the sole (Illus 147).

Clump soles surviving in situ or tunnel stitch holes for them show that 85 soles had been patched. Type 1 soles were the most patched, with 28 examples, which represent 33% of the repaired soles, or 50% of their type. Substantial proportions of the two-part soles had been repaired: 28.5% of Type 7, 6% of Type 8, and 24% of Type 9.

Repairs to sole–upper seams are suggested by close concentrations of stitch holes in both sole and upper stitching channels, as on Cat Nos 4123/A03–0214a, 5608/A03–0065, 783/A9372a, 332/A6774b and 5821/A0801b. However, it is possible that these soles and uppers have been reused, in conjunction with new or other reused components, rather than repaired.

Thongs were used to replace worn sole/upper seams, as on sole and upper Cat No 222/A7436a (Illus 104) and probably also vamps Cat Nos 3072/A8668g (Illus 144) and 2777/A03–0124c (Illus 146). On another example, left sole Cat No 3594/A6220b, five thong holes have replaced the very worn edge–flesh stitching channel. The thong holes are c24mm, 12mm, 27mm and 19mm apart; the new seam would have been far from waterproof (Illus 122). The use of a thong to repair a sole–upper seam was also noted at Schleswig (Schnack 1992b, 124–8).

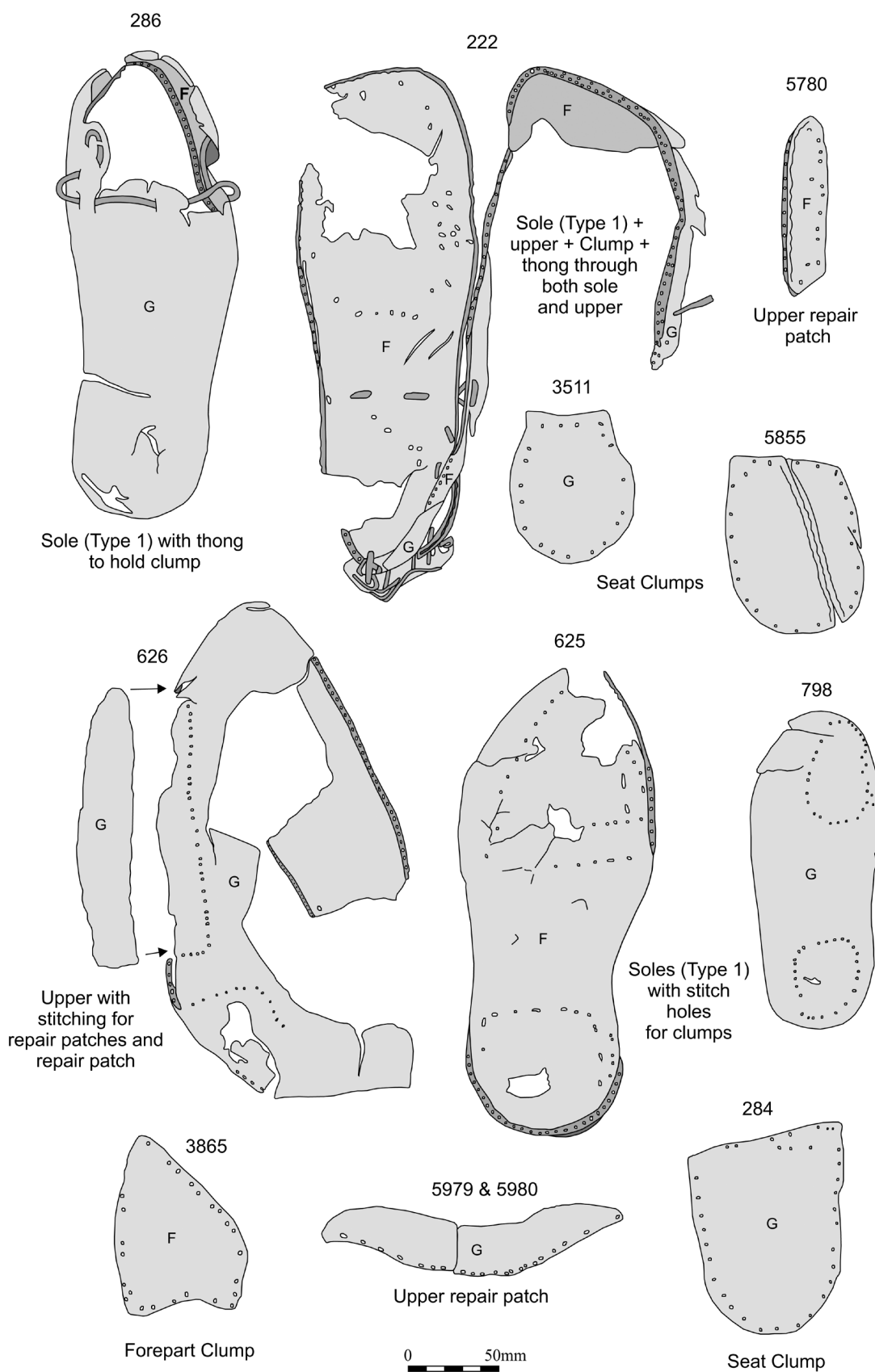
Upper Cat No 626/A9885b has had part of its lasting margin replaced by a patch; the new stitch holes are very irregular. The quarters of this upper had also been patched (Illus 104). However, this was an unusual method of repair, with only four other examples from this site (Cat Nos 267/A7044Bg, Illus 130; 2807/A03–0274b, not illustrated; 2337/A03–0291e and 456/A10048e, Illus 147). This suggests that uppers requiring patching were discarded or cut for reuse. Patches on uppers would have been much more obtrusive than clumps on soles or repairs to seams. Furthermore, uppers would not have worn as badly as a single sole. Some uppers may have been repaired more subtly, by the substitution of new or reused parts; this is especially possible for side-pieces. This method of repair may explain some of the two-part uppers of Types J and D, for example, Cat No 1105/A03–0287c, which has a sidepiece on either side of the foot (Illus 137; J Swann pers comm).

There are few examples of repairs to uppers. Uppers which had splits stitched together were found at Kirk Close, Perth (Thomas 1987, 177, nos 17 and 19) and at Redcliffe Street, Bristol (Thomas forthcoming b), while one of the Schleswig uppers had been patched (Schnack 1992b, 124–8). A child's ankle-shoe from Coppergate, York also has a repaired slit in the vamp (Mould et al 2003). Repaired soles and uppers, and separate clump soles, were most numerous in Period IV, followed by Periods II and V.

### Reuse

Some of the leather was reused rather than repaired, probably in the manufacture of new shoes from old (translation) and also in cobbling, the repair of shoes and other items. Evidence for this takes the form of cut-up uppers, and soles with shapes cut from them. Cut-up uppers appear in all periods, but particularly in Periods II (1150–1200) and IV (1250–1300). Cut-out soles (apart from Soles (seats cut across the waist)) only occur in Period V (14th century) deposits. It is also noticeable that the more complete uppers date from the earlier phases. The more fragmentary uppers from the later phases may be a further reflection of a recycling industry.





Illus 104 Repairs.

*Repairs (Illus 104).*

| <i>Cat/Accession</i> | <i>Leather type</i>                 | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                               | <i>Phase</i>   |
|----------------------|-------------------------------------|-------------|------------|----------------------------------------------|----------------|
| <b>South Sector</b>  |                                     |             |            |                                              |                |
| 28/A10800b           | Sole (Type 6)                       | 1           | V          | MC008, T3774                                 | Ib             |
| 68/A8809c            | Sole (Type 1)                       | 1/2         | V, VI      | M2.1b & B10, South Room–Floor/Occupation (1) | Ic,Icc         |
| 121/A03–0006         | Sole (Type 1)                       | 4           | V          | MC023, Well 4774                             | Icc,Id         |
| 127/A12306           | Upper (Type Aii)                    | 3           | V          | MC025, Pit 5337                              | (Ia–)Id        |
| 128/A12308a          | Sole (Type 1)                       | 3           | V          | MC025, Pit 5337                              | (Ia–)Id        |
| 163/A7787j           | Upper (Type H)                      | 1/2         | VI         | B6(Phase 1) South Room–Floor (1)             | Ie             |
| 218/A7648b           | Upper (Type Aii)                    | 2           | VI         | M14b(b), Pit 3625                            | Ie             |
| 222/A7436a           | Clump, Sole (Type 1), Upper & Thong | 2           | VI         | P5.2b                                        | Ie             |
| 255/A12287a          | Upper (Type Bi)                     | 3           | V          | MC034a                                       | Ie(If)         |
| 262/A7044Bb          | Sole (Type 1)                       | 2           | VI         | MC044b                                       | If             |
| 267/A7044Bg          | Upper (Type Bi)                     | 2           | VI         | MC044b                                       | If             |
| 286/A03–0017a        | Sole (Type 1)                       | 3           | V          | MC053a                                       | If             |
| 334/A03–0011         | Sole (Type 1)                       | 3           | VI         | MC054a, Pit 5267                             | (IIa)IIb       |
| 344/A6772d           | Upper                               | 2           | VI         | MC061                                        | IIb            |
| 352/A6773a           | Sole (Type 2)                       | 2           | VI         | MC061                                        | IIb            |
| 375/A12282a          | Sole (Type 7)                       | 1           | VI         | MC065, Pit 3908                              | IIa–IIc        |
| 400/A12293b          | Sole (Type 1)                       | 3           | VI         | MC056, Pit 5155                              | Ia–IIc         |
| 401/A12293c          | Sole (seat)                         | 3           | VI         | MC056, Pit 5155                              | Ia–IIc         |
| 449/A6771            | Upper (Type E)                      | 2           | VI         | B4, Byre – Occupation                        | IIc            |
| 452/A10048a          | Sole (Type 1)                       | 4           | VI         | M1.1f, Pit 2383                              | IIb,IIc        |
| 453/A10048b          | Sole (Type 2)                       | 4           | VI         | M1.1f, Pit 2383                              | IIb,IIc        |
| 456/A10048e          | Upper (Type J)                      | 4           | VI         | M1.1f, Pit 2383                              | IIb,IIc        |
| 462/A10599a          | Sole (Type 1)                       | 3           | VI         | M1.1c, Pit 5005                              | IId            |
| 471/A12285c          | Sole (Type 1)                       | 3           | VI         | M1.1c, Pit 5005                              | IId            |
| 473/A12285e          | Upper (Type Biv)                    | 3           | VI         | M1.1c, Pit 5005                              | IId            |
| 478/A12309b          | Upper (Type Aii)                    | 3           | VI         | M1.1c, Pit 5005                              | IId            |
| 625/A9885a           | Sole (Type 1)                       | 4           | V          | M10                                          | IId–IIg        |
| 626/A9885b           | Upper                               | 4           | V          | M10                                          | IId–IIg        |
| 635/A10778b          | Sole                                | 3           | V          | M10                                          | IId–IIg        |
| 777/A9371c           | Sole                                | 3           | VI         | M1.2, Pit 2648                               | <IIg(IIh)      |
| 778/A9371d           | Upper (Type Biii)                   | 3           | VI         | M1.2, Pit 2648                               | <IIg(IIh)      |
| 779/A9371e           | Upper (Type E)                      | 3           | VI         | M1.2, Pit 2648                               | <IIg(IIh)      |
| 821/A11221a          | Sole (Type 4)                       | 3           | VI         | M1.2, Pit 2648                               | <IIg(IIh)      |
| 919/A12536a          | Sole (Type 2)                       | 4           | VI         | M1.3                                         | IIi            |
| 922/A11639a          | Sole (Type 1)                       | 1           | VI         | MC111                                        | IIb–IIIb       |
| 923/A11639b          | Sole (Type 1)                       | 1           | VI         | MC111                                        | IIb–IIIb       |
| 970/A11261a          | Sole (Type 8)                       | 4           | V          | MC116                                        | IIe–IIIc       |
| 1003/A8011a          | Sole (rounded forepart)             | 4           | VI         | M1.4a(a)                                     | IIIa–IIIc      |
| 1026/A03–0317a       | Sole (Type 1)                       | 9           | VII        | P8.1b                                        | IIIc           |
| 1028/A03–0317c       | Grain to flesh stitching channel    | 9           | VII        | P8.1b                                        | IIIc           |
| 1076/A12535b         | Sole                                | 4           | V, VI      | MC128                                        | IIIb,IIIc      |
| 1103/A03–0287a       | Sole (Type 2)                       | 9           | VII        | P8.1c                                        | IIIc           |
| 1130/A03–0263a       | Sole (Type 2)                       | 9           | VII        | M15                                          | IIId           |
| 1148/A5893c          | Upper                               | 1           | V          | M12                                          | IIg–IIIc(–IVa) |
| 1287/A6415c          | Upper (Type Di)                     | 3           | V          | P2.2b                                        | IVa            |
| 1314/A7989a          | Sole (Type 3)                       | 4           | V          | MC143                                        | IVaa           |

*(continued)*

| <i>Cat/Accession</i> | <i>Leather type</i>                    | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i> |
|----------------------|----------------------------------------|-------------|------------|---------------------------------------------------------------|--------------|
| 1553/A03–0422a       | Sole (Type 4)                          | 7           | VII        | MC130                                                         | <IIIc–IVaa   |
| 1555/A03–0422c       | Upper (Type Bi)                        | 7           | VII        | MC130                                                         | <IIIc–IVaa   |
| 1743/A03–0347a       | Sole (Type 2)                          | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1744/A03–0347b       | Sole                                   | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1752/A03–0350a       | Sole (Type 2)                          | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1754/A03–0350c       | Sole (Type 3)                          | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1761/A03–0360a       | Sole/Upper repair patch                | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1763/A03–0360c       | Clump                                  | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1804/A03–0367a       | Sole (Type 4), upper (Type Di) & thong | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 2181/A03–0385a       | Sole (Type 7)                          | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 2333/A03–0291a       | Sole (Type 3)                          | 7           | VI         | M1.4f                                                         | IVc          |
| 2339/A03–0308b       | Sole (Type 3)                          | 7           | VI         | M1.4f                                                         | IVc          |
| 2371/A03–0332h       | Upper                                  | 7           | VI         | M1.4f                                                         | IVc          |
| 2569/A03–0329a       | Sole (Type 1)                          | 7           | VII        | B18 (Phase 1/2)                                               | IVaa,IVb     |
| 2651/A03–0316a       | Sole (Type 1)                          | 7           | VII        | B18 (Phase 1/2), Pit 7324                                     | IVaa,IVb     |
| 2682/A03–0202c       | Upper                                  | 9           | VII        | B18 (Phase 1/2), Pit 9301                                     | IVaa,IVb     |
| 2714/A03–0311a       | Sole (Type 2)                          | 7           | VII        | B18 (Phase 2a), External (1), Pit 7314                        | IVb          |
| 2719/A03–0314c       | Rand                                   | 7           | VII        | B18 (Phase 2a), External (1), Pit 7314                        | IVb          |
| 2777/A03–0124c       | Upper                                  | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2779/A03–0232        | Sole (Type 4)                          | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2807/A03–0274b       | Upper (Type Ai)                        | 7           | VII        | B18 (Phase 2b), Hall, Pit 7290                                | IVb          |
| 2841/A03–0313        | Sole (oval forepart)                   | 10          | VIII       | M9b(a)                                                        | IVc          |
| 2842/A03–0319a       | Sole (seat)                            | 10          | VIII       | M9b(a)                                                        | IVc          |
| 3066/A8668a          | Sole (Type 1)                          | 3           | VI         | M1.4d                                                         | IVb,IVc      |
| 3072/A8668g          | Upper                                  | 3           | VI         | M1.4d                                                         | IVb,IVc      |
| 3102/A6240           | Upper (Type C)                         | 2           | VI         | M1.4d                                                         | IVb,IVc      |
| 3240/A9888b          | Sole (Type 3)                          | 3           | V, VI      | M1.4c                                                         | IIIa–IVcc    |
| 3242/A4940a          | Upper (Type Biv)                       | 4           | V, VI      | M1.4b                                                         | IVb–IVcc     |
| 3384/A03–0233a       | Sole                                   | 7           | VII        | M9a                                                           | IVc,IVcc     |
| 3427/A03–0051a       | Upper, sole, rand                      | 9           | VII        | M9a, Pit 9026                                                 | IVc,IVcc     |
| 3598/A4329a          | Sole (Type 2)                          | 3           | VI         | M1.4e                                                         | IVcc(Va)     |
| 3858/A03–0047        | Sole (Type 4)                          | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3859/A03–0048a       | Sole (Type 8)                          | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3861/A03–0048c       | Sole                                   | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3863/A03–0067a       | Sole (Type 4)                          | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3886/A03–0125a       | Sole                                   | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3927/A03–0136c       | Miscellaneous fragment                 | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 4124/A03–0214b       | Sole (Type 4)                          | 7           | VII        | P8.4                                                          | Va           |
| 4284/A4901b          | Sole (Type 3)                          | 1           | V, VI      | M5a                                                           | IVb–Vc       |
| 4816/A6237b          | Sole (Type 9)                          | 3           | V, VI      | M1.5a                                                         | Va,Vaa       |
| 4972/A03–0174l       | Sole (oval forepart)                   | 7           | VII        | M8a                                                           | Va,Vaa       |
| 5016/A03–0174ddd     | Sole (Type 9)                          | 7           | VII        | M8a                                                           | Va,Vaa       |

(continued)

| <i>Cat/Accession</i>       | <i>Leather type</i>         | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                      | <i>Phase</i> |
|----------------------------|-----------------------------|-------------|------------|-------------------------------------|--------------|
| 5221/A03-0138a             | Sole (Type 7)               | 7           | VII        | M8a, T7193                          | Va, Vaa      |
| 5241/A03-0216              | Upper, sole (Type 2) & rand | 7           | VII        | B53(Phase 1),<br>Central Area-T7152 | Vb           |
| 5251/A03-0029b             | Sole (Type 8)               | 7           | VII        | P8.5                                | Vb, Vbb      |
| 5318/A4390f                | Upper (Type Ki)             | 4           | V, VI      | M3a                                 | Vb-Vc        |
| 5336/A03-0018b             | Sole (Type 9)               | 7           | VII        | M7                                  | Vc           |
| 5337/A03-0018c             | (Type 9)                    | 7           | VII        | M7                                  | Vc           |
| 5608/A03-0065              | Sole (Type 4)               | 10          | VIII       | MC174, Pit 7013                     | (Va-)Vd(Vdd) |
| 5772/A12574b               | Sole (Type 3)               | 3/4         | V, VI      | Unstratified                        | u/s          |
| 5779/A0800a                | Sole (Type 2)               | 3/4         | V, VI      | Unstratified                        | u/s          |
| 5780/A0800b                | Clump/Upper repair patch    | 3/4         | V, VI      | Unstratified                        | u/s          |
| <b>North Sector</b>        |                             |             |            |                                     |              |
| 5889/A7805c                | Upper (Type Biv)            | 5           |            | CG005                               | 4(5)         |
| <b>South/North Sectors</b> |                             |             |            |                                     |              |
| 5979/L1694f,g              | Uppers                      |             |            | Unstratified                        | u/s          |

Evidence for similar reuse has been found on many sites, especially at Kirk Close, Perth (13th–14th centuries) (Thomas 1987, 185); Norwich (Ayers and Murphy 1983); Redcliffe Street, Bristol (Thomas forthcoming b); Newcastle (mid-13th–mid-14th centuries) (Dixon 1988, 94); Leicester (Allin 1981a, 150–1) and Schleswig (especially 13th century) (Schnack 1992b, 126–8).

## Measurements

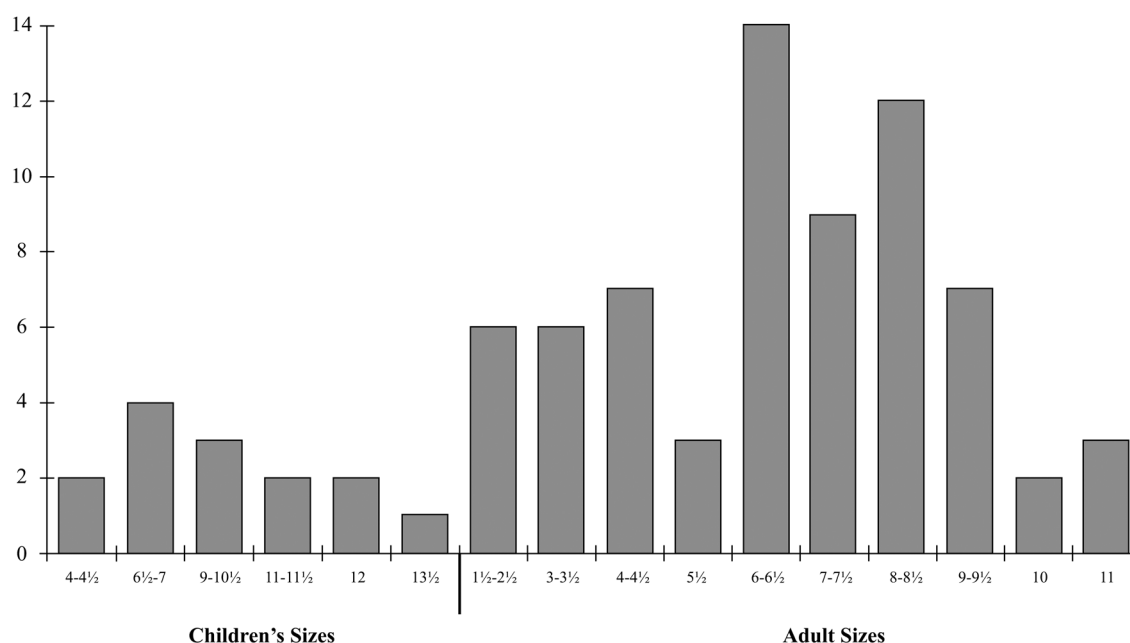
As stated in the introduction, all measurements quoted are post-conservation and are expressed in millimetres.

## Shoe sizes

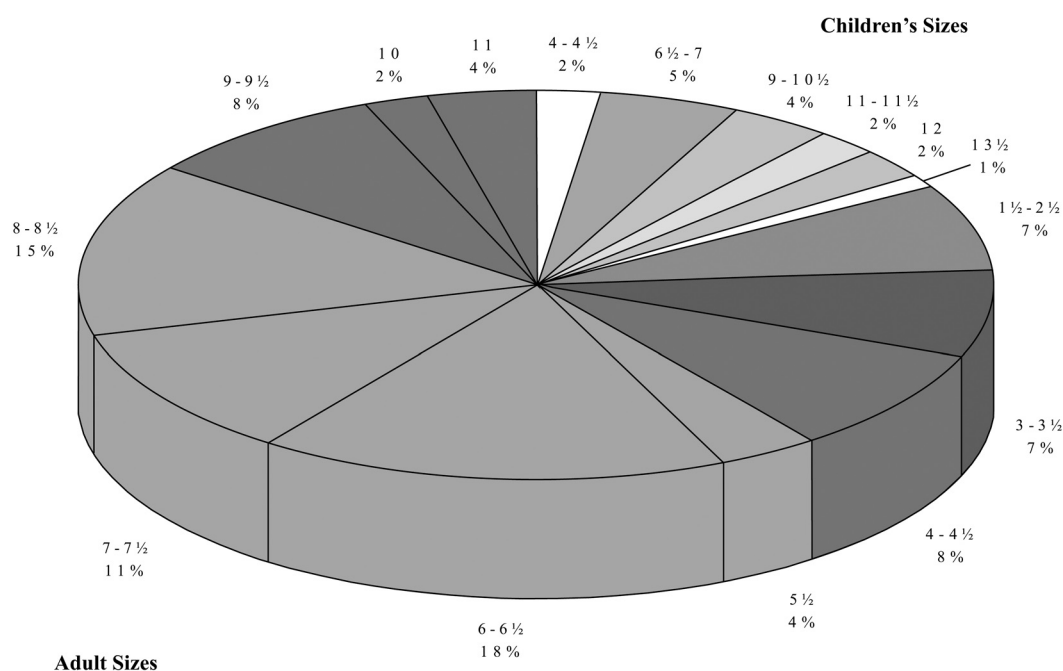
An attempt has been made to translate sole lengths into modern United Kingdom shoe sizes. As the figures for shrinkage during conservation show considerable variation, between 0% and 29%, it was decided to use only the sole lengths that can be measured on the pre-conservation drawings for this purpose. These drawings have two drawbacks: firstly, they only represent part of the leather recovered from the site;

secondly, they were made by an unskilled workforce. Hence, not all the leather is represented, and the measurements must be regarded as approximate. For this reason, no attempt has been made to try to calculate lengths of uppers. However, despite these problems, lengths were obtained for 86 complete or nearly complete soles.

No allowance has been made for shrinkage during burial, as this is much disputed. On the one hand, Thornton believed in a reduction of c10%. Carol van Driel-Murray, however, suggests that shoes in water-logged conditions may actually have expanded. In her experience, it is immediately after excavation that leather shrinks, unless it is at once kept in water (Grew and de Neergaard 1988, 103; van Driel-Murray 1987).



Illus 105 Number of shoe sizes (overall).



Illus 106 Percentage of shoe sizes (overall).



Table 9 *Shoe sizes.*

| Cat/ccession         | pre-conservation length | post-conservation length | UK shoe size | continental shoe size | shrinkage | phase          |
|----------------------|-------------------------|--------------------------|--------------|-----------------------|-----------|----------------|
| <b>Sole (Type 1)</b> |                         |                          |              |                       |           |                |
| 54/A9886a            | 282                     | 255                      | 8            | 42                    | 10%       | Ic             |
| 58/A8635a            | 228                     | 212.5                    | 2            | 34                    | 7%        | Ic,Icc         |
| 62/A8704a            | 194–198                 | 167.5                    | Childs 11    | 29                    | 14%       | Ic,Icc         |
| 68/A8809c            | 310–315                 | 287                      | 11           | 45                    | 7%        | Ic,Icc         |
| 103/A03–0001         | 292                     | 263                      | 9            | 43                    | 10%       | Ia–Icc>        |
| 104/A10798a          | 205                     | 193                      | Childs 12    | 30½                   | 6%        | Ib–Id          |
| 120/A03–0005         | 267+                    | 250+                     | 6½+          | 40+                   | 6%        | Icc,Id         |
| 121/A03–0006         | 291+                    | 266+                     | 9+           | 43+                   | 9%        | Icc,Id         |
| 125/A12297a          | 205                     | 186                      | Childs 12    | 30½                   | 9%        | (Ia–)Id        |
| 185/A7600a           | 278                     | 257                      | 8            | 42                    | 7.5%      | Ie             |
| 208/A7434            | 243                     | 207                      | 3½           | 36                    | 15%       | Ie             |
| 286/A03–0017a        | 284                     | 263                      | 8½           | 42½                   | 7%        | If             |
| 323/A10600           | 281+                    | 255+                     | 8+           | 42+                   | 9%        | Ila            |
| 331/A6774a           | 307–315                 | 271                      | 11?          | 45?                   | 12%       | Ilb            |
| 334/A03–0011         | 313                     | 274                      | 11?          | 45?                   | 12%       | (Ila)Ilb       |
| 389/A12296a          | 160                     | 142                      | Childs 7     | 27½                   | 11%       | Ila–IIc        |
| 406/A12493a          | 300                     | 277                      | 10           | 44                    | 8%        | Ia–IIc         |
| 475/A12302a          | 268                     | 244                      | 6½           | 40                    | 9%        | IId            |
| 491/A12290a          | 261                     | 231                      | 6            | 39½                   | 11.5%     | Ilb–IIIf       |
| 625/A9885a           | 294                     | 264                      | 9            | 43                    | 10%       | IId–IIg        |
| 798/A10366           | 198                     | 179                      | Childs 11½   | 29½                   | 10%       | <IIg(IIh)      |
| 846/A8544            | 280                     | 240                      | 8            | 42                    | 14%       | IIIa–IIIc      |
| 923/A11639b          | 242                     | 219                      | 3½           | 36                    | 9.5%      | Ilb–IIIb       |
| 2652/A03–0316b       | 190                     | 165.5                    | Childs 10½   | 28½                   | 13%       | IVaa,IVb       |
| <b>Sole (Type 2)</b> |                         |                          |              |                       |           |                |
| 173/A7580b           | 245                     | 221.5                    | 4            | 37                    | 10%       | Ie             |
| 175/A7589a           | 280                     | 275                      | 8            | 42                    | 2%        | Ie             |
| 611/A9879a           | 231                     | 212                      | 2            | 34                    | 8%        | IId–IIg        |
| 1103/A03–0287a       | 278                     | 256.5                    | 7½–8         | 41½–42                | 8%        | IIIc           |
| 1144/A4817a          | 266                     | 233                      | 6½           | 40                    | 11%       | IIg–IIIc(–IVa) |
| 1659/A03–0417a       | 250+                    | 235+                     | 4½+          | 37½+                  | 6%        | IVa–IVb        |
| 1743/A03–0347a       | 285+                    | 247+                     | 8½+          | 42½+                  | 13%       | IVaa,IVb       |
| 1809/A03–0374a       | 283+                    | 267.5+                   | 8–8½+        | 42–42½+               | 5.5%      | IVaa,IVb       |
| 2361/A03–0331a       | 268                     | 240                      | 6½           | 42½                   | 10%       | IVc            |
| 2714/A03–0311a       | 161                     | 144                      | Childs 7     | 24                    | 10.5%     | IVb            |
| 2872/A4894           | 183                     | 168                      | Childs 9½    | 27½                   | 8%        | IVb,IVc        |
| 3335/A03–0261a       | 159                     | 138                      | Childs 6½    | 23½                   | 13%       | IVc,IVcc       |
| 3877/A03–0120b       | 275                     | 253                      | 7½           | 41½                   | 8%        | Vaa            |
| 4493/A4289a          | 137                     | 127                      | Childs 4     | 20½                   | 7%        | Va,Vaa(VI)     |
| 4815/A6237a          | 226                     | 206                      | 1½           | 33½                   | 9%        | Va,Vaa         |
| 5241/A03–0216        | 288                     | 262.5                    | 8½–9         | 42½–43                | 9%        | Vb             |
| 5768/A9821a          | 260                     | 229                      | 5½           | 39                    | 12%       | u/s            |
| 5779/A0800a          | 268                     | 239                      | 6½           | 40                    | 11%       | u/s            |
| <b>Sole (Type 3)</b> |                         |                          |              |                       |           |                |
| 740/A9144            | 270                     | 243                      | 7            | 41                    | 10%       | <IIg(IIh)      |
| 783/A9372a           | 258                     | 242                      | 5½           | 39                    | 6%        | <IIg(IIh)      |
| 788/A9546a           | 285                     | 259.5                    | 8½           | 42½                   | 9%        | <IIg(IIh)      |

(continued)

| Cat/ccession         | pre-conservation length | post-conservation length | UK shoe size | continental shoe size | shrinkage | phase        |
|----------------------|-------------------------|--------------------------|--------------|-----------------------|-----------|--------------|
| 831/A8518a           | 268                     | 251.5                    | 6½           | 40                    | 6%        | IIh          |
| 1095/A03-0270a       | 265                     | 252                      | 6            | 39½                   | 5%        | IIIc         |
| 1106/A03-0304a       | 300                     | 267                      | 10           | 44                    | 11%       | IIIc         |
| 1195/A9883           | 287                     | 271                      | 9            | 43                    | 6%        | IIg-IIIId    |
| 1426/A6187a          | 244                     | 228.5                    | 3½           | 36                    | 6%        | IVaa         |
| 1991/A03-0362a       | 267                     | 248                      | 6½           | 40                    | 7%        | IVaa,IVb     |
| 2333/A03-0291a       | 286                     | 257                      | 8½           | 42½                   | 10%       | IVc          |
| 2750/A03-0293        | 280                     | 259                      | 8            | 42                    | 7.5%      | IVb          |
| 2985/A10521          | 251                     | 227.5                    | 4½           | 37½                   | 9%        | IVb,IVc      |
| 3033/A3459           | 225                     | 200                      | 1½           | 33½                   | 11%       | IVb,IVc      |
| 3246/A6195           | 270                     | 253                      | 7            | 41                    | 6%        | IVb-IVcc     |
| 3321/A03-0066a       | 242+                    | 226.5+                   | 3½+          | 36+                   | 6%        | IVc,IVcc     |
| 3405/A03-0052a       | 249+                    | 233+                     | 4½           | 37½                   | 6%        | IVc,IVcc     |
| 3707/A03-0134a       | 278                     | 260                      | 7½           | 41½                   | 7%        | Va           |
| 4229/A6373           | 271+                    | 236+                     | 7+           | 41+                   | 13%       | IVcc,Va      |
| 5871/A03-0008        | 258                     | 242                      | 5½           | 39                    | 6%        | u/s          |
| <b>Sole (Type 4)</b> |                         |                          |              |                       |           |              |
| 821/A11221a          | 247                     | 237.5                    | 4            | 37                    | 4%        | <IIg(IIh)    |
| 1042/A8546           | 266                     | 240                      | 6½           | 40                    | 10%       | IIe-IIIc     |
| 1206/A8680a          | 272                     | 253                      | 7            | 41                    | 7%        | IIg-IIIId    |
| 1553/A03-0422a       | 238+                    | 215+                     | 3+           | 35½+                  | 10%       | <IIIc-IVaa   |
| 1804/A03-0367a       | 234                     | 230                      | 2½           | 35                    | 2%        | IVaa,IVb     |
| 2728/A03-0295a       | 275                     | 254                      | 7½-8         | 41½                   | 9%        | IVb          |
| 2779/A03-0232        | 287                     | 254.5                    | 8½-9         | 42½-43                | 11%       | IVb          |
| 3863/A03-0067a       | 266+                    | 238.5                    | 6½+          | 40+                   | 10%       | Vaa          |
| 4811/A6189           | 265                     | 241                      | 6½           | 40                    | 9%        | Va,Vaa       |
| 4827/A03-0106        | 242                     | 222.5                    | 3½           | 36                    | 8%        | Va,Vaa       |
| 5240/A03-0090        | 291                     | 273.5                    | 9            | 43                    | 5%        | Vb           |
| 5608/A03-0065        | 177+                    | 165+                     | Childs 9+    | 27+                   | 7%        | (Va-)Vd(Vdd) |
| <b>Sole (Type 5)</b> |                         |                          |              |                       |           |              |
| 403/A12295           | 281                     | 240                      | 8            | 42                    | 15%       | Ia-IIc       |
| 1504/A03-0405        | 261+                    | 255+                     | 6+           | 39½+                  | 2%        | <IIIc-IVaa   |
| 3117/A8681a          | 246                     | 226                      | 4            | 37                    | 8%        | IVb,IVc      |
| 3857/A03-0044        | 225+                    | 215+                     | 1½+          | 33½+                  | 4%        | Vaa          |
| 3985/A03-0170b       | 262                     | 240                      | 6            | 39½                   | 8%        | Vaa          |
| 5329/A6399a          | 270                     | 238                      | 7            | 41                    | 12%       | Vb-Vc        |
| <b>Sole (Type 6)</b> |                         |                          |              |                       |           |              |
| 28/A10800b           | 249                     | 240                      | 4½           | 37½                   | 3.6%      | Ib           |
| 43/A8525             | 238                     | 208                      | 3            | 35½                   | 13%       | Ic           |
| 314/A10365a          | 296                     | 256                      | 9½           | 43½                   | 14%       | IIa          |
| <b>Sole (Type 7)</b> |                         |                          |              |                       |           |              |
| 3624/A6077c          | 218+                    | 202+                     | Childs 13½+  | 32+                   | 7%        | IVcc(Va)     |

*Average shrinkage of above soles 8.7%*

The sizes recorded vary between a child's 4 and an adult 11. A study of their frequencies (Illus 105) shows that adult 6 to 9½ were the most common, followed by adult 1½ to 4½. There was also a small group of children's sizes, 4 to 12, and a very few large examples, adult 10 to 11. Another ten soles, which were not included in the original drawings, have been identified as children's, on the basis of their overall length; no attempt, however, has been made to define a specific modern size. The three main groups possibly represent men's, youths' and women's, and children's, with allowance being made between the groups. As noted under the study of Soles (Children's), the children's sizes were mainly restricted to Soles Types 1 and 2, with one each of Types 3, 4 and 7.

## Soles

Of the 785 fragments of soles found, 261 (33%) were reasonably complete and could be divided into nine types, distinguished by variations in shape. Types 1–6 are whole soles; Type 7 consists of soles sewn across the tread, or middle of the forepart; Types 8 and 9 are seats and foreparts, respectively, sewn across the waist and probably originally joined together; several pairs match. Soles that are obviously children's have been compared with adult types, but have been considered separately, to see if dating trends differed. It was not possible to define the types of the rest of the sole fragments, though variations, such as toe shapes, were noted as far as possible. One group has been listed separately, as they are mostly of 14th-century date; these are seats that have been cut across the waist, possibly for reuse.

The types have been defined by shape, especially that of the toe, but also taking into account overall alignment and proportions of the sole, width of waist

and curvature of forepart. Schnack (1992b, 38–46) used similar but stricter criteria in her work on the Schleswig soles, ending up with 13 types and three sub-types. These she then placed into four groups, based on the width and shape of the waists. Thus her Group 1 consisted of Types 1–4, with broad, virtually symmetrical soles and no waists. Groups 2 (Types 5–7), 3 (Types 8–10) and 4 (Types 11–13) had progressively more marked waists. Group 1 proved to be the earliest, being predominantly of 11th-century date, followed by Group 2, mainly from the 13th century, and Groups 3 and 4, chiefly of 13th- and 14th-century date. However, these datings were by no means absolute, as Group 1, 2 and 4 soles were also found in 12th-century layers.

In his division of the Bergen soles, Larsen relied on strict mathematical statistics. He came to the conclusion that the most important measurements were the length of the sole and the width of the waist, which he expressed as a ratio. However, he also recognised the relevance of seat and forepart widths, and of overall alignments. As a result, he produced four types, I, II, III and IV, and four variants, A1–A4 (Larsen 1992, 27–30). Larsen also found that his sole types fell into broad dating trends. Thus Types 1 and A3 and A4 were the commonest forms from before 1170 to 1198, while Type IV was of much later date, chiefly 1332 to 1476. Type II, on the other hand, appeared in substantial numbers throughout the site's time-span (Larsen 1992, 38).

Carter's report on the King's Lynn leather also used the length:waist ratio as an expression of sole shape. Thus, if the length of a sole is 120mm, the width of the waist 30mm, then A:C=3.00. In this case, however, no allowance was made for variations in forepart or toe shape that were not represented by the ratio. Carter claimed that this method could be used for dating purposes, and quoted the evidence from King's Lynn.

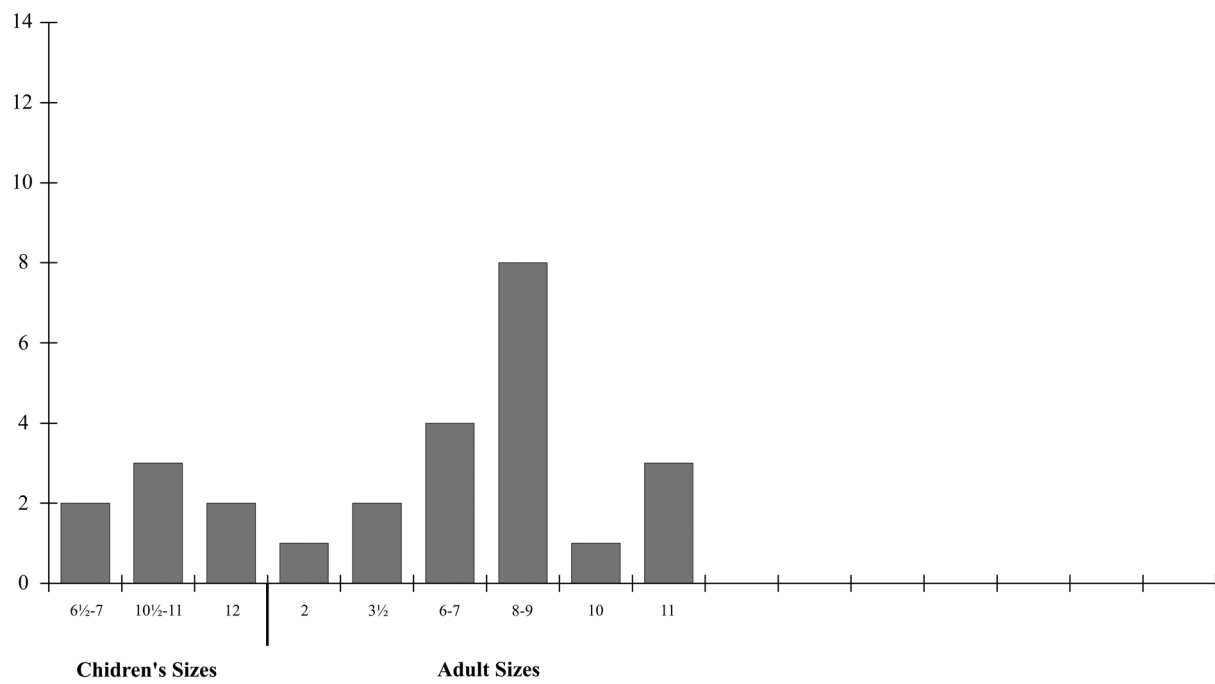
**Table 10** *A:C values of soles by type, where A=length, C=width of waist.*

| sole type | A:C        | average |
|-----------|------------|---------|
| 1         | 2.43–4.25  | 3.43    |
| 2         | 3.3–5.62   | 4.17    |
| 3         | 3.89–7.76  | 5.66    |
| 4         | 4.66–6.36  | 5.64    |
| 5         | 4.21–10.68 | 6.02    |
| 6         | 3.05–4.45  | 3.7     |

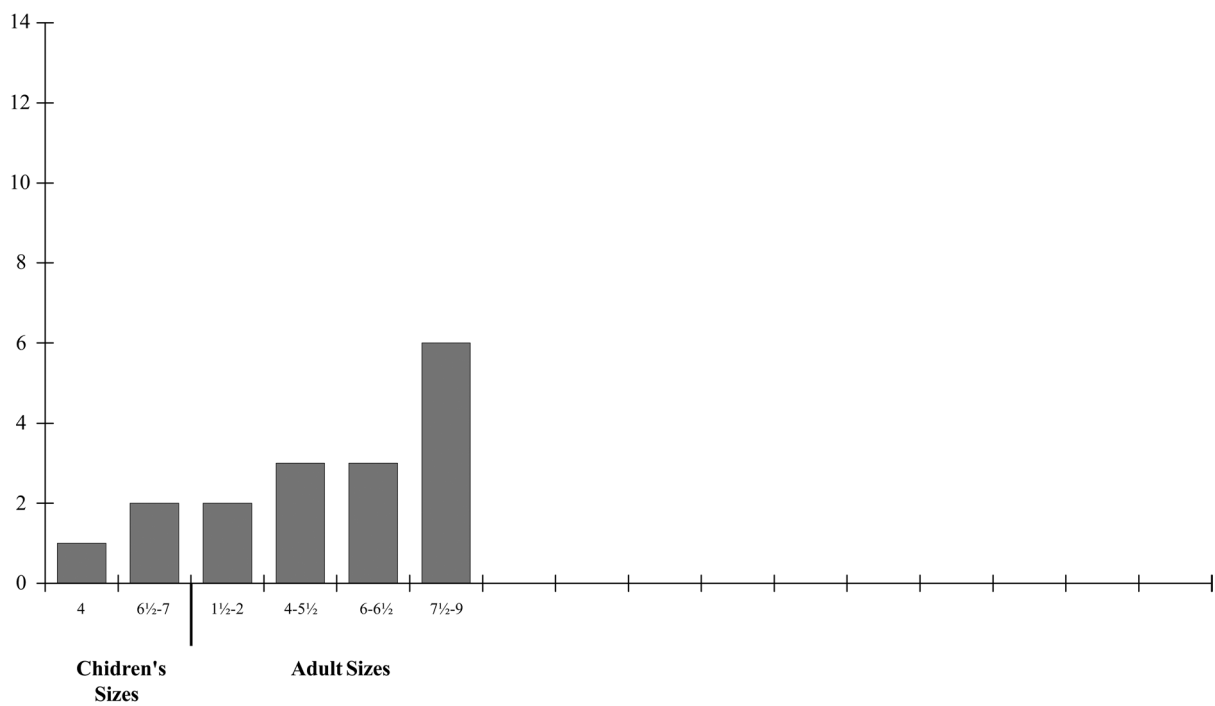
*Types 7, 8 and 9 not applicable*

**Table 11** *A:C values of soles by period, where A=length, C=width of waist.*

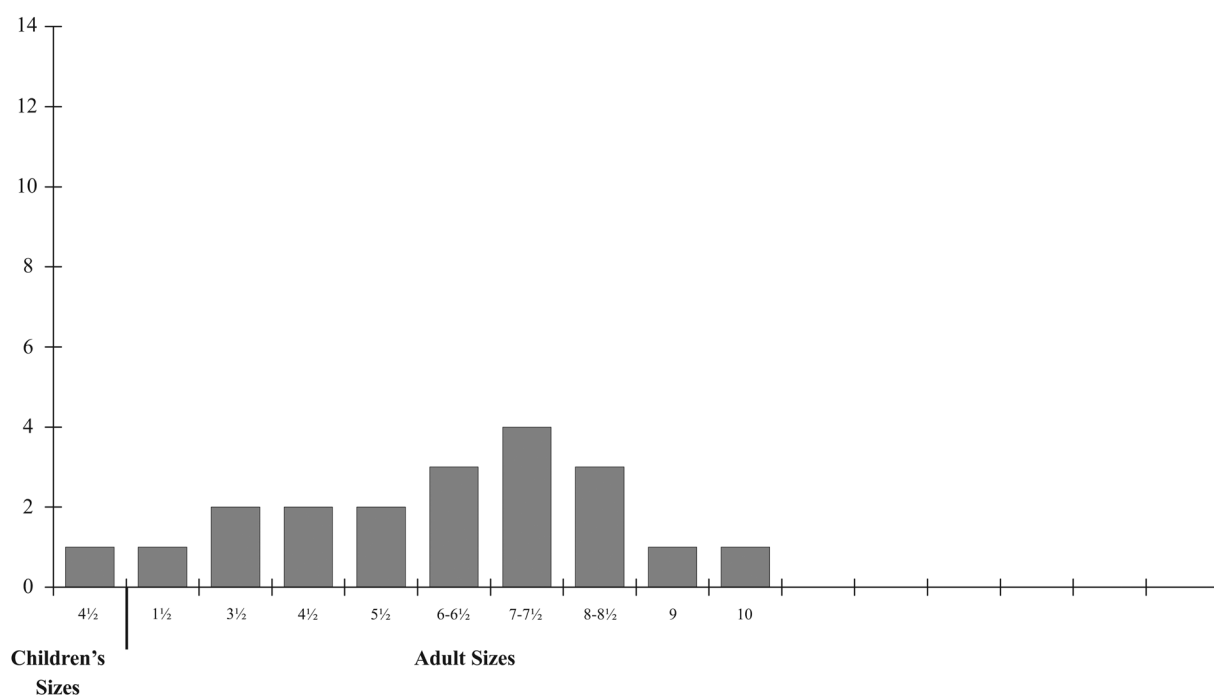
| period | date         | A:C        | average |
|--------|--------------|------------|---------|
| I      | (1100–1150)  | 2.87–5.08  | 3.52    |
| II     | (1150–1200)  | 2.43–7.36  | 5.17    |
| III    | (1200–1250)  | 3.6–7.76   | 5.17    |
| IV     | (1250–1300)  | 3.45–10.68 | 5.18    |
| V      | (1300–1350>) | 3.79–7.06  | 5.47    |



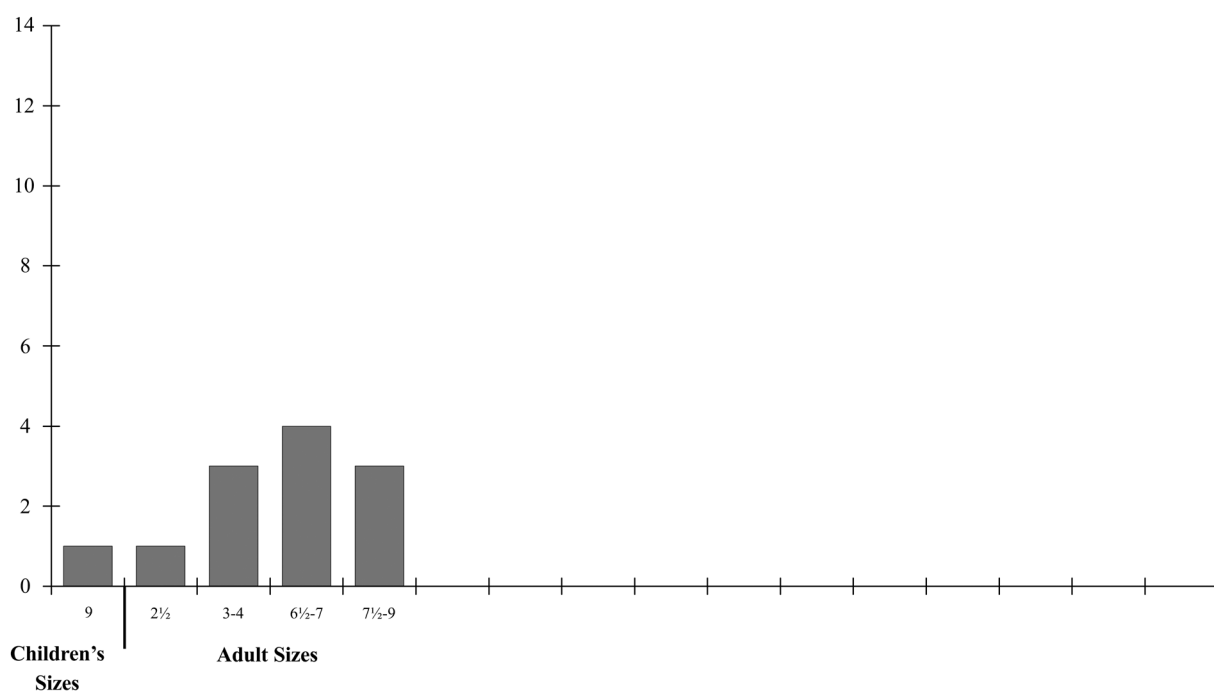
*Illus 107 Soles, Type 1.*



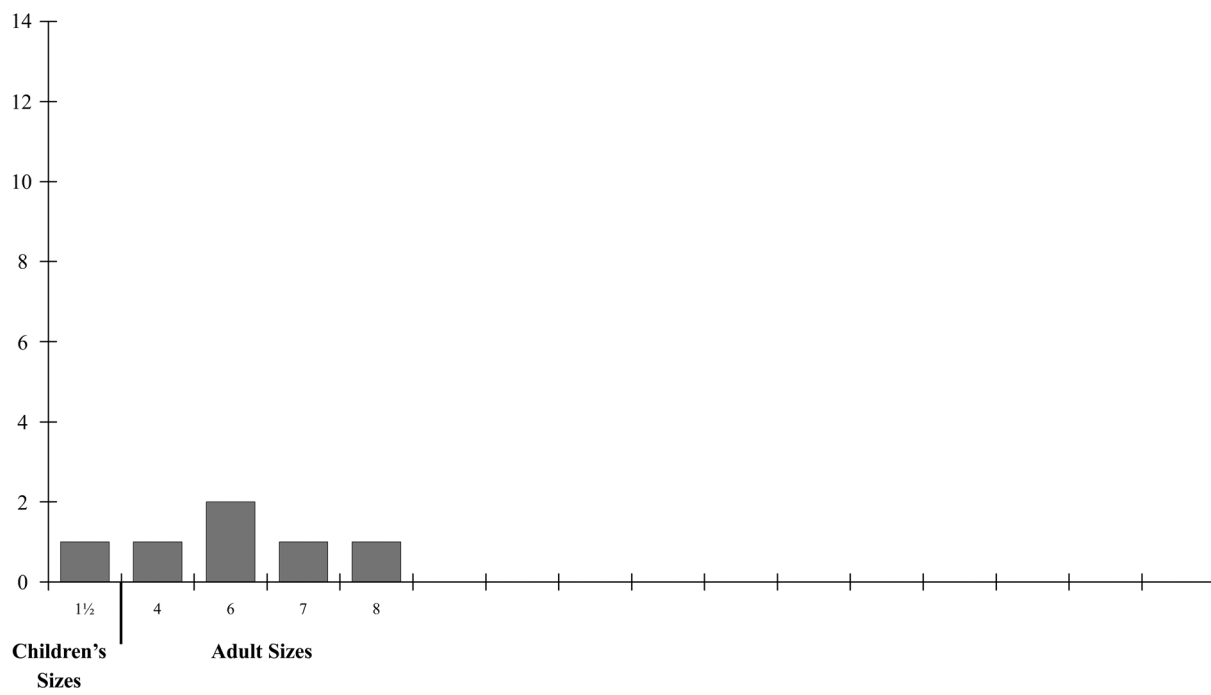
*Illus 108 Soles, Type 2.*



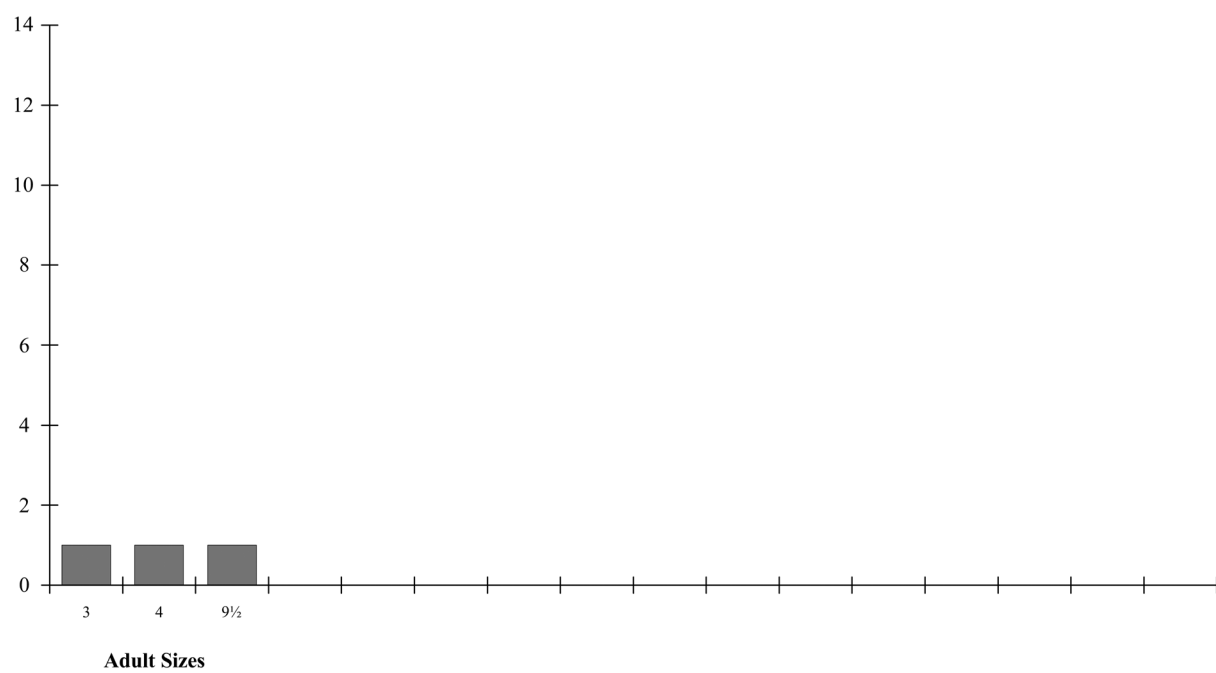
Illus 109 Soles, Type 3.



Illus 110 Soles, Type 4.

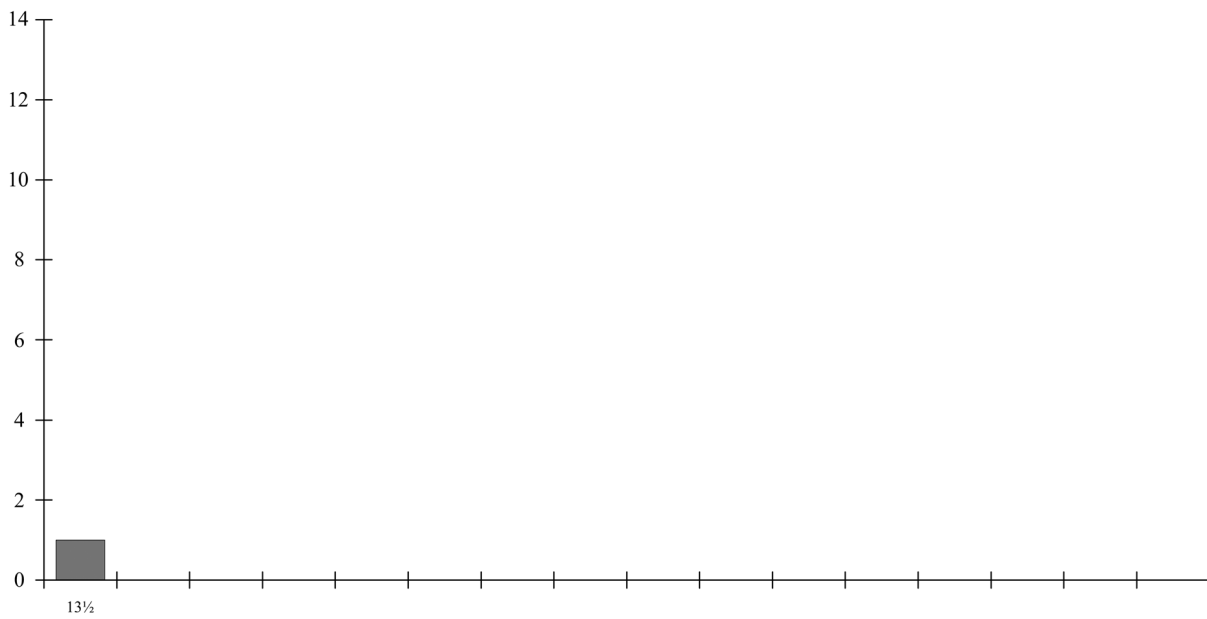


Illus 111 Soles, Type 5.



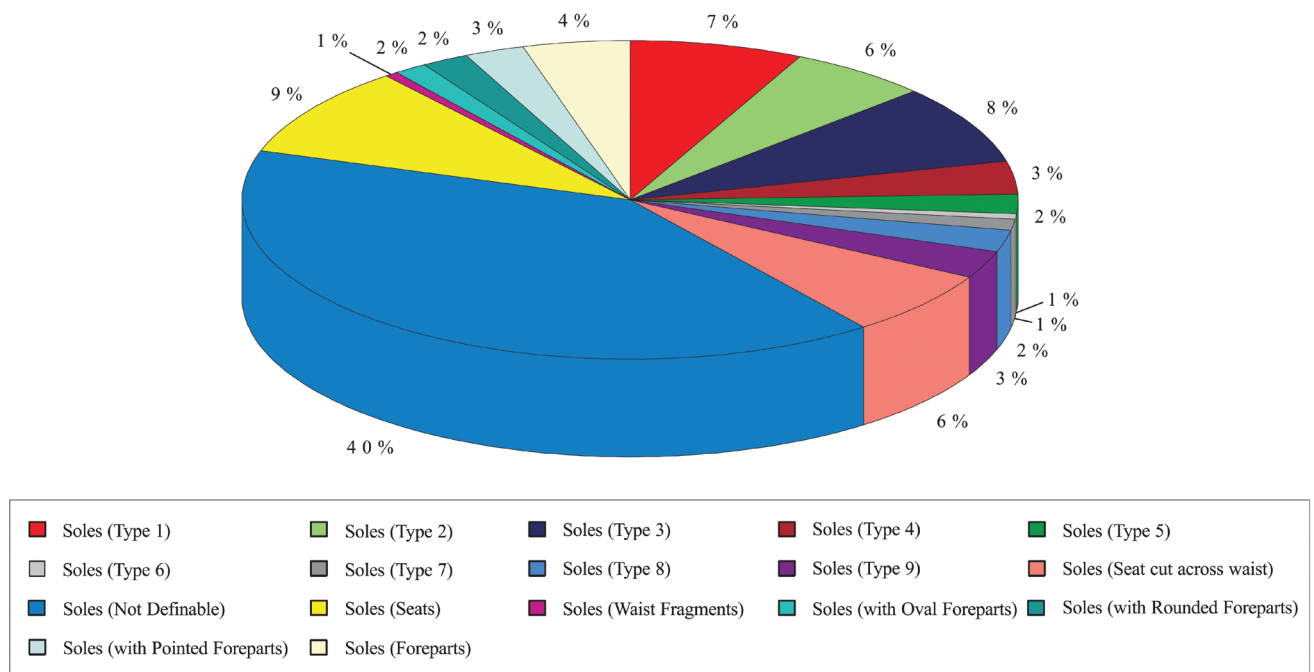
Illus 112 Soles, Type 6.



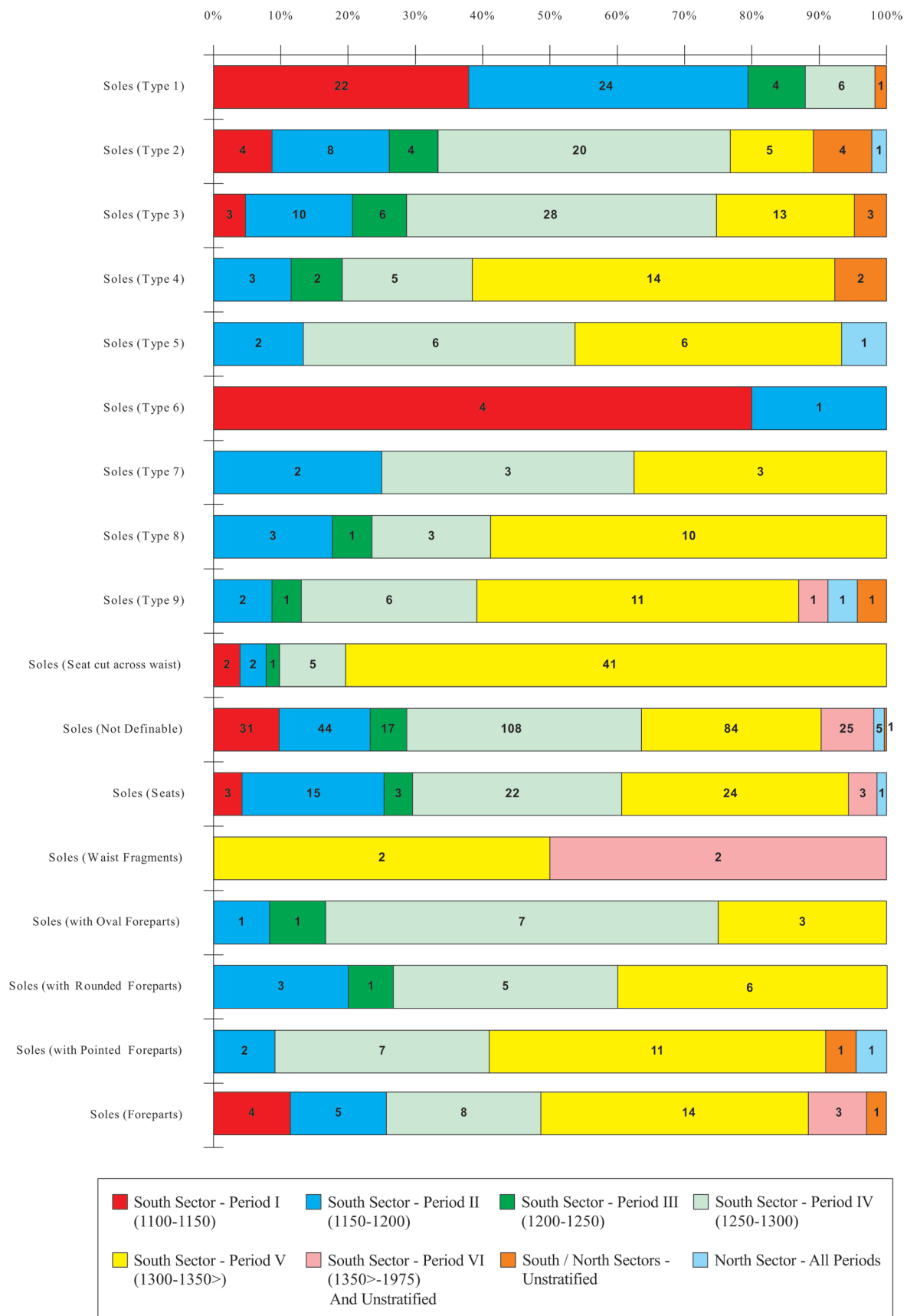


**Children's Sizes**

*Illus 113 Soles, Type 7.*



*Illus 114 Sole categories (percentage).*



**Illus 115** Number and percentage of sole categories arranged by period.

None of the 21 Period I (c1050–1250) soles had an A:C greater than 4.4. His 45 soles from Period II (c1250–1350) ranged between 3.9 and 8.0 but were normally between 5.0 and 7.0. The seven Period III (c1350–1500) soles have an A:C up to 12.00 (Clarke and Carter 1977, 355–61).

At Perth High Street, general dating trends can be observed. Type 1 soles, which are broad and straight, are mostly of 12th-century date; the more shapely Types 2 and 3 soles belong principally to the 13th century, while the pointed soles of Types 4 and 5 are mainly of 14th-century date. However, there are exceptions; Type 1 soles also occur in late 13th century contexts; Types 2 and 3 cover a 200-year span from the early 12th century; Type 4 soles date from the 12th century. Pointed soles also include straighter, broader examples of 12th-century date (Type 6). The dating of each type will be discussed in greater detail below. Here it is sufficient to note that sole shapes obviously varied in popularity; several different types were in use at the same time; choice of a particular shape would have depended not just on fashion but also on the needs and preferences of the wearer. Hence, it would be unwise to attempt a definitive dating of sole types.

This argument is supported by Allin (1981b, 9–10), who, in her discussion of the leather from Leicester, challenged the close dating of soles purely on stylistic grounds, emphasising the tendency for styles to be repeated. The above point is important, in view of Carter's use of length:waist ratios as a dating tool, as mentioned above.

This ratio has been applied to the Perth soles, taking into account both types and Periods (see Tables 10 and 11). Types 1 and 6 have virtually identical A:C values, as do Types 3, 4 and 5 (apart from one anomaly), while Type 2 values are slightly higher than those of Types 1 and 6, but lower than those of Types 3, 4 and 5. So far, Carter's theory appears to work, as Types 1 and 6 are earlier than the rest. On the other hand, the ratios do not seem to distinguish between Type 3 and the later Types 4 and 5. This is because the method is over simplified and is not sufficiently sensitive to variations in the shape and width of the forepart, and in the shape of the toe. Carter's theory also appears to work on a chronological basis, but only just. Thus the average ratio rises from 3.52 in Period I to 5.17 in Period II. However, at this point the average levels out, rising only to 5.18 in Period IV and peaking to 5.47 in Period V. Accordingly, Carter's theory only proves that, between the 12th and 14th centuries, waists became proportionately narrower. It can be used as a general guide to possible date of a sole, as it differentiates between wide and narrow waists, but it cannot be used for closer dating, as it does not distinguish between the different foreparts of similarly waisted soles.

### *Soles, Type 1*

(Illus 104, 107, 116, 117, 124, 139, 145, 146 and 147)

Type 1 consists of 58 broad and straight soles, with either no waist or only a very slight narrowing and with a straight-sided forepart, ending in a broad rounded or oval toe. Rather shapeless, they would have been easily cut out. At the High Street, they belonged predominantly to the 12th century (Periods I and II), with at least 38% (22) from Period I and 44% (26) from Period II. The distribution shows only a few concentrations, with four from Pit 5337, five from Midden 14b(b) and five from Pit 5005 in Midden 1.1c. Otherwise, these soles were found singly or in twos (Illus 104, 116, 117, 124, 139, 145, 146, 147).

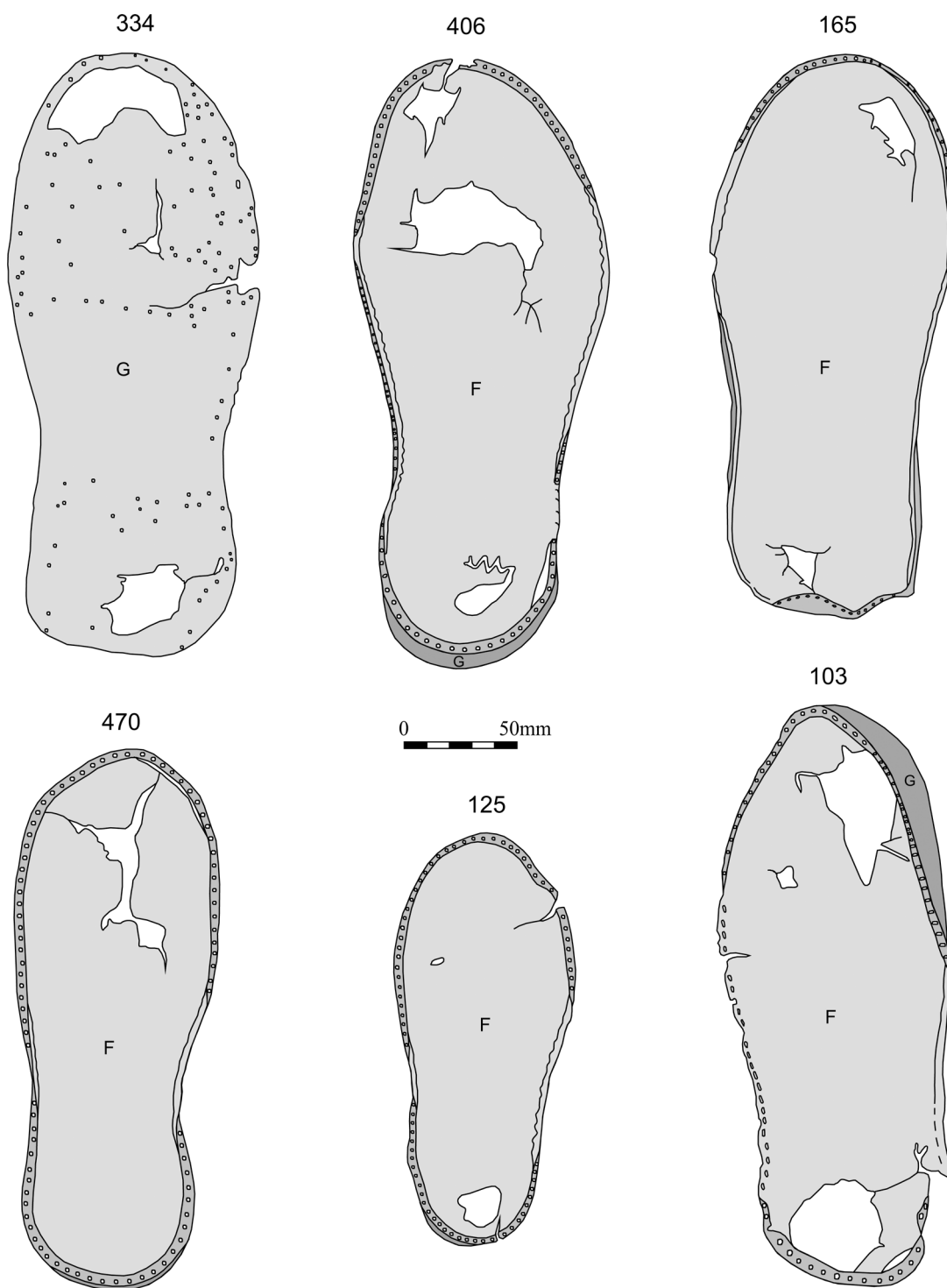
Dated parallels from other sites range between the 12th and 13th centuries and include 42 St Paul Street and Gallowgate Middle School, Aberdeen (predominantly mid 12th–early 13th centuries) (Stones 1982, 191–7; Thomas 2001a, 243); the Clarendon Hotel, Oxford (c1120–1220) (Sturdy 1958, 75–7); King's Lynn (Period I: c1050–1250) (Clarke and Carter 1977, 355–7); Durham (11th century?) (Carver 1979, 31–3, Figs 19–20); Exeter (13th century) (Friendship-Taylor 1984, 324–7, Fig 184, nos 4 and 6); Winchester (13th century) (Thornton 1990b, 612–15, Fig 163, no 1938, Fig 164, no 1948); Coppergate, York, (9th–13th centuries) (Mould et al 2003); Waterford (late 11th–13th centuries) (O'Rourke 1997, 720, Fig 18.5, 18.6); Bergen (12th–14th centuries) (Larsen 1992, 27–8) and Schleswig (12th–14th centuries) (Schnack 1992b, 38–46, Abb. II, nos 1a, 5, 2a, 6, 8).

### *Soles, Type 2* (Illus 118, 124, 137, 140, 146 and 147)

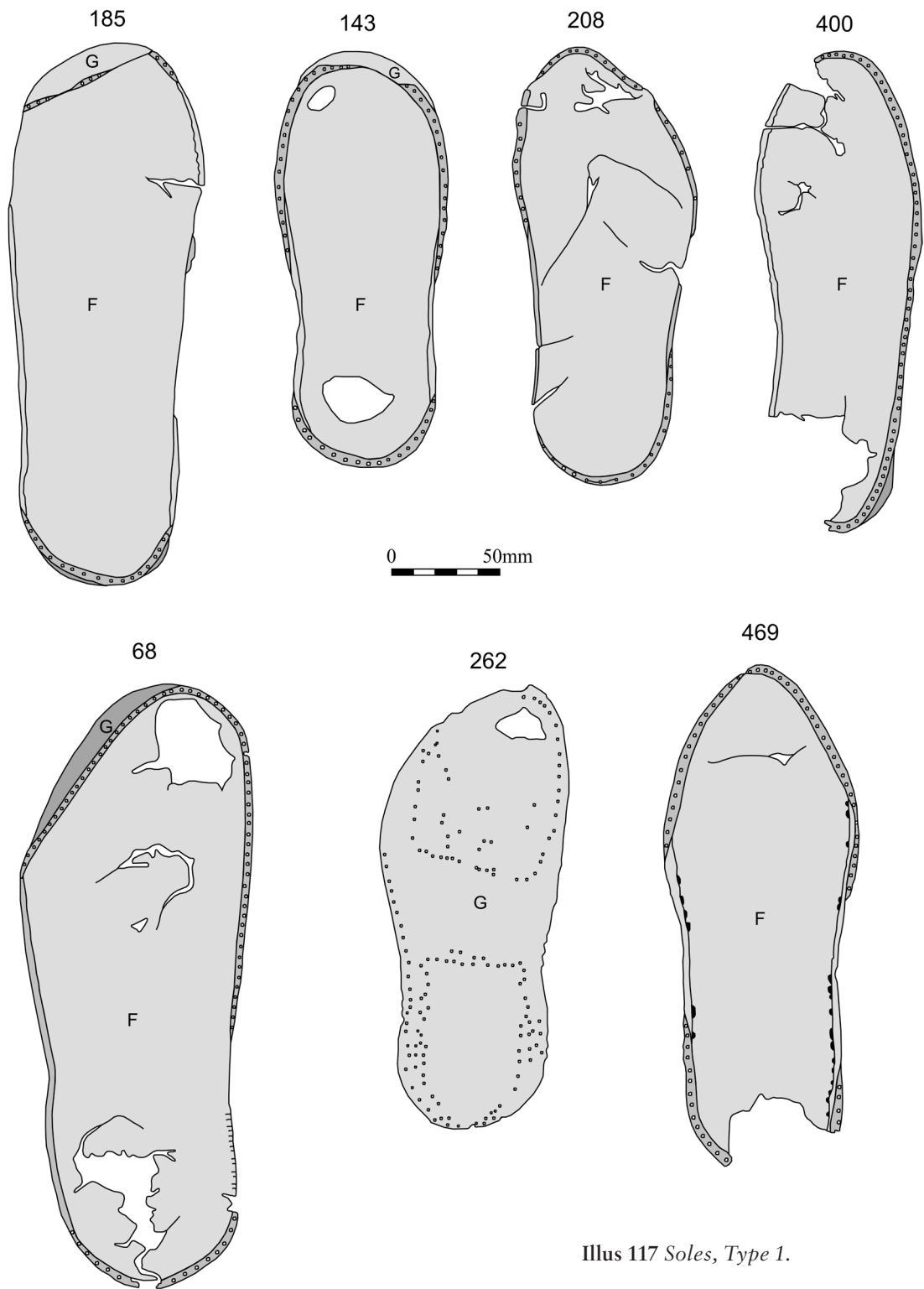
The 46 Type 2 soles are also straight, but have a more pronounced shape, with definite waists and with curved foreparts, ending in oval or rounded toes. They mainly belong to the second half of the 13th century, with 42% (20) from Period IV. They are scattered over the site in ones and twos, with only three larger groups: three from Midden 14b(b), four from Pit 7402 (MC126) and three from Midden 1.4f (Illus 118, 124, 137, 140, 146, 147). Parallels mainly from the 12th to 14th centuries are known from Kirk Close, Perth (13th–14th centuries) (Thomas 1987, 176–177); 42 St Paul Street (mid-12th–early 14th century), Aberdeen (Stones 1982, 191–7); 45–75 Gallowgate (1250–1400) and Gallowgate Middle School (12th–13th centuries), Aberdeen (Thomas 2001a, 243); King's Lynn (Period I, c1050–1250) (Clarke and Carter 1977, 355–7); London (early–late 14th century) (Tatton-Brown 1975, 157, Fig 27, nos 9, 22, 43, 51, 52; Grew and de Neergaard 1988, 62, Fig 96, 65, Fig 99); Barbican Ditch, Oxford (13th–15th centuries) (Hassall 1976, 277, Fig 18, nos 6, 9, 10); Durham (11th century?) (Carver 1979, 31–3, Fig 19, 20); Leicester (15th century) (Allin 1981a, 150–1, Fig 57.13, 14, Fig 58.18, Fig 59.28); Bristol (13th–14th centuries) (Thomas forthcoming a); Nantwich (14th

*Soles, Type 1 (Illus 104, 116, 124, 139 and 145–7).*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                               | <i>Phase</i> |
|----------------------|-------------|------------|----------------------------------------------|--------------|
| <b>South Sector</b>  |             |            |                                              |              |
| 5/A12300a            | 1           | V, VI      | MC002                                        | Ia           |
| 54/A9886a            | 1/2         | V, VI      | M2.1b                                        | Ic           |
| 58/A8635a            | 1/2         | V, VI      | M2.1b & B10, South Room–Floor/Occupation (1) | Ic,Icc       |
| 62/A8704a            | 1/2         | V, VI      | M2.1b & B10, South Room–Floor/Occupation (1) | Ic,Icc       |
| 68/A8809c            | 1/2         | V, VI      | M2.1b & B10, South Room–Floor/Occupation (1) | Ic,Icc       |
| 103/A03–0001         | 4           | V/VI       | MC017                                        | Ia–Icc>      |
| 104/A10798a          | 4           | VI         | MC018, Pit 2398                              | Ib–Id        |
| 120/A03–0005         | 4           | V          | MC023, Well 4774                             | Icc,Id       |
| 121/A03–0006         | 4           | V          | MC023, Well 4774                             | Icc,Id       |
| 125/A12297a          | 3           | V          | MC025, Pit 5337                              | (Ia–)Id      |
| 128/A12308a          | 3           | V          | MC025, Pit 5337                              | (Ia–)Id      |
| 129/A12308b          | 3           | V          | MC025, Pit 5337                              | (Ia–)Id      |
| 136/A12291           | 3           | V          | MC025, Pit 5337                              | (Ia–)Id      |
| 143/A7789b           | 2           | VI         | P5.2a                                        | Ie           |
| 165/A7256a           | 2           | VI         | M14b(b)                                      | Ie           |
| 170/A7573            | 2           | VI         | M14b(b)                                      | Ie           |
| 185/A7600a           | 2           | VI         | M14b(b)                                      | Ie           |
| 208/A7434            | 2           | VI         | M14b(b), Pit 3625                            | Ie           |
| 217/A7648a           | 2           | VI         | M14b(b), Pit 3625                            | Ie           |
| 222/A7436a           | 2           | VI         | P5.2b                                        | Ie           |
| 262/A7044Bb          | 2           | VI         | MC044b                                       | If           |
| 286/A03–0017a        | 3           | V          | MC053a                                       | If           |
| 313/A12310           | 3           | V          | MC039, Pit 2609                              | If,IIa       |
| 323/A10600           | 3           | V          | MC049, Pit 5259                              | IIa          |
| 331/A6774a           | 1/2         | VI         | P5.4a                                        | IIb          |
| 334/A03–0011         | 3           | VI         | MC054a, Pit 5267                             | (IIa)IIb     |
| 343/A6772c           | 2           | VI         | MC061                                        | IIb          |
| 353/A6773b           | 2           | VI         | MC061                                        | IIb          |
| 363/A2296a           | 1           | V          | M14a, Pit 3040                               | Id–IIc       |
| 385/A12304           | 1           | VI         | MC065, Pit 3908                              | IIa–IIc      |
| 389/A12296a          | 1           | VI         | MC065                                        | IIa–IIc      |
| 400/A12293b          | 3           | VI         | MC056, Pit 5155                              | Ia–IIc       |
| 406/A12493a          | 3           | VI         | MC056, Pit 5155                              | Ia–IIc       |
| 452/A10048a          | 4           | VI         | M1.1f, Pit 2383                              | IIb,IIc      |
| 462/A10599a          | 3           | VI         | M1.1c, Pit 5005                              | IId          |
| 469/A12285a          | 3           | VI         | M1.1c, Pit 5005                              | IId          |
| 470/A12285b          | 3           | VI         | M1.1c, Pit 5005                              | IId          |
| 471/A12285c          | 3           | VI         | M1.1c, Pit 5005                              | IId          |
| 475/A12302a          | 3           | VI         | M1.1c, Pit 5005                              | IId          |
| 491/A12290a          | 1           | VI         | MC071                                        | IIb–IIIf     |
| 504/A3447a           | 2           | VI         | M1.1d & M1.1e                                | IIb–IIIf     |
| 505/A3447b           | 2           | VI         | M1.1d & M1.1e                                | IIb–IIIf     |
| 541/A6371            | 2           | V          | B5, North Room–Floor/Occupation (2)          | IIa–IIIf     |
| 625/A9885a           | 4           | V          | M10                                          | IIb–IIIf     |
| 634/A10778a          | 3           | V          | M10                                          | IIb–IIIf     |
| 797/A10043           | 3           | VI         | M1.2, Pit 2648                               | <IIg(IIh)    |
| 798/A10366           | 3           | VI         | M1.2, Pit 2648                               | <IIg(IIh)    |
| 846/A8544            | 4           | V, VI      | M11                                          | IIIa–IIIc    |
| 922/A11639a          | 1           | VI         | MC111                                        | IIb–IIIb>    |
| 923/A11639b          | 1           | VI         | MC111                                        | IIb–IIIb>    |
| 1026/A03–0317a       | 9           | VII        | P8.1b                                        | IIIc         |
| 1878/A03–0353a       | 7           | VII        | MC126, Pit 7402                              | IVaa,IVb     |
| 2569/A03–0329a       | 7           | VII        | B18 (Phase 1/2)                              | IVaa,IVb     |
| 2651/A03–0316a       | 7           | VII        | B18 (Phase 2a), Pit 7324                     | IVaa,IVb     |
| 2652/A03–0316b       | 7           | VII        | B18 (Phase 2a), Pit 7324                     | IVaa,IVb     |
| 3066/A8668a          | 3           | VI         | M1.4d                                        | IVb,IVc      |
| 3599/A4329b          | 3           | VI         | M1.4e                                        | IVcc(Va)     |
| 5737/A12307a         | 1           | VI, VII    | Unstratified                                 | u/s          |



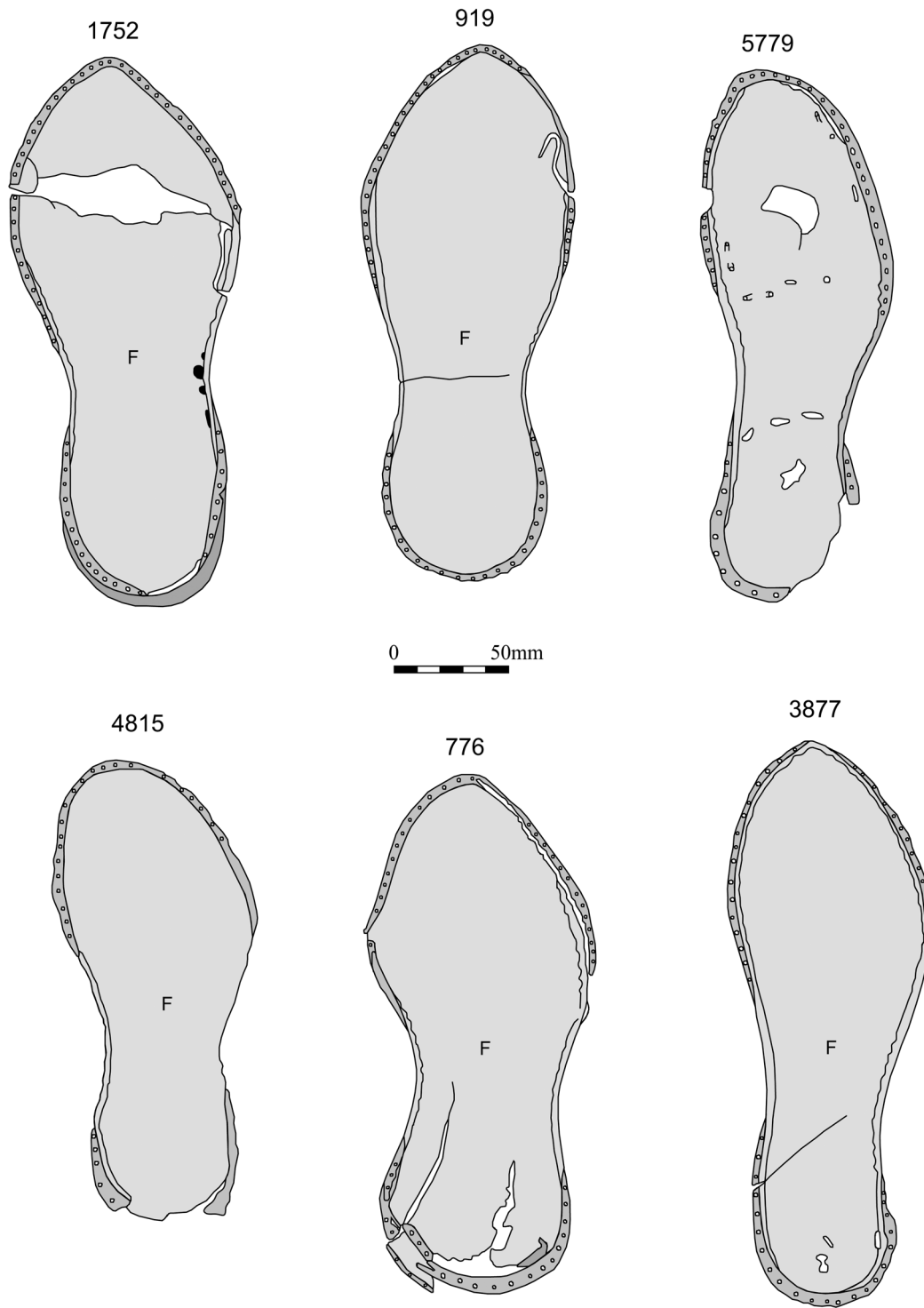
Illus 116 Soles, Type 1.



Illus 117 Soles, Type 1.

*Soles, Type 2 (Illus 118, 124, 137, 140 and 146–7).*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                   | <i>Phase</i>   |
|----------------------|-------------|------------|------------------------------------------------------------------|----------------|
| <b>South Sector</b>  |             |            |                                                                  |                |
| 147/A11595a          | 3           | VI         | MC037a, Pit 5157                                                 | Ia–Ie          |
| 173/A7580b           | 2           | VI         | M14b(b)                                                          | Ie             |
| 175/A7589a           | 2           | VI         | M14b(b)                                                          | Ie             |
| 176/A7589b           | 2           | VI         | M14b(b)                                                          | Ie             |
| 306/A12635b          | 4           | V          | B16b, Pit 4726                                                   | Id–IIa         |
| 352/A6773a           | 2           | VI         | MC061                                                            | IIb            |
| 453/A10048b          | 4           | VI         | M1.1f, Pit 2383                                                  | IIb,IIc        |
| 472/A12285d          | 3           | VI         | M1.1c, Pit 5005                                                  | IIId           |
| 611/A9879a           | 4           | V          | M10                                                              | IIId–IIg       |
| 776/A9371b           | 3           | VI         | M1.2, Pit 2648                                                   | <IIg(IIh)      |
| 897/A11260a          | 3           | VI         | M1.3                                                             | IIi            |
| 919/A12536a          | 4           | VI         | M1.3                                                             | IIi            |
| 933/A03–0327a        | 9           | VII        | P8.0                                                             | IIIa,IIIb      |
| 1103/A03–0287a       | 9           | VII        | P8.1c                                                            | IIIc           |
| 1130/A03–0263a       | 9           | VII        | M15                                                              | IIId           |
| 1144/A4817a          | 1           | V          | M12                                                              | IIg–IIIc(–IVa) |
| 1309/A11215          | 3           | V          | P2.2b                                                            | IVa            |
| 1659/A03–0417a       | 7           | VI         | P3.3                                                             | IVa–IVb        |
| 1743/A03–0347a       | 7           | VII        | MC126, Pit 7402                                                  | IVaa,IVb       |
| 1752/A03–0350a       | 7           | VII        | MC126, Pit 7402                                                  | IVaa,IVb       |
| 1809/A03–0374a       | 7           | VII        | MC126, Pit 7402                                                  | IVaa,IVb       |
| 1879/A03–0353b       | 7           | VII        | MC126, Pit 7402                                                  | IVaa,IVb       |
| 2361/A03–0331a       | 7           | VI         | M1.4f                                                            | IVc            |
| 2364/A03–0332a       | 7           | VI         | M1.4f                                                            | IVc            |
| 2481/A03–0392c       | 7           | VI         | M1.4f                                                            | IVc            |
| 2714/A03–0311a       | 7           | VII        | B18 (Phase 2a), External (1), Pit 7314                           | IVb            |
| 2747/A03–0297a       | 7           | VII        | B18 (Phase 2a), North Room & Hall–<br>Construction (1)           | IVb            |
| 2754/A03–0288a       | 7           | VII        | B18 (Phase 2b), North Room, Hall & Hall<br>South–Occupation (10) | IVb            |
| 2760/A03–0092        | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall<br>SouthOccupation (10)  | IVb            |
| 2775/A03–0124a       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall<br>SouthOccupation (10)  | IVb            |
| 2776/A03–0124b       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall<br>SouthOccupation (10)  | IVb            |
| 2872/A4894           | 3           | V          | MC155                                                            | IVb,IVc        |
| 3067/A8668b          | 3           | VI         | M1.4d                                                            | IVb,IVc        |
| 3335/A03–0261a       | 7           | VII        | P8.3 & M9a, PW7267                                               | IVc,IVcc       |
| 3419/A03–0217a       | 7           | VII        | B18 (Phases 2a & 2b) & M9a, PH7237                               | (IVb)IVc,IVcc  |
| 3598/A4329a          | 3           | VI         | M1.4e                                                            | IVcc(Va)       |
| 3877/A03–0120b       | 7           | VI, VII    | M1.5b                                                            | Vaa            |
| 4493/A4289a          | 3           | V, VI      | M1.5a                                                            | Va,Vaa(VI)     |
| 4815/A6237a          | 3           | V, VI      | M1.5a                                                            | Va,Vaa         |
| 5241/A03–0216        | 7           | VII        | B53 (Phase 1), Central Area– T7152                               | Vb             |
| 5256/A03–0079        | 7           | VII        | B53 (Phase 2), North Area–Occupation (7b)                        | Vbb            |
| 5738/A12307b         | 1           | VI, VII    | Unstratified                                                     | u/s            |
| 5768/A9821a          | 3/4         | V, VI      | Unstratified                                                     | u/s            |
| 5779/A0800a          | 3/4         | V, VI      | Unstratified                                                     | u/s            |
| 5792/A0817a          | 3/4         | V, VI      | Unstratified                                                     | u/s            |
| <b>North sector</b>  |             |            |                                                                  |                |
| 5942/A0807a          | 5, A        |            | Lade (4)                                                         | 6–12(b–e)      |



Illus 118 Soles, Type 2.



century?) (Hutchings 1983, 81–2, Fig 16, L 16); Chapel Lane Staith, Hull (late 13th–early 14th century) (Jackson 1979, 47–57, Fig 22, 7, 10); Coppergate, York (12th–14th centuries) (Mould et al 2003); Waterford (12th–13th centuries) (O'Rourke 1997, 720, Fig 7); Bergen (late 12th–late 15th centuries) (Larsen 1992, 27–28, Type II) and Schleswig (12th century) (Schnack 1992b, 38–46, Abb. II, Form II, Fig 3 no 14).

### *Soles, Type 3* (Illus 119, 120, 145 and 147)

Type 3 soles, of which there are 63, are mostly of a natural foot shape with pronounced waists and curved foreparts, inclined inwards slightly, and ending in oval toes. Two unusual soles have had pieces cut out. Cat No 1314/A7989a (Illus 120) has a long narrow hole, pointed at each end, with an edge–flesh stitching channel up each edge, suggesting that a worn sole had been patched in an extraordinary way. Cat No 4533/A6400 (Illus 120) is a very worn sole that has had triangles cut out of the thinnest part of seat and forepart. It is possible that an apprentice made these cuts; on the other hand, the triangles may have been deliberately cut by someone requiring thin and supple pieces of leather. A piper informs me that he requires very thin pieces of leather for his bagpipes; he cuts these from old shoes (Information from Mr Duncan McDiarmid, Castle Menzies Farm, Weem, Aberfeldy, Perthshire; Illus 119, 120, 141, 145, 147).

Type 3 soles range in date from the 12th to the 14th centuries, but belong predominantly to the second half of the 13th century, with 46% (28) from Period IV. Again, they are mainly distributed singly or in twos, but have a few concentrated groups, with five from Midden 1.2, Pit 2648, three from Midden 1.3, three from Pit 7402 (MC126), four from Midden 1.4f, five from Building 18 (Phase 2), three from Building 1 and three from Midden 8a. This was a very common medieval shape of sole, with dated parallels mainly from the 13th and 14th centuries, from Kirk Close, Perth (13th–14th centuries) (Thomas 1987, 176–7); Gallowgate Middle School (12th–13th centuries) and 45–75 Gallowgate (1250–1375), Aberdeen (Thomas 2001a, 243); Weoley Castle, Birmingham (13th century) (Oswald 1963, 132); Low Petergate, York (12th–14th centuries) (Goodfellow and Thornton 1972, 97–104); London (early 13th century; early–mid 14th century) (Tatton-Brown 1975, 154–8; Grew and de Neergaard 1988, 56, Fig 84); King's Lynn (c1250–1350) (Clarke and Carter 1977, 357–60); Barbican Ditch, Oxford (13th–15th century) (Hassall 1976, 275–8); Queen Street, Newcastle (mid-13th–mid-14th century) (Dixon 1988, Fig 35, nos 203–205); Leicester (early–mid-14th century) (Allin 1981a, 147, Fig 55.1); Exeter (14th century?) (Friendship-Taylor 1984, 326, 329, Fig 185, 28, 40); Winchester (late 11th–mid-13th centuries) (Ottaway 1982, 128–30); Sandwell Priory (13th–15th centuries) (Thomas 1991, 104); Bristol Bridge (13th–14th centuries) (Thomas forthcoming a); Plymouth (13th–15th centuries) (Gaskell-Brown 1986, Fig 17.1);

Nantwich (mid 14th-century?) (Hutchings 1983, 80–2, Fig 16, L12, L14); Chapel Lane Staith, Hull (late 13th century–1350) (Jackson 1979, Fig 22, 11, 12); Hull (late 13th–early 14th centuries) (Armstrong 1977, 51–60, Fig 20, 3–5, 13); Beverley (12th–13th centuries) (Armstrong 1987, Fig 23, nos 27–28); Coppergate, York (13th–14th centuries) (Mould et al 2003); Waterford (13th century) (O'Rourke, 1997, 720 Fig 18.5, 18.7); Bergen (late 12th and mid-13th–early 15th centuries) (Larsen 1992, 28) and Schleswig (Form 9: 13th–14th centuries; Form 12: 12th century) (Schnack 1992b, 38–46, Abb. II, Form 9 and 12, Fig 3, nos 9–11, 15–16).

Less well dated examples come from Minster Pool, Lichfield (Gould and Thornton 1973, 53–7); Clare Castle, Suffolk (Thornton 1959, 136–52); Oakham Castle, Rutland (Gathercole 1958, 31–3); Parliament Street, York (Tweddle 1986, 242–53); Whithorn (Nicholson 1997); Redcliffe Street, Bristol (Thomas forthcoming b) and Jedburgh (Thomas 1995).

### *Soles, Type 4* (Illus 121, 124 and 145)

The 26 soles of Type 4 are slender and elegant, with narrow waists and gently curved pointed foreparts. They fall into two groups, 8 symmetrical with a central point, and 17 asymmetrical, but not as markedly as those of Type 5. They date from the mid-12th to the mid-14th centuries, with 53% (14) belonging to the 14th century (Period V). The majority (10) of the asymmetrical variants came from 14th century contexts (Period V). Otherwise, the date ranges are very similar. As with the other types, they were mostly found singly, with four small groups: two from Midden 1.2, Pit 2648; two from Building 18 (Phase 2); three from Midden 1.5b; two each from Middens 1.5a and 8a; and two from Building 53 (Phase 1 (Illus 121, 124, 139, 145).

Very similar soles, of late 14th- to early 15th-century date were found at Threave Castle, Galloway (Thomas 1981, 123–124). Other published parallels, chiefly of 13th- to 14th-century date, include Gallowgate Middle School, Aberdeen (12th–13th centuries); King's Lynn (c1350–1500); Barbican Ditch, Oxford (13th–15th centuries); Dover (early 14th century); Southampton (late 13th century); Leicester (early 14th–15th centuries); London (late 14th century); Coppergate, York (12th–14th centuries); Waterford (13th century) and Bristol Bridge (13th–14th centuries) (Thomas 2001a, 243; Clarke and Carter 1977, 360–1; Hassall 1976, 277–8, Fig 18.8; Mynard 1969, 101–4, Fig 20; Platt and Coleman-Smith 1975, 296–8, Fig 261, nos 250–254; Allin 1981a, 147–148; Grew and de Neergaard 1988, 67, Fig 101; Mould et al 2003; O'Rourke 1997, 720, Fig 18.5, 18.6; Thomas forthcoming a).

### *Soles, Type 5* (Illus 122)

Thirteen of the 15 Type 5 soles recovered also have pointed toes and are similar to those of Type 4 but are less slender, with broader, more curved foreparts.

*Soles, Type 3 (Illus 119, 120, 124, 145 and 147).*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i> |
|----------------------|-------------|------------|---------------------------------------------------------------|--------------|
| <b>South Sector</b>  |             |            |                                                               |              |
| 116/A03-0002a        | 4           | V, VI      | MC023                                                         | Icc,Id       |
| 156/A7787c           | 1/2         | VI         | B6 (Phase 1), South Room-Floor (1)                            | Ie           |
| 177/A7589c           | 2           | VI         | M14b(b)                                                       | Ie           |
| 502/A03-0003a        | 3           | V          | P2.1a                                                         | IIb-IIf      |
| 740/A9144            | 3           | VI         | M1.2, Pit 2648                                                | <IIg(IIh)    |
| 774/A9365            | 3           | VI         | M1.2, Pit 2648                                                | <IIg(IIh)    |
| 783/A9372a           | 3           | VI         | M1.2, Pit 2648                                                | <IIg(IIh)    |
| 788/A9546a           | 3           | VI         | M1.2, Pit 2648                                                | <IIg(IIh)    |
| 795/A9884a           | 3           | VI         | M1.2, Pit 2648                                                | <IIg(IIh)    |
| 831/A8518a           | 4           | V, VI      | M11                                                           | IIh          |
| 857/A8527a           | 4           | VI         | M1.3                                                          | IIi          |
| 866/A8634a           | 3           | VI         | M1.3                                                          | IIi          |
| 908/A11235b          | 3           | VI         | M1.3                                                          | IIi          |
| 937/A11644           | 1           | VII        | MC112b                                                        | IIIb         |
| 1035/A8009a          | 3           | V          | MC117, Pit 4695                                               | IIe-IIIc     |
| 1095/A03-0270a       | 9           | VII        | P8.1c                                                         | IIIc         |
| 1106/A03-0304a       | 9           | VII        | P8.1c                                                         | IIIc         |
| 1195/A9883           | 3           | V          | M6b                                                           | IIg-IIIId    |
| 1215/A9373a          | 3           | V          | M6b                                                           | IIg-IIIId    |
| 1300/A8810a          | 3           | V          | P2.2b                                                         | IVa          |
| 1314/A7989a          | 4           | V          | MC143                                                         | IVaa         |
| 1387/A8021a          | 3           | V/VI       | MC144, WW2221                                                 | <IIIId-IVaa  |
| 1426/A6187a          | 4           | V          | MC156                                                         | IVaa         |
| 1753/A03-0350b       | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1754/A03-0350c       | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1991/A03-0362a       | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 2333/A03-0291a       | 7           | VI         | M1.4f                                                         | IVc          |
| 2338/A03-0308a       | 7           | VI         | M1.4f                                                         | IVc          |
| 2339/A03-0308b       | 7           | VI         | M1.4f                                                         | IVc          |
| 2340/A03-0308c       | 7           | VI         | M1.4f                                                         | IVc          |
| 2713/A03-0299        | 7           | VII        | B18 (Phase 2a), External (1), Pit 7314                        | IVb          |
| 2722/A03-0307a       | 7           | VII        | B18 (Phase 2a), External (1), Pit 7314                        | IVb          |
| 2725/A03-0413a       | 7           | VII        | B18 (Phases 2a & 2b), T7385                                   | IVb          |
| 2750/A03-0293        | 7           | VII        | B18 (Phase 2a), North Room & Hall Construction (2)            | IVb          |
| 2761/A03-0104a       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South-Occupation (10) | IVb          |
| 2985/A10521          | 3           | V          | MC155, Pit 2691                                               | IVb,IVc      |
| 3033/A3459           | 3           | VI         | M1.4d                                                         | IVb,IVc      |
| 3048/A8335           | 3           | VI         | M1.4d                                                         | IVb,IVc      |
| 3125/A03-0253a       | 7           | VI         | M1.4h                                                         | IVc          |
| 3239/A9888a          | 3           | V, VI      | M1.4c                                                         | IIIa-IVcc    |
| 3240/A9888b          | 3           | V, VI      | M1.4c                                                         | IIIa-IVcc    |
| 3246/A6195           | 4           | V, VI      | M1.4b                                                         | IVb-IVcc     |
| 3321/A03-0066a       | 9           | VII        | P8.3                                                          | IVc,IVcc     |
| 3382/A03-0249a       | 7           | VII        | M9a                                                           | IVc,IVcc     |
| 3405/A03-0052a       | 9           | VII        | M9a                                                           | IVc,IVcc     |
| 3501/A03-0186a       | 10          | VIII       | M9b(b)                                                        | IVc,IVcc     |
| 3593/A6220a          | 3           | VI         | M1.4e                                                         | IVcc(Va)     |
| 3707/A03-0134a       | 7           | VI         | B34, Occupation                                               | Va           |
| 3719/A03-0160c       | 7           | VI         | B34, Courtyard                                                | Va           |
| 3873/A03-0116b       | 7           | VI, VII    | M1.5b                                                         | Vaa          |

(continued)

*Soles, Type 3 (Illus 119, 120, 124, 145 and 147) (continued).*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>              | <i>Phase</i> |
|----------------------|-------------|------------|-----------------------------|--------------|
| 4123/A03-0214a       | 7           | VII        | P8.4                        | Va           |
| 4228/A6419           | 3           | V          | B1(a), T2789                | IVcc, Va     |
| 4229/A6373           | 3           | V          | B1(a), South Room, Pit 2460 | IVcc, Va     |
| 4248/A4943c          | 2           | V          | B1(b), Demolition           | Va           |
| 4284/A4901b          | 1           | V, VI      | M5a                         | IVb-Vc       |
| 4528/A6198a          | 3           | V, VI      | M1.5a                       | Va, Vaa(VI)  |
| 4533/A6400           | 3           | V, VI      | M1.5a                       | Va, Vaa(VI)  |
| 4886/A03-0128a       | 7           | VII        | M8a                         | Va, Vaa      |
| 4887/A03-0128b       | 7           | VII        | M8a                         | Va, Vaa      |
| 5020/A03-0212a       | 7           | VII        | M8a                         | Va, Vaa      |
| 5772/A12574b         | 3/4         | V, VI      | Unstratified                | u/s          |
| 5807/A0811a          | 3/4         | V, VI      | Unstratified                | u/s          |
| 5871/A03-0008        | 7-10        | VI-VIII    | Unstratified                | u/s          |

Another two (Cat Nos 5335/A03-0018a, 5908/A0113) have lost their toes but their overall shape is similar. They are almost all of mid-13th- to mid-14th-century date, with two examples from Midden 1.4i and Path 8.4, one from Midden 1.4e and one each from Middens 5a, 3a and 7 (Illus 122).

Published parallels, ranging in date from the 13th to the 15th centuries, include London (early 13th century, mid-late 14th century); Leicester (14th-15th centuries); Exeter (mid 14th-15th centuries); Sandwell Priory (15th century); Bayham Abbey (late 15th century-1525); Plymouth (13th-15th centuries); Scale Lane/Lowgate, Hull (late 14th century); Barbican Ditch (13th-15th centuries), Castle Moat (13th/14th-17th/18th centuries), Oxford; Coppergate, York (13th-14th centuries); Waterford (13th century); Amsterdam (1275-1350); Bergen (Type III?: 14th-15th centuries) and Schleswig (Form 13: 12th century) (Grew and de Neergaard 1988, 57-66, Fig 90, 98, 100; Allin 1981a, 148-9, Fig 56, 9, Fig 57, 11, 12, Fig 60, 33; Friendship-Taylor 1984, 324-7, Fig 184, nos 12 and 19, Fig 185, 27; Thomas 1991, 104, nos 14-15; Jones and Thornton 1983, Fig 53, nos 4 and 5; Gaskell-Brown 1986, Fig 17, nos 8 and 9; Armstrong 1980, 68, nos 68-69; Hassall 1976, 276-7, Fig 18, 2, 288-289, Fig 22, 24; Mould et al 2003; O'Rourke 1997, 720, Fig 18.5; Baart et al 1977, 74, 78; Larsen 1992, 28; Schnack 1992b, 38-46, Abb. II, Fig 4, nos 1-3).

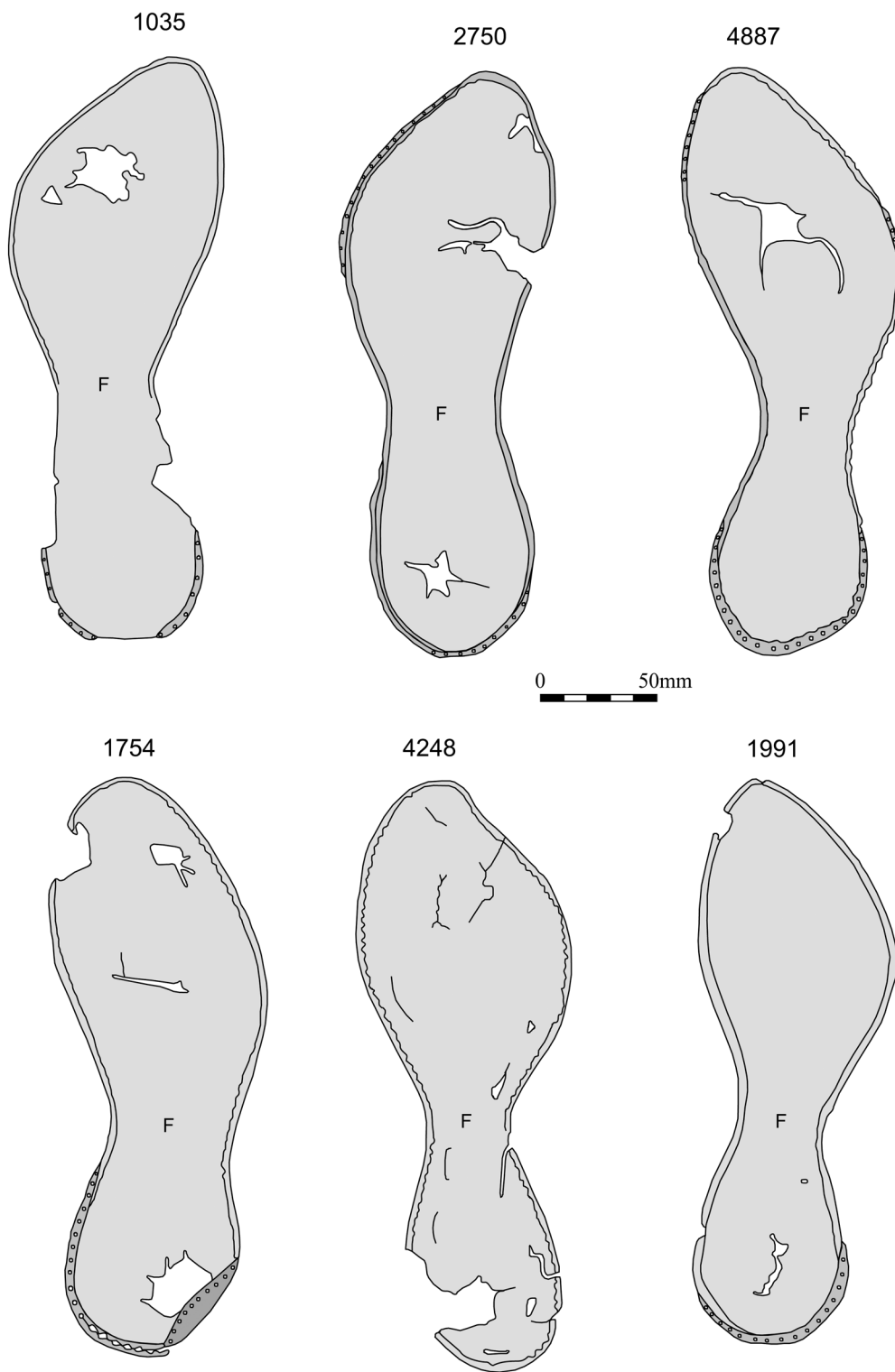
*Soles, Type 6 (Illus 122)*

The five Type 6 soles are broad and straight, with a central point. Cat Nos 1/A12303a, 28/A10800b and 43/A8525 are almost symmetrical, with only a very slight narrowing at the waist. Despite their points, these soles bear more resemblance to those of Type 1 than to other pointed soles. Cat Nos 6/A12300b and 314/A10365 are asymmetrical, and have more marked waists, although these are still fairly wide. The point of Cat No 314/A10365 has been turned outwards slightly. It may have

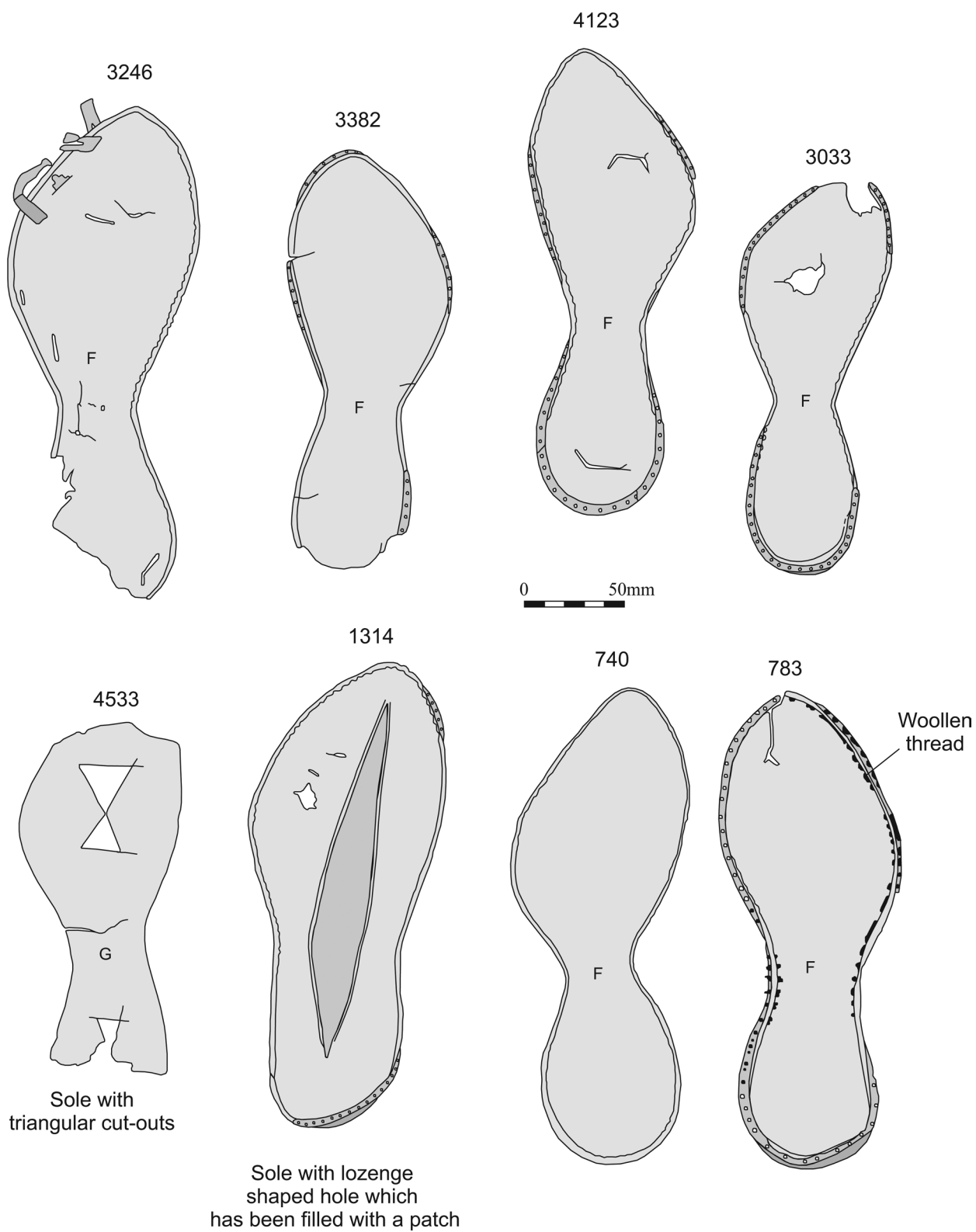
been stuffed, possibly with moss, although strands of hemp were found in a pointed toe from Plymouth (Gaskell-Brown 1986, Fig 17, 13). Cat No 6/A12300b ends in a pointed extension, which may also have been stuffed. All examples of this category were recovered from 12th century deposits. Cat No 314/A10365a was discovered within a context group that had been laid down shortly after 1150, the other four examples all dated from the first half of the 12th century. They include some of the earliest leatherwork from the High Street (Illus 122).

There are few published parallels for either variant. Those for Type 6a include York (Coppergate and Swinegate, 10th-14th centuries; Low Petergate, 12th-14th centuries; and Schleswig Forms 3a, 4: 11th-12th centuries; Form 7: 12th-13th centuries (Mould et al 2003; Carlisle 1998, unpublished archive report; Goodfellow and Thornton 1972, 100, Fig 23, no 6; Schnack 1992b, 38-46, Abb. II, Fig 2, nos 10-15, Fig 3, nos 5 and 6).

A sole very similar to Cat No 314/A10365a was found at Whithorn, dating to the second half of the 12th century (Nicholson 1997, 504, Fig 10.141.LR 19.6). Other close parallels from Brooks Wharf, Upper Thames Street, London, were accompanied by uppers with vamps cut with V-notches exactly matching the points on the soles (12th-14th centuries) (Thomas forthcoming c). Parallels for Cat No 6/A12300b include Durham (11th century) and London (early-mid-12th century) (Carver 1979, 31-3, Fig 19.1655/750216(a); Grew and de Neergaard 1988, 52, Fig 83; Pritchard 1991, 230, 234, Fig 3.118). According to Pritchard, these shoes with exaggerated points resemble those described by the chronicler Orderic Vitalis; these, he claimed, were imitations by the lower classes of 'shoes with pointed toes curled like scorpions' tails and rams' horns' which were popular at the court of William Rufus in the last decade of the 11th century (Pritchard 1991, 230).



Illus 119 Soles, Type 3.



Illus 120 Soles, Type 3.

*Soles, Type 4 (Illus 117, 121, 124 and 145).*

S=symmetrical; As=asymmetrical

| <i>Cat/Accession</i> | <i>S/As</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i> |
|----------------------|-------------|-------------|------------|---------------------------------------------------------------|--------------|
| <b>South Sector</b>  |             |             |            |                                                               |              |
| 325/A03-0009b        | S           | 3           | V          | MC049, Pit 5259                                               | IIa          |
| 811/A11219b          | As          | 3           | VI         | M1.2, Pit 2648                                                | <IIg(IIh)    |
| 821/A11221a          | S           | 3           | VI         | M1.2, Pit 2648                                                | <IIg(IIh)    |
| 1042/A8546           | As          | 3           | V          | MC117, Pit 4695                                               | IIe-IIIc     |
| 1206/A8680a          | S           | 3           | V          | M6b                                                           | IIg-III d    |
| 1553/A03-0422a       | S           | 7           | VII        | MC130                                                         | <IIIc-IVaa   |
| 1804/A03-0367a       | As          | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 2365/A03-0332b       | As          | 7           | VI         | M1.4f                                                         | IVc          |
| 2728/A03-0295a       | As          | 7           | VII        | B18 (Phases 2a & 2b), WW7308                                  | IVb          |
| 2779/A03-0232        | As          | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South-Occupation (10) | IVb          |
| 3704/A9273b          | S?          | 3           | VI         | B34, Floor                                                    | Va           |
| 3858/A03-0047        | As          | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3863/A03-0067a       | As          | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3896/A03-0132a       | As          | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 4124/A03-0214b       | As          | 7           | VII        | P8.4                                                          | Va           |
| 4530/A6245a          | As          | 3           | V, VI      | M1.5a                                                         | Va,Vaa(VI)   |
| 4811/A6189           | S?          | 3           | V, VI      | M1.5a                                                         | Va,Vaa       |
| 4827/A03-0106        | As          | 7           | VII        | M8a                                                           | Va,Vaa       |
| 5113/A03-0151a       | S           | 7           | VII        | M8a, Pit 7183                                                 | Va,Vaa       |
| 5238/A03-0097        | As          | 7           | VII        | B53 (Phase 1), Central Area-Occupation (2a)                   | Vb           |
| 5240/A03-0090        | As          | 7           | VII        | B53 (Phase 1), Central Area-Occupation (3c)                   | Vb           |
| 5250/A03-0029a       | As          | 7           | VII        | P8.5                                                          | Vb,Vbb       |
| 5301/A4917a          | n-c         | 4           | V, VI      | M3a                                                           | Vb-Vc        |
| 5608/A03-0065        | As          | 10          | VIII       | MC174, Pit 7013                                               | (Va-)Vd(Vdd) |
| 5739/A12307c         | S           | 1           | VI, VII    | Unstratified                                                  | u/s          |
| 5810/A12487a         | As          | 2           | V, VI      | Unstratified                                                  | u/s          |

*Soles, Type 7 (Illus 123)*

The eight Type 7 soles are of a natural shape, similar to those of Types 3 and 5, but with an edge-flesh stitching channel across the tread, or middle of the forepart, for the attachment of a separate toe-piece. These seams are most probably not part of the original construction but repair measures taken when the toes had worn. This argument is further supported by the fact that sole Cat No 5599/A4352a also has an edge-flesh stitching channel across the middle of the seat. No separate toe-pieces have survived. It is also possible that these soles are examples of the manufacture of new shoes from old. 75% (6) of these soles are of mid-13th to mid-14th-century date (Periods IV and V); the others came from a pit that dated from the third quarter of the 12th century (Illus 123).

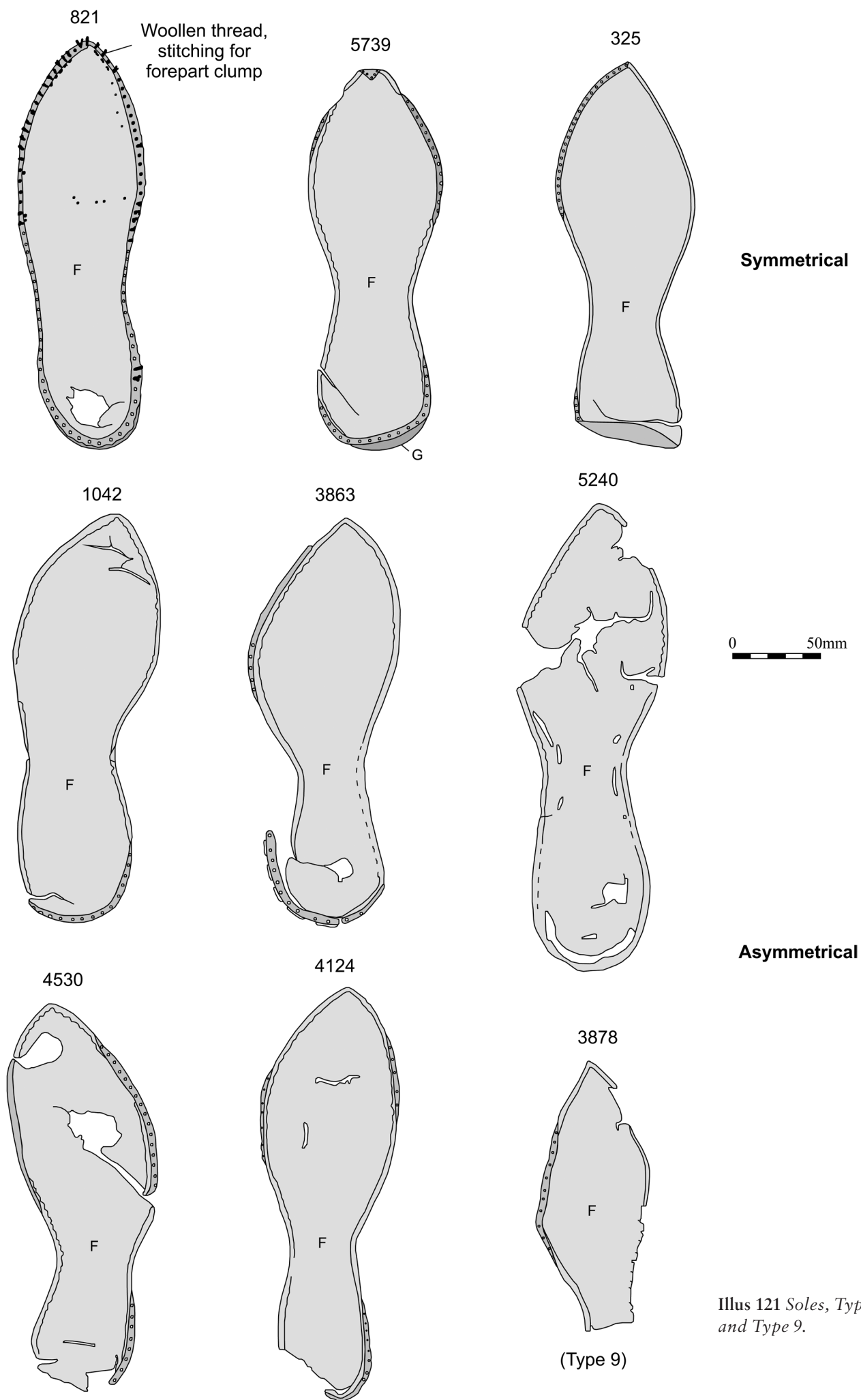
The only published parallels are from Low Petergate, Coppergate and Swinegate, York (12th-14th centuries), King Edward Street, Perth and Sewer Lane, Hull (late 13th-early 14th centuries). The last example consists of a three-part sole, mid and rear forepart and toe of forepart (Goodfellow and Thornton 1972, 102, Fig 25 no 28; Mould et al 2003; Carlisle 1998, unpublished archive report; Thomas and Walsh 1995, 971; Armstrong 1977, 51-60).

*Soles, Types 8 and 9 (Illus 123 and 145)*

Types 8 and 9 consist of 17 seats and 23 foreparts, respectively, each sewn across the waist with an edge-flesh stitching channel, thus forming composite soles. Five matching pairs survive: Cat Nos 447/A6722-Type 4?; 970/A11261a, 971/A11261b-Type 2; 916/A12490a, 917/A12490b-Type 2; 3859/A03-0048a, 3860/A03-0048b-Type 3?; and 2300/A03-0276a, 2301/A03-0276b-Type not definable (Illus 123, 145).

The majority of both seats and foreparts date from the later 13th to mid-14th centuries. Indeed 52% (21) of these associated categories were recovered from deposits that had been laid down during the first half of the 14th century (Period V), and another 22% (9) came from context groups that dated from the second half of the 13th century (Period IV). While they were mainly of later date, at least five (13%) were also discovered in 12th century deposits. These included the earliest, 447/A6722, which was recovered from an occupation layer within a byre attached to the south gable of a small backland house (Building 4) which, on dendrochronological evidence, had been erected shortly after 1150. A study of the distribution shows that 12 were found singly, the rest in nine groups: Building 4, Midden 1.3, Midden 1.4f, Building 18 (Phase 2),





*Soles, Type 5 (Illus 122).*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>  | <i>Phase</i> |
|----------------------|-------------|------------|-----------------|--------------|
| <b>South Sector</b>  |             |            |                 |              |
| 403/A12295           | 3           | VI         | MC056, Pit 5155 | Ia–IIc       |
| 654/A9558            | 4           | V          | M10, Pit 2330   | IIId–IIg     |
| 1361/A8007a          | 4           | V          | MC143           | IVaa         |
| 1504/A03–0405        | 7           | VII        | MC130           | <IIIc–IVaa   |
| 3117/A8681a          | 3           | VI         | M1.4d, Pit 2566 | IVb, IVc     |
| 3517/A03–0224a       | 7           | VI         | M1.4i           | IVcc         |
| 3562/A03–0244a       | 7           | VI         | M1.4i           | IVcc         |
| 3594/A6220b          | 3           | VI         | M1.4e           | IVcc(Va)     |
| 3857/A03–0044        | 7           | VI, VII    | M1.5b           | Vaa          |
| 3985/A03–0170b       | 7           | VI, VII    | M1.5b           | Vaa          |
| 4283/A4901a          | 1           | V, VI      | M5a             | IVb–Vc       |
| 5329/A6399a          | 3           | V, VI      | M3a             | Vb–Vc        |
| 5335/A03–0018a       | 7           | VII        | M7              | Vc           |
| 5611/A4290           | 1           | V          | M5d             | Vc–Vdd       |
| <b>North Sector</b>  |             |            |                 |              |
| 5908/A0113           | 5, A        |            | CG017           | 4–11         |

*Soles, Type 6 (Illus 122).*

| <i>Cat/Accession</i> | <i>Sole type</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i> | <i>Phase</i> |
|----------------------|------------------|-------------|------------|----------------|--------------|
| <b>South Sector</b>  |                  |             |            |                |              |
| 1/A12303a            | Type 6a          | 1           | VI         | MC002          | Ia           |
| 6/A12300b            | Type 6b          | 1           | V, VI      | MC002          | Ia           |
| 28/A10800b           | Type 6a          | 1           | V          | MC008, T3774   | Ib           |
| 43/A8525             | Type 6a          | 1/2         | V, VI      | M2.1b          | Ic           |
| 314/A10365a          | Type 6b          | 3           | V          | MC049          | IIa          |

Middens 8a, 7 and 3c each with two; and Middens 1.5a and Midden 1.5b each with six.

This use of separate seats and foreparts is not very common at Perth; it was economical, utilising small pieces of leather, possibly reusing the better part of an old sole; on the other hand, it was not very strong, as the seam joining seat and forepart would have been subjected to great strain. It could represent either original construction or translation or cobbling (the making of new shoes from worn ones). It is unlikely to be part of a repair; a clump sole, attached by tunnel stitching, would have been more usual.

Similar separate seats and foreparts, predominantly of 13th–14th century date, have also been found at King's Lynn (1250–1350); Dover (late 14th century); London (early–late 14th century); Coventry; Low Petergate and Parliament Street, (12th–14th centuries) Coppergate and Swinegate, (13th–14th centuries) York; Town Wall, Roushill, Shrewsbury; Lich Street, Worcester; Newcastle (mid 13th–mid 14th century); Austin Friars (late 14th century) and Market Place, Leicester; Kirk Close, Perth (13th–14th centuries); Bristol Bridge (13th–14th centuries) and Redcliffe Street, Bristol; Chapel Lane Staith, Hull (late 13th–early 14th century); Sewer Lane, Hull (late 13th–early 14th centuries); Hartlepool and Schleswig (11th–14th centuries, especially 13th

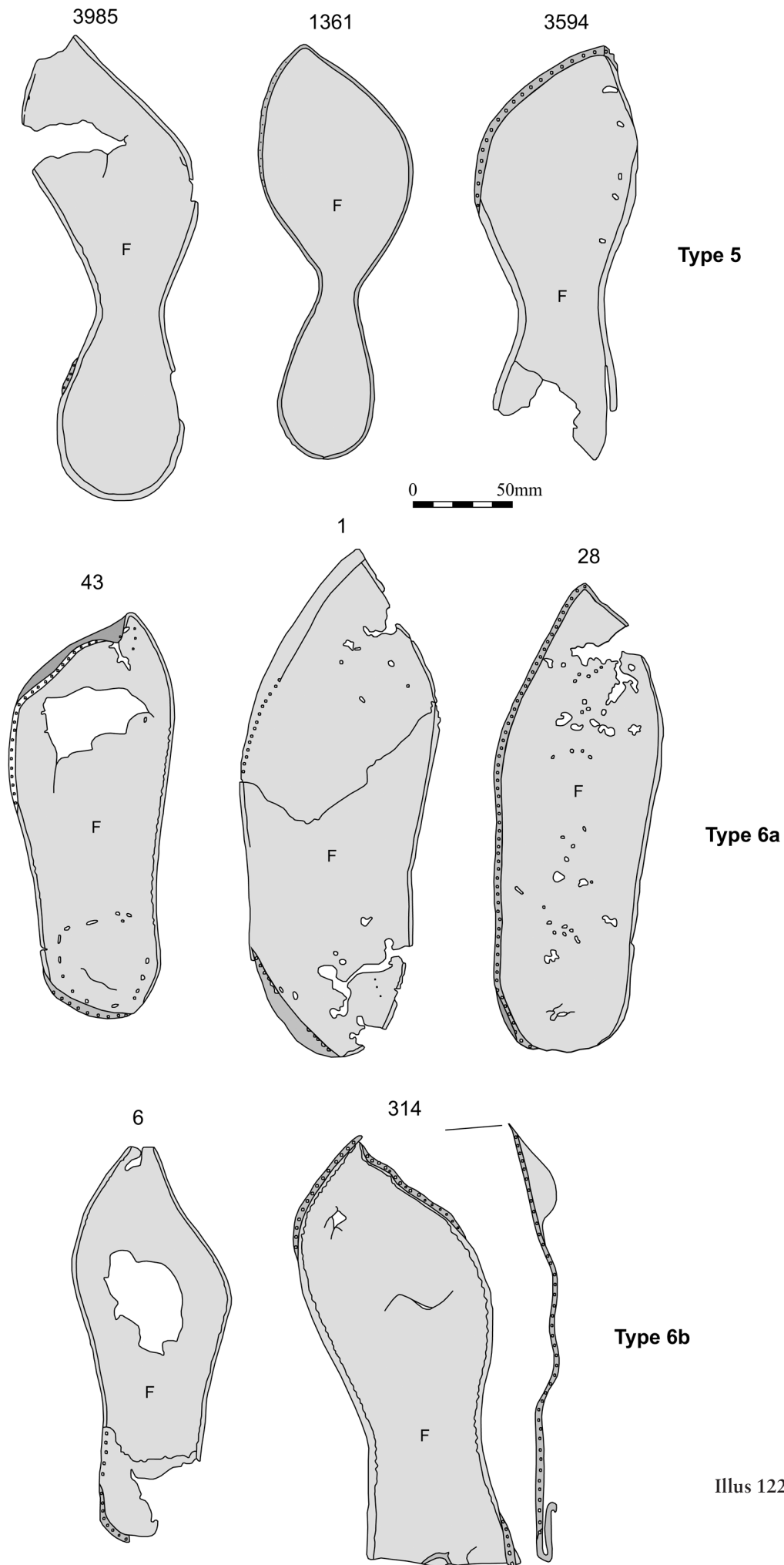
century) (Clarke and Carter 1977, 360, Fig 168, nos 68–70; Mynard 1969, 103–4, Fig 20, L6, L7; Grew and de Neergaard 1988, 60, Fig 94, 68, Fig 102, 69, Fig 103, 70, Fig 104; Tatton-Brown 1975, 156–8, Fig 27, nos 47, 74; Thomas 1980, 11, 44–78/51/17, 78/51/20, 64–65–49/194/1, 49/194/2, 72–73–49/226/4, 49/226/10; Goodfellow and Thornton 1972, 104, Fig 26, no 28; Tweddle 1986, 242–53, Fig 110, 786; Mould et al 2003; Carlisle 1998, unpublished archive report; Thornton 1961, 200, 206, Fig 53.2; Thornton 1969a, 58–9, no 5; Dixon 1988, 94, Fig 35, no 206; Allin 1991a, 148, Fig 55, 6, 1991b, 12, 27, Fig 3, 24; Thomas 1987, 176–7; Thomas forthcoming a and b; Jackson 1979, Fig 22, 6 and 7; Armstrong 1977, 51–60; Jackson 1987, 47–8, Fig 23, 1 and 3; Schnack 1992b, 51–2, Abb. 19, Fig 6).

*Soles, children's (Illus 124)*

Twenty-six soles that are obviously children's have been listed separately to ascertain whether there were any variations in the popularity and dating of children's soles.

Eight (31%) soles were of Type 1; seven of these dated to the 12th century and one to the second half of the 13th century. Half of the ten (38%) Type 2 soles belonged to the second half of the 13th century, while two were of 12th-century date. One (Cat No 4493/





Illus 122 Soles, Type 5 and Type 6.

*Soles, Type 7 (Illus 123).*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>  | <i>Phase</i> |
|----------------------|-------------|------------|-----------------|--------------|
| <b>South Sector</b>  |             |            |                 |              |
| 375/A12282a          | 1           | VI         | MC065, Pit 3908 | Ila–IIc      |
| 376/A12282b          | 1           | VI         | MC065, Pit 3908 | Ila–IIc      |
| 2181/A03–0385a       | 7           | VII        | MC126, Pit 7402 | IVaa, IVb    |
| 3068/A8668c          | 3           | VI         | M1.4d           | IVb, IVc     |
| 3624/A6077c          | 3           | VI         | M1.4e           | IVcc(Va)     |
| 5021/A03–0212b       | 7           | VII        | M8a             | Va, Vaa      |
| 5221/A03–0138a       | 7           | VII        | M8a, T7193      | Va, Vaa      |
| 5599/A4352a          | 4           | V          | M3c             | Vd           |

*Soles, Type 8 (Illus 123 and 145).*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>       | <i>Phase</i> |
|----------------------|-------------|------------|----------------------|--------------|
| <b>South Sector</b>  |             |            |                      |              |
| 447/A6722            | 2           | VI         | B4 'Byre' Occupation | IIc          |
| 450/A10773a          | 3           | VI         | MC066                | IIc          |
| 916/A12490a          | 4           | VI         | M1.3                 | IIi          |
| 970/A11261a          | 4           | V          | MC116                | IIe–IIIc     |
| 1506/A03–0410a       | 7           | VII        | MC130                | <IIIc–IVaa   |
| 2300/A03–0276a       | 7           | VI         | M1.4f                | IVc          |
| 3539/A03–0234a       | 7           | VI         | M1.4i                | IVcc         |
| 3720/A03–0160d       | 7           | VI         | B34, Courtyard       | Va           |
| 3859/A03–0048a       | 7           | VI, VII    | M1.5b                | Vaa          |
| 3882/A03–0121a       | 7           | VI, VII    | M1.5b                | Vaa          |
| 3925/A03–0136a       | 7           | VI, VII    | M1.5b                | Vaa          |
| 4308/A1251a          | 3           | V, VI      | M1.5a                | Va, Vaa(VI)  |
| 4501/A6188a          | 3           | V, VI      | M1.5a                | Va, Vaa(VI)  |
| 4550/A1253a          | 3           | V, VI      | M1.5a                | Va, Vaa      |
| 4812/A6221a          | 3           | V, VI      | M1.5a                | Va, Vaa      |
| 5251/A03–0029b       | 7           | VII        | P8.5                 | Vb, Vbb      |
| 5598/A6475           | 4           | V          | M3c                  | Vd           |

A4289a), and quite possibly two (Cat No 5942/A0807a) were of 14th-century date. Types 3 and 4 were each represented by one example, dating to the early and mid 14th century, respectively. A single child's Type 5 sole was recovered from Trench A, from a layer dating to the 12th–13th centuries. A Type 7 sole was of late 13th-century date (Illus 124).

Thus, Type 2 emerges as the most popular, with Type 1 second. The more elegant and shapely types, such as 3, 4 and 5 were hardly used. The dating trends reflect those of the adult types. This evidence for children's soles is in agreement with that from London, especially from Baynard's Castle, where children's soles were modestly shaped, keeping to the shape of the foot; the more elaborate and exaggerated styles were not used for children (de Neergaard 1985, 14–20).

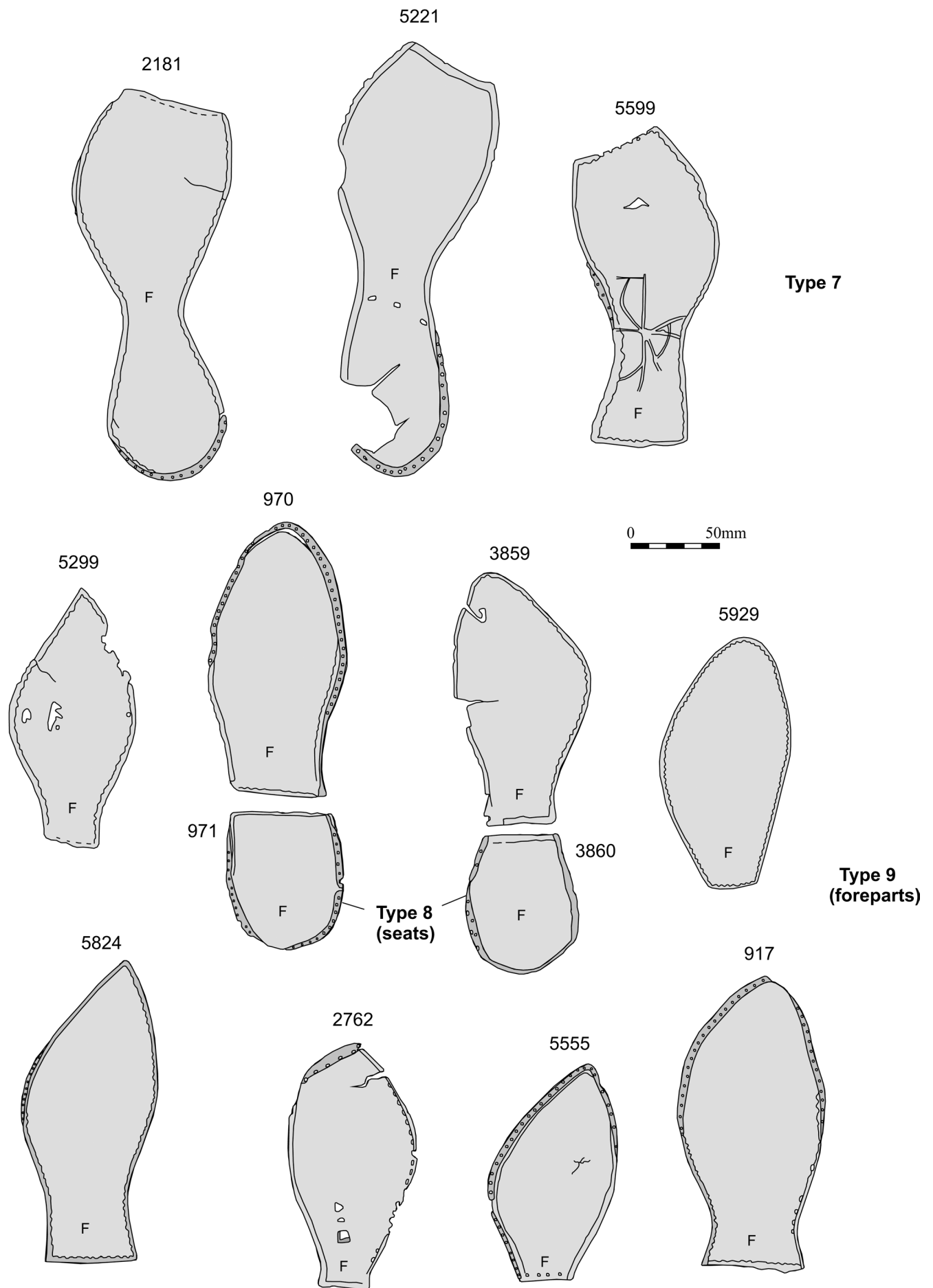
*Soles, pointed fragments (Illus 159)*

Three pointed triangular objects, each with two edge–flesh stitching channels, may be parts of shoes. The third edge on each is very thin, as if worn; tunnel

stitches, similar to those found on clump soles, run parallel to this third edge on two of them. They are unlikely to be the fronts of foreparts, as they are exceedingly narrow and pointed. It has been suggested that they are the pointed extensions of seats found on early (10th–11th century) soles. The tunnel stitch holes suggest that they might have been used as clump soles, for repair. They were originally assigned to Miscellanea, and are illustrated with them (Illus 159). All three came from Phase Vaa and are thus of early 14th-century date, which makes the seat extension theory unlikely.

*Soles, seat cut across waist*

The 51 seats that had been cut across the waist have been listed separately, as the majority (82%) of them come from Period V (14th century) deposits. These 14th-century seats include several large groups, eg three from M1.5b, eight from P8.4, three from M1.5a, ten from M8a, seven from M3a, three from M7 and two from M3b and M3c. Indeed it is noteworthy that nearly half (48%) of this category came from one property, Rig VII.



Illus 123 Soles, Type 7, Type 8 seats and Type 9 foreparts.

*Soles, Type 9 (Illus 123 and 145).*

| <i>Cat/Accession</i>       | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i> |
|----------------------------|-------------|------------|---------------------------------------------------------------|--------------|
| <b>South Sector</b>        |             |            |                                                               |              |
| 447/A6722                  | 2           | VI         | B4, 'Byre'—Occupation                                         | IIc          |
| 917/A12490b                | 4           | VI         | M1.3                                                          | IIi          |
| 971/A11261b                | 4           | V          | MC116                                                         | IIe–IIIc     |
| 1275/A3448a                | 2           | V          | P2.2a                                                         | IVa          |
| 1434/A6474a                | 4           | V          | MC156                                                         | IVaa         |
| 1691/A7792                 | 3           | V          | B3(South)—Occupation (1b)                                     | IVa,IVaa     |
| 2301/A03–0276b             | 7           | VI         | M1.4f                                                         | IVc          |
| 2704/A03–0296a             | 7           | VII        | B18 (Phase 1/2), MF 7307                                      | IVaa,IVb     |
| 2762/A03–0104b             | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South—Occupation (10) | IVb          |
| 3860/A03–0048b             | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3878/A03–0120c             | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3947/A03–0140a             | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 4479/A2284a                | 3           | V, VI      | M1.5a                                                         | Va,Vaa(VI)   |
| 4816/A6237b                | 3           | V, VI      | M1.5a                                                         | Va,Vaa       |
| 4828/A03–0175a             | 7           | VII        | M8a                                                           | Va,Vaa       |
| 5016/A03–0174ddd           | 7           | VII        | M8a                                                           | Va,Vaa       |
| 5299/A6247                 | 2           | V, VI      | M4a                                                           | Va–Vc        |
| 5336/A03–0018b             | 7           | VII        | M7                                                            | Vc           |
| 5337/A03–0018c             | 7           | VII        | M7                                                            | Vc           |
| 5555/A6242a                | 4           | V          | M3c                                                           | Vd           |
| 5824/A03–0127a             | 7           | VI, VII    | Unstratified                                                  | u/s          |
| <b>North Sector</b>        |             |            |                                                               |              |
| 5929/A0110a                | 5, A        |            | Lade (4)                                                      | 6–12(b–e)    |
| <b>South/North Sectors</b> |             |            |                                                               |              |
| 5982/L2766a                |             |            | Unstratified                                                  | u/s          |

These seats show varying degrees of wear, suggesting that they have been cut off worn soles, either to be reused, as separate seats or as clump soles, or else to allow reuse of a better preserved forepart.

*Soles, indeterminate forms*

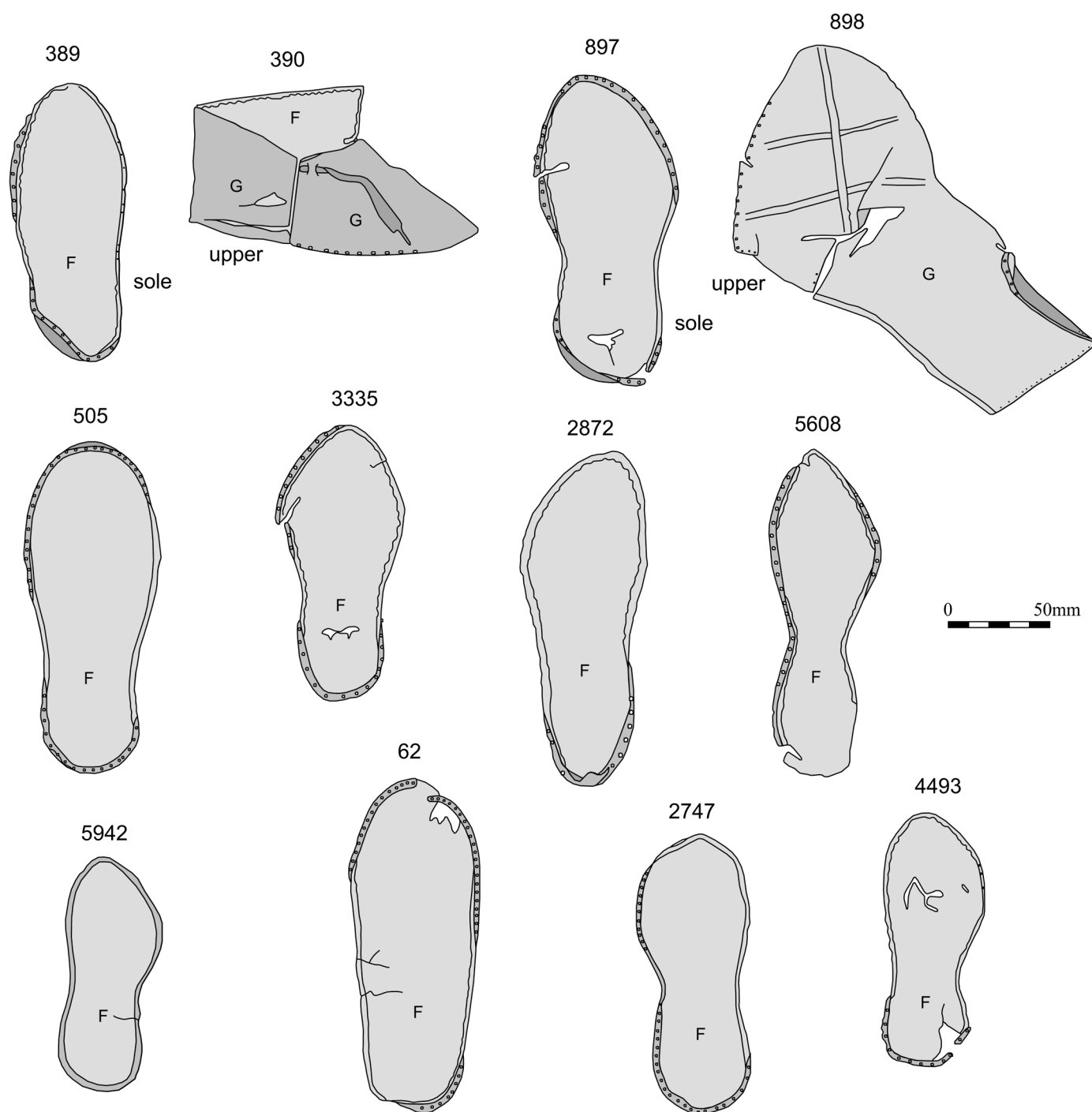
It was not possible to ascribe 473 sole fragments to particular types, as they were too worn or incomplete. Where possible, these have been listed as seats, waists or foreparts. Seven (1%) soles of indeterminate form were recovered from the excavations within the North Sector of the site, and 464 from its South Sector. The majority (65%) of these South Sector fragments come

from Periods IV and V (1250–1350>): Period I: 37 (8%); Period II: 69 (15%); Period III: 22 (5%); Period IV: 160 (34%); Period V: 144 (31%); unstratified: 32 (7%).

The fragments were distributed all over the site, with particular concentrations in B10 (5), M14b(b) (11), MC044b (5), MC061 (5), B4 (9), B5 (6), M10 (13), M1.2 (9), M1.3 (7), MC128 (6), P2.2b (5), MC126 (8), M1.4f (20), B18 (21), M9b(a) (6), M1.4d (19), M1.4c (10), M1.4b (7), P8.3 (6), M9a (17), M1.4e (10), P8.4 (10), B1 (9), M5a (7), M1.5a (19), M1.5b (13), M8a (35), M4a (5), M3a (11), P1a (11) and M3c (8). (B=Building; M=Midden, P=Path, MC=Miscellaneous Context; see also Appendix 7).

*Soles, children's (Illus 124).*

| <i>Cat/Accession</i> | <i>Sole type</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i>     |
|----------------------|------------------|-------------|------------|---------------------------------------------------------------|------------------|
| <b>South Sector</b>  |                  |             |            |                                                               |                  |
| 62/A8704a            | Sole (Type 1)    | 1/2         | V, VI      | M2.1b & B10, South Room–Floor/Occupation (1)                  | Ic,Icc           |
| 104/A10798a          | Sole (Type 1)    | 4           | VI         | MC018, Pit 2398                                               | Ib–Id            |
| 125/A12297a          | Sole (Type 1)    | 3           | V          | MC025, Pit 5337                                               | (Ia–)Id          |
| 182/A7597a           | Sole             | 2           | VI         | M14b(b)                                                       | Ie               |
| 187/A7797a           | Sole             | 2           | VI         | M14b(b)                                                       | Ie               |
| 306/A12635b          | Sole (Type 2)    | 4           | V          | B16b, Pit 4726                                                | Id–IIa           |
| 353/A6773b           | Sole (Type 1)    | 2           | VI         | MC061                                                         | IIb              |
| 389/A12296a          | Sole (Type 1)    | 1           | VI         | MC065                                                         | IIa–IIc          |
| 505/A3447b           | Sole (Type 1)    | 2           | VI         | M1.1d & M1.1e                                                 | IIId–IIIf        |
| 798/A10366           | Sole (Type 1)    | 3           | VI         | M1.2, Pit 2648                                                | <IIg(IIh)        |
| 897/A11260a          | Sole (Type 2)    | 3           | VI         | M1.3                                                          | IIi              |
| 1678/A4895a          | Sole             | 2           | V          | B3(South), Construction–Levelling                             | IVa,IVaa         |
| 1831/A03–0378a       | Sole             | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb         |
| 2652/A03–0316b       | Sole (Type 1)    | 7           | VII        | B18 (Phase 1/2), Pit 7324                                     | IVaa,IVb         |
| 2714/A03–0311a       | Sole (Type 2)    | 7           | VII        | B18 (Phase 2a), External (1), Pit 7314                        | IVb              |
| 2747/A03–0297a       | Sole (Type 2)    | 7           | VII        | B18 (Phase 2a), North Room & Hall–Construction(1)             | IVb              |
| 2760/A03–0092        | Sole (Type 2)    | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb              |
| 2872/A4894           | Sole (Type 2)    | 3           | V          | MC155                                                         | IVb,IVc          |
| 3335/A03–0261a       | Sole (Type 2)    | 7           | VII        | P8.3 & M9a, PW7267                                            | IVc,IVcc         |
| 3624/A6077c          | Sole (Type 7)    | 3           | VI         | M1.4e                                                         | IVcc(Va)         |
| 3873/A03–0116b       | Sole (Type 3)    | 7           | VI, VII    | M1.5b                                                         | Vaa              |
| 4493/A4289a          | Sole (Type 2)    | 3           | V, VI      | M1.5a                                                         | Va,Vaa(VI)       |
| 5608/A03–0065        | Sole (Type 4)    | 10          | VIII       | MC174, Pit 7013                                               | (Va–)Vd<br>(Vdd) |
| 5792/A0817a          | Sole (Type 2)    | 3/4         | V, VI      | Unstratified                                                  | Unstratified     |
| <b>North Sector</b>  |                  |             |            |                                                               |                  |
| 5908/A0113           | Sole (Type 5)    | 5, A        |            | CG017                                                         | 4–11             |
| 5942/A0807a          | Sole (Type 2)    | 5, A        |            | Lade (4)                                                      | 6–12(b–e)        |



Illus 124 Children's soles and matching uppers.

Soles, pointed fragments (Illus 159).

| Cat/Accession       | Area | Rig     | Feature | Phase |
|---------------------|------|---------|---------|-------|
| <b>South Sector</b> |      |         |         |       |
| 3927/A03-0136c      | 7    | VI, VII | M1.5b   | Vaa   |
| 3928/A03-0136d      | 7    | VI, VII | M1.5b   | Vaa   |
| 3929/A03-0136e      | 7    | VI, VII | M1.5b   | Vaa   |

*Soles, seat cut across waist.*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i> |
|----------------------|-------------|------------|---------------------------------------------------------------|--------------|
| <b>South Sector</b>  |             |            |                                                               |              |
| 2/A12303b            | 1           | V, VI      | MC002                                                         | Ia           |
| 178/A7589d           | 2           | VI         | M14b(b)                                                       | Ie           |
| 366/A7694b           | 1           | V          | M14a                                                          | Id–IIc       |
| 484/A10498           | 3           | VI         | M1.1a                                                         | IId,IIe      |
| 1075/A12535a         | 4           | V/VI       | MC128                                                         | IIIb,IIIc    |
| 2764/A03–0105        | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 3231/A6395a          | 3           | V, VI      | M1.4c                                                         | IIIa–IVcc    |
| 3340/A03–0205a       | 7           | VII        | M9a                                                           | IVc,IVcc     |
| 3376/A03–0240a       | 7           | VII        | M9a                                                           | IVc,IVcc     |
| 3604/A4818a          | 3           | VI         | M1.4e                                                         | IVcc(Va)     |
| 3673/A7807a          | 3           | VI         | P6                                                            | IVcc,Va      |
| 3883/A03–0121b       | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3948/A03–0140b       | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3986/A03–0170c       | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 4029/A03–0156b       | 7           | VII        | P8.4                                                          | Va           |
| 4035/A03–0158b       | 7           | VII        | P8.4                                                          | Va           |
| 4041/A03–0159a       | 7           | VII        | P8.4                                                          | Va           |
| 4079/A03–0161        | 7           | VII        | P8.4                                                          | Va           |
| 4087/A03–0210a       | 7           | VII        | P8.4                                                          | Va           |
| 4106/A03–0211a       | 7           | VII        | P8.4                                                          | Va           |
| 4125/A03–0214c       | 7           | VII        | P8.4                                                          | Va           |
| 4152/A03–0198a       | 7           | VII        | P8.4, Pit 7216                                                | Va           |
| 4503/A6188c          | 3           | V, VI      | M1.5a                                                         | Va,Vaa(VI)   |
| 4531/A6245b          | 3           | V, VI      | M1.5a                                                         | Va,Vaa(VI)   |
| 4551/A1253b          | 3           | V, VI      | M1.5a                                                         | Va,Vaa       |
| 4903/A03–0162b       | 7           | VII        | M8a                                                           | Va,Vaa       |
| 4964/A03–0174d       | 7           | VII        | M8a                                                           | Va,Vaa       |
| 4965/A03–0174e       | 7           | VII        | M8a                                                           | Va,Vaa       |
| 5102/A03–0147a       | 7           | VII        | M8a, Pit 7183                                                 | Va,Vaa       |
| 5103/A03–0147b       | 7           | VII        | M8a, Pit 7183                                                 | Va,Vaa       |
| 5114/A03–0151b       | 7           | VII        | M8a, Pit 7183                                                 | Va,Vaa       |
| 5134/A03–0137a       | 7           | VII        | M8a, Pit 7183                                                 | Va,Vaa       |
| 5185/A03–0144a       | 7           | VII        | M8a, Pit 7183                                                 | Va,Vaa       |
| 5199/A03–0129b       | 7           | VII        | M8a, T7193                                                    | Va,Vaa       |
| 5222/A03–0138b       | 7           | VII        | M8a, T7193                                                    | Va,Vaa       |
| 5261/A03–0089b       | 10          | VIII       | M8b                                                           | Va,Vaa(–Vc)  |
| 5300/A6413           | 2           | V, VI      | M4a                                                           | Va–Vc        |
| 5303/A4917c          | 4           | V, VI      | M3a                                                           | Vb–Vc        |
| 5304/A4917d          | 4           | V, VI      | M3a                                                           | Vb–Vc        |
| 5305/A4917e          | 4           | V, VI      | M3a                                                           | Vb–Vc        |
| 5313/A4390a          | 7           | V, VI      | M3a                                                           | Vb–Vc        |
| 5314/A4390b          | 7           | V, VI      | M3a                                                           | Vb–Vc        |
| 5327/A6210           | 4           | V, VI      | M3a                                                           | Vb–Vc        |
| 5331/A4907a          | 4           | V, VI      | M3a                                                           | Vb–Vc        |
| 5338/A03–0018d       | 7           | VII        | M7                                                            | Vc           |
| 5339/A03–0022        | 7           | VII        | M7                                                            | Vc           |
| 5340/A03–0024        | 7           | VII        | M7                                                            | Vc           |
| 5349/A6479a          | 4           | VI         | M3b                                                           | Vd           |
| 5357/A5894a          | 4           | VI         | M3b                                                           | Vd           |
| 5557/A6481           | 4           | V          | M3c                                                           | Vd           |
| 5566/A4602a          | 4           | V          | M3c                                                           | Vd           |



*Soles, indeterminate forms.*

| <i>Cat/Accession</i> | <i>Leather type</i>     | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                     | <i>Phase</i> |
|----------------------|-------------------------|-------------|------------|------------------------------------|--------------|
| <b>South Sector</b>  |                         |             |            |                                    |              |
| 29/A10800c           | Sole                    | 2           | V          | MC008, T3774                       | Ib           |
| 35/A8652             | Sole                    | 2           | VI         | MC011, Pit 3755                    | Ib,Ic        |
| 83/A7788             | Sole (forepart)         | 1/2         | V          | B10, South Room–Occupation (2a)    | Icc          |
| 84/A8662a            | Sole                    | 1/2         | V          | B10, South Room–Floor (2b)         | Icc          |
| 88/A8682             | Sole                    | 1/2         | V          | B10, South Room–Occupation (2b)    | Icc          |
| 89/A8688a            | Sole                    | 1/2         | V          | B10, South Room–Occupation (2b)    | Icc          |
| 90/A8688b            | Sole                    | 1/2         | V          | B10, South Room–Occupation (2b)    | Icc          |
| 95/A12289a           | Sole                    | 4           | V/VI       | MC017                              | Ia–Icc>      |
| 107/A6403a           | Sole                    | 1           | V          | MC029, Pit 3125                    | Id           |
| 114/A10799a          | Sole                    | 4           | V, VI      | MC023                              | Icc,Id       |
| 130/A12308c          | Sole (seat)             | 3           | V          | MC025, Pit 5337                    | (Ia–)Id      |
| 135/A12286b          | Sole                    | 3           | V          | MC025, Pit 5337                    | (Ia–)Id      |
| 151/A12311           | Sole (forepart)         | 3           | VI         | MC037a, Pit 5157                   | Ia–Ie        |
| 157/A7787d           | Sole                    | 1/2         | VI         | B6 (Phase 1), South Room–Floor (1) | Ie           |
| 158/A7787e           | Sole                    | 1/2         | VI         | B6 (Phase 1), South Room–Floor (1) | Ie           |
| 159/A7787f           | Sole                    | 1/2         | VI         | B6 (Phase 1), South Room–Floor (1) | Ie           |
| 160/A7787g           | Sole                    | 1/2         | VI         | B6 (Phase 1), South Room–Floor (1) | Ie           |
| 182/A7597a           | Sole                    | 2           | VI         | M14b(b)                            | Ie           |
| 187/A7797a           | Sole                    | 2           | VI         | M14b(b)                            | Ie           |
| 188/A7797b           | Sole                    | 2           | VI         | M14b(b)                            | Ie           |
| 198/A7257c           | Sole                    | 2           | VI         | M14b(b), Pit 3625                  | Ie           |
| 199/A7257d           | Sole                    | 2           | VI         | M14b(b), Pit 3625                  | Ie           |
| 200/A7257e           | Sole                    | 2           | VI         | M14b(b), Pit 3625                  | Ie           |
| 201/A7257f           | Sole                    | 2           | VI         | M14b(b), Pit 3625                  | Ie           |
| 209/A7567a           | Sole                    | 2           | VI         | M14b(b), Pit 3625                  | Ie           |
| 211/A7574a           | Sole (forepart)         | 2           | VI         | M14b(b), Pit 3625                  | Ie           |
| 213/A7574c           | Sole                    | 2           | VI         | M14b(b), Pit 3625                  | Ie           |
| 214/A7574d           | Sole                    | 2           | VI         | M14b(b), Pit 3625                  | Ie           |
| 219/A7800a           | Sole (seat)             | 2           | VI         | M14b(b), Pit 3625                  | Ie           |
| 227/A7588a           | Sole (forepart)         | 2           | V          | M14b(c)                            | Ie,If        |
| 228/A7588b           | Sole                    | 2           | V          | M14b(c)                            | Ie,If        |
| 243/A7310a           | Sole (seat)             | 2           | V          | M14b(a)                            | Id           |
| 245/A7581a           | Sole                    | 2           | V          | M14b(a)                            | Id           |
| 263/A7044Bc          | Sole                    | 2           | VI         | MC044b                             | If           |
| 264/A7044Bd          | Sole                    | 2           | VI         | MC044b                             | If           |
| 274/A7074a           | Sole                    | 2           | VI         | MC044b                             | If           |
| 275/A7074b           | Sole                    | 2           | VI         | MC044b                             | If           |
| 276/A7074c           | Sole                    | 2           | VI         | MC044b                             | If           |
| 291/A7570a           | Sole                    | 2           | V          | MC046, Pit 3636                    | If,IIa       |
| 292/A7570b           | Sole                    | 2           | V          | MC046, Pit 3636                    | If,IIa       |
| 293/A7570c           | Sole                    | 2           | V          | MC046, Pit 3636                    | If,IIa       |
| 295/A12632a          | Sole (oval forepart)    | 4           | V          | B16b, Pit 4726                     | Id–IIa       |
| 321/A10505a          | Sole                    | 3           | V          | MC049, Pit 5259                    | IIa          |
| 326/A03–0009c        | Sole                    | 3           | V          | MC049, Pit 5259                    | IIa          |
| 337/A6770a           | Sole (seat)             | 2           | VI         | MC061                              | IIb          |
| 338/A6770b           | Sole (pointed forepart) | 2           | VI         | MC061                              | IIb          |
| 354/A6773c           | Sole (forepart)         | 2           | VI         | MC061                              | IIb          |
| 355/A6773d           | Sole (forepart)         | 2           | VI         | MC061                              | IIb          |
| 359/A6946            | Sole (seat)             | 2           | VI         | MC061                              | IIb          |
| 377/A12282c          | Sole (seat)             | 1           | VI         | MC065, Pit 3908                    | IIa–IIc      |
| 378/A12282d          | Sole                    | 1           | VI         | MC065, Pit 3908                    | IIa–IIc      |
| 391/A03–0354a        | Sole (seat)             | 1           | VI         | MC065                              | IIa–IIc      |
| 392/A03–0354b        | Sole (seat)             | 1           | VI         | MC065                              | IIa–IIc      |
| 401/A12293c          | Sole (seat)             | 3           | VI         | MC056, Pit 5155                    | Ib–IIc       |
| 426/A6371            | Sole (seat)             | 2           | VI         | B4, ‘Byre’–Occupation              | IIc          |

*(continued)*

| <i>Cat/Accession</i> | <i>Leather type</i>            | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                      | <i>Phase</i> |
|----------------------|--------------------------------|-------------|------------|-------------------------------------|--------------|
| 431/A6483a           | Sole (seat)                    | 2           | VI         | B4, 'Byre'–Occupation               | IIc          |
| 432/A6483b           | Sole                           | 2           | VI         | B4, 'Byre'–Occupation               | IIc          |
| 433/A6483c           | Sole                           | 2           | VI         | B4, 'Byre'–Occupation               | IIc          |
| 434/A6483d           | Sole                           | 2           | VI         | B4, 'Byre'–Occupation               | IIc          |
| 435/A6483e           | Sole                           | 2           | VI         | B4, 'Byre'–Occupation               | IIc          |
| 436/A6483f           | Sole                           | 2           | VI         | B4, 'Byre'–Occupation               | IIc          |
| 437/A6483g           | Sole                           | 2           | VI         | B4, 'Byre'–Occupation               | IIc          |
| 448/A6747            | Sole                           | 2           | VI         | B4, 'Byre'–Occupation               | IIc          |
| 497/A10801a          | Sole                           | 3           | V          | P2.1a                               | IIb–IIf      |
| 498/A10801b          | Sole                           | 3           | V          | P2.1a                               | IIb–IIf      |
| 499/A10801c          | Sole                           | 3           | V          | P2.1a                               | IIb–IIf      |
| 500/A10801d          | Sole                           | 3           | V          | P2.1a                               | IIb–IIf      |
| 513/A6391a           | Sole (seat)                    | 2           | VI         | M1.1d & M1.1e                       | IIc–IIf      |
| 514/A6391b           | Sole                           | 2           | VI         | M1.1d & M1.1e                       | IIc–IIf      |
| 520/A7005b           | Sole                           | 1/2         | V          | B5, T4485                           | IIa–IIff     |
| 525/A6426a           | Sole                           | 1/2         | V          | B5, WW3566                          | IIa–IIff     |
| 532/A6949b           | Sole (rounded forepart)        | 2           | V          | B5, North Room–Floor/Occupation (1) | IIa–IIff     |
| 542/A6376a           | Sole (seat)                    | 2           | V          | B5, North Room–Floor/Occupation (2) | IIa–IIff     |
| 543/A6376b           | Sole (forepart)                | 2           | V          | B5, North Room–Floor/Occupation (2) | IIa–IIff     |
| 553/A6948a           | Sole                           | 2           | V          | B5, Destruction                     | IIa–IIff     |
| 616/A11231a          | Sole                           | 4           | V          | M10                                 | IIc–IIg      |
| 617/A11231b          | Sole                           | 4           | V          | M10                                 | IIc–IIg      |
| 618/A11231c          | Sole                           | 4           | V          | M10                                 | IIc–IIg      |
| 619/A11231d          | Sole                           | 4           | V          | M10                                 | IIc–IIg      |
| 635/A10778b          | Sole                           | 3           | V          | M10                                 | IIc–IIg      |
| 655/A9553a           | Sole (seat)                    | 4           | V          | M10, Pit 4552                       | IIc–IIg      |
| 656/A9553b           | Sole (forepart)                | 4           | V          | M10, Pit 4552                       | IIc–IIg      |
| 657/A9553c           | Sole                           | 4           | V          | M10, Pit 4552                       | IIc–IIg      |
| 658/A9553d           | Sole                           | 4           | V          | M10, Pit 4552                       | IIc–IIg      |
| 659/A9553e           | Sole                           | 4           | V          | M10, Pit 4552                       | IIc–IIg      |
| 660/A9553f           | Sole                           | 4           | V          | M10, Pit 4552                       | IIc–IIg      |
| 661/A9553g           | Sole                           | 4           | V          | M10, Pit 4552                       | IIc–IIg      |
| 662/A9553h           | Sole                           | 4           | V          | M10, Pit 4552                       | IIc–IIg      |
| 733/A9887            | Sole                           | 4           | VI         | B12, Occupation (1b)                | IIe–IIg      |
| 735/A9367a           | Sole (pointed forepart)        | 4           | VI         | B12, Occupation (2a)                | IIe–IIg      |
| 777/A9371c           | Sole                           | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 784/A9372b           | Sole (seat)                    | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 789/A9546b           | Sole                           | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 796/A9884b           | Sole                           | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 801/A10674           | Sole (seat)                    | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 802/A10775a          | Sole (seat)                    | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 804/A11218a          | Sole                           | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 813/A11220b          | Sole, rand, upper              | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 826/A12292           | Sole (rounded forepart), upper | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 847/A8545a           | Sole (forepart)                | 4           | V/VI       | M1.1                                | IIh          |
| 874/A8665a           | Sole (seat)                    | 3           | VI         | M1.3                                | IIi          |
| 875/A8665b           | Sole (rounded forepart)        | 3           | VI         | M1.3                                | IIi          |
| 887/A8821a           | Sole                           | 3           | VI         | M1.3                                | IIi          |
| 909/A11267a          | Sole                           | 3           | VI         | M1.3                                | IIi          |
| 910/A11267b          | Sole                           | 3           | VI         | M1.3                                | IIi          |
| 913/A11268a          | Sole                           | 3           | VI         | M1.3                                | IIi          |
| 914/A11268b          | Sole                           | 3           | VI         | M1.3                                | IIi          |
| 924/A11639c          | Sole                           | 1           | VI         | MC111                               | IIb–IIIb>    |
| 940/A03–0373a        | Sole                           | 9           | VII        | M1.3                                | IIg–IIIb     |

(continued)

| <i>Cat/Accession</i> | <i>Leather type</i>     | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                    | <i>Phase</i>   |
|----------------------|-------------------------|-------------|------------|-----------------------------------|----------------|
| 957/A8813a           | Sole                    | 4           | V          | MC116                             | IIe–IIIc       |
| 1001/A8001           | Sole                    | 4           | V          | MC117, Pit 4695                   | IIe–IIIc       |
| 1003/A8011a          | Sole (rounded forepart) | 4           | VI         | M1.4a(a)                          | IIIa–IIIc      |
| 1008/A7999           | Sole (seat)             | 4           | VI         | M1.4a(a)                          | IIIa–IIIc      |
| 1010/A12390a         | Sole                    | 4           | VI         | M1.4a(a)                          | IIIa–IIIc      |
| 1011/A12390b         | Sole                    | 4           | VI         | M1.4a(a)                          | IIIa–IIIc      |
| 1050/A8671h          | Sole                    | 3           | V          | MC117, Pit 4695                   | IIe–IIIc       |
| 1066/A6194a          | Sole                    | 4           | V/VI       | MC128                             | IIb,IIIc       |
| 1067/A6194b          | Sole                    | 4           | V/VI       | MC128                             | IIb,IIIc       |
| 1068/A6194c          | Sole                    | 4           | V/VI       | MC128                             | IIb,IIIc       |
| 1071/A6401a          | Sole (seat)             | 4           | V/VI       | MC128                             | IIb,IIIc       |
| 1076/A12535b         | Sole                    | 4           | V/VI       | MC128                             | IIb,IIIc       |
| 1077/A12535c         | Sole                    | 4           | V/VI       | MC128                             | IIb,IIIc       |
| 1096/A03–0270b       | Sole                    | 9           | VII        | P8.1c                             | IIIc           |
| 1113/A03–0323b       | Sole (seat)             | 9           | VII        | P8.1c                             | IIIc           |
| 1114/A03–0323c       | Sole (oval forepart)    | 9           | VII        | P8.1c                             | IIIc           |
| 1128/A03–0252a       | Sole                    | 9           | VII        | M15                               | IIId           |
| 1146/A5893a          | Sole                    | 1           | V          | M12                               | IIg–IIIc(–IVa) |
| 1207/A8680b          | Sole                    | 3           | V          | M6b                               | IIg–IIId       |
| 1222/A6070a          | Sole                    | 2           | V          | M6b                               | IIg–IIId       |
| 1259/A03–0421a       | Sole (seat)             | 7           | VI         | MC124                             | <IIIc–IVa      |
| 1270/A4933a          | Sole (pointed forepart) | 2           | V          | P2.2a                             | IVa            |
| 1271/A4933b          | Sole (pointed forepart) | 2           | V          | P2.2a                             | IVa            |
| 1280/A8540a          | Sole                    | 4           | VI         | M1.4a(b)                          | IIIa–IVa       |
| 1281/A8540b          | Sole                    | 4           | VI         | M1.4a(b)                          | IIIa–IVa       |
| 1285/A6415a          | Sole                    | 3           | V          | P2.2b                             | IVa            |
| 1286/A6415b          | Sole                    | 3           | V          | P2.2b                             | IVa            |
| 1301/A8810b          | Sole (seat)             | 3           | V          | P2.2b                             | IVa            |
| 1302/A8810c          | Sole (waist fragment)   | 3           | V          | P2.2b                             | IVa            |
| 1303/A8810d          | Sole (oval forepart)    | 3           | V          | P2.2b                             | IVa            |
| 1315/A7989b          | Sole                    | 4           | V          | MC143                             | IVaa           |
| 1374/A8029a          | Sole                    | 4           | V          | MC143                             | IVaa           |
| 1388/A8021b          | Sole                    | 3           | V/VI       | MC144, WW2221                     | <IIId–IVaa     |
| 1389/A8021c          | Sole                    | 3           | V/VI       | MC144, WW2221                     | <IIId–IVaa     |
| 1416/A8020a          | Sole                    | 3           | V          | P2.2a & P2.3a                     | IVa,IVaa       |
| 1442/A7786           | Sole                    | 3           | V          | MC151                             | IVaa           |
| 1479/A6190a          | Sole                    | 2           | V          | B26, Floor/Occupation (8a)        | IIg–IVaa       |
| 1496/A4827a          | Sole (forepart)         | 1           | VI         | B20, Levelling                    | <IIId–IVaa     |
| 1603/A03–0424a       | Sole (pointed forepart) | 7           | VII        | MC130                             | <IIIc–IVaa     |
| 1635/A11242a         | Sole                    | 3           | VI         | B2, WW2498                        | IVa,IVaa       |
| 1672/A7995a          | Sole (seat)             | 3           | V          | B3(South), WW2569                 | IVa,IVaa       |
| 1678/A4895a          | Sole                    | 2           | V          | B3(South), Construction–Levelling | IVa,IVaa       |
| 1679/A4895b          | Sole                    | 2           | V          | B3(South), Construction–Levelling | IVa,IVaa       |
| 1694/A03–0318b       | Sole                    | 7           | VII        | B18 (Phase 1b), Destruction       | IVa,IVaa       |
| 1701/A4896a          | Sole                    | 4           | VI         | B11, Floor                        | IVaa           |
| 1731/A03–0343a       | Sole (pointed forepart) | 7           | VII        | MC126, Pit 7402                   | IVaa,IVb       |
| 1744/A03–0347b       | Sole                    | 7           | VII        | MC126, Pit 7402                   | IVaa,IVb       |
| 1761/A03–0360a       | Sole                    | 7           | VII        | MC126, Pit 7402                   | IVaa,IVb       |
| 1766/A03–0363        | Sole                    | 7           | VII        | MC126, Pit 7402                   | IVaa,IVb       |
| 1831/A03–0378a       | Sole                    | 7           | VII        | MC126, Pit 7402                   | IVaa,IVb       |
| 1886/A03–0357b       | Sole (oval forepart)    | 7           | VII        | MC126, Pit 7402                   | IVaa,IVb       |
| 1887/A03–0357c       | Sole                    | 7           | VII        | MC126, Pit 7402                   | IVaa,IVb       |

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| <i>Cat/Accession</i> | <i>Leather type</i>     | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i> |
|----------------------|-------------------------|-------------|------------|---------------------------------------------------------------|--------------|
| 1888/A03-0357d       | Sole                    | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 2290/A03-0271b       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2291/A03-0271c       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2317/A03-0285a       | Sole (seat)             | 7           | VI         | M1.4f                                                         | IVc          |
| 2318/A03-0285b       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2319/A03-0285c       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2320/A03-0285d       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2351/A03-0330a       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2366/A03-0332c       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2367/A03-0332d       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2368/A03-0332e       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2369/A03-0332f       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2374/A03-0333a       | Sole (oval forepart)    | 7           | VI         | M1.4f                                                         | IVc          |
| 2375/A03-0333b       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2394/A03-0336        | Sole (rounded forepart) | 7           | VI         | M1.4f                                                         | IVc          |
| 2396/A03-0339a       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2403/A03-0342a       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2448/A03-0387a       | Sole (seat)             | 7           | VI         | M1.4f                                                         | IVc          |
| 2449/A03-0387b       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2452/A03-0326a       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2453/A03-0326b       | Sole                    | 7           | VI         | M1.4f                                                         | IVc          |
| 2555/A03-0289        | Sole (seat)             | 7           | VII        | B18 (Phase 2a), North Room & Hall-Floor (1)                   | IVb          |
| 2570/A03-0329b       | Sole                    | 7           | VII        | B18 (Phase 1/2)                                               | IVaa,IVb     |
| 2571/A03-0329c       | Sole                    | 7           | VII        | B18 (Phase 1/2)                                               | IVaa,IVb     |
| 2572/A03-0329d       | Sole                    | 7           | VII        | B18 (Phase 1/2)                                               | IVaa,IVb     |
| 2598/A03-0192a       | Sole                    | 9           | VII        | B18 (Phase 1/2)                                               | IVaa,IVb     |
| 2600/A03-0184a       | Sole (seat)             | 9           | VII        | B18 (Phase 1/2)                                               | IVaa,IVb     |
| 2639/A03-0231a       | Sole (rounded forepart) | 9           | VII        | B18 (Phase 1/2)                                               | IVaa,IVb     |
| 2640/A03-0231b       | Sole                    | 9           | VII        | B18 (Phase 1/2)                                               | IVaa,IVb     |
| 2672/A03-0180a       | Sole (seat)             | 9           | VII        | B18 (Phase 1/2), Pit 9276                                     | IVaa,IVb     |
| 2680/A03-0202a       | Sole (oval forepart)    | 9           | VII        | B18 (Phase 1/2), Pit 9301                                     | IVaa,IVb     |
| 2705/A03-0296b       | Sole                    | 7           | VII        | B18 (Phase 1/2), MF 7307                                      | IVaa,IVb     |
| 2717/A03-0314a       | Sole (rounded forepart) | 7           | VII        | B18 (Phase 2a), External (1), Pit 7314                        | IVb          |
| 2718/A03-0314b       | Sole                    | 7           | VII        | B18 (Phase 2a), External (1), Pit 7314                        | IVb          |
| 2723/A03-0307b       | Sole (seat)             | 7           | VII        | B18 (Phase 2a), External (1), Pit 7314                        | IVb          |
| 2730/A03-0301a       | Sole (seat)             | 7           | VII        | B18 (Phase 2b), WW7308                                        | IVb          |
| 2733/A03-0368a       | Sole (seat)             | 10          | VII        | B18 (Phases 2a & 2b), MW6155                                  | IVb          |
| 2734/A03-0368b       | Sole                    | 10          | VII        | B18 (Phases 2a & 2b), MW6155                                  | IVb          |
| 2755/A03-0288b       | Sole                    | 7           | VII        | B18 (Phase 2b), North Room, Hall & Hall South-Occupation (10) | IVb          |
| 2780/A03-0245a       | Sole (forepart)         | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South-Occupation (10) | IVb          |
| 2781/A03-0245b       | Sole                    | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South-Occupation (10) | IVb          |
| 2795/A03-0152a       | Sole                    | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South-Occupation (10) | IVb          |
| 2816/A03-0290        | Sole (seat)             | 10          | VIII       | M9b(a)                                                        | IVc          |
| 2839/A03-0312a       | Sole                    | 10          | VIII       | M9b(a)                                                        | IVc          |
| 2841/A03-0313        | Sole (oval forepart)    | 10          | VIII       | M9b(a)                                                        | IVc          |
| 2842/A03-0319a       | Sole (seat)             | 10          | VIII       | M9b(a)                                                        | IVc          |
| 2843/A03-0319b       | Sole (seat)             | 10          | VIII       | M9b(a)                                                        | IVc          |
| 2857/A03-0302        | Sole                    | 10          | VIII       | M9b(a), T6163                                                 | IVc          |
| 2860/A4821a          | Sole                    | 2           | VI         | M1.4d & B2, Late Occupation/Abandonment (2)                   | IVa-IVc      |

(continued)

| <i>Cat/Accession</i> | <i>Leather type</i>        | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                  | <i>Phase</i> |
|----------------------|----------------------------|-------------|------------|-------------------------------------------------|--------------|
| 2861/A4821b          | Sole                       | 2           | VI         | M1.4d & B2, Late Occupation/<br>Abandonment (2) | IVa–IVc      |
| 2862/A4821c          | Sole                       | 2           | VI         | M1.4d & B2, Late Occupation/<br>Abandonment (2) | IVa–IVc      |
| 2873/A9142           | Sole                       | 3           | V          | MC155, Pit 2691                                 | IVb, IVc     |
| 2878/A9358a          | Sole                       | 3           | V          | MC155, Pit 2691                                 | IVb, IVc     |
| 2890/A9363a          | Sole (seat)                | 3           | V          | MC155, Pit 2691                                 | IVb, IVc     |
| 3034/A4941a          | Sole                       | 3           | VI         | M1.4d                                           | IVb, IVc     |
| 3056/A8667b          | Sole (pointed<br>forepart) | 3           | VI         | M1.4d                                           | IVb, IVc     |
| 3057/A8667c          | Sole                       | 3           | VI         | M1.4d                                           | IVb, IVc     |
| 3069/A8668d          | Sole                       | 3           | VI         | M1.4d                                           | IVb, IVc     |
| 3070/A8668e          | Sole                       | 3           | VI         | M1.4d                                           | IVb, IVc     |
| 3084/A3449d          | Sole                       | 2           | VI         | M1.4d                                           | IVb, IVc     |
| 3085/A4924a          | Sole (seat)                | 2           | VI         | M1.4d                                           | IVb, IVc     |
| 3086/A4924b          | Sole                       | 2           | VI         | M1.4d                                           | IVb, IVc     |
| 3091/A5900b          | Sole                       | 2           | VI         | M1.4d                                           | IVb, IVc     |
| 3092/A5900c          | Sole                       | 2           | VI         | M1.4d                                           | IVb, IVc     |
| 3093/A5900d          | Sole                       | 2           | VI         | M1.4d                                           | IVb, IVc     |
| 3094/A5900e          | Sole                       | 2           | VI         | M1.4d                                           | IVb, IVc     |
| 3097/A6226a          | Sole                       | 2           | VI         | M1.4d                                           | IVb, IVc     |
| 3103/A6392a          | Sole (waist<br>fragment)   | 2           | VI         | M1.4d                                           | IVb, IVc     |
| 3111/A8028a          | Sole (seat)                | 3           | VI         | M1.4d, Pit 2566                                 | IVb, IVc     |
| 3112/A8028b          | Sole (forepart)            | 3           | VI         | M1.4d, Pit 2566                                 | IVb, IVc     |
| 3113/A8028c          | Sole                       | 3           | VI         | M1.4d, Pit 2566                                 | IVb, IVc     |
| 3123/A6205a          | Sole (forepart)            | 2           | VI         | M1.4d, Pit 2801                                 | IVb, IVc     |
| 3124/A6205b          | Sole                       | 2           | VI         | M1.4d, Pit 2801                                 | IVb, IVc     |
| 3126/A03–0253b       | Sole                       | 7           | VI         | M1.4h                                           | IVc          |
| 3127/A03–0253c       | Sole                       | 7           | VI         | M1.4h                                           | IVc          |
| 3145/A6381a          | Sole                       | 3           | V          | M1.4g                                           | IVb, IVc     |
| 3172/A3540c          | Sole                       | 3           | V, VI      | M1.4c                                           | IIIa–IVcc    |
| 3176/A6072b          | Sole                       | 3           | V, VI      | M1.4c                                           | IIIa–IVcc    |
| 3177/A6072c          | Sole                       | 3           | V, VI      | M1.4c                                           | IIIa–IVcc    |
| 3178/A6072d          | Sole                       | 3           | V, VI      | M1.4c                                           | IIIa–IVcc    |
| 3179/A6072e          | Sole                       | 3           | V, VI      | M1.4c                                           | IIIa–IVcc    |
| 3196/A6191a          | Sole                       | 3           | V, VI      | M1.4c                                           | IIIa–IVcc    |
| 3197/A6191b          | Sole                       | 3           | V, VI      | M1.4c                                           | IIIa–IVcc    |
| 3198/A6191c          | Sole                       | 3           | V, VI      | M1.4c                                           | IIIa–IVcc    |
| 3219/A6228a          | Sole                       | 3           | V, VI      | M1.4c                                           | IIIa–IVcc    |
| 3225/A6390a          | Sole                       | 3           | V, VI      | M1.4c                                           | IIIa–IVcc    |
| 3248/A6233a          | Sole (seat)                | 4           | V, VI      | M1.4b                                           | IVb–IVcc     |
| 3249/A6233b          | Sole (seat)                | 4           | V, VI      | M1.4b                                           | IVb–IVcc     |
| 3250/A6233c          | Sole (pointed<br>forepart) | 4           | V, VI      | M1.4b                                           | IVb–IVcc     |
| 3251/A6233d          | Sole                       | 4           | V, VI      | M1.4b                                           | IVb–IVcc     |
| 3252/A6233e          | Sole                       | 4           | V, VI      | M1.4b                                           | IVb–IVcc     |
| 3253/A6233f          | Sole                       | 4           | V, VI      | M1.4b                                           | IVb–IVcc     |
| 3254/A4944           | Sole (forepart)            | 4           | V, VI      | M1.4b                                           | IVb–IVcc     |
| 3260/A03–0239a       | Sole                       | 7           | VII        | P8.3                                            | IVc, IVcc    |
| 3273/A03–0226a       | Sole                       | 7           | VII        | P8.3                                            | IVc, IVcc    |
| 3282/A03–0227b       | Sole (seat)                | 7           | VII        | P8.3                                            | IVc, IVcc    |
| 3307/A03–0250d       | Sole (rounded<br>forepart) | 7           | VII        | P8.3                                            | IVc, IVcc    |
| 3315/A03–0260d       | Sole (forepart)            | 7           | VII        | P8.3                                            | IVc, IVcc    |
| 3337/A03–0267        | Sole                       | 7           | VII        | P8.3 & M9a, PW7267                              | IVc, IVcc    |
| 3343/A03–0183a       | Sole & upper               | 7           | VII        | M9a                                             | IVc, IVcc    |
| 3352/A03–0246a       | Sole                       | 7           | VII        | M9a                                             | IVc, IVcc    |
| 3363/A03–0223a       | Sole (seat)                | 7           | VII        | M9a                                             | IVc, IVcc    |
| 3379/A03–0243a       | Sole (forepart)            | 7           | VII        | M9a                                             | IVc, IVcc    |

(continued)

| <i>Cat/Accession</i> | <i>Leather type</i>     | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                     | <i>Phase</i>  |
|----------------------|-------------------------|-------------|------------|------------------------------------|---------------|
| 3380/A03-0243b       | Sole (rounded forepart) | 7           | VII        | M9a                                | IVc,IVcc      |
| 3384/A03-0233a       | Sole                    | 7           | VII        | M9a                                | IVc,IVcc      |
| 3391/A03-0255a       | Sole                    | 7           | VII        | M9a                                | IVc,IVcc      |
| 3393/A03-0259a       | Sole (oval forepart)    | 7           | VII        | M9a                                | IVc,IVcc      |
| 3396/A03-0268a       | Sole                    | 7           | VII        | M9a                                | IVc,IVcc      |
| 3397/A03-0268b       | Sole                    | 7           | VII        | M9a                                | IVc,IVcc      |
| 3417/A03-0275a       | Sole                    | 7           | VII        | B18 (Phases 2a & 2b) & M9a, PH7297 | (IVb)IVc,IVcc |
| 3420/A03-0217b       | Sole (oval forepart)    | 7           | VII        | B18 (Phases 2a & 2b) & M9a, PH7297 | (IVb)IVc,IVcc |
| 3427/A03-0051a       | Sole, rand, upper       | 9           | VII        | M9a, Pit 9026                      | IVc,IVcc      |
| 3428/A03-0051b       | Sole, rand, upper       | 9           | VII        | M9a, Pit 9026                      | IVc,IVcc      |
| 3429/A03-0051c       | Sole, rand, upper       | 9           | VII        | M9a, Pit 9026                      | IVc,IVcc      |
| 3430/A03-0051d       | Sole, rand, upper       | 9           | VII        | M9a, Pit 9026                      | IVc,IVcc      |
| 3432/A03-0049b       | Sole                    | 9           | VII        | M9a, Pit 9026                      | IVc,IVcc      |
| 3546/A03-0238a       | Sole                    | 7           | VI         | M1.4i                              | IVcc          |
| 3563/A03-0244b       | Sole                    | 7           | VI         | M1.4i                              | IVcc          |
| 3565/A7688a          | Sole (pointed forepart) | 3           | VI         | M1.4e                              | IVcc(Va)(VI)  |
| 3566/A7688b          | Sole                    | 3           | VI         | M1.4e                              | IVcc(Va)(VI)  |
| 3581/A7778a          | Sole                    | 3           | VI         | M1.4e                              | IVcc(Va)(VI)  |
| 3605/A4818b          | Sole                    | 3           | VI         | M1.4e                              | IVcc(Va)      |
| 3625/A6077d          | Sole                    | 3           | VI         | M1.4e                              | IVcc(Va)      |
| 3642/A6404           | Sole                    | 3           | VI         | M1.4e                              | IVcc(Va)      |
| 3646/A7780a          | Sole (forepart)         | 3           | VI         | M1.4e                              | IVcc(Va)      |
| 3647/A7780b          | Sole                    | 3           | VI         | M1.4e                              | IVcc(Va)      |
| 3652/A4916           | Sole (seat)             | 2           | VI         | M1.4e                              | IVcc(Va)      |
| 3653/A4903a          | Sole                    | 3           | VI         | M1.4e, Pit 2446                    | IVcc(Va)      |
| 3660/A5902a          | Sole                    | 3           | VI         | P6                                 | IVcc,Va       |
| 3661/A5902b          | Sole                    | 3           | VI         | P6                                 | IVcc,Va       |
| 3699/A4299a          | Sole (forepart)         | 3           | VI         | B34, Floor                         | Va            |
| 3702/A4350           | Sole (forepart)         | 3           | VI         | B34, Floor                         | Va            |
| 3706/A03-0172b       | Sole (forepart)         | 7           | VI         | B34, Floor                         | Va            |
| 3721/A03-0160e       | Sole (forepart)         | 7           | VI         | B34, Courtyard                     | Va            |
| 3760/A03-0190a       | Sole (seat)             | 7           | VI         | B34, Courtyard                     | Va            |
| 3761/A03-0190b       | Sole (forepart)         | 7           | VI         | B34, Courtyard                     | Va            |
| 3861/A03-0048c       | Sole                    | 7           | VI, VII    | M1.5b                              | Vaa           |
| 3862/A03-0060        | Sole (pointed forepart) | 7           | VI, VII    | M1.5b                              | Vaa           |
| 3879/A03-0120d       | Sole (pointed forepart) | 7           | VI, VII    | M1.5b                              | Vaa           |
| 3880/A03-0120e       | Sole (pointed forepart) | 7           | VI, VII    | M1.5b                              | Vaa           |
| 3886/A03-0125a       | Sole                    | 7           | VI, VII    | M1.5b                              | Vaa           |
| 3897/A03-0132b       | Sole (waist fragment)   | 7           | VI, VII    | M1.5b                              | Vaa           |
| 3898/A03-0132c       | Sole (oval forepart)    | 7           | VI, VII    | M1.5b                              | Vaa           |
| 3926/A03-0136b       | Sole                    | 7           | VI, VII    | M1.5b                              | Vaa           |
| 3943/A03-0139a       | Sole (seat)             | 7           | VI, VII    | M1.5b                              | Vaa           |
| 3960/A03-0142a       | Sole                    | 7           | VI, VII    | M1.5b                              | Vaa           |
| 3976/A03-0148a       | Sole (forepart)         | 7           | VI, VII    | M1.5b                              | Vaa           |
| 3977/A03-0148b       | Sole (pointed forepart) | 7           | VI, VII    | M1.5b                              | Vaa           |
| 3987/A03-0170d       | Sole (rounded forepart) | 7           | VI, VII    | M1.5b                              | Vaa           |

(continued)



| <i>Cat/Accession</i> | <i>Leather type</i>     | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                | <i>Phase</i> |
|----------------------|-------------------------|-------------|------------|-------------------------------|--------------|
| 4020/A03–0155a       | Sole                    | 7           | VII        | P8.4                          | Va           |
| 4028/A03–0156a       | Sole (seat)             | 7           | VII        | P8.4                          | Va           |
| 4034/A03–0158a       | Sole (rounded forepart) | 7           | VII        | P8.4                          | Va           |
| 4042/A03–0159b       | Sole                    | 7           | VII        | P8.4                          | Va           |
| 4088/A03–0210b       | Sole(rounded forepart)  | 7           | VII        | P8.4                          | Va           |
| 4089/A03–0210c       | Sole (rounded forepart) | 7           | VII        | P8.4                          | Va           |
| 4090/A03–0210d       | Sole (rounded forepart) | 7           | VII        | P8.4                          | Va           |
| 4099/A03–0171a       | Sole (seat)             | 7           | VII        | P8.4                          | Va           |
| 4126/A03–0214d       | Sole                    | 7           | VII        | P8.4                          | Va           |
| 4127/A03–0214e       | Sole                    | 7           | VII        | P8.4                          | Va           |
| 4200/A4906a          | Sole                    | 1           | V, VI      | M5c                           | (IVc–)Va     |
| 4202/A6397a          | Sole (forepart)         | 1           | V, VI      | M5c                           | (IVc–)Va     |
| 4207/A6232a          | Sole (seat)             | 3           | V          | B1(a), Construction–Levelling | IVcc,Va      |
| 4208/A6232b          | Sole (seat)             | 3           | V          | B1(a), Construction–Levelling | IVcc,Va      |
| 4209/A6232c          | Sole                    | 3           | V          | B1(a), Construction–Levelling | IVcc,Va      |
| 4210/A6232d          | Sole                    | 3           | V          | B1(a), Construction–Levelling | IVcc,Va      |
| 4217/A4920           | Sole                    | 2           | V          | B1(a), Construction–Levelling | IVcc,Va      |
| 4219/A6234a          | Sole                    | 2           | V          | B1(a), Construction–Levelling | IVcc,Va      |
| 4232/A4925a          | Sole (seat)             | 3           | V          | B1(a), North Room–Floor (3a)  | IVcc,Va      |
| 4241/A1239a          | Sole                    | 3           | V          | B1(b), North Room–Floor (6)   | Va           |
| 4260/A6374a          | Sole (seat)             | 2           | V          | B1(b), Demolition, Tumble     | Va           |
| 4262/A6478a          | Sole (seat)             | 1           | V, VI      | M5a                           | IVb–Vc       |
| 4263/A6478b          | Sole (seat)             | 1           | V, VI      | M5a                           | IVb–Vc       |
| 4264/A6478c          | Sole                    | 1           | V, VI      | M5a                           | IVb–Vc       |
| 4265/A6478d          | Sole                    | 1           | V, VI      | M5a                           | IVb–Vc       |
| 4266/A6478e          | Sole                    | 1           | V, VI      | M5a                           | IVb–Vc       |
| 4273/A5892a          | Sole (rounded forepart) | 1           | V, VI      | M5a                           | IVb–Vc       |
| 4285/A4923a          | Sole                    | 1           | V, VI      | M5a                           | IVb–Vc       |
| 4289/A0825a          | Sole (forepart)         | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4290/A0825b          | Sole                    | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4291/A0825c          | Sole                    | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4306/A1223a          | Sole                    | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4309/A1251b          | Sole (pointed forepart) | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4395/A2247a          | Sole                    | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4396/A2247b          | Sole                    | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4397/A2247c          | Sole                    | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4480/A2284b          | Sole                    | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4481/A2284c          | Sole                    | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4482/A2284d          | Sole                    | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4483/A2284e          | Sole                    | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4487/A3456a          | Sole (forepart)         | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4500/A5895           | Sole                    | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4502/A6188b          | Sole (seat)             | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4504/A6188d          | Sole (pointed forepart) | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4529/A6198b          | Sole                    | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4552/A1253c          | Sole                    | 3           | V, VI      | M1.5a                         | Va,Vaa       |
| 4813/A6221b          | Sole                    | 3           | V, VI      | M1.5a                         | Va,Vaa       |
| 4829/A03–0175b       | Sole (seat)             | 7           | VII        | M8a                           | Va,Vaa       |
| 4830/A03–0175c       | Sole (seat), rand       | 7           | VII        | M8a                           | Va,Vaa       |
| 4831/A03–0175d       | Sole                    | 7           | VII        | M8a                           | Va,Vaa       |
| 4832/A03–0175e       | Sole (pointed forepart) | 7           | VII        | M8a                           | Va,Vaa       |
| 4876/A03–0111c       | Sole                    | 7           | VII        | M8a                           | Va,Vaa       |

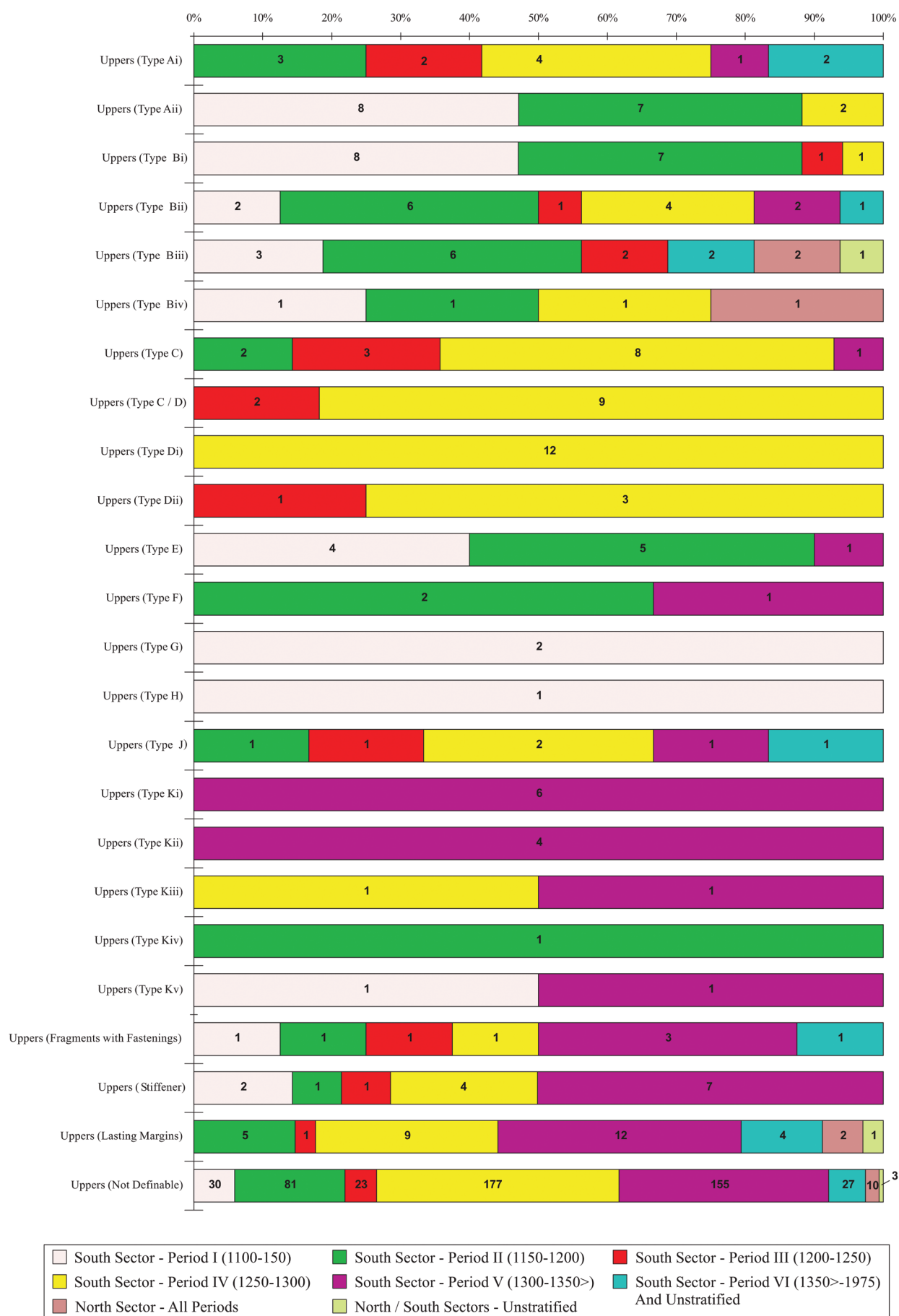
(continued)



| <i>Cat/Accession</i> | <i>Leather type</i>     | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                            | <i>Phase</i> |
|----------------------|-------------------------|-------------|------------|-------------------------------------------|--------------|
| 4880/A03-0179a       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4888/A03-0128c       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4890/A03-0128e       | Sole (pointed forepart) | 7           | VII        | M8a                                       | Va,Vaa       |
| 4902/A03-0162a       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4904/A03-0162c       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4905/A03-0162d       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4906/A03-0162e       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4907/A03-0162f       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4908/A03-0162g       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4909/A03-0162h       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4910/A03-0162i       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4911/A03-0162j       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4912/A03-0162k       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4913/A03-0162l       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4914/A03-0162m       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4915/A03-0162n       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4916/A03-0162o       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4962/A03-0174b       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4963/A03-0174c       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4966/A03-0174f       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4967/A03-0174g       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4968/A03-0174h       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4969/A03-0174i       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4970/A03-0174j       | Sole                    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4971/A03-0174k       | Sole (oval forepart)    | 7           | VII        | M8a                                       | Va,Vaa       |
| 4972/A03-0174l       | Sole (oval forepart)    | 7           | VII        | M8a                                       | Va,Vaa       |
| 5022/A03-0212c       | Sole (seat)             | 7           | VII        | M8a                                       | Va,Vaa       |
| 5186/A03-0144b       | Sole (seat)             | 7           | VII        | M8a, Pit 7183                             | Va,Vaa       |
| 5198/A03-0129a       | Sole (seat)             | 7           | VII        | M8a, T7193                                | Va,Vaa       |
| 5200/A03-0129c       | Sole                    | 7           | VII        | M8a, T7193                                | Va,Vaa       |
| 5252/A03-0029c       | Sole (waist fragment)   | 7           | VII        | P8.5                                      | Vb,Vbb       |
| 5255/A03-0045        | Sole                    | 7           | VII        | B53 (Phase 2), South Area–Occupation (7a) | Vbb          |
| 5291/A4598           | Sole (pointed forepart) | 2           | V, VI      | M4a                                       | Va–Vc        |
| 5292/A6071a          | Sole                    | 2           | V, VI      | M4a                                       | Va–Vc        |
| 5295/A6231           | Sole (seat)             | 2           | V, VI      | M4a                                       | Va–Vc        |
| 5296/A6253           | Sole (pointed forepart) | 2           | V, VI      | M4a                                       | Va–Vc        |
| 5297/A6212a          | Sole (forepart)         | 2           | V, VI      | M4a                                       | Va–Vc        |
| 5302/A4917b          | Sole (seat)             | 4           | V, VI      | M3a                                       | Vb–Vc        |
| 5306/A4917f          | Sole                    | 4           | V, VI      | M3a                                       | Vb–Vc        |
| 5308/A5896a          | Sole (seat)             | 4           | V, VI      | M3a                                       | Vb–Vc        |
| 5315/A4390c          | Sole                    | 4           | V, VI      | M3a                                       | Vb–Vc        |
| 5316/A4390d          | Sole                    | 4           | V, VI      | M3a                                       | Vb–Vc        |
| 5317/A4390e          | Sole                    | 4           | V, VI      | M3a                                       | Vb–Vc        |
| 5322/A4919a          | Sole (seat)             | 4           | V, VI      | M3a                                       | Vb–Vc        |
| 5323/A4919b          | Sole (seat)             | 4           | V, VI      | M3a                                       | Vb–Vc        |
| 5324/A4919c          | Sole (forepart)         | 4           | V, VI      | M3a                                       | Vb–Vc        |
| 5328/A6199           | Sole                    | 4           | V, VI      | M3a                                       | Vb–Vc        |
| 5334/A6204           | Sole                    | 4           | V, VI      | M3a                                       | Vb–Vc        |
| 5341/A1245           | Sole (seat)             | 4           | VI         | M3b                                       | Vd           |
| 5342/A2283a          | Sole (seat)             | 4           | VI         | M3b                                       | Vd           |
| 5358/A5894b          | Sole                    | 4           | VI         | M3b                                       | Vd           |
| 5389/A6223           | Sole                    | 4           | VI         | P1a                                       | Vd           |
| 5391/A6248a          | Sole (forepart)         | 4           | VI         | P1a                                       | Vd           |
| 5394/A6197           | Sole                    | 4           | VI         | P1a                                       | Vd           |

(continued)

| <i>Cat/Accession</i>       | <i>Leather type</i>     | <i>Area</i> | <i>Rig</i> | <i>Feature</i>  | <i>Phase</i> |
|----------------------------|-------------------------|-------------|------------|-----------------|--------------|
| 5396/A6394a                | Sole (pointed forepart) | 4           | VI         | P1a             | Vd           |
| 5407/A4247b                | Sole                    | 4           | VI         | P1a             | Vd           |
| 5408/A4247c                | Sole                    | 4           | VI         | P1a             | Vd           |
| 5409/A4247d                | Sole                    | 4           | VI         | P1a             | Vd           |
| 5410/A4247e                | Sole                    | 4           | VI         | P1a             | Vd           |
| 5460/A1246a                | Sole                    | 4           | VI         | P1a, MF2125     | Vd           |
| 5461/A1246b                | Sole                    | 4           | VI         | P1a, MF2125     | Vd           |
| 5462/A1246c                | Sole                    | 4           | VI         | P1a, MF2125     | Vd           |
| 5486/A0821a                | Sole                    | 4           | VI         | M3b             | Vd           |
| 5525/A6218a                | Sole (seat)             | 4           | VI         | M3b             | Vd           |
| 5552/A6209a                | Sole                    | 4           | V          | M3c             | Vd           |
| 5569/A4362a                | Sole                    | 4           | V          | M3c             | Vd           |
| 5592/A6201                 | Sole (forepart)         | 4           | V          | M3c             | Vd           |
| 5593/A6192a                | Sole                    | 4           | V          | M3c             | Vd           |
| 5594/A6192b                | Sole                    | 4           | V          | M3c             | Vd           |
| 5604/A6255a                | Sole (forepart)         | 4           | V          | M3c             | Vd           |
| 5616/A0819a                | Sole                    | 2           | VI         | M4c             | Vd,Vdd       |
| 5708/A0118a                | Sole (forepart)         | 7/10        | VII/VIII   | Sondage 2003    | u/s          |
| 5709/A0118b                | Sole                    | 7/10        | VII/VIII   | Sondage 2003    | u/s          |
| 5710/A0118c                | Sole                    | 7/10        | VII/VIII   | Sondage 2003    | u/s          |
| 5711/A0118d                | Sole                    | 7/10        | VII/VIII   | Sondage 2003    | u/s          |
| 5742/A5898b                | Sole                    | 2           | V, VI      | Unstratified    | u/s          |
| 5743/A5898c                | Sole                    | 2           | V, VI      | Unstratified    | u/s          |
| 5754/A6383a                | Sole                    | 2           | V, VI      | Unstratified    | u/s          |
| 5763/A0120a                | Sole (seat)             | 3/4         | V, VI      | Unstratified    | u/s          |
| 5776/A2246                 | Sole (forepart)         | 7/10        | VII/VIII   | Sondage 2003    | u/s          |
| 5794/A0817c                | Sole (seat)             | 3/4         | V, VI      | Unstratified    | u/s          |
| 5796/A1234a                | Sole                    | 3/4         | V, VI      | Unstratified    | u/s          |
| 5797/A1234b                | Sole                    | 3/4         | V, VI      | Unstratified    | u/s          |
| 5798/A1234c                | Sole                    | 3/4         | V, VI      | Unstratified    | u/s          |
| 5799/A1234d                | Sole                    | 3/4         | V, VI      | Unstratified    | u/s          |
| 5800/A1234e                | Sole                    | 3/4         | V, VI      | Unstratified    | u/s          |
| 5801/A1234f                | Sole                    | 3/4         | V, VI      | Unstratified    | u/s          |
| 5802/A1234g                | Sole                    | 3/4         | V, VI      | Unstratified    | u/s          |
| 5803/A1234h                | Sole                    | 3/4         | V, VI      | Unstratified    | u/s          |
| 5805/A1635a                | Sole (seat)             | 3/4         | V, VI      | Unstratified    | u/s          |
| 5811/A12487b               | Sole                    | 2           | V, VI      | Unstratified    | u/s          |
| 5812/A12487c               | Sole                    | 2           | V, VI      | Unstratified    | u/s          |
| 5813/A12487d               | Sole                    | 2           | V, VI      | Unstratified    | u/s          |
| 5814/A12487e               | Sole                    | 2           | V, VI      | Unstratified    | u/s          |
| 5817/A6222a                | Sole                    | 4           | V, VI      | Unstratified    | u/s          |
| 5820/A0801a                | Sole (forepart)         | 4           | V, VI      | Unstratified    | u/s          |
| 5821/A0801b                | Sole                    | 4           | V, VI      | Unstratified    | u/s          |
| 5825/A03–0127b             | Sole                    | 7           | VII, VIII  | Unstratified    | u/s          |
| 5850/A03–0133a             | Sole                    | 7           | VII, VIII  | Unstratified    | u/s          |
| 5851/A03–0133b             | Sole                    | 7           | VII, VIII  | Unstratified    | u/s          |
| 5852/A03–0133c             | Sole                    | 7           | VII, VIII  | Unstratified    | u/s          |
| 5853/A03–0133d             | Sole                    | 7           | VII, VIII  | Unstratified    | u/s          |
| 5854/A03–0133e             | Sole (pointed forepart) | 7           | VII, VIII  | Unstratified    | u/s          |
| <b>North Sector</b>        |                         |             |            |                 |              |
| 5887/A7805a                | Sole                    | 5           | –          | CG005           | 4(5)         |
| 5888/A7805b                | Sole                    | 5           | –          | CG005           | 4(5)         |
| 5891/A6236a                | Sole                    | 5           | –          | CG007, Pit 0276 | 4,5          |
| 5892/A6236b                | Sole                    | 5           | –          | CG007, Pit 0276 | 4,5          |
| 5915/A0109a                | Sole (pointed forepart) | 5,A         | –          | Lade (4)        | 6–12 (b–e)   |
| 5948/A0804                 | Sole (seat)             | 5,A         | –          | Lade (4)        | 6–12 (b–e)   |
| 5965/A0102                 | Sole                    | 5,A         | –          | CG028           | 15–18        |
| <b>South/North Sectors</b> |                         |             |            |                 |              |
| 5973/L1694c                | Sole (forepart)         | –           | –          | Unstratified    | u/s          |



Illus 125 Number and percentage of upper categories arranged by period.

## Uppers

Of the 722 fragments of upper found, 160 (22%) were complete enough to enable them to be divided into ten Types, A–K (excluding I). The types have been defined by the overall pattern and shape and by the method of fastening. All, except Types H and J, are basically one-piece uppers; in this pattern, an approximately rectangular fragment of leather has been cut and folded round the foot, forming both vamp and quarters, which are joined, usually on the inside of the foot, by a butted edge–flesh seam. Most of these uppers have one or two additional pieces: nearly all have a second leg flap or latchet, as, for example Cat No 218/A7648b, (Type Aii; Illus 127); some have a side-piece linking vamp and quarters, as on Cat No 4288/A4926, (Type Ai), where the side-piece is long and rectangular, reaching from lasting margin to top edge. Some boots, for instance Cat Nos 2486–8/A03–0392h–j, (Type Ai; Illus 128), have two side-pieces, positioned one on top of the other. Another boot, Cat No 358/A6773g, (Type Bii; Illus 131) is made up of five pieces, a large fragment comprising vamp, quarters and part of two leg flaps, two triangular fragments forming the top front corners of both leg flaps and a top band. Such variations from the basic one-piece pattern were probably the result of economy, or occasionally, repair, not style. Types H and J are distinguished by having separate vamps and quarters linked on both the inside and outside of the foot by butted edge–flesh stitching channels. Many uppers, of all types, contain another fragment – a semicircular or triangular heel-stiffener, set on the inside of the quarters.

The following trends emerge from a study of the dating of each type. Types A and B, simple wrap-around boots, the former with no apparent fastening, the latter with varying patterns of thongs, are predominantly of 12th-century date. Also chiefly from 12th-century contexts are Type E, low shoes with small leg flaps or fastenings, Type F, low shoes with no latchets, Type G, high shoes with latchets ending in

thongs and Type H, an exceptionally high calf boot with the vamp separate from the quarters. Type J, boots and shoes with separate vamps and quarters, however, belong mainly to the second half of the 13th century, as do Types C and D, boots and shoes respectively, with side lacing. Type K, boots with central fastening, are mainly of late 13th- to mid-14th-century date.

Types A, B, C, G and K consist of ankle-boots, while the Type H upper belongs to a high boot; these were almost certainly worn outdoors. Types D, E and F were low shoes; F in particular, which had no fastenings and no latchets, might have been an indoor slipper.

Thirteen children's uppers were recognised. These belonged to Types Ai (2), Bi (9), Bii (1) and Kiv (1). The Type K upper, although it had a central fastening, was of a much simpler, cruder design than the rest of Type K. The majority of the children's uppers were of mid- to late 12th-century date, with only two from the second half of the 13th century.

### *Uppers, decorated*

(Illus 124, 136, 138, 140, 144 and 148)

Evidence for decoration was found on nine uppers. In three cases, this consisted of a vamp stripe, running from vamp throat to toe. Those on Cat Nos 162/A7787i and 4287/A6398 were made with three and four, respectively, parallel grooves (Illus 138, 144). A child's upper, Cat No 898/A11260b, had a more elaborate pattern, with not only a single groove from throat to toe, but also two grooves at right angles (Illus 124). A fourth upper, Cat No 1089/A03–0278d, had a long vertical rib, formed by two parallel grain to flesh stitching channels (Illus 144).

It is probable that these grooves or ribs would have been stitched with wool or silk; a boot from Coventry, for example, had 'an embroidered stripe of brown wool up the centre front, running from toe to throat' (Thomas 1980, 55–6, 49/185/12). Thornton suggests that a shoe from Lich Street, Worcester, may have been 'stitched horizontally to give the effect of an inserted piping' (Thornton 1969a, 57–8, Fig 13, no 3).

### *Decorated uppers (Illus 124, 136, 140, 144 and 148)*

| <i>Cat/Accession</i>    | <i>Leather type</i>        | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                        | <i>Phase</i> |
|-------------------------|----------------------------|-------------|------------|---------------------------------------|--------------|
| <b>South Sector</b>     |                            |             |            |                                       |              |
| 162/A7787i              | Upper (Type E)             | 1/2         | VI         | B6(Phase 1), South Room–Floor (1)     | Ie           |
| 172/A7580a & 174/A7580c | Top band, upper (Type Aii) | 2           | VI         | M14b(b)                               | Ie           |
| 186/A7600b              | Upper (Type G)             | 2           | VI         | M14b(b)                               | Ie           |
| 229/A7588c              | Upper (Type G)             | 2           | V          | M14b(c)                               | Ie, 1f       |
| 898/A11260b             | Upper (Type Ai)            | 3           | VI         | M1.3                                  | Ili          |
| 1089/A03–0278d          | Upper                      | 9           | VII        | B19 (Phase 2b), North Room–Floor (2b) | IIIc         |
| 1287/A6415c             | Upper (Type Di)            | 3           | V          | P2.2b                                 | IVa          |
| 1288/A6415d             | Upper (Type Di)            | 3           | V          | P2.2b                                 | IVa          |
| 4287/A6398              | Upper                      | 1           | V, VI      | M5a, Pit 3540                         | IVb–Vc       |

Coloured silk thread had been used on shoes from London, as, for example, on an upper from Seal House, which had 'three stripes of contrasting red, white and (faded) green' (Grew and de Neergaard 1988, 77–9). Similarly, a 12th-century ankle-shoe from Swinegate, York, has a vamp stripe sewn with pink thread (Mould et al 2003). Vamp stripes were also found at Waterford, Bergen and Schleswig (O'Rourke 1997, 704, 710, Fig 18.3.1, 18.3.2; Larsen 1992, 31–3; Schnack 1992b, Fig 18 no 2, Fig 19, Fig 20 no 2).

Two of the High Street examples (Cat Nos 162/A7787i and 186/A7600b) were recovered from Rig VI deposits that had been laid down shortly before 1150. Three others came from mid-13th-century layers. The earliest of these was detected within a secondary floor-level in the North Room of B19 (Phase 2b), a backland structure in Rig VII. The other two (Cat Nos 1287/A6415c and 1288/A6415d) were found in what should probably be recognised as an occupation layer of a path (P2.2b) that ran along the eastern boundary of Rig V. The sixth example (Cat No 4287/A6398) came from Pit 3540, a pit that dated from some time between the later 13th and the earlier 14th centuries. Parallels from London, York, Schleswig and Bergen are mainly of 12th-century date (Grew and de Neergaard 1988, 77–9; Mould et al 2003; Carlisle 1998, unpublished archive report; Schnack 1992b, 75–8; Larsen 1992, 31–3). This early date fits in with Larsen's suggestion that the decorative vamp stripe owes its origin to 'the functional seam or thonging which held the one-piece shoe together on the top of the foot' (Larsen 1992, 57). A construction seam of this type survives on a 10th century one-piece ankle shoe from Coppergate, York (Mould et al 2003).

Two uppers had been decorated with silk stitching, on the top edge of the quarters (Cat No 229/A7588c, Type G; Illus 140) and on a separate topband or binding (Cat No 172/A7580a, Illus 148; see Straps folded once for further details). Both these uppers came from mid-12th-century contexts.

Another two uppers appear to have had openwork or cutout decoration. A Type G upper, Cat No 186/A7600b, has had a thin strip and three ovals cut out (Illus 140). The closest, though not exact, parallels are found on similarly styled shoes from Schleswig (Schnack 1992b, Figs 45–49, Halbschuh Form G, 93–97). These are, however, later in date (13th to 14th centuries) than the High Street example, which is of mid-12th-century date. Comparable decoration from Bergen is also of 13th- to 14th-century date.

One of the Type Di uppers, Cat Nos 1287/A6415c and 1288/A6415d (Illus 136), has a number of irregular slits. These might have been caused by wear, but, on the other hand, they were possibly intended as decoration, similar to that on several of the Schleswig uppers, which, being of 13th-century date, are broadly contemporary with the High Street example (Schnack 1992b, Halbschuh Form C, 78–84; Fig 22 no 2, Fig 25 no 2, Fig 32 no 2, Fig 33).

Larsen suggests that the effect of openwork decoration may have been enhanced by the use of 'a highly coloured lining', although he admits that the Bergen uppers show no evidence for this (Larsen 1992, 32). Upper Cat Nos 1287/A6415c and 1288/A6415d (Illus 136), however, has a vertical row of tunnel stitching, which could have secured such a lining.

#### *Uppers, Types Ai–ii: ankle boot* (Illus 126–8)

Type A consists of 27 ankle boots of one-piece wrap around design with no surviving thongs or tunnel holes for thongs. Ten of these are high ankle-boots (Ai), the rest are low ankle-boots (Aii). As discussed above, these boots are made of one large fragment comprising vamp, quarters and usually a leg flap. Most also have one or more additional fragments—second leg flaps, side-pieces and stiffeners. Nearly all boots had a second leg flap, but it only survives in six examples, as, for instance, Cat Nos 67/A8809b (Illus 128); 174/A7580c (Illus 126); 218/A7648b (Illus 127). Five uppers retain their stiffeners, as, for example, Cat Nos 478/A12309b (Illus 126); 2486–8/A03–0392h–j (Illus 128); 218/A7648b (Illus 127) while a sixth, Cat No 127/A12306 still has the stitch holes for one (Illus 128). Side-pieces survive on eight boots, including Cat Nos 478/A12309b (Illus 126); 277/A7074d (Illus 128); 2486–8/A03–0392h–j (2) (Illus 128); 174/A7580c (Illus 126). Two single slits on Cat No 478/A12309b (Illus 126) might have been for thongs but the complete absence of any other indication for thongs suggest that these slits may represent damage.

5822/A0801c is unusual in that on the inside of the foot it has a very long vamp wing, with vamp and quarters joining in the middle of the stiffener, thus forming a backseam. The quarters of a low boot, Cat No 3327/A03–0066g, has a domed top edge, similar to those found in shoes of Type D.

The vamp of Cat No 898/A11260b has been decorated with an engraved line from throat to toe and with two more at right angles, across the middle of the vamp (Illus 124). Parallels from Worcester, Coventry and London suggest that the lines might have been stitched with wool or silk (Thornton 1969a, 57–8, Fig 13, no 3; Thomas 1980, 55–6, 49/185/12; Grew and de Neergaard 1988, 77–9).

On the High Street site, these ankle boots range in date from the earlier 12th century to possibly as late as the early 14th century. Low ankle boots (Type Aii) seem predominantly to have been of 12th-century date, with 15 (88%) of the 17 coming from Period I and II deposits. The other two (12%) were detected within Rig VII layers that dated from the later 13th century. In the case of the high ankle boots (Type Ai), the dating is not precise. Of the eight stratified examples, (two came from unstratified deposits) at least three, and possibly as many as five, came from Period II (the second half of the 12th century). Equally it is also true that at least three, and possibly as many as five, may have come



*Uppers, Type Ai: high ankle boot (Illus 127–8).*

| <i>Cat/Accession</i>                                   | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                 | <i>Phase</i>   |
|--------------------------------------------------------|-------------|------------|--------------------------------|----------------|
| <b>South Sector</b>                                    |             |            |                                |                |
| 332/A6774b                                             | 1/2         | VI         | P5.4a                          | IIb            |
| 823/A11221c                                            | 3           | VI         | M1.2, Pit 2648                 | <IIg(IIh)      |
| 898/A11260b                                            | 3           | VI         | M1.3                           | IIi            |
| 1145/A4817b                                            | 1           | V          | M12                            | IIg–IIIc(–IVa) |
| 1216/A9373b                                            | 3           | V          | M6b                            | IIg–IIId       |
| 2486/A03–0392h,<br>2487/A03–0392i,<br>& 2488/A03–0392j | 7           | VI         | M1.4f                          | IVc            |
| 2807/A03–0274b                                         | 7           | VII        | B18 (Phase 2b), Hall, Pit 7290 | IVb            |
| 4288/A4926                                             | 1           | V, VI      | M5a, Pit 3540                  | IVb–Vc         |
| 5822/A0801c                                            | 4           | V, VI      | Unstratified                   | u/s            |
| 5876/A03–0037b                                         | 7–10        | VI–VIII    | Unstratified                   | u/s            |

*Uppers, Type Aii: low ankle boot (Illus 126–8).*

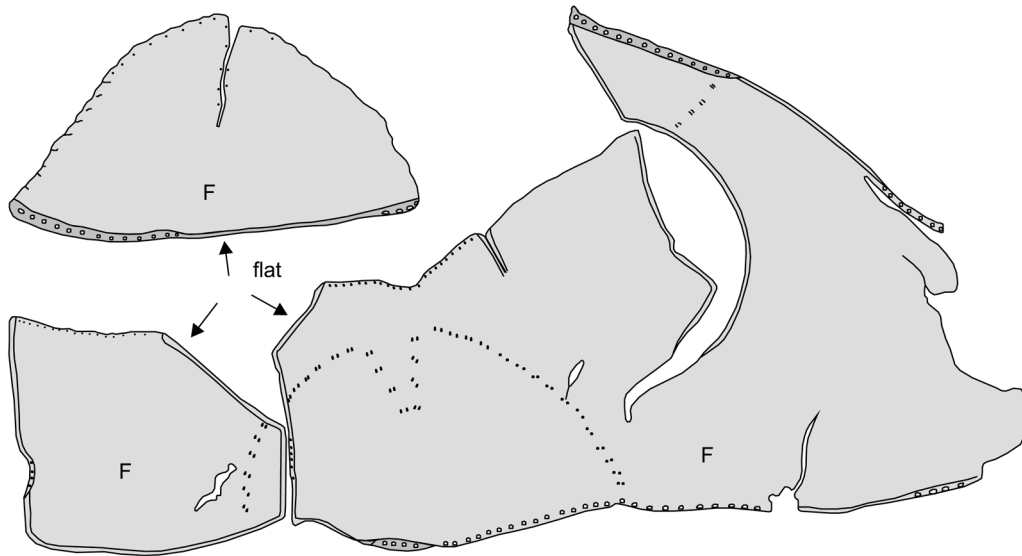
| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                   | <i>Phase</i> |
|----------------------|-------------|------------|--------------------------------------------------|--------------|
| <b>South Sector</b>  |             |            |                                                  |              |
| 67/A8809b            | 1/2         | V, VI      | M2.1b & B10, South Room–<br>Floor/Occupation (1) | Ic,Icc       |
| 127/A12306           | 3           | V          | MC025, Pit 5337                                  | (Ia–)Id      |
| 144/A7789c           | 2           | VI         | P5.2a                                            | Ie           |
| 174/A7580c           | 2           | VI         | M14b(b)                                          | Ie           |
| 202/A7257g           | 2           | VI         | M14b(b), Pit 3625                                | Ie           |
| 218/A7648b           | 2           | VI         | M14b(b), Pit 3625                                | Ie           |
| 277/A7074d           | 2           | VI         | MC044b                                           | If           |
| 362/A7806            | 2           | V          | M14b(a)                                          | Id           |
| 364/A2296b           | 1           | V          | M14a, Pit 3040                                   | Id–IIc       |
| 455/A10048d          | 4           | VI         | M1.1f, Pit 2383                                  | IIb,IIc      |
| 465/A11641           | 3           | VI         | M1.1c, Pit 5005                                  | IIId         |
| 478/A12309b          | 3           | VI         | M1.1c, Pit 5005                                  | IIId         |
| 507/A3447d           | 2           | VI         | M1.1d & M1.1e                                    | IIId–IIIf    |
| 918/A12490c          | 4           | VI         | M1.3                                             | IIi          |
| 921/A12536c          | 4           | VI         | M1.3                                             | IIi          |
| 2641/A03–0231c       | 9           | VII        | B18 (Phase 1/2)                                  | IVaa,IVb     |
| 3327/A03–0066g       | 9           | VII        | P8.3                                             | IVc,IVcc     |

from 14th-century deposits (Periods III and IV). These two categories of ankle boot are distributed singly over the site, apart from four concentrations: three from M14b(b), two from M1.1c, three from M1.3 and two from B18.

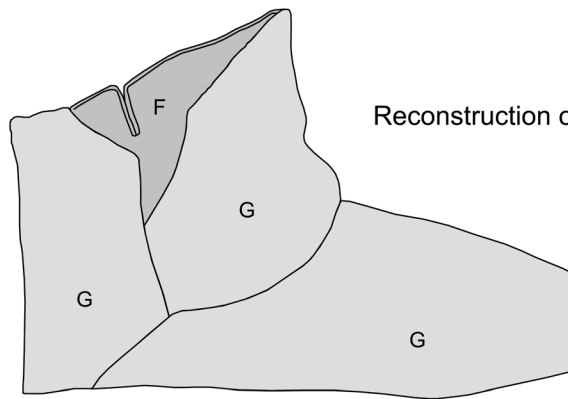
Parallels include South Methven Street, Perth (15th century?); Gallowgate Middle School (12th–13th centuries), Netherkirkgate, Aberdeen; London (early–mid 12th century; early–mid 14th century); Winchester

(late 11th–13th centuries); York; Novgorod; Bremen (11th century?); Bergen (late 12th–early 14th centuries) and Schleswig (11th–12th centuries) (Thomas 1987, 186; Thomas 2001a, 243; Grew and de Neergaard 1988, 11, no 6; Tatton-Brown 1975, 15, Fig 27, no 76; Ottaway 1982, 128–30; Thornton 1990b, 612–13, Fig 163, nos 1937 and 1938; Mould et al 2003; Thompson 1967, 81, Fig 83; Schnack 1993, 62–3, Fig 1a; Larsen 1992, 25–6, Fig 27; Schnack 1992b, 99).

478



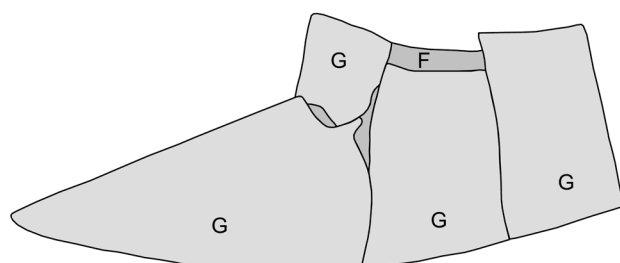
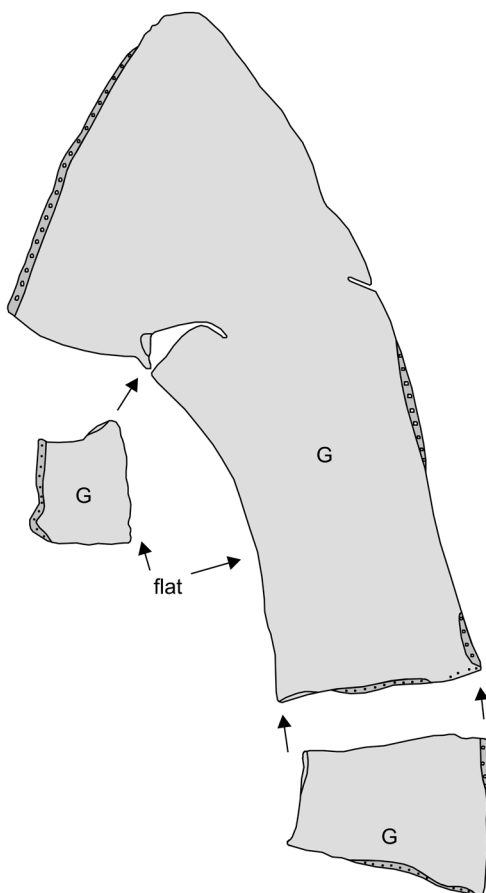
Reconstruction of 478



174

0 50mm

Reconstruction of 174

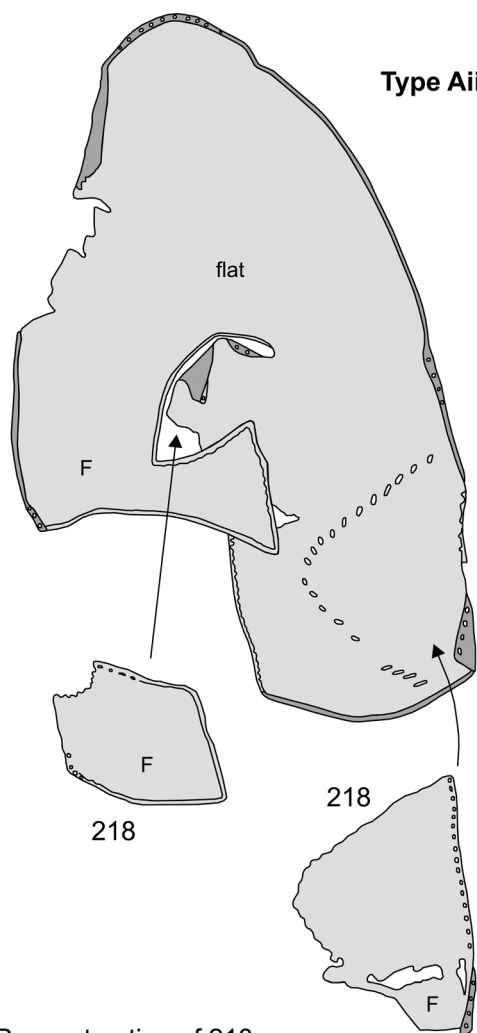


Illus 126 Uppers, Type Aii.



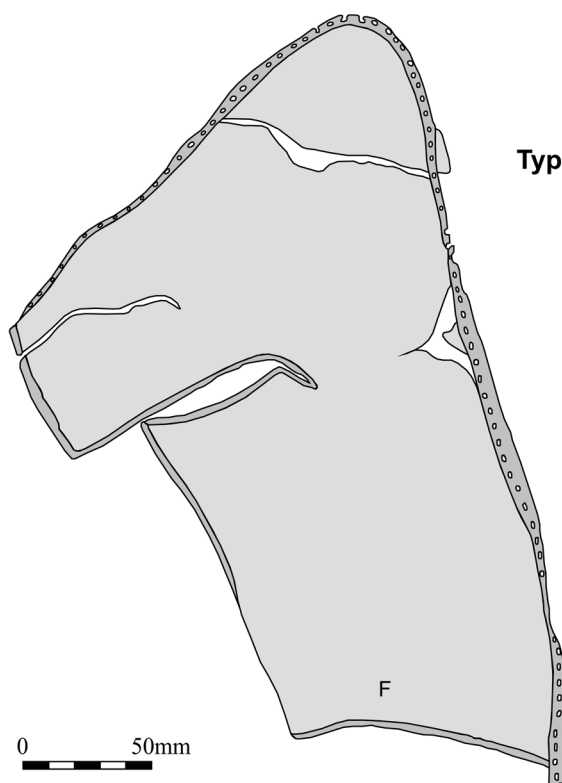
218

Type Aii

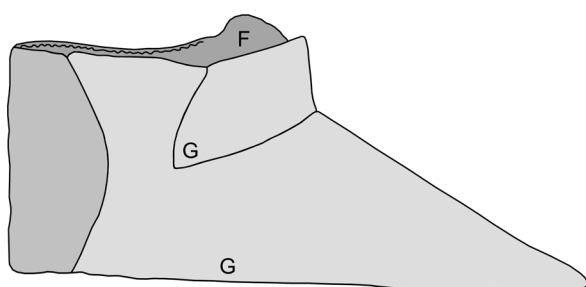


823

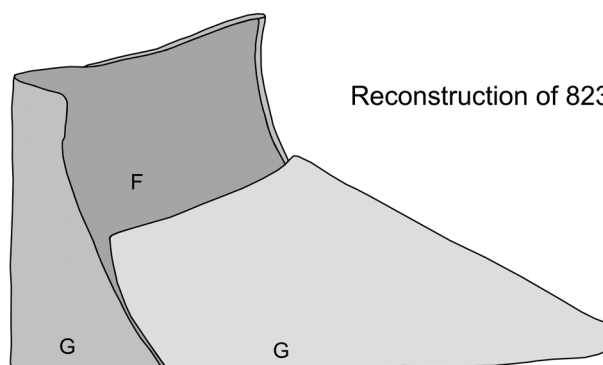
Type Ai



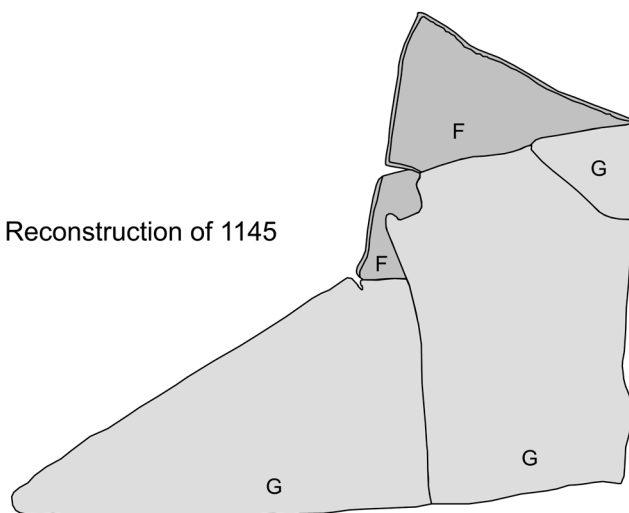
Reconstruction of 218



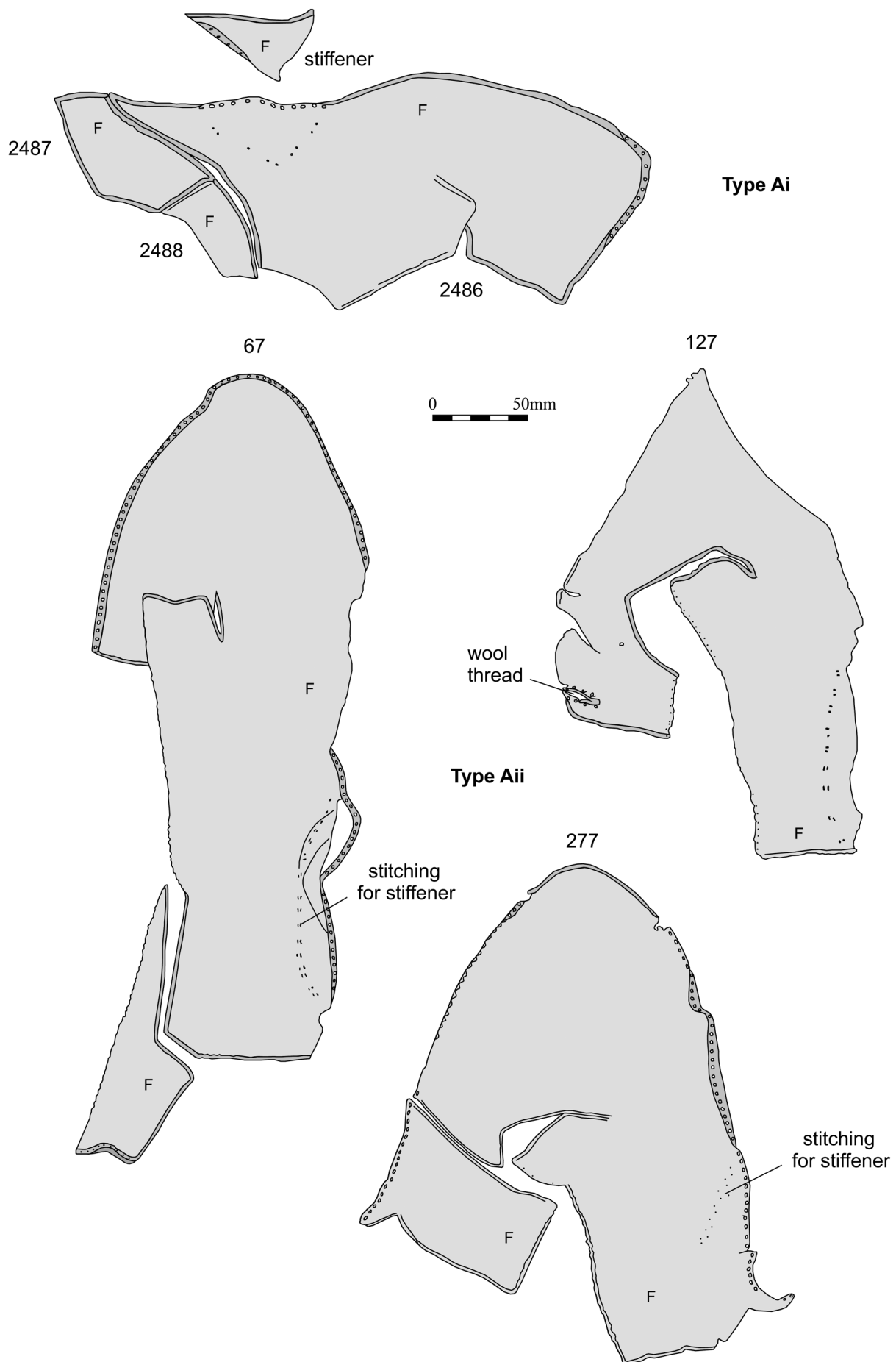
Reconstruction of 823



Reconstruction of 1145



Type Ai



Illus 128 Uppers, Types Ai and Aii.

*Uppers, Type Bi–iv*

Type B consists of 53 boots of one-piece design secured by thongs wrapped round the foot in varying patterns. Type Bi has one horizontal thong, Type Bii two or more horizontal thongs, while Type Biii has two vertical thongs, apparently securing horizontal thongs. Uppers of Type Biv have only a single thong hole surviving.

*Uppers, Type Bi: low boot with tunnel hole for thong* (Illus 129, 130, 146)

The 17 uppers of Type Bi have tunnel holes for one horizontal thong. The tunnel holes consist of two short parallel vertical slits, about 6mm apart and 4–5mm high; they are usually positioned on each side of the quarters at about the height of the vamp throat, as, for instance, on Cat No 307/A12635c (Illus 146). On some examples, the tunnel hole on the inside of the foot is near the top of the vamp wing as on Cat No 267/A7044Bg (Illus 130).

Cat No 117/A03–0002b, with only one surviving tunnel hole, has clear marks and creases indicating the position of the thong (Illus 129). Cat No 390/A12296b, with tunnel holes on quarters and vamp wing, has a fragment of thong in situ. On Cat No 508/A3447e, the inner tunnel hole is on a sidepiece.

As with Type A, most uppers of one-piece design include additional fragments. Cat No 183/A7597b has a second leg flap; that of Cat No 30/A10800d (Illus 129) no longer survives. Similarly, Cat No 508/A3447e still retains its sidepiece, while Cat No 527/A6803 (Illus 130) does not. Cat No 126/A12297b has a stiffener but its second leg flap is missing (Illus 129). Cat No 357/A6773f has two strips added to the main piece, to increase the height of the leg. On Cat No 117/A03–0002b, both a leg flap and a sidepiece are missing (Illus 129).

Two boots are unusual in having part of the quarters turned inwards. Cat No 126/A12287a is a low boot with one large fragment comprising vamp, quarters and leg flap. The end of the quarters has been folded inwards and stitched to the flesh side of the quarters. It was not a heel stiffener, as separate stitch holes survive in the correct position. There is also a row of tunnel stitches across the flesh side of the leg flap, possibly for a lining (Illus 129). Similarly, part of the quarters of high boot Cat No 296/A12632b was turned inwards (Illus 130).

Type Bi uppers range in date from early 12th to mid 13th century, but are predominantly (88%) of 12th-century date, with at least eight (47%) examples from Period I (the first half of the 12th century), seven (41%) from Period II. The other two (12%) came from deposits that are unlikely to date from any later than the mid 13th century. The two uppers with quarters turned inwards are both from mid 12th century contexts. These uppers were found singly, apart from two groups of two, M14b(b) and Pit 4726, a cesspit in B16b. All, but one, came from Rigs V or VI.

Dated parallels for this type of boot range from the 11th to the 15th centuries, but are mainly of 12th- to 14th-century date: South Methven Street, Perth (15th century); Gallowgate Middle School, Aberdeen (12th–13th centuries); Low Petergate, York (12th–14th centuries); Coppergate and Swinegate, York; Durham (11th–12th century?); London (first half of the 12th century–mid-13th century); Winchester (late 11th–12th centuries); Whitstable (13th century); Bristol Bridge, Bristol (13th–14th centuries); Waterford (late 11th–12th century); Konstanz (13th century–1500); Bergen (12th–13th centuries); Schleswig (11th–13th centuries) and Lübeck (the end of the 12th century–mid-13th century) (Thomas 1987, 186; Thomas 2001, 243; Goodfellow and Thornton 1972, 97, 102, Fig 25, no 31; Mould et al 2003; Carlisle 1998, unpublished; Carver 1979, 30; Pritchard 1991, 230; Grew and de Neer-gaard 1988, 9–19, Figs 3, 5, 8–9, 12, 22–23; Thornton 1990b, 615–16, Fig 164 no 1947; Thompson 1956, 55–7; Thomas forthcoming a; O'Rourke 1997, 710, Fig 18.3.2; Schnack 1994, 28–9, 3.3, Tafel 21, 22–1949, 4505; Larsen 1992, 19–20, Fig 13; Schnack 1992b, 99–106; Groenman-van Waateringe and Guiran 1978, Typ 5).

The Durham report also refers to an upper which has its lengthy inside quarter folded down to the flesh side by an overseam; this is a hitherto unrecorded feature of an early shoe (Carver 1979, 30). A similar feature was found on one of the uppers from Gallowgate Middle School, Aberdeen. In this case the folded-in portion was rectangular in shape, and had had another rectangular piece stitched above it (Thomas 2001a, 243, [12th–13th centuries]).

Less well dated examples are also known from King Edward Street, 1–5 High Street and Mill Street, Perth; Netherkirkgate, Aberdeen; Coventry; Parliament Street, York; Novgorod; Dublin and Haithabu (Thomas and Walsh 1995, 971; Thomas 1987 186; Thomas 2001a, 243; Thomas 1980, 14, 55–49/185/12 and 1349/195/66; Tweddle 1986, 246–53, Fig 112 nos 815–816; Thompson 1967, 81, Fig 83, 5; Ard Mhusáem na H-Éireann 1973, E 71–16871 and 3981; Groenman-van Waateringe 1975, 24; Groenman-van Waateringe 1984, Typ 6).

*Uppers, Type Bii: boot with tunnel holes for two rows of thongs* (Illus 131)

Type Bii consists of 16 one-piece boots with tunnel holes for two or more rows of horizontal thongs. Cat No 537/A6416a has a thong wrapped twice around it, passing through two tunnel holes, one above the other, on the closed side of the quarters and through two tunnel holes on the other side, one of which spans the junction of quarters and second leg flap. Cat No 358/A6773g has two tunnel holes, one above the other, on the closed side of the quarters, one tunnel hole on the open side and a single hole at the vamp throat. A length of thong, knotted on the flesh side, passes through the hole at the vamp throat. A second fragment of thong, tied to a third piece, is still threaded through the tunnel hole on the open side (Illus 131).

*Uppers, Type Bi–iv.*

| <i>Cat/Accession</i>       | <i>Type</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                            | <i>Phase</i>   |
|----------------------------|-------------|-------------|------------|-------------------------------------------|----------------|
| <b>South Sector</b>        |             |             |            |                                           |                |
| 3/A12303c                  | Bi          | 1           | V, VI      | MC002                                     | Ia             |
| 30/A10800d                 | Bi          | 1           | V          | MC008, T3774                              | Ib             |
| 117/A03–0002b              | Bi          | 4           | V, VI      | MC023                                     | Icc,Id         |
| 126/A12297b                | Bi          | 3           | V          | MC025, Pit 5337                           | (Ia–)Id        |
| 161/A7787h                 | Biii        | 1/2         | VI         | B6 (Phase 1), South Room–Floor (1)        | Ie             |
| 179/A7589e                 | Bii         | 2           | VI         | M14b(b)                                   | Ie             |
| 183/A7597b                 | Bi          | 2           | VI         | M14b(b)                                   | Ie             |
| 191/A7797e                 | Bi          | 2           | VI         | M14b(b)                                   | Ie             |
| 192/A13004a                | Bii         | 2           | VI         | M14b(b)                                   | Ie             |
| 193/A13004b                | Biii        | 2           | VI         | M14b(b)                                   | Ie             |
| 239/A7072b                 | Biii        | 2           | V          | M14b(c)                                   | Ie,If          |
| 255/A12287a                | Bi          | 3           | V          | MC034a                                    | Ie(If)         |
| 267/A7044Bg                | Bi          | 2           | VI         | MC044b                                    | If             |
| 285/A9556b                 | Biv         | 3           | VI         | MC053c                                    | If             |
| 296/A12632b                | Bi          | 4           | V          | B16b, Pit 4726                            | Id–IIa         |
| 307/A12635c                | Bi          | 4           | V          | B16b, Pit 4726                            | Id–IIa         |
| 313/A12310                 | Biii        | 3           | V          | MC039, Pit 2609                           | If,IIa         |
| 357/A6773f                 | Bi          | 2           | VI         | MC061                                     | IIb            |
| 358/A6773g                 | Bii         | 2           | VI         | MC061                                     | IIb            |
| 360/A6951a                 | Bii         | 2           | VI         | MC061                                     | IIb            |
| 390/A12296b                | Bi          | 1           | VI         | MC065                                     | IIa–IIc        |
| 404/A12298a                | Biii        | 3           | VI         | MC056, Pit 5155                           | Ia–IIc         |
| 411/A12493f                | Biii        | 3           | VI         | MC056, Pit 5155                           | Ia–IIc         |
| 442/A6483l                 | Biii        | 2           | VI         | B4, ‘Byre’–Occupation                     | IIc            |
| 461/A10511                 | Bi          | 3           | VI         | M1.1c, Pit 5005                           | IId            |
| 473/A12285e                | Biv         | 3           | VI         | M1.1c, Pit 5005                           | IId            |
| 508/A3447e                 | Bi          | 2           | VI         | M1.1d & M1.1e                             | IId–IIIf       |
| 527/A6803                  | Bi          | 1/2         | V          | B5, South Room–Floor/Occupation (3)       | IIa–IIff       |
| 537/A6416a                 | Bii         | 1/2         | V          | B5, North Room–Floor/Occupation (1)       | IIa–IIff       |
| 631/A10047a                | Biii        | 3           | V          | M10                                       | IId–IIg        |
| 730/A9356                  | Bii         | 4           | VI         | B12, Pit 2345                             | IIe–IIg        |
| 778/A9371d                 | Biii        | 3           | VI         | M1.2, Pit 2648                            | <IIg(IIh)      |
| 785/A9372c                 | Bii         | 3           | VI         | M1.2, Pit 2648                            | <IIg(IIh)      |
| 853/A11253                 | Bii         | 4           | V, VI      | M11                                       | IIh            |
| 931/A12305                 | Biii        | 1           | VI         | MC111                                     | IIb–IIIb       |
| 934/A03–0327b              | Biii        | 9           | VII        | P8.0                                      | IIa,IIIb       |
| 1088/A03–0278c             | Bii         | 9           | VII        | B19 (Phase 2b), North Room–Floor (2b)     | IIc            |
| 1147/A5893b                | Bii         | 1           | V          | M12                                       | IIg–IIIc(–IVa) |
| 1208/A8680c                | Bi          | 3           | V          | M6b                                       | IIg–IIId       |
| 1555/A03–0422c             | Bi          | 7           | VII        | MC130                                     | <IIIc–IVaa     |
| 1880/A03–0353c             | Bii         | 7           | VII        | MC126, Pit 7402                           | IVaa,IVb       |
| 2653/A03–0316c             | Bii         | 7           | VII        | B18 (Phase 1/2), Pit 7324                 | IVb            |
| 3242/A4940a                | Biv         | 4           | V, VI      | M1.4b                                     | IVb–IVcc       |
| 3320/A03–0262b             | Bii         | 7           | VII        | P8.3                                      | IVc,IVcc       |
| 3621/A4914                 | Bii         | 3           | VI         | M1.4e                                     | IVcc(Va)       |
| 5257/A03–0050              | Bii         | 7           | VII        | B53 (Phase 2), North Area–Occupation (14) | Vbb            |
| 5740/A12307d               | Biii        | 1           | V, VI      | Unstratified                              | u/s            |
| 5755/A6383b                | Biii        | 2           | V, VI      | Unstratified                              | u/s            |
| 5815/A12487f               | Bii         | 2           | V, VI      | Unstratified                              | u/s            |
| <b>North Sector</b>        |             |             |            |                                           |                |
| 5889/A7805c                | Biv         | 5           | –          | CG005                                     | 4(5)           |
| 5907/A7585b                | Biii        | 5           | –          | CG013                                     | (5–)7–9        |
| 5943/A0807b                | Biii        | 5, A        | –          | Lade(4)                                   | 6–12(b–e)      |
| <b>South/North Sectors</b> |             |             |            |                                           |                |
| 5978/L1694e                | Biii        | –           | –          | Unstratified                              | u/s            |

*Uppers, Type Bi: low boot with tunnel hole for thong (Illus 129–30).*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                      | <i>Phase</i> |
|----------------------|-------------|------------|-------------------------------------|--------------|
| <b>South Sector</b>  |             |            |                                     |              |
| 3/A12303c            | 1           | V, VI      | MC002                               | Ia           |
| 30/A10800d           | 1           | V          | MC008, T3774                        | Ib           |
| 117/A03–0002b        | 4           | V, VI      | MC023                               | Icc,Id       |
| 126/A12297b          | 3           | V          | MC025, Pit 5337                     | (Ia–)Id      |
| 183/A7597b           | 2           | VI         | M14b(b)                             | Ie           |
| 191/A7797e           | 2           | VI         | M14b(b)                             | Ie           |
| 255/A12287a          | 3           | V          | MC034a                              | Ie(If)       |
| 267/A7044Bg          | 2           | VI         | MC044b                              | If           |
| 296/A12632b          | 4           | V          | B16b, Pit 4726                      | Id–IIa       |
| 307/A12635c          | 4           | V          | B16b, Pit 4726                      | Id–IIa       |
| 357/A6773f           | 2           | VI         | MC061                               | IIb          |
| 390/A12296b          | 1           | VI         | MC065                               | IIa–IIc      |
| 461/A10511           | 3           | VI         | M1.1c, Pit 5005                     | IIId         |
| 508/A3447e           | 2           | VI         | M1.1d & M1.1e                       | IIId–IIIf    |
| 527/A6803            | 1/2         | V          | B5, South Room–Floor/Occupation (3) | IIa–IIff     |
| 1208/A8680c          | 3           | V          | M6b                                 | IIg–IIId     |
| 1555/A03–0422c       | 7           | VII        | MC130                               | <IIId–IVaa   |

*Uppers, Type Bii: boot with tunnel holes for two rows of thongs (Illus 131).*

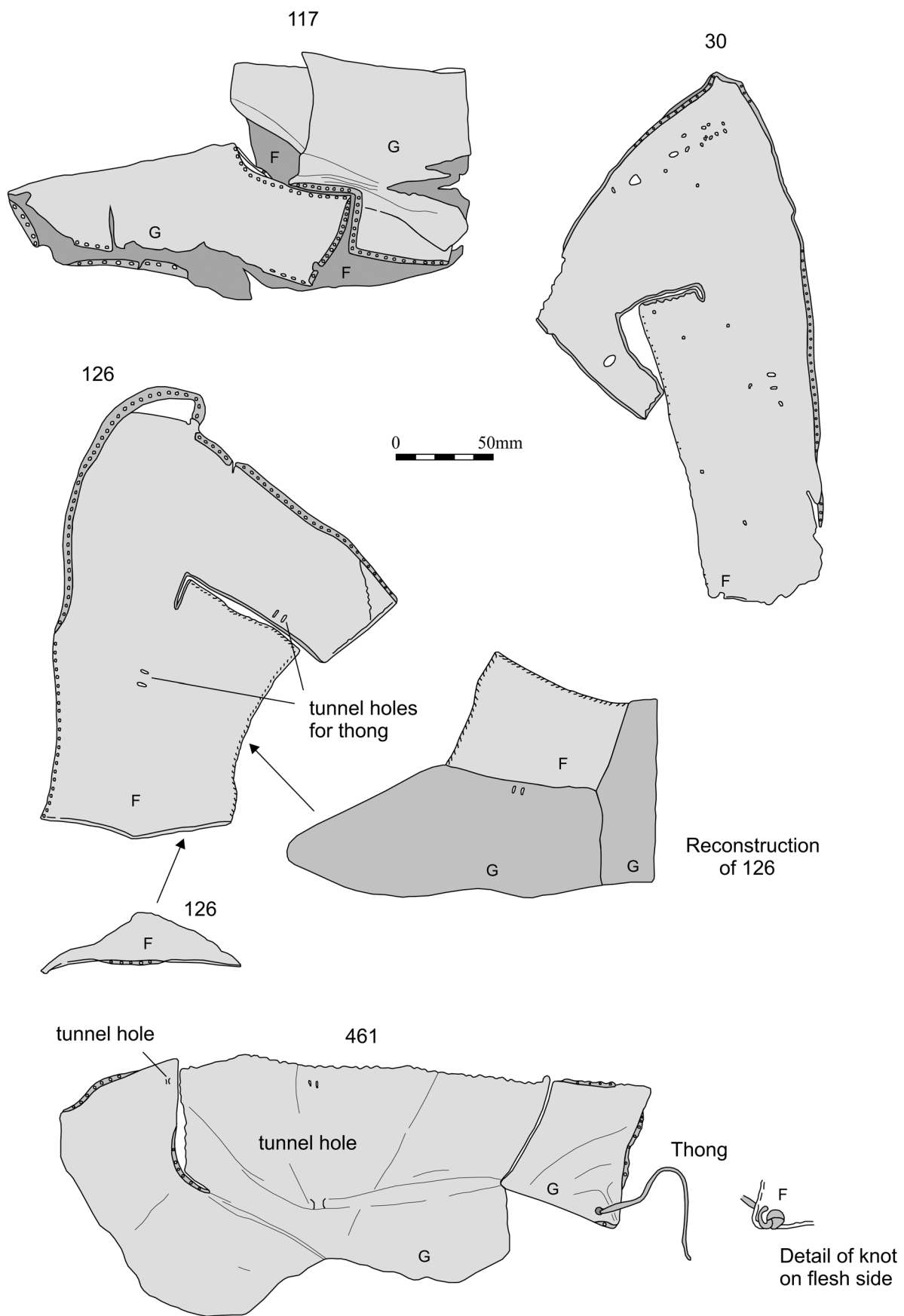
| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                            | <i>Phase</i>   |
|----------------------|-------------|------------|-------------------------------------------|----------------|
| <b>South Sector</b>  |             |            |                                           |                |
| 179/A7589e           | 2           | VI         | M14b(b)                                   | Ie             |
| 192/A13004a          | 2           | VI         | M14b(b)                                   | Ie             |
| 358/A6773g           | 2           | VI         | MC061                                     | IIb            |
| 360/A6951a           | 2           | VI         | MC061                                     | IIb            |
| 537/A6416a           | 1/2         | V          | B5, North Room–Floor/Occupation (1)       | IIa–IIIf       |
| 730/A9356            | 4           | VI         | B12, Pit 2345                             | IIe–IIg        |
| 785/A9372c           | 3           | VI         | M1.2, Pit 2648                            | <IIg(IIh)      |
| 853/A11253           | 4           | V, VI      | M11                                       | IIh            |
| 1088/A03–0278c       | 9           | VII        | B19 (Phase 2b), North Room–Floor (2b)     | IIId           |
| 1147/A5893b          | 1           | V          | M12                                       | IIg–IIId(–IVa) |
| 1880/A03–0353c       | 7           | VII        | MC126, Pit 7402                           | IVaa,IVb       |
| 2653/A03–0316c       | 7           | VII        | B18 (Phase 1/2), Pit 7324                 | IVb            |
| 3320/A03–0262b       | 7           | VII        | P8.3                                      | IVc,IVcc       |
| 3621/A4914           | 3           | VI         | M1.4e                                     | IVcc(Va)       |
| 5257/A03–0050        | 7           | VII        | B53 (Phase 2), North Area–Occupation (14) | Vbb            |
| 5815/A12487f         | 2           | V, VI      | Unstratified                              | u/s            |

Cat Nos 2653/A03–0316c (Illus 146) and 785/A9372c have two and three tunnel holes on either side of the quarters, respectively; the latter upper also has a hole in the vamp wing, with a fragment of thong through it.

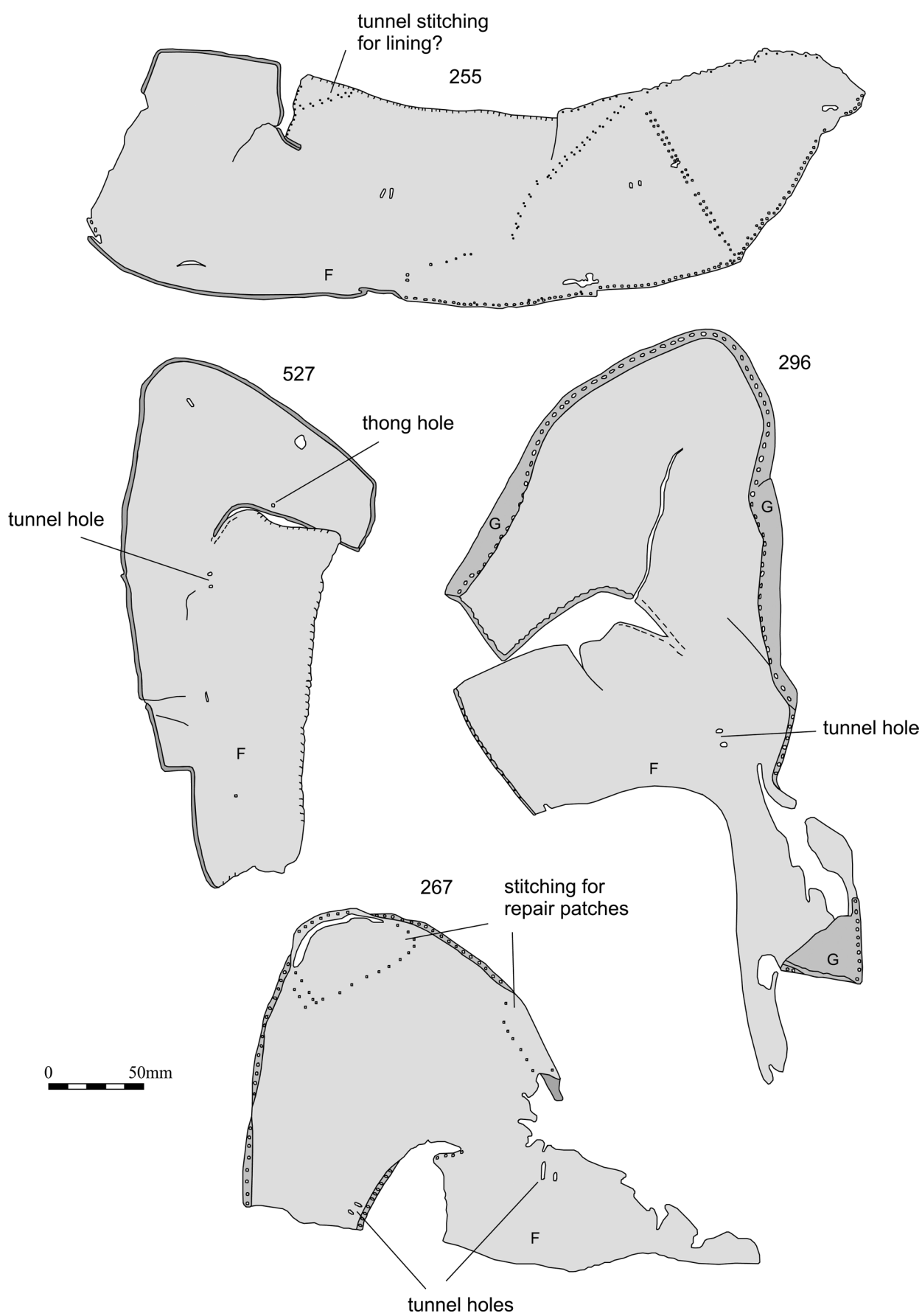
Some boots have tunnel holes that were apparently never used. Cat No 3621/A4914 has one obviously used tunnel hole, but above and below it are a pair of short slits, probably unstretched tunnel holes (Illus 131). Similarly, Cat No 192/A13004a (Illus 131) has three tunnel holes, the top one of which consists of a pair of slits and Cat No 358/A6773g, discussed above, has, on the closed side of the quarters, two probably unused tunnel holes above the two already described, suggesting that the boot was originally prepared for four horizontal rows of thonging (Illus 131).

Type Bii uppers, like others of one-piece design, usually contain additional fragments. Cat No 358/A6773g, with five parts, has already been discussed (see Uppers–Introduction above). Cat No 785/A9372c probably originally had a small triangular sidepiece, as well as a second leg flap, both of which Cat No 179/A7589e (Illus 131) also had. Cat No 192/A13004a (Illus 131) still retains its side-piece; the latter example also has a stiffener. The second leg-flap of Cat No 537/A6416a is still in situ, held in place by the thong wrapped round this boot.

Uppers of this type were found in contexts ranging in date from slightly before 1150 until the early 14th century, but were predominantly (50%) of 12th-century date. Two (12.5%) examples came from Period I, six

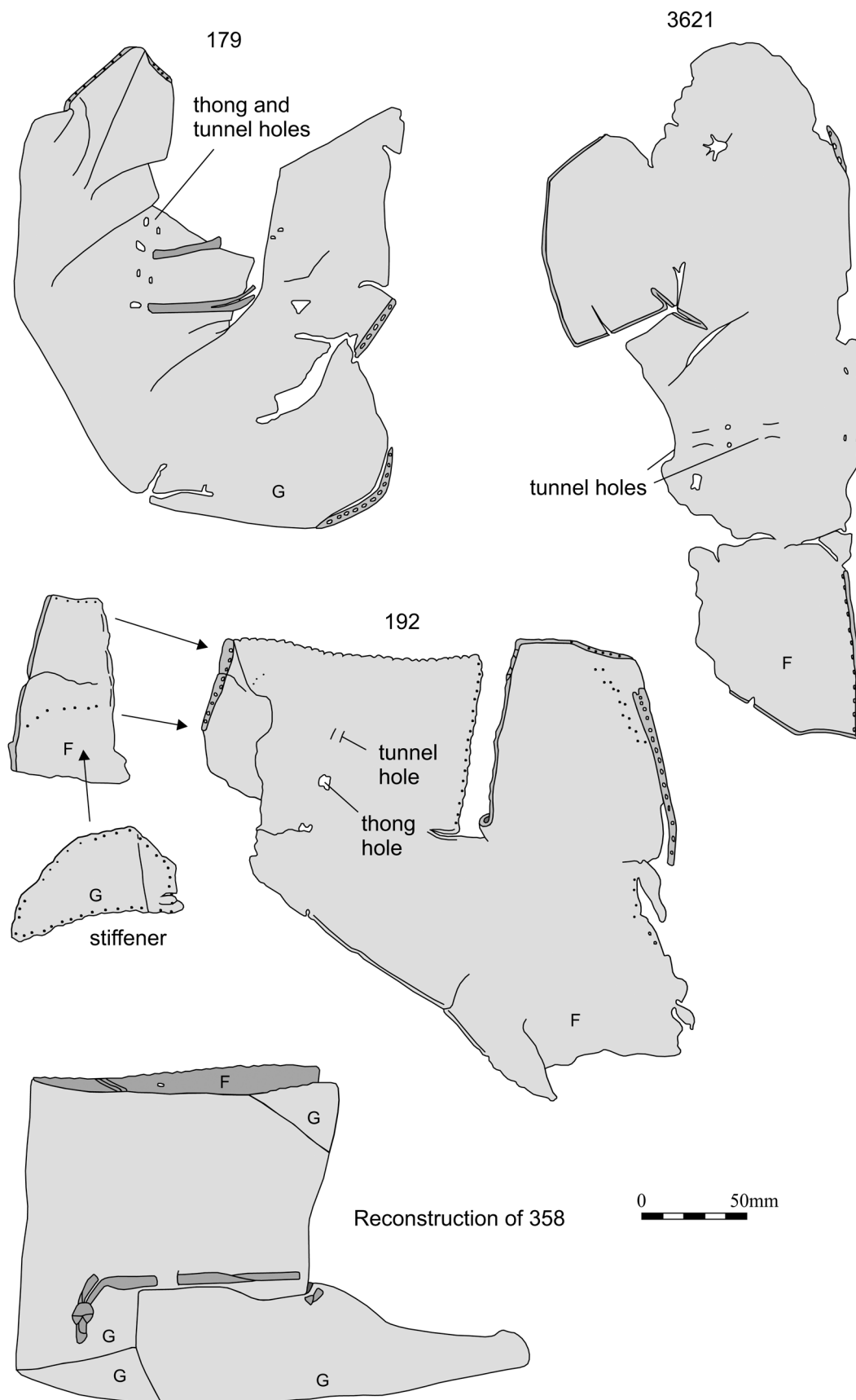


Illus 129 Uppers, Type Bi.



Illus 130 *Uppers, Type Bi.*





Illus 131 *Uppers, Type Bii.*

(37%) from Period II, two (12.5%) from Period III, four (25%) from Period IV, one (6%) from Period V and one (6%) unstratified. As with those of Type Bi, these uppers occurred singly, except for two groups of two found in M14b(b) and MC061.

Parallels, of mainly 12th- to 14th-century date, include London (early–mid 13th century); Newcastle (mid 13th–mid 14th centuries); Bristol Bridge, Bristol (13th–14th centuries); Coventry; York (12th–13th centuries); Waterford (12th century); Bergen (late 12th–mid 13th centuries); Schleswig (12th–14th centuries); Lübeck (the end of the 12th century–mid 13th century) and Bremen (12th–15th centuries) (Grew and de Neergaard 1988, 14–19, Figs 13–14, 20–21, 24; Dixon 1988, 93–5, Fig 33, nos 192 and 193; Thomas forthcoming a; Thomas 1980, 52–78/51/60 and 162–78/82/56; Mould et al 2003; O'Rourke 1997, 704, Fig 18.4.1; Larsen 1992, 19–20, Fig 14b; Schnack 1992b, 106–14, Figs 64, 66–68, 70–73, 75; Groenman-van Waateringe and Guiran 1978, Typ 6; Schnack 1993, 62–4, Fig 1b).

*Uppers, Type Biii: boot with vertical thonging*  
(Illus 132–4)

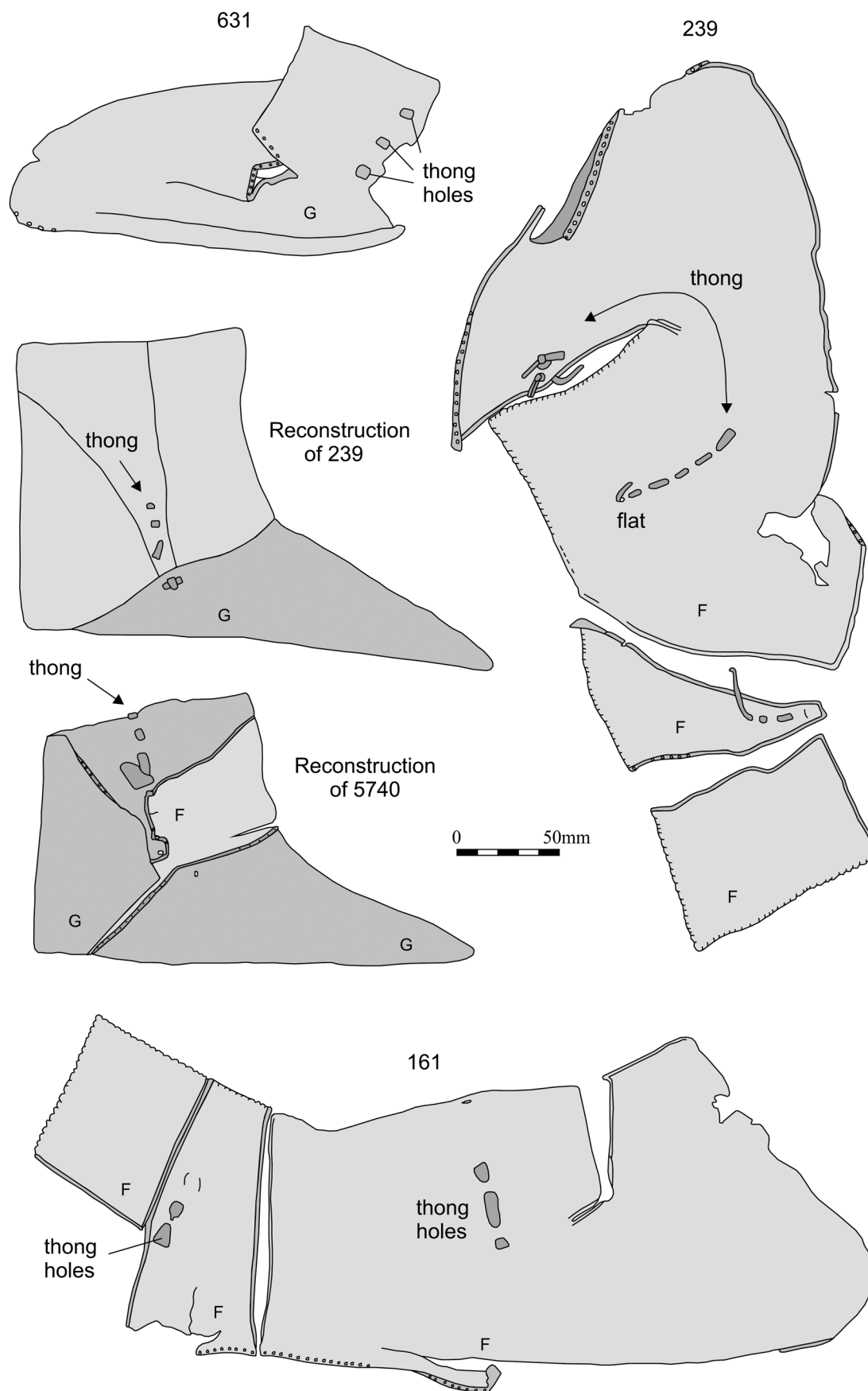
Type Biii consists of 16 uppers with vertical thonging, threaded through tunnel holes formed by pairs of short horizontal slits, as on Cat No 5740/A12307d (Illus 132). These vertical thongs were apparently used to secure wrap-around horizontal thongs, as on Cat No 934/A03–0327b (Illus 134). This upper has, on the closed side of the quarters, a row of vertical thonging with five short stretches of thong on the grain side, through the lowest of which a long horizontal thong has been threaded. This horizontal thong also passes through the second leg flap, which has two vertical rows of thonging; one of these rows spans the junction of the leg flap and vamp wing. Cat No 931/A12305 (Illus 134) also has a vertical thong on each side as

well as a horizontal thong. The vertical thong on the sidepiece ends with a short horizontal stretch on the flesh side at both top and bottom; the top end points towards the quarters, the bottom one towards the vamp throat. It is not clear whether these thongs were turned horizontally in order to secure them, or were originally intended to pass round the foot, with the bottom one perhaps linking up with the surviving horizontal thong which runs from vamp throat to vamp wing. An upper from King's Lynn, which has vertical thongs, suggests the latter possibility; in this case, the bottom ends of the thongs become horizontal, passing forwards, on the flesh side, to single holes on the vamp wings. The vertical thongs on two other uppers, however, are knotted at the base and end there (Clarke and Carter 1977, 352–354, Fig 165, nos 24, 19 and 23). Three uppers from Coventry had clear indentations from horizontal thongs, at the same level as part of the vertical thonging; on 78/82/31, these indentations were 'at a level with the lowest three loops' (of the vertical thonging), while on A830/10, the impression corresponded 'to the position of the lowest loop' (Thomas 1980, 51–78/51/58; 132–49/195/74; 150–A830/10; 155–78/82/31). This evidence strongly supports the suggestion that the vertical thongs were used to secure horizontal wrap-around laces; it is probable that not all the loops of the vertical thongs were used and that often only the lowest loop was used. Vertical thongs were almost certainly also used for their decorative effect.

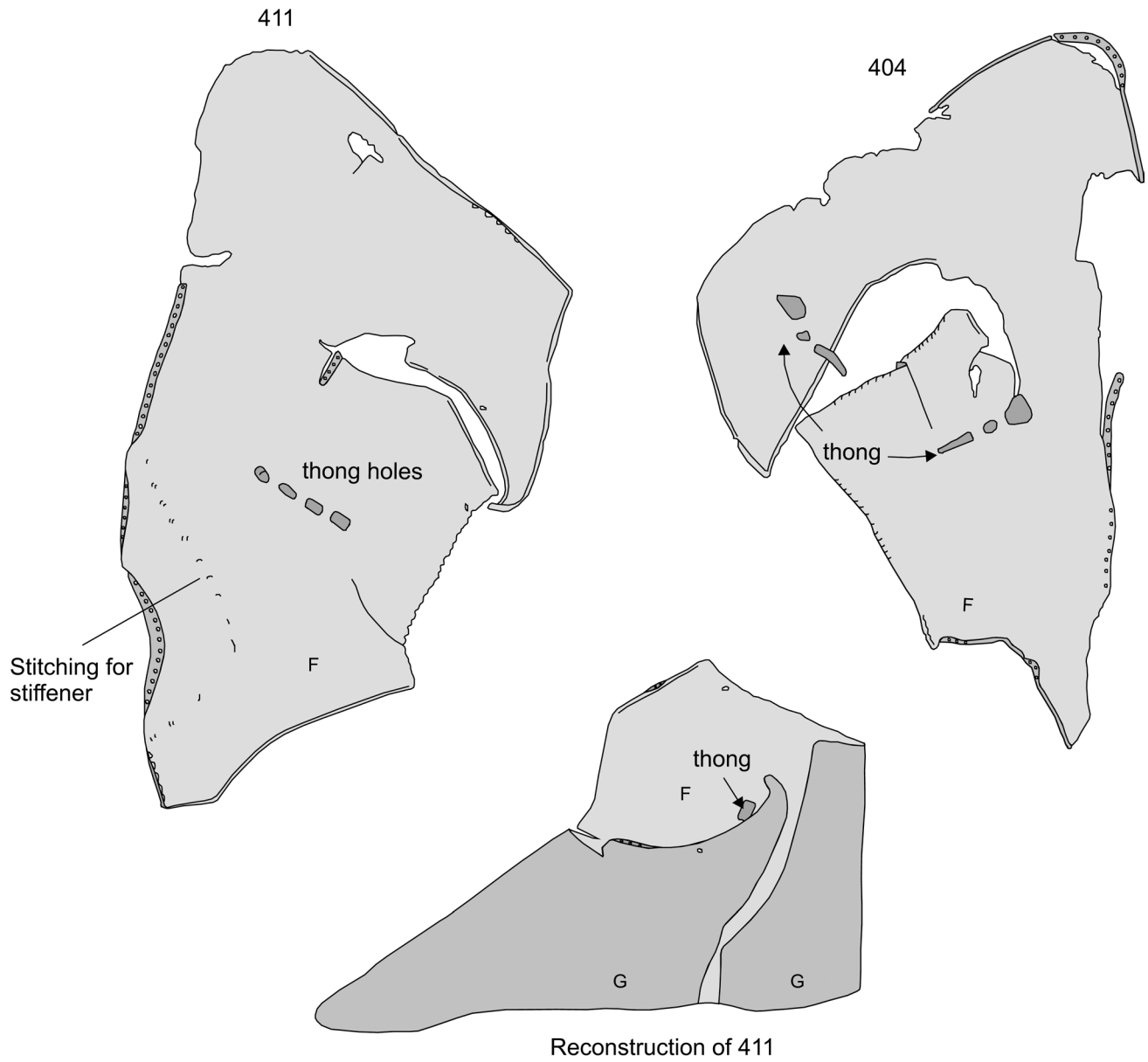
Six uppers have additional pieces surviving. Cat Nos 161/A7787h (Illus 132) and 239/A7072b (Illus 132) have side-pieces and second leg flaps; Cat No 313/A12310 (Illus 145) has a sidepiece and a top band. Cat No 934/A03–0327b (Illus 134) has a second leg flap; this upper also has an unusually high vamp wing, reaching to the top edge of the boot.

*Uppers, Type Biii: boot with vertical thonging (Illus 132–4).*

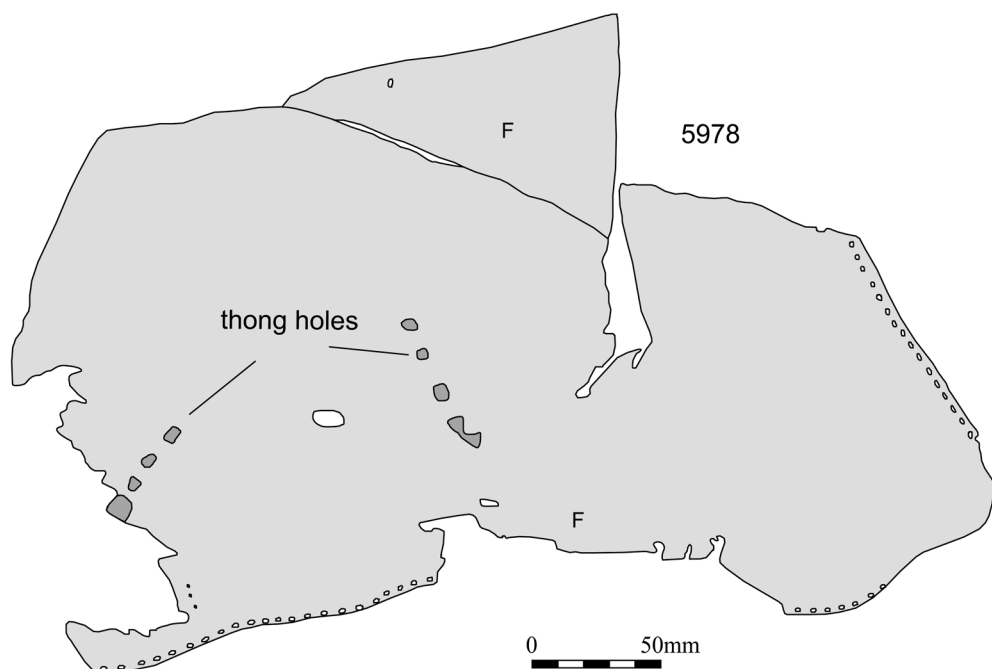
| <i>Cat/Accession</i>       | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                     | <i>Phase</i> |
|----------------------------|-------------|------------|------------------------------------|--------------|
| <b>South Sector</b>        |             |            |                                    |              |
| 161/A7787h                 | 1/2         | VI         | B6 (Phase 1), South Room–Floor (1) | Ie           |
| 193/A13004b                | 2           | VI         | M14b(b)                            | Ie           |
| 239/A7072b                 | 2           | V          | M14b(c)                            | Ie,If        |
| 313/A12310                 | 3           | V          | MC039, Pit 2609                    | If,Ila       |
| 404/A12298a                | 3           | VI         | MC056, Pit 5155                    | Ia–IIc       |
| 411/A12493f                | 3           | VI         | MC056, Pit 5155                    | Ia–IIc       |
| 442/A64831                 | 2           | VI         | B4, 'Byre'–Occupation              | IIc          |
| 631/A10047a                | 3           | V          | M10                                | IId–IIg      |
| 778/A9371d                 | 3           | VI         | M1.2, Pit 2648                     | <IIg(IIh)    |
| 931/A12305                 | 1           | VI         | MC111                              | IIf–IIIf     |
| 934/A03–0327b              | 9           | VII        | P8.0                               | IIIf,IIIf    |
| 5740/A12307d               | 1           | VI, VII    | Unstratified                       | u/s          |
| 5755/A6383b                | 2           | V, VI      | Unstratified                       | u/s          |
| <b>North Sector</b>        |             |            |                                    |              |
| 5907/A7585b                | 5           | –          | CG013                              | (5–)7–9      |
| 5943/A0807b                | 5, A        | –          | Lade (4)                           | 6–12(b–e)    |
| <b>South/North Sectors</b> |             |            |                                    |              |
| 5978/L1694e                | –           | –          | Unstratified                       | u/s          |



Illus 132 *Uppers, Type Biii.*



Illus 133 *Uppers, Type Biii.*



Cat No 931/A12305 (Illus 134) has a sidepiece, Cat No 5978/L1694e (Illus 133) part of the first leg flap, but both their second leg flaps are missing, as in Cat No 411/A12493f (Illus 133).

The stratified South Sector Type Biii uppers date from the slightly before 1150 until the early 13th century, belonging mainly to the 12th century, with at least three (18%) examples from Period I, six (37%) from Period II and two (13%) from Period III. Apart from three unstratified examples (Cat Nos 5704/A12307d, 5755/A6383d and 5978/L1694e), two examples of Type Biii boots were also found in Area 5/Trench A. One of these (Cat No 5907/A7585b) came from deposits that dated from the 12th or 13th centuries. The other (Cat No 5943/A0807b), however, came from the infill of Lade (4), the Town Ditch. This infilling was of 14th century and later date. Again, these uppers were found singly, with the exception of two found together in Pit 5155 (MC056). A very well preserved boot of this type was recovered from 1–5 High Street, Perth, but unfortunately it was unstratified (Thomas 1987, 186). Other parallels, predominantly of 12th–13th-century date, include 45–75 Gallowgate (1350–1375) and Gallowgate Middle School (12th–13th centuries), Aberdeen; King's Lynn (1050–1250); London (late 12th–13th centuries); Bristol Bridge, Bristol (13th–14th centuries); Nantwich (12th century?); York (12th–13th centuries); Waterford (12th–13th centuries); Bremen (12th–15th centuries); Bergen (late 12th–early 13th centuries); Schleswig (12th–13th centuries); Lübeck (the end of the 12th century–mid 13th century); Deventer (12th century) and Konstanz (13th–15th centuries) (Thomas 2001a, 243; Clarke and Carter 1977, 352–54, Fig 165, nos 19, 23–24; Grew and de Neergaard 1988, 14–15, Figs 15 and 16; Thomas forthcoming a; Hutchings 1983, 80–1, Fig 16, L 10; Carlisle 1998 unpublished; O'Rourke 1997, 704, Fig 18.1.3; Schnack 1993, 62–4, Fig 1c; Larsen 1992, 19–20, Fig 14b; Schnack 1992b, 107–14, Abb 51 Typ B, Figs 65, 74, 78–79; Groenman-van Waateringe and Guiran 1978, Typ 7; Groenman-van Waateringe 1975, 24–5, Fig 2.6, 34, note 2; Schnack 1994, 29, Taf 22, 23). Undated parallels were found at Coventry, York (Parliament Street), Beverley, S'Hertogen-bosch and Oud Naarden (Thomas 1980, 51, 132, 150, 155; Tweddle 1986, 246–53, Fig 113, no 820; Jackson 1983, 69, Figs 6 and 7 no 3; Goubitz 1983, Type 1; Groenman-van Waateringe 1975, 24–5, Fig 2.6, 34, note 2).

*Upper, Type Biv: boot with possible thong hole on vamp wing* (Illus 134)

Four boots of one-piece design have only a single thong hole surviving as in Cat No 5889/A7805c (Illus 134), which has a thong, knotted on the flesh side, threaded through a slit in the vamp wing; this boot also has a crease which might have been caused by a wrap-around thong. The other holes on this upper are the result of wear. It is possible that these boots originally had other thong holes and were therefore of Types Bi, Bii or Biii, but none are complete enough to enable further definition.

At least two examples (50%) date from the 12th century, a third to the later 13th century. A fourth is from Area 5; it came, however, from some of the earlier deposits in that area, and could well also be of 12th century date. It is certainly of no later date than the 13th century. The earliest of the Type Biv boots from the South Sector was recovered from a deposit that was laid down shortly before 1150. It is possible that all three of the South Sector Type Biv boots come from one property. The two 12th century examples certainly came from Rig VI, while Cat No 3242/A4940a was found within a midden which had built up after that property had been combined with that to the west of it, Rig V.

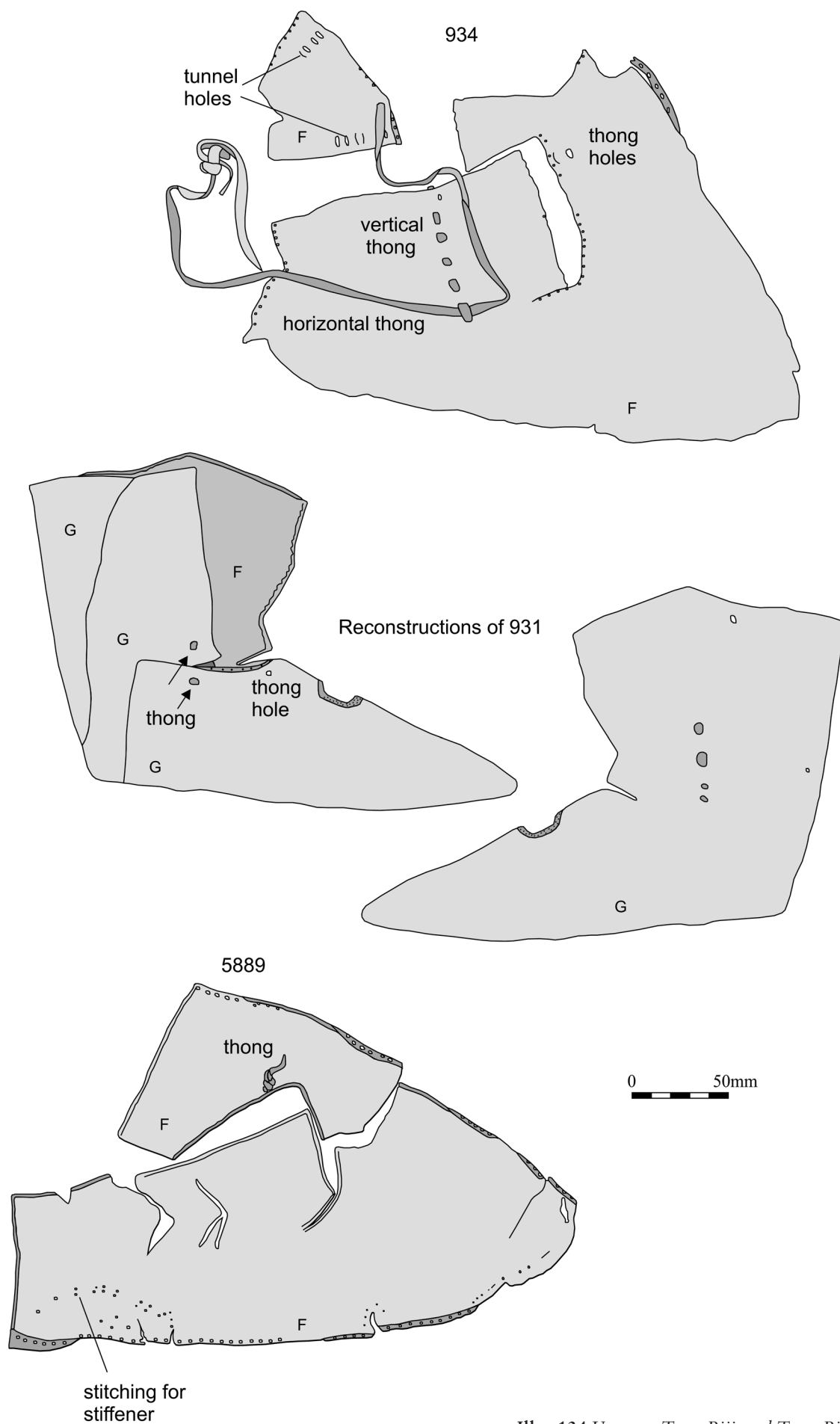
*Upper, Type C: boot with side lacing* (Illus 135)

Type C consists of 14 boots of one-piece design with side lacing linking quarters with vamp wing or side-piece and with the second leg flap. The lacing was threaded through tie-holes, placed parallel to the vertical edges of quarters, vamp wings, side-pieces and leg flaps; these edges have been oversewn. On three examples, including Cat Nos 503/A03–0003b (Illus 135) and 2725/A03–0413a (Illus 135), the edges beneath the lowest tie-hole have been stitched together with an edge–flesh seam. Seven uppers have a row of tunnel stitching on the flesh side, parallel to the tie-holes; this was almost certainly used to attach a strengthener or facing, which would also have been secured by the oversewing on the edge, as in Cat Nos 1043/A8671a, 2745/A03–0294a (Illus 135), 2771/A03–0123a (Illus 135) and 2725/A03–0413a (Illus 135).

No strengtheners or facings have survived from the High Street, but examples were found at The Custom House site, London (early–mid 14th century); the Barbican Ditch, Oxford (13th–15th centuries); King's Lynn (1050–1350); Coppergate, York and at Coventry.

*Upper, Type Biv: boot with possible thong hole on vamp wing* (Illus 134).

| Cat/Accession       | Area | Rig   | Feature         | Phase    |
|---------------------|------|-------|-----------------|----------|
| <b>South Sector</b> |      |       |                 |          |
| 285/A9556b          | 3    | VI    | MC053c          | If       |
| 473/A12285e         | 3    | VI    | M1.1c, Pit 5005 | IId      |
| 3242/A4940a         | 4    | V, VI | M1.4b           | IVb–IVcc |
| <b>North Sector</b> |      |       |                 |          |
| 5889/A7805c         | 5    | –     | CG005           | 4(5)     |



Illus 134 Uppers, Type Biii and Type Biv.

These consisted of V-shaped strips of leather, oversewn on all edges, perforated by round holes. At Coventry, three facings were found in situ, while nine other boots had stitching for facings (Tatton-Brown 1975, 159, nos 86, 88, Fig 28, nos 86, 89; Hassall 1976, 281, Fig 20, no 39; Clarke and Carter 1977, 361, Fig 168, no 79, 363, where they were described as binding of a jerkin; Mould et al 2003; Thomas 1980, 13, 14, 23, 40, 48, 56, 59, 71, 74, 92, 95, 105, 128–132, 135, 143, 157).

At the High Street, these Type C boots were found in contexts dating from the second half of the 12th century to the early 14th century, but were mainly (65%) of mid-13th- to early 14th-century date; with two (14%) examples from Period II, three (21%) from Period III, eight (58%) from IV and one (7%) from V. They were distributed singly over the site apart from two, found in P8.1c and M1.4f and four found in B18 (Phase 2).

Parallels, with or without surviving facings, tend to be later, being mainly of 14th- to 15th-century date: 45–75 Gallowgate, Aberdeen (1350–1375); Bristol Bridge, Bristol (13th–14th centuries); London (early–mid 14th century, early–mid 15th century); Sandwell Priory (14th–15th centuries); Exeter (15th century?), Coppergate, York (14th–15th centuries) and Konstanz (14th–15th centuries). Undated parallels were also found at Hull and S'Hertogenbosch (Thomas 2001a; Thomas forthcoming a; Grew and de Neergaard 1988, 27, Fig 39–40, 42–43, Figs 68–70; Thomas 1991, 107, 109, Fig 37, 9; Friendship-Taylor 1984, 324, 327–30; Mould et al 2003; Schnack 1994, 29–30, 3.3.8, Tafel 25–27; Watkin 1987, Fig 130, 423–425; Goubitz 1983, type 3).

*Upper, Type C/D: boots and/or shoes with tie holes*  
(not illustrated)

Eleven fragments of uppers have tie holes, most probably for side lacing, but it is not possible to

determine whether these are parts of boots or shoes. On five fragments, the edge parallel to the tie holes has been oversewn; three examples also have tunnel stitching for facings, (oversewn) Cat Nos 1136/A03–0265a, 1137/A03–026 5b, (possibly oversewn) 2796/A03–0152b, (oversewn) 2706/A03–0296c tunnel stitching, (oversewn) 1704/A03–0396a, 1705/A03–0396b, 1706/A03–0396c, 1707/A03–0396d tunnel stitching, 2363/A03–0331c tunnel stitching. All eight fragments are of mid–late 13th-century date. Apart from a single example that was recovered from a Rig VI midden, this category is noteworthy as having come from Rig VII (6) and Rig VIII (4).

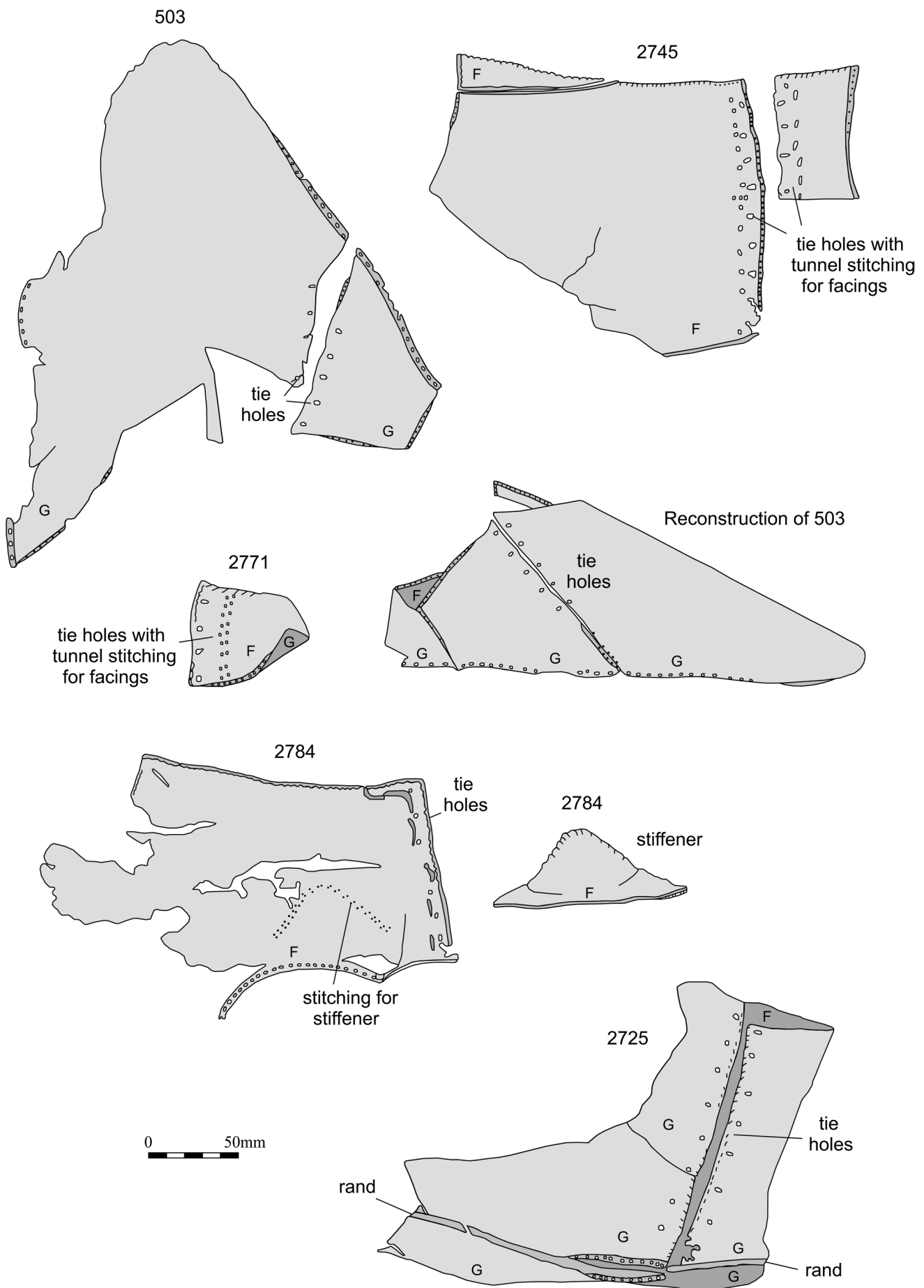
*Uppers, Types Di and Dii* (Illus 136–7)

Type D consists of 16 shoes, not boots, with side lacing. The uppers are of one-piece design, but usually with second leg flaps or latches and occasionally with side-pieces. The leg flaps or latches are small and were not apparently used as fastenings. The shoes were laced with thongs threaded through tie-holes; on Type Di, these tie-holes were on adjacent edges of quarters and vamp wing or side-piece, whereas on Type Dii, both rows of tie-holes were on a side-piece, specially split for this purpose. The edges parallel to the tie-holes have been oversewn; several uppers have tunnel stitching for strengtheners or facings. Opposing tie-holes were not usually arranged in pairs, indicating different lacing methods from present ones. Groenman-van Waateringe has considered at length medieval methods of lacing. Of particular interest, with regard to Types C and D, is a method for shoes with an unequal number of tie-holes on either side. This method was observed on a 17th-century shoe. A single lace is looped through the lowest hole of the longer vertical or diagonal row and both ends are then passed through the opposite hole.

*Upper, Type C: boot with side lacing* (Illus 135).

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i> |
|----------------------|-------------|------------|---------------------------------------------------------------|--------------|
| <b>South Sector</b>  |             |            |                                                               |              |
| 503/A03–0003b        | 3           | V          | P2.1a                                                         | IIb–IIIf     |
| 790/A9546c           | 3           | VI         | M1.2, Pit 2648                                                | <IIg(IIh)    |
| 1043/A8671a          | 3           | V          | MC117, Pit 4695                                               | IIe–IIIf     |
| 1098/A03–0270d       | 9           | VII        | P8.1c                                                         | IIIc         |
| 1115/A03–0323d       | 9           | VII        | P8.1c                                                         | IIIc         |
| 2292/A03–0271d       | 7           | VI         | M1.4f                                                         | IVc          |
| 2434/A03–0355a       | 7           | VI         | M1.4f                                                         | IVc          |
| 2725/A03–0413a       | 7           | VII        | B18 (Phases 2a & 2b), T7385                                   | IVb          |
| 2745/A03–0294a       | 7           | VII        | B18 (Phase 2a), North Room & Hall–Construction (1)            | IVb          |
| 2771/A03–0123a       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2784/A03–0245e       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2877/A9357c          | 3           | V          | MC155, Pit 2691                                               | IVb,IVc      |
| 3102/A6240           | 2           | VI         | M1.4d                                                         | IVb,IVc      |
| 4130/A03–0214h       | 7           | VII        | P8.4                                                          | Va           |





Illus 135 Uppers, Type C.

*Upper, Type C/D: boot and/or shoe with tie holes.*

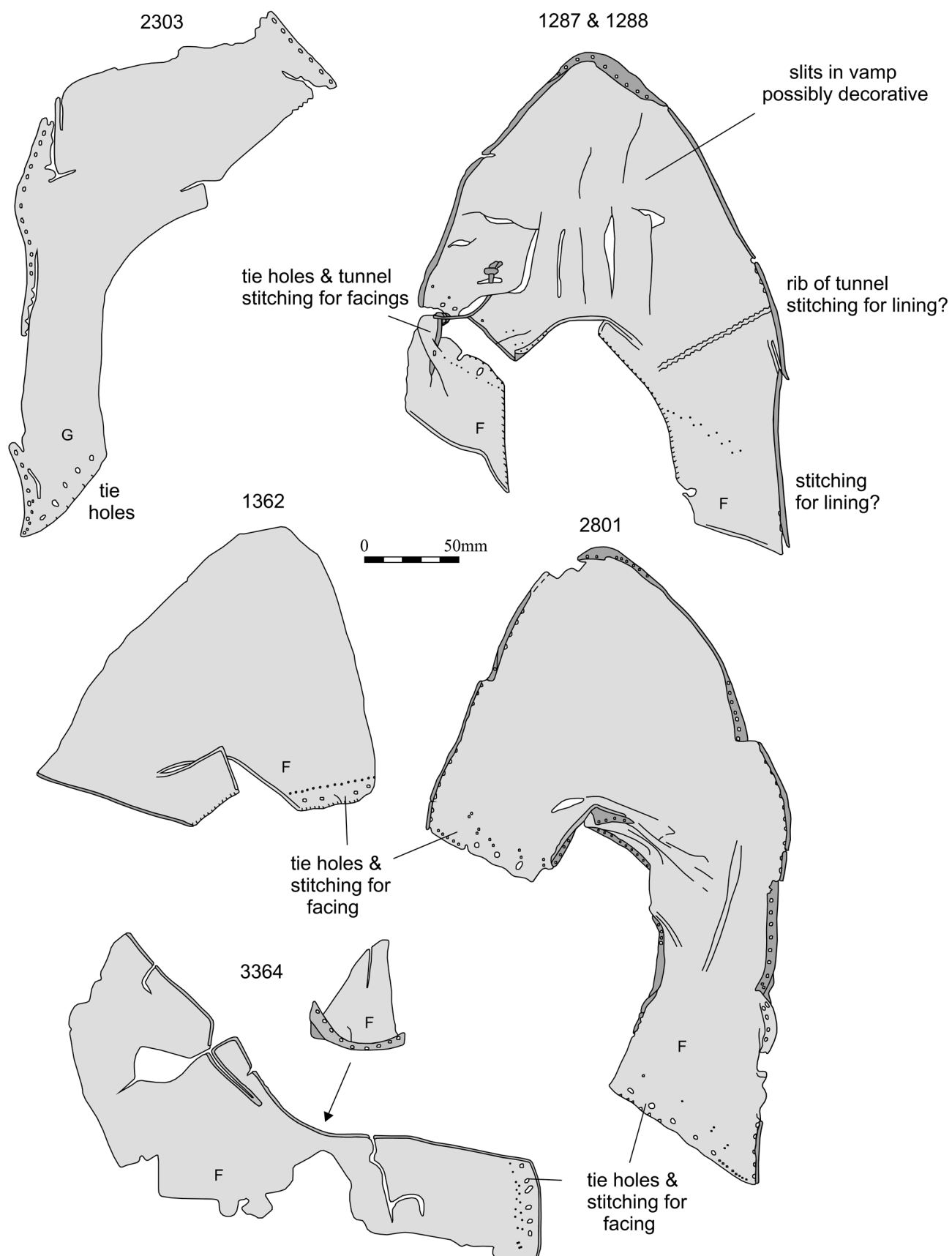
| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i>  |
|----------------------|-------------|------------|---------------------------------------------------------------|---------------|
| <b>South Sector</b>  |             |            |                                                               |               |
| 1136/A03-0265a       | 9           | VII        | M15                                                           | IIIId         |
| 1137/A03-0265b       | 9           | VII        | M15                                                           | IIIId         |
| 1704/A03-0396a       | 10          | VIII       | MC131                                                         | <IVa–IVb      |
| 1705/A03-0396b       | 10          | VIII       | MC131                                                         | <IVa–IVb      |
| 1706/A03-0396c       | 10          | VIII       | MC131                                                         | <IVa–IVb      |
| 1707/A03-0396d       | 10          | VIII       | MC131                                                         | <IVa–IVb      |
| 2363/A03-0331c       | 7           | VI         | M1.4f                                                         | IVc           |
| 2706/A03-0296c       | 7           | VII        | B18 (Phase 1/2), MF 7307                                      | IVaa,IVb      |
| 2796/A03-0152b       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb           |
| 3354/A03-0246c       | 7           | VII        | M9a                                                           | IVc,IVcc      |
| 3418/A03-0275b       | 7           | VII        | B18 (Phases 2a & 2b) & M9a, PH7297                            | (IVb)IVc,IVcc |

*Upper, Type Di and Dii (Illus 136–7).*

| <i>Cat/Accession</i> | <i>Type</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i> |
|----------------------|-------------|-------------|------------|---------------------------------------------------------------|--------------|
| <b>South Sector</b>  |             |             |            |                                                               |              |
| 1105/A03-0287c       | Dii         | 9           | VII        | P8.1c                                                         | IIIc         |
| 1287/A6415c          | Di          | 3           | V          | P2.2b                                                         | IVa          |
| 1288/A6415d          | Di          | 3           | V          | P2.2b                                                         | IVa          |
| 1362/A8007b          | Di          | 4           | V          | MC143                                                         | IVaa         |
| 1804/A03-0367a       | Di          | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 2193/A03-0386        | Di          | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 2302/A03-0276c       | Di          | 7           | VI         | M1.4f                                                         | IVc          |
| 2303/A03-0276d       | Di          | 7           | VI         | M1.4f                                                         | IVc          |
| 2759/A03-0288f       | Dii         | 7           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2772/A03-0123b       | Di          | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2801/A03-0078        | Di          | 9           | VII        | B18 (Phase 2b), Hall & Hall South–Occupation (12a)            | IVb          |
| 3364/A03-0223b       | Di          | 7           | VII        | M9a                                                           | IVc,IVcc     |
| 3385/A03-0233b       | Dii         | 7           | VII        | M9a                                                           | IVc,IVcc     |
| 3406/A03-0052b       | Dii         | 9           | VII        | M9a                                                           | IVc,IVcc     |
| 3434/A03-0073        | Di          | 9           | VII        | M9a, Pit 9078                                                 | IVc,IVcc     |
| 3595/A4318a          | Di          | 3           | VI         | M1.4e                                                         | IVcc(Va)     |

*Upper, Type Di: shoe with side lacing (Illus 136–7, 145).*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i> |
|----------------------|-------------|------------|---------------------------------------------------------------|--------------|
| <b>South Sector</b>  |             |            |                                                               |              |
| 1287/A6415c          | 3           | V          | P2.2b                                                         | IVa          |
| 1288/A6415d          | 3           | V          | P2.2b                                                         | IVa          |
| 1362/A8007b          | 4           | V          | MC143                                                         | IVaa         |
| 1804/A03-0367a       | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 2193/A03-0386        | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 2302/A03-0276c       | 7           | VI         | M1.4f                                                         | IVc          |
| 2303/A03-0276d       | 7           | VI         | M1.4f                                                         | IVc          |
| 2772/A03-0123b       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2801/A03-0078        | 9           | VII        | B18 (Phase 2b), Hall & Hall South–Occupation (12a)            | IVb          |
| 3364/A03-0223b       | 7           | VII        | M9a                                                           | IVc,IVcc     |
| 3434/A03-0073        | 9           | VII        | M9a, Pit 9078                                                 | IVc,IVcc     |
| 3595/A4318a          | 3           | VI         | M1.4e                                                         | IVcc(Va)     |



Illus 136 *Uppers, Type Di.*

One end of the lace is passed backwards and forwards, from one side to the other, emerging at the top hole of the longer row. The other end of the lace is threaded up the shorter row, then across to the top hole of the longer row, so that both ends of the lace pass through the same hole, but one from the grain side, the other from the flesh side (Groenman-van Waateringe 1975, 31, Fig 9.2).

In another method of lacing, opposing pairs of holes were linked by single thongs one end of which was sewn to the flesh side of the upper, then threaded through the two holes. Thus, a shoe with three holes on each side would have had three horizontal thongs. A third method used a strip of leather, c15mm wide, split for most of its length; the unsplit end was sewn to the flesh side and the two laces threaded through matching pairs of holes and were then knotted (Groenman-van Waateringe 1975, 30, 31, Fig 9.3, 9.1, 9.5).

Dating from mid to later 13th century, 62% of the Type D shoes came from just one property, Rig VII.

#### *Upper, Type Di: shoe with side lacing*

(Illus 136, 137, 145)

Twelve uppers were of Type Di, with the tie-holes on the quarters and on the vamp wing or sidepiece. On one example, Cat No 2801/A03-0078 (Illus 136), the edges beneath the lowest tie-hole have been sewn together with an edge-flesh seam. Tunnel stitching for a facing or strengthener, similar to that found on Type C boots, survives on five uppers: Cat Nos 1287/A6415c and 1288/A6415d (Illus 136), 1362/A8007b (Illus 136), 2801/A03-0078 (Illus 136), 2772/A03-0123b, 3364/A03-0223b (Illus 136).

Two uppers, Cat Nos 1287/A6415c and 1288/A6415d (Illus 136) and 2302/A03-0276c, have side-pieces, with three and six tie-holes respectively. A triangular stiffener survives with upper Cat No 3364/A03-0223b (Illus 136). On Cat No 2193/A03-0386, both a stiffener and a second latchet are missing. Upper Cat Nos 1287/A6415c and 1288/A6415d (Illus 136) has a vertical row of tunnel stitches on the closed side of the vamp wing, possibly to secure a lining, which would have enhanced its openwork decoration. Cat No 1362/A8007b (Illus 136) is included here, although it has separate quarters and vamp; this is possibly the result of repairs.

All 12 Type Di uppers type came from contexts that probably dated from the second half of the 13th century (Period IV). Ten were found in twos, in P2.2b, MC126,

M1.4f, B18 (Phase 2b) and M9a. The majority (50%) came from Rig VII (6), but three were also recovered from both Rig V and Rig VI.

The illustrations of two shoes from King's Lynn (c1250–1350) appear to show tie-holes for side-lacing, but no mention is made of tie-holes in the otherwise detailed descriptions (Clarke and Carter 1977, 350–352, Fig 164, nos 3 and 7). Other parallels are also mainly of 13th- to 14th-century date: London (early–mid 13th century); Newcastle (mid 13th–mid 14th centuries); Bristol Bridge, Bristol (13th–14th centuries); Chapel Lane Staith, Hull (late 13th–mid 14th centuries); Exeter (c1300?); Coppergate, York (13th–14th centuries); Waterford (12th–13th centuries); Bergen (late 12th–mid 14th century); Schleswig (mainly 13th century); Konstanz (especially 13th and 14th centuries); Lübeck (the end of the 12th century–mid-13th century) and Amsterdam (13th–15th centuries) (Grew and de Neergaard 1988, 18–19, Figs 25–26, 56, 89; Dixon 1988, 94, Fig 34, no 199; Thomas forthcoming a; Jackson 1979, Fig 22, nos 20–21, 34; Friendship-Taylor 1984, 324, Fig 184.7; Mould et al 2003; O'Rourke 1997, 706; Larsen 1992, 20–1, Figs 17–18; Schnack 1992b, 78–84, Taf 22–23; Schnack 1994, 24, 3.3.2, Tafel 10–12; Groenman-van Waateringe and Guiran 1978, Typ 1; Groenman-van Waateringe 1975, 25–30, Figs 2.7 and 7.2). Later examples were found at Worcester (mid-15th century; dated by style of toe) and Bremen (14th–the first half of the 15th centuries) (Thornton 1969a, 57–8, no 2; Schnack 1993, 64–5, Fig 2a). Less securely dated or unstratified parallels include Whithorn and Coventry (Nicholson 1997, 502–3; Thomas 1980, 17, 48–78/51/46, 49/214/6 and 78/59/28).

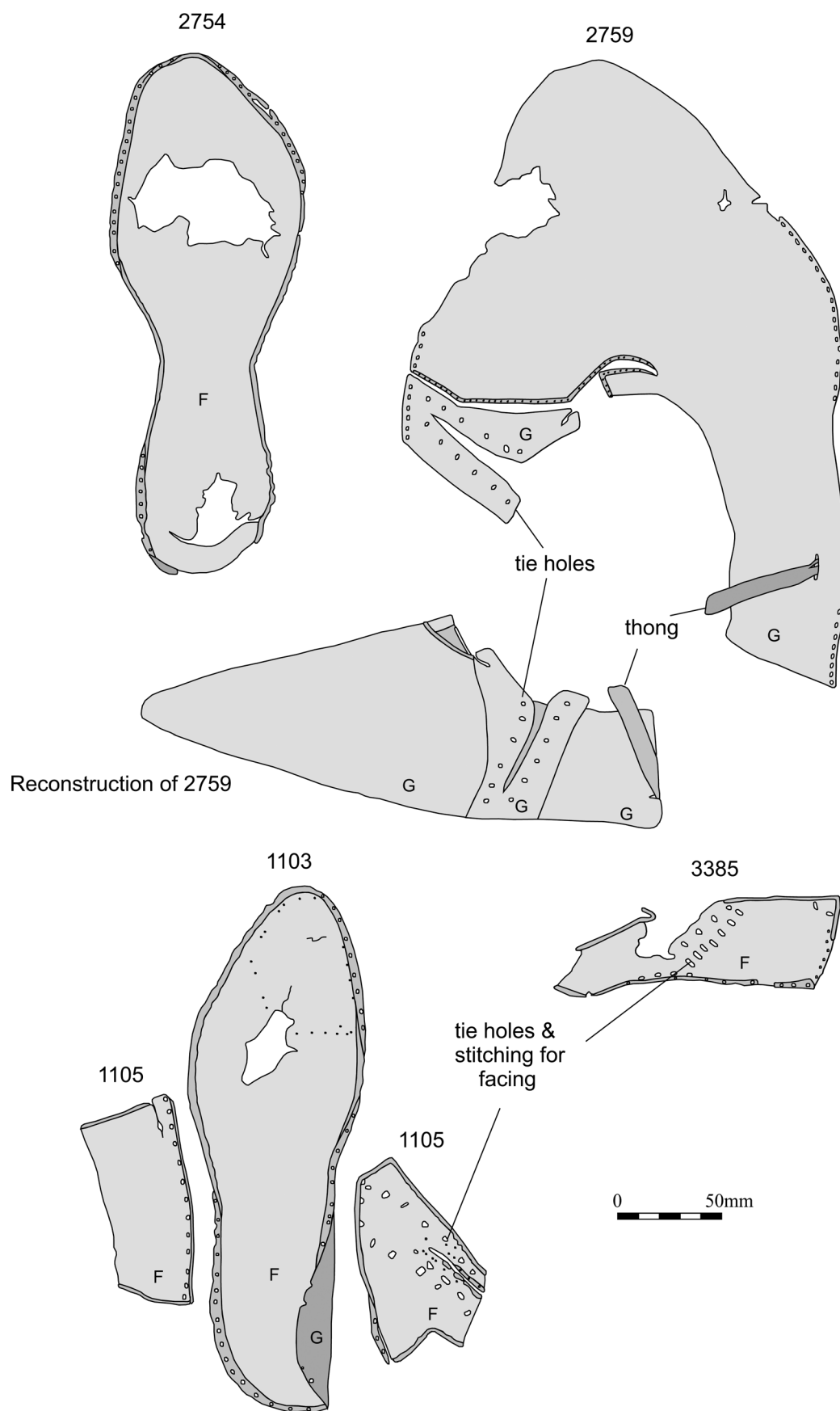
#### *Upper, Type Dii: shoes with side-pieces split for side lacing* (Illus 137)

Type Dii consists of four shoes with side lacing.

All these uppers have a sidepiece that has been split vertically or diagonally, to form a gusset; parallel to the edges of the gusset are tie-holes. The edges of the gusset have been oversewn; one example, Cat No 1105/A03-0287c, has tunnel stitching for a facing. All the side-pieces extend to the full height of the shoe, from lasting margin to top edge: Cat No 1105/A03-0287c is unusual in having at least four parts, vamp, quarters and inner and outer side-pieces, of which only the side-pieces remain, with a matching Type 2 sole. The outer sidepiece could have been added as a repair measure (Illus 137).

#### *Upper, Type Dii: shoe with side pieces split for side lacing* (Illus 137).

| Cat/Accession       | Area | Rig | Feature                                                       | Phase    |
|---------------------|------|-----|---------------------------------------------------------------|----------|
| <b>South Sector</b> |      |     |                                                               |          |
| 1105/A03-0287c      | 9    | VII | P8.1c                                                         | IIIc     |
| 2759/A03-0288f      | 7    | VII | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb      |
| 3385/A03-0233b      | 7    | VII | M9a                                                           | IVc,IVcc |
| 3406/A03-0052b      | 9    | VII | M9a                                                           | IVc,IVcc |



Illus 137 Uppers, Type Dii with matching soles, Type 2.

All four examples were recovered from Rig VII deposits which are of mid- to late 13th-century date. Two were found in M9a and one each from P8.1c and B18 (Phase 2b).

Parallels for this sub-type are not very common, but are still of 13th–14th century date: London (early–mid-13th century); Bristol Bridge, Bristol (13th–14th centuries); Coppergate, York (13th–14th centuries); Waterford (12th–13th centuries) and Schleswig (chiefly 13th century) (Grew and de Neergaard 1988, 18–19, Fig 27, 57, Fig 90; Thomas forthcoming a; Mould et al 2003; O'Rourke 1997, 706; Schnack 1992b, 78–84, Taf 25, 2, 32, 1).

The only other possible parallel is a fragment from King's Lynn, dating to c1250–1350, described by Carter as an 'instep gusset from front-lacing shoe'. The illustrations show it to be very similar to the sidepiece of Cat No 1105/A03–0287c, except that the King's Lynn example has an edge–flesh stitching channel on its lower edge, not a lasting margin (Clarke and Carter 1977, 350–1, Fig 164, 6).

#### *Upper, Type E: low shoe (Illus 138–9)*

Type E consists of ten shoes with uppers of one-piece construction and with neither thongs nor holes for them. In many respects, these shoes were made to a similar pattern as Type A ankle-boots, but were cut lower on the sides of the foot, with the quarters rising to a dome or peak. Cat No 180/A7589f has a separate second latchet, while on Cat No 65/A8808 (Illus 138) both latchets, which do not meet, are made out of the same piece of leather as the vamp and quarters. This upper probably had a sidepiece. Its quarters have a domed or peaked top edge.

Cat No 476/A12302b (Illus 139) has a stiffener, while stitching for a stiffener survives on four examples, as on Cat Nos 4307/A1233b (Illus 138) and 65/A8808 (Illus 138). The vamp of Cat No 162/A7787i (Illus 138) has been decorated with three approximately parallel lines out from throat to toe. It may have been stitched with coloured wool or silk (see Decorated uppers, above).

All (90%) but one of these uppers are of 12th-century date; the exception was from an early 14th-century

midden (M1.5a) with post-medieval contamination. Apart from two examples which were found in M14b(b) and another two in Pit 5005 (M1.1c), the rest were found singly. Of the nine 12th-century examples of Type E shoes, four of which belonged to Period I and five to Period II, seven came from Rig VI, one from Rig V and one from either Rig V or VI. By the time that Cat No 4307/A1223b was deposited in M1.5a, it is believed that these two properties had been combined.

The closest parallel, from London, is also of 12th-century date (early–mid-12th century; Grew and de Neergaard 1988, 53, Fig 84). A similar example from Worcester has a higher vamp throat, as does an upper from Schleswig (Thornton 1969a, 57–8, Fig 13, no 3, dated 1350–1450 on stylistic grounds; Schnack 1992b, Fig 95, 1, no 7409, 13th–14th centuries). Three of the Whithorn upper fragments have been assigned to this type but as there is no evidence for small latchets, it is possible that they might belong to Type F (Nicholson 1997, 502–503).

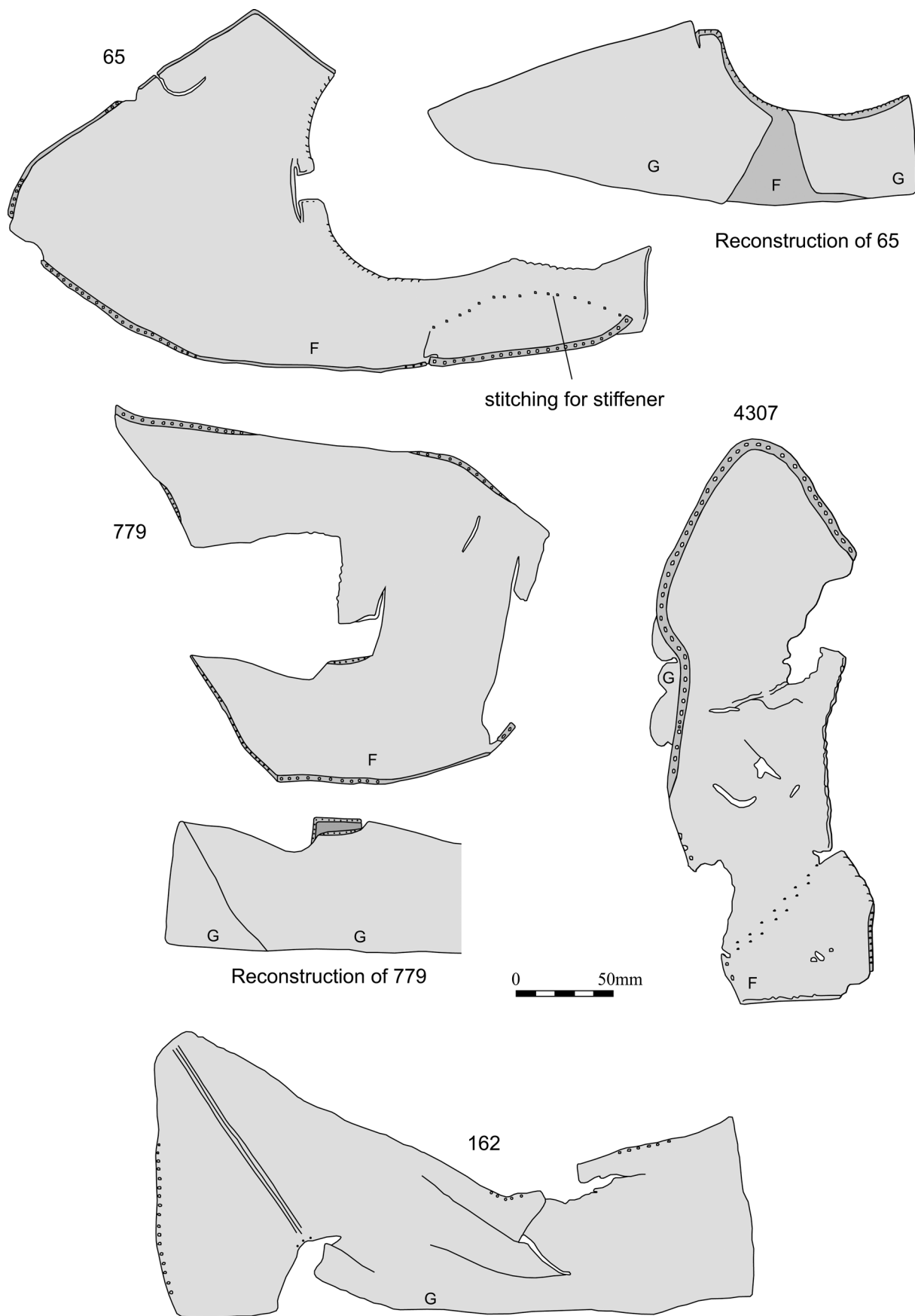
#### *Upper, Type F: low shoe without fastenings (Illus 139, 140)*

Type F consists of three uppers of low shoes with no latchets and no apparent fastenings. Cat No 810/A11219a (Illus 139) is most probably a one-piece upper; its quarters have a domed top edge. A similar upper was found at King's Lynn, dated c1250 to 1350 (Clarke and Carter 1977, 350–2, Fig 164, no 12). Cat No 315/A10365b (Illus 139) is possibly a one-piece upper, with quarters and vamp wing joining, but if that were so it would not match the accompanying sole. As the front of the vamp appears to match the sole, it is more probable that the upper had separate quarters. This upper is so worn that it is hard to distinguish between cracked and deliberately cut edges. The toe of this shoe may have been stuffed with moss (see Sole (Type 6) above).

Cat No 3670/A7791 is of one-piece design, with an exceptionally high vamp throat and very low quarters; a separate sidepiece and an insert at the vamp throat no longer survive. The quarters of this shoe were most probably lined, with the lining attached to the flesh side by two rows of tunnel stitching, one parallel to the

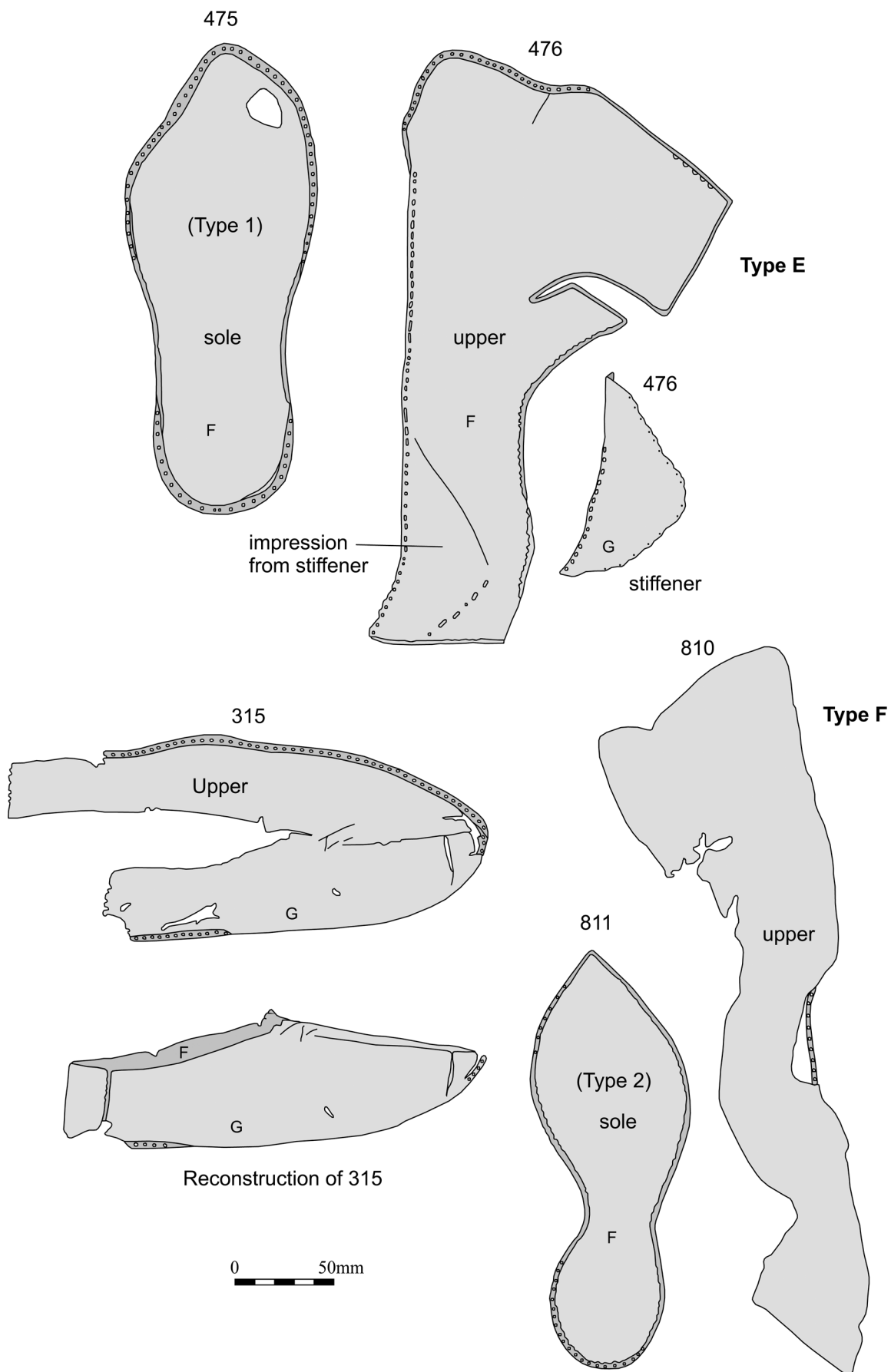
#### *Upper, Type E: low shoe (Illus 138–9).*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                               | <i>Phase</i> |
|----------------------|-------------|------------|----------------------------------------------|--------------|
| <b>South Sector</b>  |             |            |                                              |              |
| 65/A8808             | 1/2         | V, VI      | M2.1b & B10, South Room–Floor/Occupation (1) | Ic,Icc       |
| 162/A7787i           | 1/2         | VI         | B6 (Phase 1), South Room–Floor (1)           | Ie           |
| 180/A7589f           | 2           | VI         | M14b(b)                                      | Ie           |
| 212/A7574b           | 2           | VI         | M14b(b), Pit 3625                            | Ie           |
| 327/A03–0009d        | 3           | V          | MC049, Pit 5259                              | IIa          |
| 449/A6771            | 2           | VI         | B4 'Byre'–Occupation                         | IIc          |
| 474/A12285f          | 3           | VI         | M1.1c, Pit 5005                              | IIId         |
| 476/A12302b          | 3           | VI         | M1.1c, Pit 5005                              | IIId         |
| 779/A9371e           | 3           | VI         | M1.2, Pit 2648                               | <IIg(IIh)    |
| 4307/A1223b          | 3           | V, VI      | M1.5a                                        | Va,Vaa(VI)   |



Illus 138 *Uppers, Type E.*





Illus 139 Uppers, Type E and Type F with two matching soles, Types 1 and 2.

vertical edge of the quarters, the other on the closed side of the quarters (Illus 140). The nearest parallel is another shoe from King's Lynn, dated c1250–1350 (Clarke and Carter 1977, 350–1, Fig 164, 11).

The two earliest Type F uppers from the High Street were found in Period II deposits that would have dated from the second half of the 12th century, while the third was recovered from a path (P6) which had been laid down in c1300. Two came from Rig VI and one from Rig V. The nearest parallels range in date from the mid-10th to the mid-14th centuries: Winchester (mid-late 10th century, slightly high throat); London (early-mid 12th century and early-mid 13th century); King's Lynn (c1250–1350); Coppergate, York (10th, 11th and 13th centuries); Swinegate, York (late 11th, 12th and 13th centuries); Waterford (12th–13th centuries); Bergen (late 12th–mid 14th centuries) and Schleswig (11th–12th centuries, high vamp throat, with all-over cut-out decoration) (Thornton 1990b, 601–2, Fig 160, no 1878; Grew and de Neergaard 1988, 12, Fig 11, 16, Figs 18–19; Clarke and Carter 1977, 350–1, Fig 164, nos 11 and 12; Mould et al 2003; Carlisle 1998; O'Rourke 1997, 706, Fig 18.2.2; Larsen 1992, 23–4, Figs 23–24; Schnack 1992b, Fig 92.2).

*Upper, Type G: shoe with latchet ending in thong* (Illus 140)

Type G consists of two high shoes or low boots with latchets ending in thongs for central fastening. Cat No 229/A7588c (Illus 140) is a one-piece upper, comprising vamp, with low vamp throat, vamp wings, quarters and two latchets ending in thongs, tied together. The top edge of the quarters has been oversewn with silk. Upper Cat No 186/A7600b (Illus 140) comprises vamp, vamp wing, low vamp throat with decorative openwork, quarters and one latchet, ending in a thong. The second latchet is missing. Its vamp might have had a coloured

lining, to enhance the decorative effect. Both the High Street examples were recovered from deposits that had been laid down shortly before 1150 from different, but adjoining, properties.

There appears to be only one exact parallel for this type from Coppergate, York (mid-12th century) (Mould et al 2003). A shoe from Southampton, of late 13th century date, has similar latchets, but it is not clear whether they ended in thongs (Platt and Coleman Smith 1975, II, 296–7, Fig 260, no 2141). Two latchets knotted together from Bristol (Bristol Bridge) may also belong to this style (13th–14th centuries; Thomas forthcoming a).

In her report on the shoes from Schleswig, Schnack compares Perth Type G with her Halbschuhform G1 that dates to the 13th and 14th centuries. However, all her shoes appear to be fastened with a strap and buckle; the only example with two thongs is cut exceedingly low at the vamp throat, well below the thongs (Schnack 1992b, 93–7, 137–8, list 7, Tafel 46–49). A similar boot was found at Konstanz, while another three may have been fastened by a latchet ending in two thongs tied through holes in the opposing latchet (late 13th–15th centuries, Schnack 1994, Tafel 18 and 19). The latter feature is also found on ankle-boots from Haithabu, where two thongs were attached to one end of a latchet (Groenman-van Waateringe 1984, Typ 10).

It is possible that the PHSAE Type G is an early form of later latchet and strap and buckle shoes, such as the late 14th century examples from London (Grew and de Neergaard 1988, 32–3, Figs 42–47).

*Upper, Type H: high calf boot* (Illus 141)

Type H consists of one very high boot (Cat No 163/A7787j), with vamp separate from quarters. Quarters and vamp wing and leg flaps and vamp throat were joined by butted edge–flesh seams; neither thongs nor holes for them survived, suggesting a closed boot,

*Upper, Type F: low shoe without fastenings* (Illus 139–40).

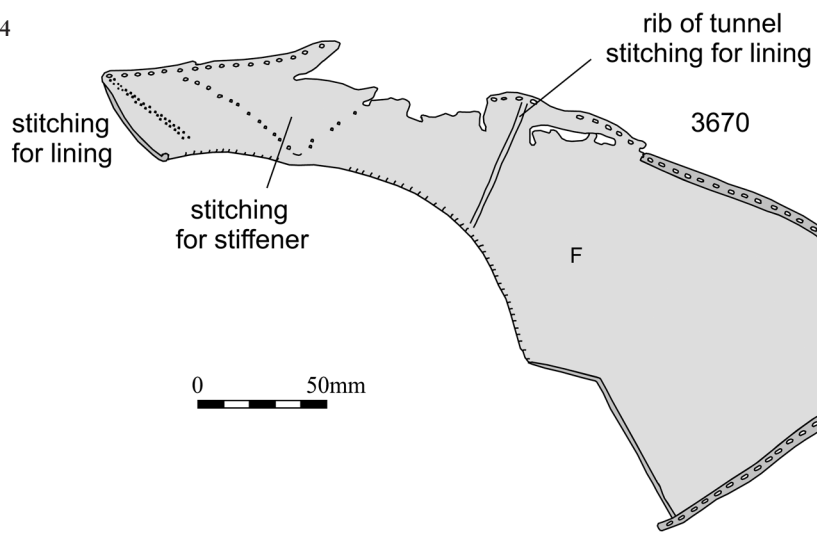
| Cat/Accession       | Area | Rig | Feature        | Phase     |
|---------------------|------|-----|----------------|-----------|
| <b>South Sector</b> |      |     |                |           |
| 315/A10365b         | 3    | V   | MC049          | Ila       |
| 810/A11219a         | 3    | VI  | M1.2, Pit 2648 | <IIg(IIh) |
| 3670/A7791          | 3    | VI  | P6             | IVcc,Va   |

*Upper, Type G: shoe with latchet ending in thong* (Illus 140).

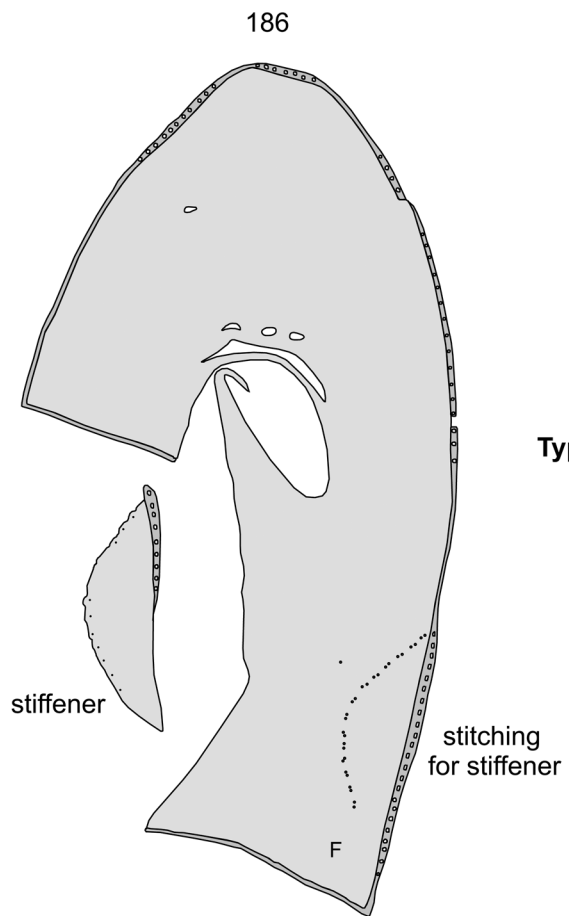
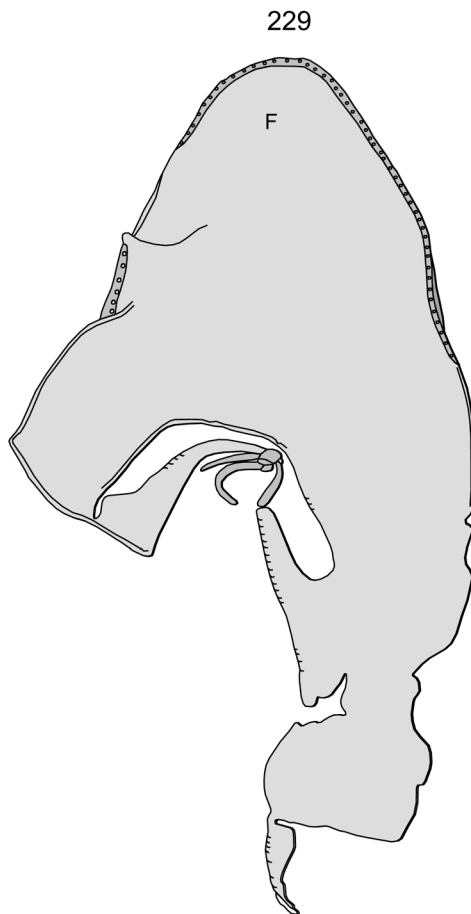
| Cat/Accession       | Area | Rig | Feature | Phase |
|---------------------|------|-----|---------|-------|
| <b>South Sector</b> |      |     |         |       |
| 186/A7600b          | 2    | VI  | M14b(b) | Ie    |
| 229/A7588c          | 2    | V   | M14b(c) | Ie,If |

*Upper, Type H: high calf boot* (Illus 141).

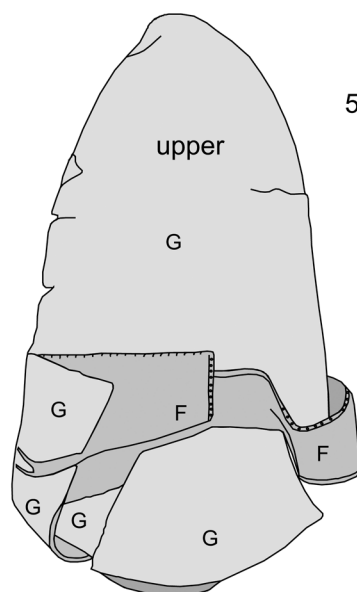
| Cat/Accession       | Area | Rig | Feature                            | Phase |
|---------------------|------|-----|------------------------------------|-------|
| <b>South Sector</b> |      |     |                                    |       |
| 163/A7787j          | 1/2  | VI  | B6 (Phase 1), South Room–Floor (1) | Ie    |



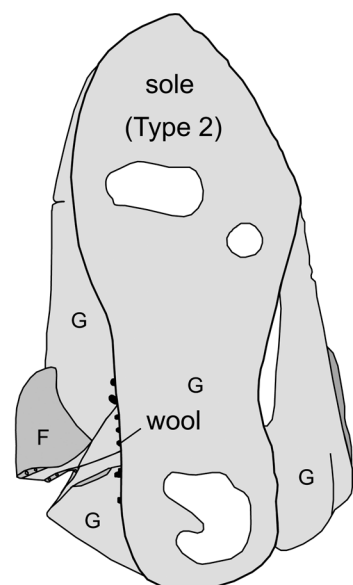
Type F



Type G

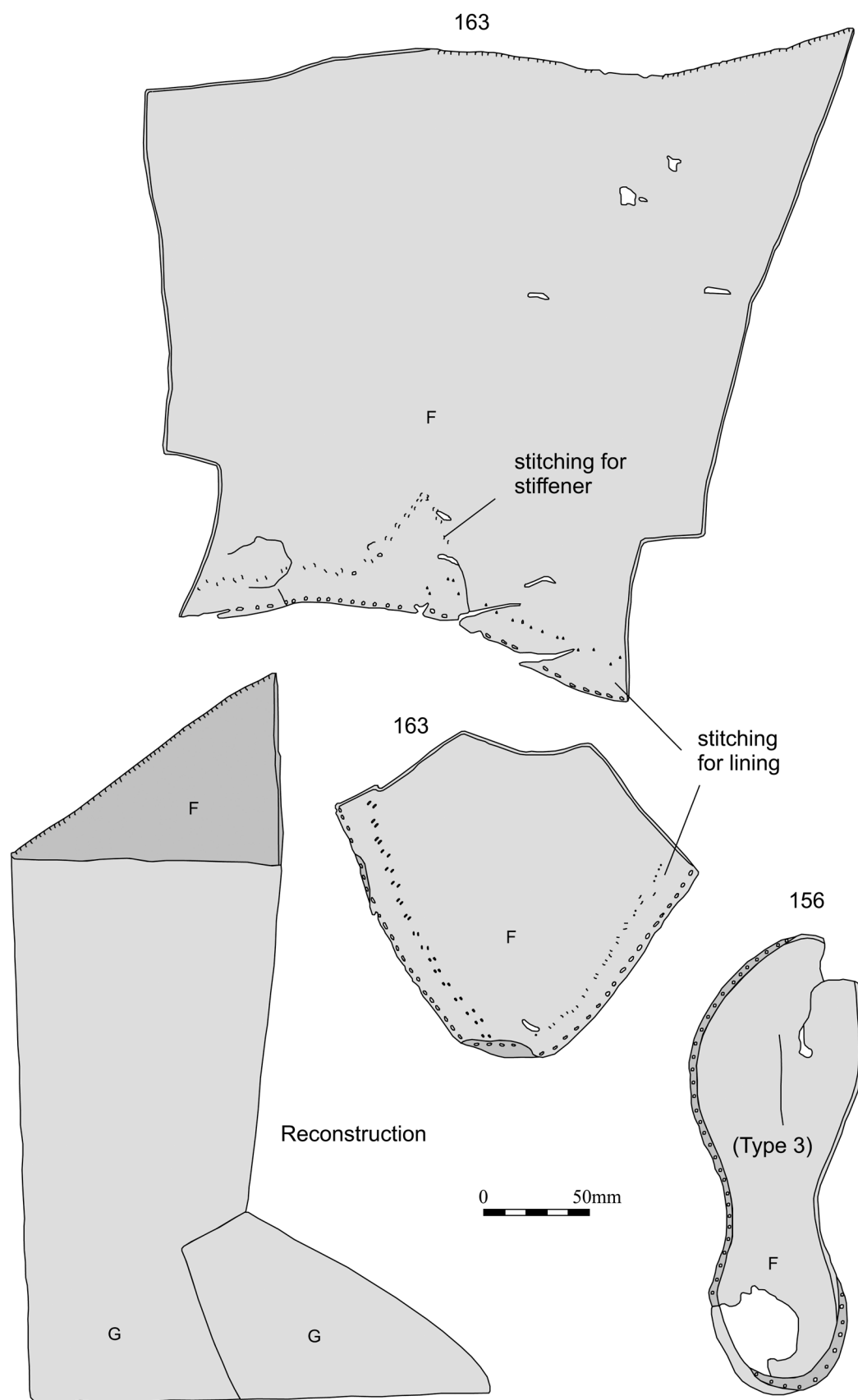


5769



Type J

Left Illus 140 Uppers, Type F and Type G; uppers, Type J with attached sole, Type 2.



Illus 141 Upper, Type H with matching sole, Type 3 and reconstruction.

probably similar to a modern wellington boot, with possibly a thong tied round the ankle or leg but not slotted through tunnel holes. The overall style is similar to that of a one-piece design, but, because of the height of the leg, vamp and quarters had to be made of separate pieces. Tunnel stitching for a heel stiffener survives in the quarters, as well as a horizontal row of tunnel stitching, c15mm above the lasting margin of both quarters and vamp, but not crossing the area of the heel stiffener. Its purpose is not clear; possibly it was used to attach the bottom edge of a lining; the top edge might have been secured to the hemstitch on the top edges of the leg. This boot was of mid-12th-century date. It was recovered from a floor layer that had been laid down shortly before 1150.

Cat No 5606/A03–0254 consists of quarters cut to a similar pattern as those of Cat No 163/A7787j, but on a smaller scale, and without a second integral leg flap. As this does not seem big enough to be from a high boot, it has been assigned to Type J. Similarly, Walsh assigned one of the quarters from King Edward Street, Perth to this type. Again, although they are of the same basic shape, they are so much smaller that it is doubtful whether they belong to a high boot (Thomas and Walsh 1995, 971).

The other parallels all come from abroad, and are mostly later in date: Schleswig (13th–14th centuries); Konstanz (c1300–1500); Bergen (second half of the 14th century); Lübeck (the end of the 12th century–mid 13th century) and Novgorod (11th century?). Most of these, however, are not exactly of the same pattern. The nearest are two examples from Schleswig; no 5516 (Tafel 90) and the leather lining of no 4403 (Tafel 86) (Schnack 1992b, 114–21, 141–3, Tafel 83, 84, 86, 90, Stiefelform Typ B; Schnack 1992a, 98–9, Fig 2a; Schnack 1994, Tafel 38; Larsen 1992, 24–5, Fig 26; Groenman-van Waateringe and Guiran 1978, Typ 8; Vons-Comis 1982b, Ab 82, 96e; Thompson 1967, 81, Fig 83, 1).

Schnack also lists parallels from another 12 sites: Pleskau (11th century); Zurich (12th century); Svendborg (12th century); Oslo (13th–14th centuries); Tønsberg (13th–14th centuries); Danzig (13th century); Riga (13th–14th centuries); Stettin (14th century); Warsaw (14th century); Stockholm (14th–15th centuries); Amsterdam (13th–15th centuries); Frankfurt-am-Oder (second quarter of 15th century); Lund (13th–

15th centuries?) and Peiting (?8th–9th centuries, more probably 12th century). Her distribution map shows very clearly that the type is predominantly eastern, ranging from Schleswig to Novgorod, the only western examples coming from Peiting (Germany), Zurich, Amsterdam and Perth (Schnack 1992b, 141–3, 151).

*Upper, Type J: boots or shoes with vamp separate from quarters* (Illus 140, 143, 147)

It might be more appropriate to call Type J a group rather than a type, as the sole feature uniting these six boots or shoes is the fact that the vamps are separate from the quarters. This may be the result of repair, rather than deliberate two-piece construction.

One boot, Cat No 5769/A9821b (Illus 140), is similar in overall style to Type A, in that it looks like a one-piece wrap-around boot with no tunnel-holes or slits for thongs. However, close inspection demonstrates that it is of composite construction, originally made with four separate pieces. A large and oddly shaped fragment comprises vamp, both vamp wings and one leg flap. Both vamp wings extend far back; one is also very high, reaching to the top edge of the boot, while the second, on the outside of the foot, becomes a leg flap. A small trapezoidal piece forms the quarters; a tiny triangle fills a space between inner vamp wing and quarters. A second leg flap, now missing, would have fitted in above the vamp throat. The interior of the boot was lined with felt, an unexpected luxury in an upper otherwise designed to be as economical as possible (see *The Textiles*, this volume). It was unstratified.

Only the vamps of Cat Nos 1310/A6377 (Illus 140), 456/A10048e (Illus 147) and 941/A03–0373b survived. Cat No 1310/A6377 had a rounded throat and a vamp wing on either side; it dated to the second half of the 13th century. Cat No 456/A10048e had a continuous edge–flesh stitching channel, forming the edge of vamp throat and both wings; it was of mid-12th-century date. Cat No 941/A03–0373b, of which only a small part was found, belonged to the late 12th or early 13th century. Similar vamps have been found in Coventry (Thomas 1980, 16, 48, 52, 67, 90, 104, 147, 158, Vamp Type 6).

Cat Nos 2753/A03–0281 and 5606/A03–0254 (Illus 143) consist of the quarters and legs of boots with separate vamps (now missing). As mentioned earlier,

*Upper Type J: boots or shoes with vamp separate from quarters* (Illus 140, 143, 147).

| Cat/Accession       | Area | Rig   | Feature                                                       | Phase        |
|---------------------|------|-------|---------------------------------------------------------------|--------------|
| <b>South Sector</b> |      |       |                                                               |              |
| 456/A10048e         | 4    | VI    | M1.1f, Pit 2383                                               | IIb,IIc      |
| 941/A03–0373b       | 9    | VII   | M13                                                           | IIg–IIIb     |
| 1310/A6377          | 3    | V     | P2.2b                                                         | IVa          |
| 2753/A03–0281       | 7    | VII   | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 5606/A03–0254       | 10   | VIII  | MC174, Pit 7013                                               | (Va–)Vd(Vdd) |
| 5769/A9821b         | 3/4  | V, VI | Unstratified                                                  | u/s          |

Cat No 5606/A03–0254 resembles the quarters of Type H (Cat No 163/A7787j), but on a smaller scale, and is thus unlikely to be part of a very high boot. These boots are of mid–later 14th century date. Thus, two of the stratified examples of these boots belonged to Periods II or III (the second half of the 12th century or earlier 13th century), while three were of late 13th–earlier 14th century date. Examples of Type J uppers were recovered from all four rigs which were excavated.

Other parallels include 45–75 Gallowgate (1350–1375), Gallowgate Middle School (12th–13th centuries), Aberdeen; Newcastle (mid 13th–14th centuries); Winchester (late 11th–mid 13th century) and Schleswig (Thomas 2001a, 249; Dixon 1988, Fig 35, 208B, 212A; Ottaway 1982, 128–30; Schnack 1992b, Fig 98, no 1).

### *Uppers, Type Ki–v*

The 14 uppers (15 fragments) of Type K comprise low boots or high shoes with a central fastening, consisting of a combination of slits and toggles on the latches and occasionally on the vamp throat. The uppers have been subdivided according to the surviving evidence. Types Ki, Kii and Kiii, with toggles, horizontal thongs and slits, are probably all parts of the same fastening method, while Type Kiv has a similar but much simpler arrangement; Type Kv consists of two very fragmentary boot pieces, with slit or double latches.

Although this category (Ki–v) included examples which were discovered in 12th and 13th century deposits, it is interesting to note that 11 (73%) of the 15 came from 14th-century layers. Indeed six of these came from the same midden (M1.5b). As many as ten (67%) came from the same area, Area 7.

### *Uppers, Type Ki (Illus 142)*

The five Ki uppers all have toggles and slits. Cat No 3602/A4329e (Illus 142) has two slits on one latchet, three slits and a round hole on the second latchet and a

toggle at vamp throat, threaded through a single hole.

The upper Cat Nos 4030/A03–0156c and 4031/A03–0156d (Illus 142) has a similar arrangement, with two horizontal slits through the latchet, a toggle at the vamp throat and a horizontal slit and a toggle on the second latchet; the toggle at the latchet has been threaded through a tunnel hole and a single hole. Cat No 5638/A1249a (Illus 142) and Cat No 5318/A4390f are probably parts of latchets; the former has two toggles and a trace of a slit, while the latter has four round holes, with a toggle through the bottom one and two thongs, possibly broken toggles, through the two top holes. Cat No 3866/A03–0069a (Illus 142) is also probably a latchet, with a T-shaped slit and two toggles, each threaded through a tunnel hole. The purpose of the tunnel stitching on the flesh side, parallel to the top and outer edges of the latchet, is not clear. It was possibly for attaching the latchet to the rest of the upper. These uppers are all of late 13th- to mid 14th-century date. Two of the six fragments were recovered from P8.4, an early 14th century path which ran along the western boundary of Rig VII.

### *Uppers, Type Kii (Illus 142)*

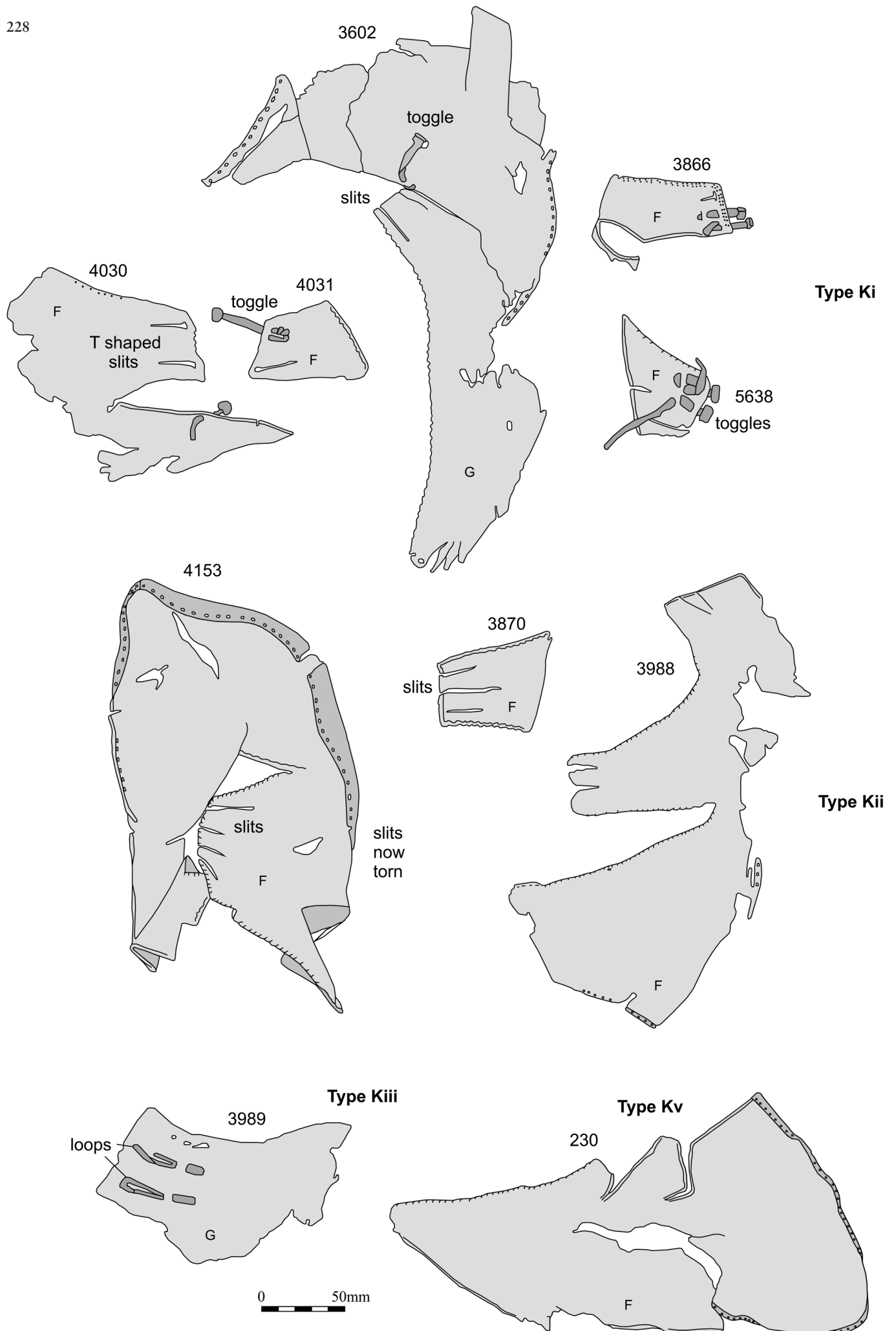
The four examples of Type Kii uppers have horizontal slits, but no surviving thongs or toggles and are most probably latchets belonging to Type Ki uppers. All four were recovered from early 14th-century features, three from M1.5b.

### *Uppers Type Kiii (Illus 142, 144)*

The two fragments are latchets with three horizontal thongs. The thongs on Cat No 3283/A03–0227d (Illus 144) are each threaded through a tunnel hole, a single hole and a vertical thong. This fragment differs from other examples with vertical thongs (Type Biii), in having the horizontal thongs firmly anchored close to an oversewn edge, suggesting that they were toggles or loops, rather than wrap-around thongs. Cat No 3989/

### *Uppers, Type Ki–v.*

| <i>Cat/Accession</i>               | <i>Type</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i> | <i>Phase</i> |
|------------------------------------|-------------|-------------|------------|----------------|--------------|
| <b>South Sector</b>                |             |             |            |                |              |
| 230/A7588d                         | Kv          | 2           | V          | M14b(c)        | Ie,If        |
| 878/A8665e                         | Kiv         | 3           | VI         | M1.3           | Ili          |
| 3283/A03–0227d                     | Kiii        | 7           | VII        | P8.3           | IVc,IVcc     |
| 3602/A4329e                        | Ki          | 3           | VI         | M1.4e          | IVcc(Va)     |
| 3866/A03–0069a                     | Ki          | 7           | VI, VII    | M1.5b          | Vaa          |
| 3870/A03–0098a                     | Kii         | 7           | VI, VII    | M1.5b          | Vaa          |
| 3902/A03–0132g                     | Kii         | 7           | VI, VII    | M1.5b          | Vaa          |
| 3968/A03–0143a                     | Kv          | 7           | VI, VII    | M1.5b          | Vaa          |
| 3988/A03–0170e                     | Kii         | 7           | VI, VII    | M1.5b          | Vaa          |
| 3989/A03–0170f                     | Kiii        | 7           | VI, VII    | M1.5b          | Vaa          |
| 4030/A03–0156c &<br>4031/A03–0156d | Ki          | 7           | VII        | P8.4           | Va           |
| 4153/A03–0198b                     | Kii         | 7           | VII        | P8.4, Pit 7216 | Va           |
| 5318/A4390f                        | Ki          | 4           | V, VI      | M3a            | Vb–Vc        |
| 5638/A1249a                        | Ki          | 4           | VI         | M3e, Pit 2111  | Vdd>         |



Illus 142 Fragments of uppers, Type K.



A03–0170f (Illus 142) has three horizontal thongs ending in loops; the thongs have each been passed through a tunnel hole and a single hole. Both these Type Kiii uppers came from contexts that dated from c1300. They came from what were effectively the succeeding phases of the Path 8 sequence between Rigs VI and VII.

*Upper, Type Kiv (Illus 143)*

Type Kiv consists of one low boot, Cat No 878/A8665e, with a much simpler and cruder fastening, comprising a toggle attached to one latchet and passed through an oval hole in the second latchet. Although the fastening method is basically similar to those of Types Ki–iii, this boot is not strictly comparable, as it is much more roughly finished than the other examples. This boot was discovered in a very late 12th-century backland midden.

*Uppers, Type Kv (Illus 142)*

Type Kv consists of two fragments. Cat No 230/A7588d (Illus 142) is possibly part of a boot with central fastening; it appears to have a double latchet, one on top of the other. It is not clear if or how this latchet was secured to its partner. This upper came from a deposit that had been laid down very shortly before 1150. As such it was by far the earliest Type K upper detected at the High Street.

Cat No 3968/A03–0143a has a slit latchet, possibly for a central fastening. Like so many of the other variations of Type K upper, it was discovered within M1.5b, an early 14th-century midden in Rigs VI and VII.

The majority of the Type K uppers belong to the late 13th–first half of the 14th century: Period IV, two examples (14%) and Period V, ten examples (71%). The two 12th century examples are atypical.

*Uppers, Type Ki (Illus 142).*

| <i>Cat/Accession</i>               | <i>Area</i> | <i>Rig</i> | <i>Feature</i> | <i>Phase</i> |
|------------------------------------|-------------|------------|----------------|--------------|
| <b>South Sector</b>                |             |            |                |              |
| 3602/A4329e                        | 3           | VI         | M1.4e          | IVcc(Va)     |
| 3866/A03–0069a                     | 7           | VI, VII    | M1.5b          | Vaa          |
| 4030/A03–0156c &<br>4031/A03–0156d | 7           | VII        | P8.4           | Va           |
| 5318/A4390f                        | 4           | V, VI      | M3a            | Vb–Vc        |
| 5638/A1249a                        | 4           | VI         | M3e, Pit 2111  | Vdd>         |

*Uppers, Type Kii (Illus 142).*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i> | <i>Phase</i> |
|----------------------|-------------|------------|----------------|--------------|
| <b>South Sector</b>  |             |            |                |              |
| 3870/A03–0098a       | 7           | VI, VII    | M1.5b          | Vaa          |
| 3902/A03–0132g       | 7           | VI, VII    | M1.5b          | Vaa          |
| 3988/A03–0170e       | 7           | VI, VII    | M1.5b          | Vaa          |
| 4153/A03–0198b       | 7           | VII        | P8.4, Pit 7216 | Va           |

*Uppers, Type Kiii (Illus 142, 144).*

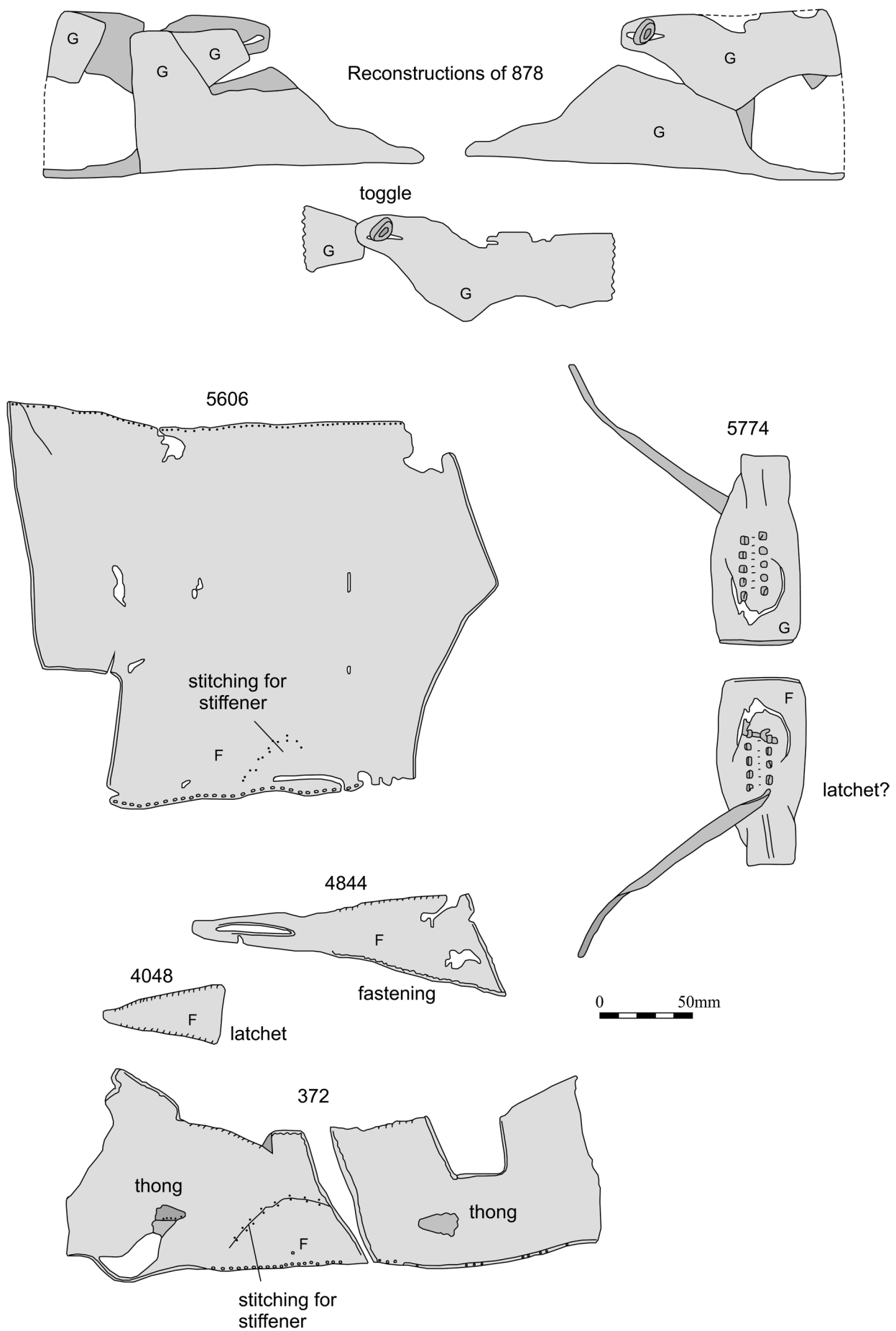
| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i> | <i>Phase</i> |
|----------------------|-------------|------------|----------------|--------------|
| <b>South Sector</b>  |             |            |                |              |
| 3283/A03–0227d       | 7           | VII        | P8.3           | IVc,IVcc     |
| 3989/A03–0170f       | 7           | VI, VII    | M1.5b          | Vaa          |

*Uppers, Type Kiv (Illus 143).*

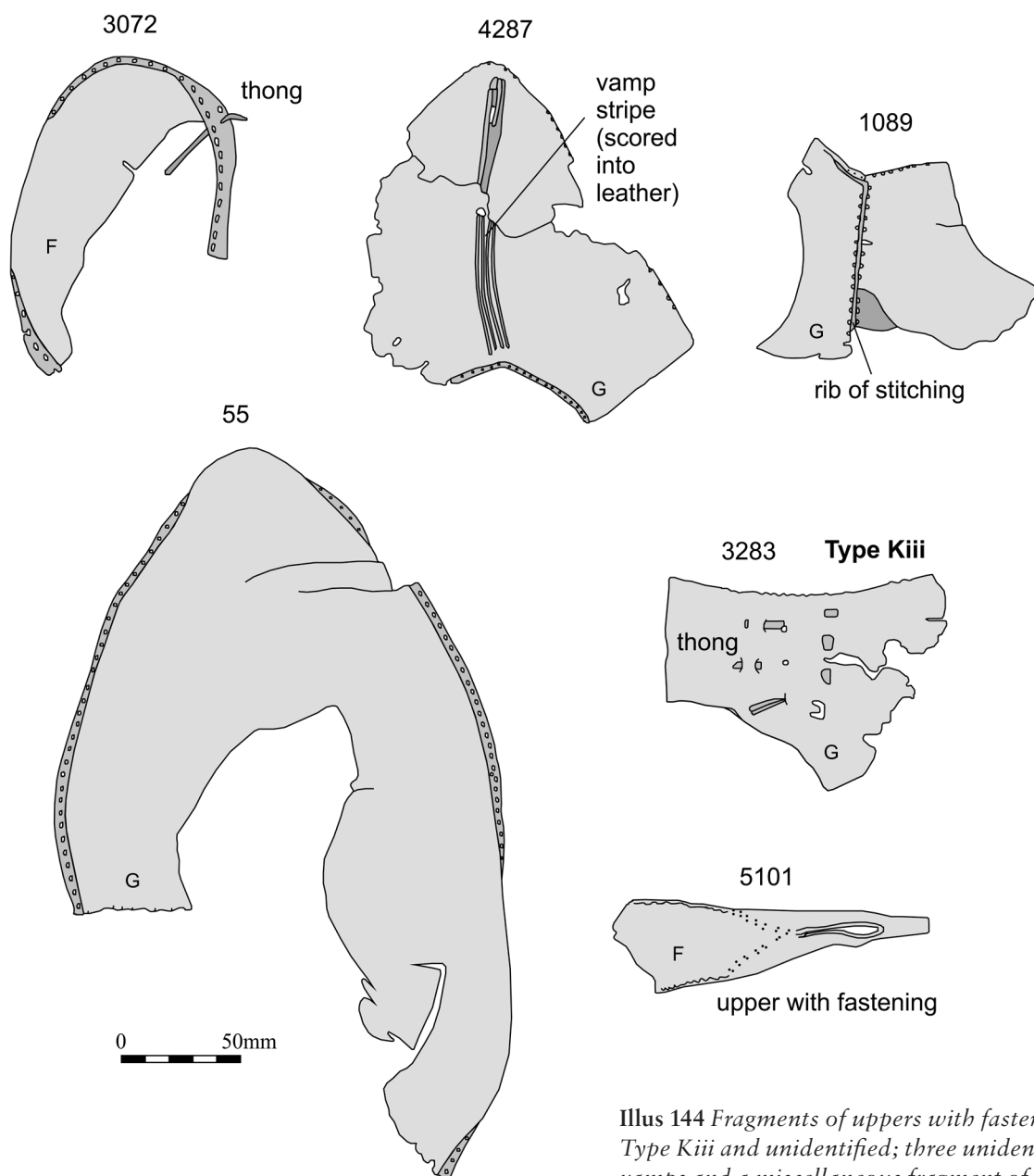
| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i> | <i>Phase</i> |
|----------------------|-------------|------------|----------------|--------------|
| <b>South Sector</b>  |             |            |                |              |
| 878/A8665e           | 3           | VI         | M1.3           | Ili          |

*Uppers, Type Kv (Illus 142).*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i> | <i>Phase</i> |
|----------------------|-------------|------------|----------------|--------------|
| <b>South Sector</b>  |             |            |                |              |
| 230/A7588d           | 2           | V          | M14b(c)        | Ie,If        |
| 3968/A03–0143a       | 7           | VI, VII    | M1.5b          | Vaa          |



Illus 143 Upper Type J, Type Kiv  
and fragments of uppers with fastenings.



**Illus 144** *Fragments of uppers with fastenings, Type Kiii and unidentified; three unidentified vamps and a miscellaneous fragment of upper.*

Substantial fragments of boots of types Ki and Kiii of 13th- to 14th-century date were found at Kirk Close, Perth, while part of a Ki upper was identified at 45–75 Gallowgate, Aberdeen (1350–1375) (Thomas 1987, 179–81, Ki nos 13, 16, 17, Kiii nos 14 and 15; Thomas 2001a, 249).

Other parallels are also of 13th- to 14th-century date: London (mid 13th–mid 14th centuries); Newcastle (mid 13th–mid 14th centuries); Bristol Bridge, Bristol (13th–14th centuries); Barbican Ditch, Oxford (13th–15th centuries); Chapel Lane Staith, Hull (late 13th–early 14th centuries); Coppergate, York (late 13th–14th centuries); Waterford (12th–13th centuries); Amsterdam (with low vamp throat: 1275–1300; ankle-boot: 14th–16th centuries); Bremen (late medieval); Bergen (mid 13th–early 15th centuries); Schleswig (12th–13th centuries); Lübeck (end of 12th century–mid 13th century);

S'Hertogenbosch and Konstanz (14th–15th centuries) (Grew and de Neergaard 1988, 22–3, Figs 32–34; Tatton-Brown 1975, 159–60, Fig 28, nos 77–78, 80; Dixon 1988, 94, Fig 34, no 194; Thomas forthcoming a; Hassall 1976, 279–80, Fig 19, no 24; Jackson 1979, Fig 22, no 19; Mould et al 2003; O'Rourke 1997, 708, Fig 18.2.1; Baart et al 1977; Groenman-van Waateringe 1975, 30–1, Fig 9.4; Schnack 1993, 64–5, Fig 2.c; Larsen 1992, 22–3, Figs 20–22; Schnack 1992b, 121, Fig 93; Groenman-van Waateringe and Guiran 1978, Typ 4; Goubitz 1983; Schnack 1994, 26, 3.3.5, Tafel 16).

#### *Uppers, fragments with fastenings (Illus 143–4)*

The eight fragments of leather grouped together here have various forms of fastening (thongs, tie-holes, slits and tunnel holes) but are too fragmentary for further

*Uppers, fragments and fastenings (Illus 143, 144).*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>           | <i>Phase</i> |
|----------------------|-------------|------------|--------------------------|--------------|
| <b>South Sector</b>  |             |            |                          |              |
| 41/A11262            | 2           | VI         | MC011, Pit 3755          | Ib,Ic        |
| 372/A4936            | 1           | V          | MC059, Pit 3142          | Id-IIc       |
| 1111/A03-0310        | 9           | VII        | P8.1c                    | IIIc         |
| 2707/A03-0296d       | 7           | VII        | B18 (Phase 1/2), MF 7307 | IVaa,IVb     |
| 4844/A03-0175q       | 7           | VII        | M8a                      | Va,Vaa       |
| 5101/A03-0046        | 9           | VII        | M8a                      | Va,Vaa       |
| 5362/A5894g          | 4           | VI         | M3b                      | Vd           |
| 5774/A12574d         | 3/4         | V, VI      | Unstratified             | u/s          |

definition of method of fastening or type of upper. All are probably parts of uppers but it is also possible that some were fastenings of clothing or other objects.

Cat Nos 41/A11262 and 372/A4936 are definitely parts of uppers of high shoes or low boots; Cat No 41/A11262 has two pairs of long slits, possibly elongated tunnel holes, on latchet and quarters. This may originally have been a Type Aii upper, to which thongs were later added rather clumsily. Cat No 372/A4936 (Illus 143) has two thongs, one sewn to the flesh side of the quarters and threaded through a slit, the other through a slit in the vamp. The second thong may have had a buckle attached to it. Cat No 2707/A03-0296d with a thong threaded through three vertical slits, could be part of a Type C or D upper, with thonging similar to that described by Groenman-van Waateringe (1975, 30–1). Cat No 1111/A03-0310 is most unusual in having a double row of five tie-holes. Cat Nos 4844/A03-0175q (Illus 143) and 5101/A03-0046 (Illus 144) are both tapered fragments, with a slit in the pointed end; the edges of the slit of Cat No 5101/A03-0046 have been stitched. Tunnel stitching on the latter suggests that it had been sewn onto an upper. These are possibly latchets or straps.

Cat No 5774/A12574d (Illus 143) is an oblong fragment, with two parallel thongs threaded through four tunnel holes; one thong has a long loose end surviving. Cat No 5362/A5894g has two thongs, plus slits for two more; one thong has been knotted, forming a button. This is possibly a Type K variant, or else part of an article of clothing.

*Uppers, stiffeners*

The 14 stiffeners listed here have no surviving uppers. Three other stiffeners have been described with their uppers. Three of the above stiffeners were semi-circular, ten triangular. The former came only from 12th-century contexts, while the latter dated from the mid-13th to mid-14th century.

A study of all the evidence for stiffeners, that is, those surviving with their uppers or indicated by stitching, as well as those listed above, shows that triangular forms (33) are almost as common as semi-

circular (35). The semi-circular examples belonged predominantly to the 12th century (71.4%). The majority of the triangular stiffeners were of mid-13th- to mid-14th-century date (60.6%), but a substantial group were of 12th-century date (33.3%).

Analysis of the shape of stiffener used for each type of upper is complicated by lack of evidence from worn or missing quarters. Type A has the lowest percentage of doubt (11%), Type K the highest (93%).

Semi-circular stiffeners were commoner on Types A, B and E (triangular stiffener numbers in brackets): A, 12 (6); B, 13 (6); E, 5 (2). Only triangular stiffeners were associated with Types C (1), D (3), H (1) and J (3).

*Uppers, lasting margins (see list)**Uppers, not definable*

Where possible, the 506 fragments of upper which were too incomplete or worn for their type to be defined have been described in the catalogue as vamps or quarters. Cat No 4249/A4943d is the quarters of a shoe with a raised or domed top edge, as in some examples of Type D. Cat No 626/A9885b comprises vamp and quarters of a shoe or boot which has been patched twice; one long narrow patch which replaced part of the lasting margin, survives. Cat No 1089/A03-0278d is a small fragment with an unusual vertical rib, formed by two grain to flesh stitching channels, which was probably a decorative feature, similar to a vamp stripe, and was perhaps stitched with coloured wool or thread. Cat No 4287/A6398 is a vamp decorated with a vamp stripe, consisting of four grooves from vamp throat to toe, similar to those on Cat No 162/A7787i (see also Upper [Type E]).

The majority (66%) of these fragmentary uppers recovered from the South Sector of the High Street excavation came from Periods IV and V: 30 (6%) from Period I, 81 (16%) from Period II, 23 (4.5%) from Period III, 177 (35%) from Period IV, 155 (30%) from Period V, 27 (5%) were unstratified, 10 (2%) from all periods in the North Sector and 3 (0.5%) were from either the South or North Sectors.

*Uppers, stiffer.*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                      | <i>Phase</i> |
|----------------------|-------------|------------|-------------------------------------|--------------|
| <b>South Sector</b>  |             |            |                                     |              |
| 106/A10798c          | 4           | VI         | MC018, Pit 2398                     | Ib–Id        |
| 289/A03–0017d        | 3           | V          | MC053a                              | If           |
| 548/A6412            | 2           | V          | B5, North Room–Floor/Occupation (2) | IIa–IIff     |
| 1027/A03–0317b       | 9           | VII        | P8.1b                               | IIIc         |
| 1399/A8021m          | 3           | V/VI       | MC144, WW2221                       | <IIId–IVaa   |
| 1777/A03–0366a       | 7           | VII        | MC126, Pit 7402                     | IVaa, IVb    |
| 3603/A4329f          | 3           | VI         | M1.4e                               | IVcc(Va)     |
| 3725/A03–0160i       | 7           | VI         | B34, Courtyard                      | Va           |
| 3871/A03–0098b       | 7           | VI, VII    | M1.5b                               | Vaa          |
| 3978/A03–0148c       | 7           | VI, VII    | M1.5b                               | Vaa          |
| 4091/A03–0210e       | 7           | VII        | P8.4                                | Va           |
| 4109/A03–0211d       | 7           | VII        | P8.4                                | Va           |
| 4826/A03–0218c       | 7           | VII        | M8a                                 | Va, Vaa      |
| 4925/A03–0162x       | 7           | VII        | M8a                                 | Va, Vaa      |

*Uppers, lasting margins.*

| <i>Cat/Accession</i>       | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i>   |
|----------------------------|-------------|------------|---------------------------------------------------------------|----------------|
| <b>South Sector</b>        |             |            |                                                               |                |
| 298/A12632d                | 4           | V          | B16b, Pit 4726                                                | Id–IIa         |
| 299/A12632e                | 4           | V          | B16b, Pit 4726                                                | Id–IIa         |
| 300/A12632f                | 4           | V          | B16b, Pit 4726                                                | Id–IIa         |
| 445/A6483o                 | 2           | VI         | B4, ‘Byre’–Occupation                                         | IIc            |
| 614/A9879d                 | 4           | V          | M10                                                           | IIId–IIg       |
| 1029/A03–0317d             | 9           | VII        | P8.1b                                                         | IIIc           |
| 2642/A03–0231d             | 9           | VII        | B18 (Phase 1/2)                                               | IVaa, IVb      |
| 2643/A03–0231e             | 9           | VII        | B18 (Phase 1/2)                                               | IVaa, IVb      |
| 2644/A03–0231f             | 9           | VII        | B18 (Phase 1/2)                                               | IVaa, IVb      |
| 2645/A03–0231g             | 9           | VII        | B18 (Phase 1/2)                                               | IVaa, IVb      |
| 2683/A03–0202d             | 9           | VII        | B18 (Phase 1/2), Pit 9301                                     | IVaa, IVb      |
| 2786/A03–0245g             | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb            |
| 3073/A8668h                | 3           | VI         | M1.4d                                                         | IVb, IVc       |
| 3421/A03–0217c             | 7           | VII        | B18 (Phases 2a & 2b) & M9a, PH7237                            | (IVb)IVc, IVcc |
| 3518/A03–0224b             | 7           | VI         | M1.4i                                                         | IVcc           |
| 3819/A03–0164c             | 7           | VI         | B34, Courtyard                                                | Va             |
| 3958/A03–0140l             | 7           | VI, VII    | M1.5b                                                         | Vaa            |
| 4013/A03–0165a             | 7           | VII        | P8.4                                                          | Va             |
| 4554/A1253e                | 3           | V, VI      | M1.5a                                                         | Va, Vaa        |
| 4555/A1253f                | 3           | V, VI      | M1.5a                                                         | Va, Vaa        |
| 4556/A1253g                | 3           | V, VI      | M1.5a                                                         | Va, Vaa        |
| 4935/A03–0162hh            | 7           | VII        | M8a                                                           | Va, Vaa        |
| 4936/A03–0162ii            | 7           | VII        | M8a                                                           | Va, Vaa        |
| 4937/A03–0162jj            | 7           | VII        | M8a                                                           | Va, Vaa        |
| 5232/A03–0082d             | 7           | VII        | B53 (Phase 1), North Area–Occupation (1b)                     | Vb             |
| 5233/A03–0082e             | 7           | VII        | B53 (Phase 1), North Area–Occupation (1b)                     | Vb             |
| 5234/A03–0082f             | 7           | VII        | B53 (Phase 1), North Area–Occupation (1b)                     | Vb             |
| 5783/A0800e                | 3/4         | V, VI      | Unstratified                                                  | u/s            |
| 5784/A0800f                | 3/4         | V, VI      | Unstratified                                                  | u/s            |
| 5785/A0800g                | 3/4         | V, VI      | Unstratified                                                  | u/s            |
| 5829/A03–0127f             | 7           | VI, VII    | Unstratified                                                  | u/s            |
| <b>North Sector</b>        |             |            |                                                               |                |
| 5894/A6236d                | 5           | –          | CG007, Pit 0276                                               | 4,5            |
| 5931/A0110c                | 5, A        | –          | Lade (4)                                                      | 6–12(b–e)      |
| <b>South/North Sectors</b> |             |            |                                                               |                |
| 5989/A?                    | –           | –          | Unstratified                                                  | u/s            |

*Uppers, not definable.*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                               | <i>Phase</i> |
|----------------------|-------------|------------|----------------------------------------------|--------------|
| <b>South Sector</b>  |             |            |                                              |              |
| 13/A9878a            | 1           | V          | M0, Pit 3776                                 | Ia(Ib)       |
| 14/A9878b            | 1           | V          | M0, Pit 3776                                 | Ia(Ib)       |
| 19/A10876            | 1           | V          | M0, Pit 3776                                 | Ia(Ib)       |
| 42/A11232            | 2           | V          | MC012, Pit3772                               | Ic           |
| 55/A9886b            | 1/2         | V, VI      | M2.1b                                        | Ic           |
| 56/A9875             | 1/2         | V, VI      | M2.1b                                        | Ic           |
| 59/A8635b            | 1/2         | V, VI      | M2.1b & B10, South Room–Floor/Occupation (1) | Ic,Icc       |
| 96/A12289b           | 4           | V/VI       | MC017                                        | Ia–Icc>      |
| 105/A10798b          | 4           | VI         | MC018, Pit 2398                              | Ib–Id        |
| 148/A11595b          | 3           | VI         | MC037a, Pit 5157                             | Ia–Ie        |
| 149/A11595c          | 3           | VI         | MC037a, Pit 5157                             | Ia–Ie        |
| 152/A12312a          | 3           | VI         | MC037a, Pit 5157                             | Ia–Ie        |
| 166/A7256b           | 2           | VI         | M14b(b)                                      | Ie           |
| 181/A7589g           | 2           | VI         | M14b(b)                                      | Ie           |
| 203/A7257h           | 2           | VI         | M14b(b), Pit 3625                            | Ie           |
| 210/A7567b           | 2           | VI         | M14b(b), Pit 3625                            | Ie           |
| 220/A7800b           | 2           | VI         | M14b(b), Pit 3625                            | Ie           |
| 222/A7436a           | 2           | VI         | P5.2b                                        | Ie           |
| 225/A8494            | 2           | VI         | MC042                                        | Ie           |
| 244/A7310b           | 2           | V          | M14b(a)                                      | Id           |
| 246/A7581b           | 2           | V          | M14b(a)                                      | Id           |
| 253/A7801a           | 2           | V          | M14b(a), Pit 3686                            | Id           |
| 260/A6984b           | 2           | VI         | MC044b                                       | If           |
| 268/A7044Bh          | 2           | VI         | MC044b                                       | If           |
| 269/A7044Bi          | 2           | VI         | MC044b                                       | If           |
| 270/A7044Bj          | 2           | VI         | MC044b                                       | If           |
| 271/A7044Bk          | 2           | VI         | MC044b                                       | If           |
| 287/A03–0017b        | 3           | V          | MC053a                                       | If           |
| 288/A03–0017c        | 3           | V          | MC053a                                       | If           |
| 294/A7121            | 1/2         | VI         | P5.3a                                        | If           |
| 297/A12632c          | 4           | V          | B16b, Pit 4726                               | Id–IIa       |
| 308/A12635d          | 4           | V          | B16b, Pit 4726                               | Id–IIa       |
| 309/A12635e          | 4           | V          | B16b, Pit 4726                               | Id–IIa       |
| 310/A12635f          | 4           | V          | B16b, Pit 4726                               | Id–IIa       |
| 312/A12378b          | 3           | VI         | P5.3b                                        | If,IIa       |
| 322/A10505b          | 3           | V          | MC049, Pit 5259                              | IIa          |
| 333/A7143            | 1/2         | VI         | P5.4a                                        | IIb          |
| 336/A6749            | 2           | VI         | MC061                                        | IIb          |
| 339/A6770c           | 2           | VI         | MC061                                        | IIb          |
| 343/A6772c           | 2           | VI         | MC061                                        | IIb          |
| 344/A6772d           | 2           | VI         | MC061                                        | IIb          |
| 345/A6772e           | 2           | VI         | MC061                                        | IIb          |
| 346/A6772f           | 2           | VI         | MC061                                        | IIb          |
| 347/A6772g           | 2           | VI         | MC061                                        | IIb          |
| 367/A7694c           | 1           | V          | M14a                                         | Id–IIc       |
| 368/A7694d           | 1           | V          | M14a                                         | Id–IIc       |
| 369/A7694e           | 1           | V          | M14a                                         | Id–IIc       |
| 370/A7694f           | 1           | V          | M14a                                         | Id–IIc       |
| 371/A7694g           | 1           | V          | M14a                                         | Id–IIc       |
| 380/A12282f          | 1           | VI         | MC065, Pit 3908                              | IIa–IIc      |
| 393/A03–0370a        | 1           | VI         | MC065                                        | IIa–IIc      |
| 412/A12493g          | 3           | VI         | MC056, Pit 5155                              | Ia–IIc       |
| 414/A6945            | 2           | VI         | B4, MW3585                                   | IIc          |
| 422/A6408            | 2           | VI         | B4, Floor                                    | IIc          |

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| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                      | <i>Phase</i> |
|----------------------|-------------|------------|-------------------------------------|--------------|
| 429/A6411a           | 2           | VI         | B4, 'Byre'–Occupation               | IIc          |
| 443/A6483m           | 2           | VI         | B4, 'Byre'–Occupation               | IIc          |
| 444/A6483n           | 2           | VI         | B4, 'Byre'–Occupation               | IIc          |
| 447/A6722            | 2           | VI         | B4, 'Byre'–Occupation               | IIc          |
| 458/A10500           | 4           | VI         | M1.1c                               | IId          |
| 464/A10599c          | 3           | VI         | M1.1c, Pit 5005                     | IId          |
| 479/A9880            | 3           | VI         | MC080                               | IId,Ile      |
| 494/A12290d          | 1           | VI         | MC071                               | IIb–IIIf     |
| 495/A12290e          | 1           | VI         | MC071                               | IIb–IIIf     |
| 496/A12290f          | 1           | VI         | MC071                               | IIb–IIIf     |
| 501/A10801e          | 3           | V          | P2.1a                               | IIb–IIIf     |
| 521/A7005c           | 1/2         | V          | B5, T4485                           | IIa–IIIf     |
| 522/A7005d           | 1/2         | V          | B5, T4485                           | IIa–IIIf     |
| 526/A6426b           | 1/2         | V          | B5, WW3566                          | IIa–IIIf     |
| 533/A6949c           | 2           | V          | B5, North Room–Floor/Occupation (1) | IIa–IIIf     |
| 534/A6949d           | 2           | V          | B5, North Room–Floor/Occupation (1) | IIa–IIIf     |
| 538/A6416b           | 2           | V          | B5, North Room–Floor/Occupation (2) | IIa–IIIf     |
| 539/A6416c           | 2           | V          | B5, North Room–Floor/Occupation (2) | IIa–IIIf     |
| 546/A6376e           | 2           | V          | B5, North Room–Floor/Occupation (2) | IIa–IIIf     |
| 555/A6948c           | 1/2         | V          | B5, Destruction                     | IIa–IIIf     |
| 556/A6948d           | 1/2         | V          | B5, Destruction                     | IIa–IIIf     |
| 558/A6950            | 1/2         | V          | B5, Destruction                     | IIa–IIIf     |
| 613/A9879c           | 4           | V          | M10                                 | IId–IIg      |
| 626/A9885b           | 4           | V          | M10                                 | IId–IIg      |
| 627/A10508a          | 4           | V          | M10                                 | IId–IIg      |
| 632/A10047b          | 3           | V          | M10                                 | IId–IIg      |
| 666/A9553l           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 667/A9553m           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 668/A9553n           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 669/A9553o           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 670/A9553p           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 671/A9553q           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 672/A9553r           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 673/A9553s           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 674/A9553t           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 675/A9553u           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 676/A9553v           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 677/A9553w           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 678/A9553x           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 741/A9364a           | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 780/A9371f           | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 781/A9371g           | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 791/A9546d           | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 800/A10507           | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 813/A11220b          | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 824/A11274a          | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 826/A12292           | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 837/A8638a           | 4           | V, VI      | M11                                 | IIh          |
| 858/A8527b           | 4           | VI         | M1.3                                | IIi          |
| 869/A8649a           | 3           | VI         | M1.3                                | IIi          |
| 882/A8666d           | 3           | VI         | M1.3                                | IIi          |
| 883/A8666e           | 3           | VI         | M1.3                                | IIi          |
| 884/A8666f           | 3           | VI         | M1.3                                | IIi          |
| 885/A8666g           | 3           | VI         | M1.3                                | IIi          |
| 888/A8821b           | 3           | VI         | M1.3                                | IIi          |
| 911/A11267c          | 3           | VI         | M1.3                                | IIi          |
| 915/A11268c          | 3           | VI         | M1.3                                | IIi          |
| 928/A11639g          | 1           | VI         | MC111                               | IIb–IIIb     |

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| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                        | <i>Phase</i>   |
|----------------------|-------------|------------|---------------------------------------|----------------|
| 935/A03–0352         | 9           | VII        | P8.0                                  | IIIa,IIIb      |
| 946/A03–0381a        | 9           | VII        | M13, Pit 9493                         | IIg–IIIb       |
| 998/A11273a          | 4           | V          | MC116                                 | IIe–IIIc       |
| 1012/A12390c         | 4           | VI         | M1.4a(a)                              | IIIa–IIIc      |
| 1022/A8691a          | 4           | VI         | M1.4a(a)                              | IIIa–IIIc      |
| 1023/A8691b          | 4           | VI         | M1.4a(a)                              | IIIa–IIIc      |
| 1032/A8677a          | 4           | V          | MC117, Pit 4695                       | IIe–IIIc       |
| 1033/A8677b          | 4           | V          | MC117, Pit 4695                       | IIe–IIIc       |
| 1036/A8009b          | 3           | V          | MC117, Pit 4695                       | IIe–IIIc       |
| 1078/A12535d         | 4           | V/VI       | MC128                                 | IIIb,IIIc      |
| 1083/A12492a         | 4           | V/VI       | MC128                                 | IIIb,IIIc      |
| 1084/A12492b         | 4           | V/VI       | MC128                                 | IIIb,IIIc      |
| 1089/A03–0278d       | 9           | VII        | B19 (Phase 2b), North Room–Floor (2b) | IIIc           |
| 1099/A03–0270e       | 9           | VII        | P8.1c                                 | IIIc           |
| 1100/A03–0270f       | 9           | VII        | P8.1c                                 | IIIc           |
| 1117/A9881           | 3           | VI         | M6a                                   | IIg–IIId       |
| 1138/A03–0265c       | 9           | VII        | M15                                   | IIId           |
| 1139/A03–0265d       | 9           | VII        | M15                                   | IIId           |
| 1140/A03–0391a       | 7           | VII        | M15, Pit 9415                         | IIId           |
| 1142/A03–0266        | 9           | VII        | M15, PW9402                           | IIId           |
| 1148/A5893c          | 1           | V          | M12                                   | IIg–IIIc(–IVa) |
| 1223/A6070b          | 2           | V          | M6b                                   | IIg–IIId       |
| 1272/A4933c          | 2           | V          | P2.2a                                 | IVa            |
| 1274/A4935           | 2           | V          | P2.2a                                 | IVa            |
| 1291/A7865           | 3           | V          | P2.2b                                 | IVa            |
| 1305/A8810f          | 3           | V          | P2.2b                                 | IVa            |
| 1306/A8810g          | 3           | V          | P2.2b                                 | IVa            |
| 1307/A8810h          | 3           | V          | P2.2b                                 | IVa            |
| 1319/A7989f          | 4           | V          | MC143                                 | IVaa           |
| 1320/A7989g          | 4           | V          | MC143                                 | IVaa           |
| 1322/A8027b          | 4           | V          | MC143                                 | IVaa           |
| 1323/A8027c          | 4           | V          | MC143                                 | IVaa           |
| 1324/A8027d          | 4           | V          | MC143                                 | IVaa           |
| 1325/A8027e          | 4           | V          | MC143                                 | IVaa           |
| 1396/A8021j          | 3           | V/VI       | MC144, WW2221                         | <IIId–IVaa     |
| 1397/A8021k          | 3           | V/VI       | MC144, WW2221                         | <IIId–IVaa     |
| 1398/A8021l          | 3           | V/VI       | MC144, WW2221                         | <IIId–IVaa     |
| 1419/A6065           | 3           | V          | P2.3a                                 | IVaa           |
| 1427/A6187b          | 4           | V          | MC156                                 | IVaa           |
| 1428/A6187c          | 4           | V          | MC156                                 | IVaa           |
| 1429/A6187d          | 4           | V          | MC156                                 | IVaa           |
| 1480/A6190b          | 2           | V          | B26, Floor/Occupation (8a)            | IIg–IVaa       |
| 1481/A6190c          | 2           | V          | B26, Floor/Occupation (8a)            | IIg–IVaa       |
| 1482/A6190d          | 2           | V          | B26, Floor/Occupation (8a)            | IIg–IVaa       |
| 1497/A4827b          | 1           | VI         | B20, Levelling                        | <IIId–IVaa     |
| 1501/A6635a          | 1           | VI         | B20, Occupation (1a)                  | <IIId–IVaa     |
| 1502/A6635b          | 1           | VI         | B20, Occupation (1a)                  | <IIId–IVaa     |
| 1547/A03–0418a       | 7           | VII        | MC130                                 | <IIIc–IVaa     |
| 1636/A11242b         | 3           | VI         | B2, WW2498                            | IVa,IVaa       |
| 1637/A11242c         | 3           | VI         | B2, WW2498                            | IVa,IVaa       |
| 1638/A11242d         | 3           | VI         | B2, WW2498                            | IVa,IVaa       |
| 1662/A03–0420a       | 7           | VI         | P3.3                                  | IVa–IVb        |
| 1663/A03–0420b       | 7           | VI         | P3.3                                  | IVa–IVb        |
| 1680/A4895c          | 2           | V          | B3 (South), Construction–Levelling    | IVa,IVaa       |
| 1695/A03–0206        | 9           | VII        | B18 (Phase 1b), Destruction           | IVa,IVaa       |
| 1702/A4896b          | 4           | VI         | B11, Floor                            | IVaa           |
| 1745/A03–0347c       | 7           | VII        | MC126, Pit 7402                       | IVaa,IVb       |
| 1746/A03–0349a       | 7           | VII        | MC126, Pit 7402                       | IVaa,IVb       |

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| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i> |
|----------------------|-------------|------------|---------------------------------------------------------------|--------------|
| 1747/A03-0349b       | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1762/A03-0360b       | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1811/A03-0374c       | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1812/A03-0374d       | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1835/A03-0348a       | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1881/A03-0353d       | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1889/A03-0357e       | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1890/A03-0357f       | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 1891/A03-0357g       | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 2000/A03-0372a       | 7           | VII        | MC126, Pit 7402                                               | IVaa,IVb     |
| 2293/A03-0271e       | 7           | VI         | M1.4f                                                         | IVc          |
| 2304/A03-0279a       | 7           | VI         | M1.4f                                                         | IVc          |
| 2305/A03-0279b       | 7           | VI         | M1.4f                                                         | IVc          |
| 2306/A03-0279c       | 7           | VI         | M1.4f                                                         | IVc          |
| 2321/A03-0285e       | 7           | VI         | M1.4f                                                         | IVc          |
| 2322/A03-0285f       | 7           | VI         | M1.4f                                                         | IVc          |
| 2323/A03-0285g       | 7           | VI         | M1.4f                                                         | IVc          |
| 2324/A03-0285h       | 7           | VI         | M1.4f                                                         | IVc          |
| 2325/A03-0285i       | 7           | VI         | M1.4f                                                         | IVc          |
| 2326/A03-0285j       | 7           | VI         | M1.4f                                                         | IVc          |
| 2337/A03-0291e       | 7           | VI         | M1.4f                                                         | IVc          |
| 2342/A03-0308e       | 7           | VI         | M1.4f                                                         | IVc          |
| 2348/A03-0322a       | 7           | VI         | M1.4f                                                         | IVc          |
| 2361/A03-0331a       | 7           | VI         | M1.4f                                                         | IVc          |
| 2370/A03-0332g       | 7           | VI         | M1.4f                                                         | IVc          |
| 2371/A03-0332h       | 7           | VI         | M1.4f                                                         | IVc          |
| 2393/A03-0335        | 7           | VI         | M1.4f                                                         | IVc          |
| 2404/A03-0342b       | 7           | VI         | M1.4f                                                         | IVc          |
| 2433/A03-0345p       | 7           | VI         | M1.4f                                                         | IVc          |
| 2454/A03-0326c       | 7           | VI         | M1.4f                                                         | IVc          |
| 2455/A03-0326d       | 7           | VI         | M1.4f                                                         | IVc          |
| 2489/A03-0392k       | 7           | VI         | M1.4f                                                         | IVc          |
| 2490/A03-0392l       | 7           | VI         | M1.4f                                                         | IVc          |
| 2573/A03-0329e       | 7           | VII        | B18 (Phase 1/2)                                               | IVaa,IVb     |
| 2574/A03-0329f       | 7           | VII        | B18 (Phase 1/2)                                               | IVaa,IVb     |
| 2590/A03-0154a       | 9           | VII        | B18 (Phase 1/2)                                               | IVaa,IVb     |
| 2591/A03-0154b       | 9           | VII        | B18 (Phase 1/2)                                               | IVaa,IVb     |
| 2638/A03-0203b       | 9           | VII        | B18 (Phase 1/2)                                               | IVaa,IVb     |
| 2654/A03-0316d       | 7           | VII        | B18 (Phase 1/2), Pit 7324                                     | IVaa,IVb     |
| 2656/A03-0325a       | 7           | VII        | B18 (Phase 1/2), Pit 7324                                     | IVaa,IVb     |
| 2657/A03-0325b       | 7           | VII        | B18 (Phase 1/2), Pit 7324                                     | IVaa,IVb     |
| 2658/A03-0325c       | 7           | VII        | B18 (Phase 1/2), Pit 7324                                     | IVaa,IVb     |
| 2681/A03-0202b       | 9           | VII        | B18 (Phase 1/2), Pit 9301                                     | IVaa,IVb     |
| 2682/A03-0202c       | 9           | VII        | B18 (Phase 1/2), Pit 9301                                     | IVaa,IVb     |
| 2694/A03-0182a       | 9           | VII        | B18 (Phase 1/2), Pit 9301                                     | IVaa,IVb     |
| 2715/A03-0311b       | 7           | VII        | B18 (Phase 2a), External (1), Pit 7314                        | IVb          |
| 2716/A03-0311c       | 7           | VII        | B18 (Phase 2a), External (1), Pit 7314                        | IVb          |
| 2735/A03-0368c       | 10          | VII        | B18 (Phases 2a & 2b), MW6155                                  | IVb          |
| 2736/A03-0368d       | 10          | VII        | B18 (Phases 2a & 2b), MW6155                                  | IVb          |
| 2737/A03-0368e       | 10          | VII        | B18 (Phases 2a & 2b), MW6155                                  | IVb          |
| 2748/A03-0297b       | 7           | VII        | B18 (Phase 2a), North Room & Hall–Construction (1)            | IVb          |
| 2765/A03-0113a       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2766/A03-0113b       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2767/A03-0113c       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |

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| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i> |
|----------------------|-------------|------------|---------------------------------------------------------------|--------------|
| 2768/A03–0113d       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2770/A03–0122        | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2777/A03–0124c       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2785/A03–0245f       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2833/A03–0306a       | 10          | VIII       | M9b(a)                                                        | IVc          |
| 2840/A03–0312b       | 10          | VIII       | M9b(a)                                                        | IVc          |
| 2844/A03–0319c       | 10          | VIII       | M9b(a)                                                        | IVc          |
| 2858/A7779a          | 3           | VI         | M1.4d & B2, Late Occupation/Abandonment (2)                   | IVa–IVc      |
| 2859/A7779b          | 3           | VI         | M1.4d & B2, Late Occupation/Abandonment (2)                   | IVa–IVc      |
| 2864/A4821e          | 2           | VI         | M1.4d & B2, Late Occupation/Abandonment (2)                   | IVa–IVc      |
| 2865/A4821f          | 2           | VI         | M1.4d & B2, Late Occupation/Abandonment (2)                   | IVa–IVc      |
| 2879/A9358b          | 3           | V          | MC155, Pit 2691                                               | IVb, IVc     |
| 2880/A9358c          | 3           | V          | MC155, Pit 2691                                               | IVb, IVc     |
| 3035/A4941b          | 3           | VI         | M1.4d                                                         | IVb, IVc     |
| 3058/A8667d          | 3           | VI         | M1.4d                                                         | IVb, IVc     |
| 3072/A8668g          | 3           | VI         | M1.4d                                                         | IVb, IVc     |
| 3077/A8701a          | 3           | VI         | M1.4d                                                         | IVb, IVc     |
| 3081/A3449a          | 2           | VI         | M1.4d                                                         | IVb, IVc     |
| 3082/A3449b          | 2           | VI         | M1.4d                                                         | IVb, IVc     |
| 3083/A3449c          | 2           | VI         | M1.4d                                                         | IVb, IVc     |
| 3087/A4924c          | 2           | VI         | M1.4d                                                         | IVb, IVc     |
| 3088/A4924d          | 2           | VI         | M1.4d                                                         | IVb, IVc     |
| 3106/A6472a          | 2           | VI         | M1.4d                                                         | IVb, IVc     |
| 3107/A6472b          | 2           | VI         | M1.4d                                                         | IVb, IVc     |
| 3108/A8000a          | 3           | VI         | M1.4d, Pit 2566                                               | IVb, IVc     |
| 3114/A8028d          | 3           | VI         | M1.4d, Pit 2566                                               | IVb, IVc     |
| 3115/A8028e          | 3           | VI         | M1.4d, Pit 2566                                               | IVb, IVc     |
| 3116/A8028f          | 3           | VI         | M1.4d, Pit 2566                                               | IVb, IVc     |
| 3122/A3455           | 2           | VI         | M1.4d, Pit 2801                                               | IVb, IVc     |
| 3128/A03–0253d       | 7           | VI         | M1.4h                                                         | IVc          |
| 3129/A03–0253e       | 7           | VI         | M1.4h                                                         | IVc          |
| 3130/A03–0253f       | 7           | VI         | M1.4h                                                         | IVc          |
| 3143/A03–0258a       | 7           | VI         | M1.4h                                                         | IVc          |
| 3180/A6072f          | 3           | V, VI      | M1.4c                                                         | IIIa–IVcc    |
| 3200/A6191e          | 3           | V, VI      | M1.4c                                                         | IIIa–IVcc    |
| 3203/A6206a          | 3           | V, VI      | M1.4c                                                         | IIIa–IVcc    |
| 3226/A6390b          | 3           | V, VI      | M1.4c                                                         | IIIa–IVcc    |
| 3233/A6395c          | 3           | V, VI      | M1.4c                                                         | IIIa–IVcc    |
| 3235/A6422a          | 3           | V, VI      | M1.4c                                                         | IIIa–IVcc    |
| 3236/A6422b          | 3           | V, VI      | M1.4c                                                         | IIIa–IVcc    |
| 3255/A03–0228a       | 7           | VII        | P8.3                                                          | IVc, IVcc    |
| 3274/A03–0226b       | 7           | VII        | P8.3                                                          | IVc, IVcc    |
| 3284/A03–0227e       | 7           | VII        | P8.3                                                          | IVc, IVcc    |
| 3285/A03–0227f       | 7           | VII        | P8.3                                                          | IVc, IVcc    |
| 3302/A03–0247a       | 7           | VII        | P8.3                                                          | IVc, IVcc    |
| 3306/A03–0250c       | 7           | VII        | P8.3                                                          | IVc, IVcc    |
| 3316/A03–0260e       | 7           | VII        | P8.3                                                          | IVc, IVcc    |
| 3336/A03–0261b       | 7           | VII        | P8.3 & M9a, PW7267                                            | IVc, IVcc    |
| 3343/A03–0183a       | 7           | VII        | M9a                                                           | IVc, IVcc    |
| 3344/A03–0183b       | 7           | VII        | M9a                                                           | IVc, IVcc    |
| 3345/A03–0187a       | 7           | VII        | M9a                                                           | IVc, IVcc    |
| 3350/A03–0207c       | 7           | VII        | M9a                                                           | IVc, IVcc    |
| 3355/A03–0246d       | 7           | VII        | M9a                                                           | IVc, IVcc    |
| 3356/A03–0246e       | 7           | VII        | M9a                                                           | IVc, IVcc    |

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| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>   | <i>Phase</i> |
|----------------------|-------------|------------|------------------|--------------|
| 3377/A03-0240b       | 7           | VII        | M9a              | IVc,IVcc     |
| 3386/A03-0233c       | 7           | VII        | M9a              | IVc,IVcc     |
| 3387/A03-0233d       | 7           | VII        | M9a              | IVc,IVcc     |
| 3407/A03-0083a       | 9           | VII        | M9a              | IVc,IVcc     |
| 3408/A03-0083b       | 9           | VII        | M9a              | IVc,IVcc     |
| 3410/A03-0076a       | 9           | VII        | M9a              | IVc,IVcc     |
| 3427/A03-0051a       | 9           | VII        | M9a, Pit 9026    | IVc,IVcc     |
| 3428/A03-0051b       | 9           | VII        | M9a, Pit 9026    | IVc,IVcc     |
| 3429/A03-0051c       | 9           | VII        | M9a, Pit 9026    | IVc,IVcc     |
| 3430/A03-0051d       | 9           | VII        | M9a, Pit 9026    | IVc,IVcc     |
| 3443/A03-0153a       | 10          | VIII       | M9b(b)           | IVc,IVcc     |
| 3444/A03-0153b       | 10          | VIII       | M9b(b)           | IVc,IVcc     |
| 3452/A03-0168b       | 10          | VIII       | M9b(b)           | IVc,IVcc     |
| 3453/A03-0168c       | 10          | VIII       | M9b(b)           | IVc,IVcc     |
| 3454/A03-0168d       | 10          | VIII       | M9b(b)           | IVc,IVcc     |
| 3455/A03-0168e       | 10          | VIII       | M9b(b)           | IVc,IVcc     |
| 3474/A03-0173a       | 10          | VIII       | M9b(b)           | IVc,IVcc     |
| 3502/A03-0186b       | 10          | VIII       | M9b(b)           | IVc,IVcc     |
| 3512/A03-0264        | 10          | VIII       | M9b(b), Pit 6132 | IVc,IVcc     |
| 3524/A03-0225b       | 7           | VI         | M1.4i            | IVcc         |
| 3525/A03-0225c       | 7           | VI         | M1.4i            | IVcc         |
| 3526/A03-0225d       | 7           | VI         | M1.4i            | IVcc         |
| 3527/A03-0225e       | 7           | VI         | M1.4i            | IVcc         |
| 3547/A03-0238b       | 7           | VI         | M1.4i            | IVcc         |
| 3567/A7688c          | 3           | VI         | M1.4e            | IVcc(Va)(VI) |
| 3568/A7688d          | 3           | VI         | M1.4e            | IVcc(Va)(VI) |
| 3584/A7795a          | 3           | VI         | M1.4e            | IVcc(Va)(VI) |
| 3596/A4318b          | 3           | VI         | M1.4e            | IVcc(Va)     |
| 3626/A6077e          | 3           | VI         | M1.4e            | IVcc(Va)     |
| 3636/A6382a          | 3           | VI         | M1.4e            | IVcc(Va)     |
| 3643/A6406a          | 3           | VI         | M1.4e            | IVcc(Va)     |
| 1025/A6215           | 3           | VI         | M1.4e, Pit 2446  | IVcc(Va)     |
| 3654/A4903b          | 3           | VI         | M1.4e, Pit 2446  | IVcc(Va)     |
| 3655/A6238a          | 3           | VI         | P6               | IVcc,Va      |
| 3662/A5902c          | 3           | VI         | P6               | IVcc,Va      |
| 3663/A5902d          | 3           | VI         | P6               | IVcc,Va      |
| 3664/A5902e          | 3           | VI         | P6               | IVcc,Va      |
| 3671/A7802a          | 3           | VI         | P6               | IVcc,Va      |
| 3687/A1637a          | 3           | VI         | B34, MF2407      | Va           |
| 3708/A03-0134b       | 7           | VI         | B34, Occupation  | Va           |
| 3714/A03-0134h       | 7           | VI         | B34, Occupation  | Va           |
| 3722/A03-0160f       | 7           | VI         | B34, Courtyard   | Va           |
| 3723/A03-0160g       | 7           | VI         | B34, Courtyard   | Va           |
| 3724/A03-0160h       | 7           | VI         | B34, Courtyard   | Va           |
| 3726/A03-0160j       | 7           | VI         | B34, Courtyard   | Va           |
| 3727/A03-0160k       | 7           | VI         | B34, Courtyard   | Va           |
| 3762/A03-0190c       | 7           | VI         | B34, Courtyard   | Va           |
| 3763/A03-0190d       | 7           | VI         | B34, Courtyard   | Va           |
| 3764/A03-0190e       | 7           | VI         | B34, Courtyard   | Va           |
| 3765/A03-0190f       | 7           | VI         | B34, Courtyard   | Va           |
| 3817/A03-0164a       | 7           | VI         | B34, Courtyard   | Va           |
| 3818/A03-0164b       | 7           | VI         | B34, Courtyard   | Va           |
| 3887/A03-0125b       | 7           | VI, VII    | M1.5b            | Vaa          |
| 3903/A03-0132h       | 7           | VI, VII    | M1.5b            | Vaa          |
| 3904/A03-0132i       | 7           | VI, VII    | M1.5b            | Vaa          |
| 3905/A03-0132j       | 7           | VI, VII    | M1.5b            | Vaa          |
| 3906/A03-0132k       | 7           | VI, VII    | M1.5b            | Vaa          |
| 3949/A03-0140c       | 7           | VI, VII    | M1.5b            | Vaa          |

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| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                | <i>Phase</i> |
|----------------------|-------------|------------|-------------------------------|--------------|
| 3969/A03-0143b       | 7           | VI, VII    | M1.5b                         | Vaa          |
| 3970/A03-0143c       | 7           | VI, VII    | M1.5b                         | Vaa          |
| 3979/A03-0148d       | 7           | VI, VII    | M1.5b                         | Vaa          |
| 3992/A03-0170i       | 7           | VI, VII    | M1.5b                         | Vaa          |
| 4032/A03-0157a       | 7           | VII        | P8.4                          | Va           |
| 4033/A03-0157b       | 7           | VII        | P8.4                          | Va           |
| 4036/A03-0158c       | 7           | VII        | P8.4                          | Va           |
| 4037/A03-0158d       | 7           | VII        | P8.4                          | Va           |
| 4048/A03-0159h       | 7           | VII        | P8.4                          | Va           |
| 4049/A03-0159i       | 7           | VII        | P8.4                          | Va           |
| 4050/A03-0159j       | 7           | VII        | P8.4                          | Va           |
| 4051/A03-0159k       | 7           | VII        | P8.4                          | Va           |
| 4052/A03-0159l       | 7           | VII        | P8.4                          | Va           |
| 4053/A03-0159m       | 7           | VII        | P8.4                          | Va           |
| 4054/A03-0159n       | 7           | VII        | P8.4                          | Va           |
| 4055/A03-0159o       | 7           | VII        | P8.4                          | Va           |
| 4080/A03-0194a       | 7           | VII        | P8.4                          | Va           |
| 4086/A03-0204        | 7           | VII        | P8.4                          | Va           |
| 4092/A03-0210f       | 7           | VII        | P8.4                          | Va           |
| 4108/A03-0211c       | 7           | VII        | P8.4                          | Va           |
| 4131/A03-0214i       | 7           | VII        | P8.4                          | Va           |
| 4132/A03-0214j       | 7           | VII        | P8.4                          | Va           |
| 4154/A03-0198c       | 7           | VII        | P8.4, Pit 7216                | Va           |
| 4155/A03-0198d       | 7           | VII        | P8.4, Pit 7216                | Va           |
| 4176/A03-0199a       | 7           | VII        | P8.4, Pit 7216                | Va           |
| 4177/A03-0199b       | 7           | VII        | P8.4, Pit 7216                | Va           |
| 4178/A03-0199c       | 7           | VII        | P8.4, Pit 7216                | Va           |
| 4179/A03-0199d       | 7           | VII        | P8.4, Pit 7216                | Va           |
| 4180/A03-0199e       | 7           | VII        | P8.4, Pit 7216                | Va           |
| 4181/A03-0199f       | 7           | VII        | P8.4, Pit 7216                | Va           |
| 4182/A03-0199g       | 7           | VII        | P8.4, Pit 7216                | Va           |
| 4201/A4906b          | 1           | V, VI      | M5c                           | (IVc-)Va     |
| 4204/A4929a          | 3           | VI         | P6 & B1(b), Demolition        | IVcc,Va      |
| 4206/A6196           | 3           | VI         | P6 & B1(b), Demolition        | IVcc,Va      |
| 4211/A6232e          | 3           | V          | B1(a), Construction–Levelling | IVcc,Va      |
| 4212/A6232f          | 3           | V          | B1(a), Construction–Levelling | IVcc,Va      |
| 4222/A6074a          | 3           | V          | B1(a), T2477                  | IVcc,Va      |
| 4233/A4925b          | 3           | V          | B1(a), North Room–Floor (3a)  | IVcc,Va      |
| 4242/A1239b          | 3           | V          | B1(b), North Room–Floor (6)   | Va           |
| 4249/A4943d          | 2           | V          | B1(b), Demolition             | Va           |
| 4253/A6410a          | 2           | V          | B1(b), Demolition             | Va           |
| 4267/A6478f          | 1           | V, VI      | M5a                           | IVb–Vc       |
| 4268/A6478g          | 1           | V, VI      | M5a                           | IVb–Vc       |
| 4269/A6478h          | 1           | V, VI      | M5a                           | IVb–Vc       |
| 4286/A4923b          | 1           | V, VI      | M5a                           | IVb–Vc       |
| 4287/A6398           | 1           | V, VI      | M5a, Pit 3540                 | IVb–Vc       |
| 4311/A1251d          | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4312/A1251e          | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4399/A2247e          | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4400/A2247f          | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4401/A2247g          | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4402/A2247h          | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4403/A2247i          | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4494/A4289b          | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4526/A6188z          | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4527/A6188aa         | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4536/A6420           | 3           | V, VI      | M1.5a                         | Va,Vaa(VI)   |
| 4553/A1253d          | 3           | V, VI      | M1.5a                         | Va,Vaa       |

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| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                            | <i>Phase</i> |
|----------------------|-------------|------------|-------------------------------------------|--------------|
| 4818/A6237d          | 3           | V, VI      | M1.5a                                     | Va, Vaa      |
| 4819/A6237e          | 3           | V, VI      | M1.5a                                     | Va, Vaa      |
| 4824/A03-0218a       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4825/A03-0218b       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4834/A03-0175g       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4835/A03-0175h       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4836/A03-0175i       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4837/A03-0175j       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4838/A03-0175k       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4839/A03-0175l       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4840/A03-0175m       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4841/A03-0175n       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4842/A03-0175o       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4843/A03-0175p       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4877/A03-0126        | 7           | VII        | M8a                                       | Va, Vaa      |
| 4878/A03-0131a       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4889/A03-0128d       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4920/A03-0162s       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4921/A03-0162t       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4922/A03-0162u       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4923/A03-0162v       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4924/A03-0162w       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4926/A03-0162y       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4927/A03-0162z       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4974/A03-0174n       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4975/A03-0174o       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4976/A03-0174p       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4977/A03-0174q       | 7           | VII        | M8a                                       | Va, Vaa      |
| 4978/A03-0174r       | 7           | VII        | M8a                                       | Va, Vaa      |
| 5023/A03-0212d       | 7           | VII        | M8a                                       | Va, Vaa      |
| 5024/A03-0212e       | 7           | VII        | M8a                                       | Va, Vaa      |
| 5025/A03-0212f       | 7           | VII        | M8a                                       | Va, Vaa      |
| 5026/A03-0212g       | 7           | VII        | M8a                                       | Va, Vaa      |
| 5027/A03-0212h       | 7           | VII        | M8a                                       | Va, Vaa      |
| 5028/A03-0212i       | 7           | VII        | M8a                                       | Va, Vaa      |
| 5029/A03-0212j       | 7           | VII        | M8a                                       | Va, Vaa      |
| 5030/A03-0212k       | 7           | VII        | M8a                                       | Va, Vaa      |
| 5031/A03-0212l       | 7           | VII        | M8a                                       | Va, Vaa      |
| 5032/A03-0212m       | 7           | VII        | M8a                                       | Va, Vaa      |
| 5105/A03-0147d       | 7           | VII        | M8a, Pit 7183                             | Va, Vaa      |
| 5115/A03-0151c       | 7           | VII        | M8a, Pit 7183                             | Va, Vaa      |
| 5116/A03-0151d       | 7           | VII        | M8a, Pit 7183                             | Va, Vaa      |
| 5136/A03-0137c       | 7           | VII        | M8a, Pit 7183                             | Va, Vaa      |
| 5137/A03-0137d       | 7           | VII        | M8a, Pit 7183                             | Va, Vaa      |
| 5138/A03-0137e       | 7           | VII        | M8a, Pit 7183                             | Va, Vaa      |
| 5139/A03-0137f       | 7           | VII        | M8a, Pit 7183                             | Va, Vaa      |
| 5140/A03-0137g       | 7           | VII        | M8a, Pit 7183                             | Va, Vaa      |
| 5141/A03-0137h       | 7           | VII        | M8a, Pit 7183                             | Va, Vaa      |
| 5201/A03-0129d       | 7           | VII        | M8a, T7193                                | Va, Vaa      |
| 5202/A03-0129e       | 7           | VII        | M8a, T7193                                | Va, Vaa      |
| 5203/A03-0129f       | 7           | VII        | M8a, T7193                                | Va, Vaa      |
| 5204/A03-0129g       | 7           | VII        | M8a, T7193                                | Va, Vaa      |
| 5229/A03-0082a       | 7           | VII        | B53 (Phase 1), North Area–Occupation (1b) | Vb           |
| 5230/A03-0082b       | 7           | VII        | B53 (Phase 1), North Area–Occupation (1b) | Vb           |
| 5231/A03-0082c       | 7           | VII        | B53 (Phase 1), North Area–Occupation (1b) | Vb           |
| 5235/A03-0056a       | 7           | VII        | B53 (Phase 1), North Area–Occupation (4)  | Vb           |
| 5241/A03-0216        | 7           | VII        | B53 (Phase 1), Central Area–T7152         | Vb           |
| 5289/A1248a          | 2           | V, VI      | M4a                                       | Vaa–Vc       |

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| <i>Cat/Accession</i>       | <i>Area</i> | <i>Rig</i> | <i>Feature</i>  | <i>Phase</i> |
|----------------------------|-------------|------------|-----------------|--------------|
| 5309/A5896b                | 4           | V, VI      | M3a             | Vb–Vc        |
| 5319/A4390g                | 4           | V, VI      | M3a             | Vb–Vc        |
| 5330/A6399b                | 4           | V, VI      | M3a             | Vb–Vc        |
| 5355/A6482e                | 4           | VI         | M3b             | Vd           |
| 5356/A6738                 | 4           | VI         | M3b             | Vd           |
| 5363/A6200a                | 4           | VI         | M3b             | Vd           |
| 5404/A6414b                | 4           | VI         | P1a             | Vd           |
| 5487/A0821b                | 4           | VI         | M3b             | Vd           |
| 5510/A1227a                | 4           | VI         | M3b             | Vd           |
| 5511/A1227b                | 4           | VI         | M3b             | Vd           |
| 5551/A4607                 | 4           | V          | M3c             | Vd           |
| 5558/A6244a                | 4           | V          | M3c             | Vd           |
| 5595/A6192c                | 4           | V          | M3c             | Vd           |
| 5636/A03–0032              | 10          | VIII       | B51, Wall 7006  | Vd, Vdd      |
| 5712/A0118e                | 7/10        | VII/VIII   | Sondage 2003    | u/s          |
| 5713/A0118f                | 7/10        | VII/VIII   | Sondage 2003    | u/s          |
| 5714/A0118g                | 7/10        | VII/VIII   | Sondage 2003    | u/s          |
| 5715/A0118h                | 7/10        | VII/VIII   | Sondage 2003    | u/s          |
| 5716/A0118i                | 7/10        | VII/VIII   | Sondage 2003    | u/s          |
| 5745/A5898e                | 2           | V, VI      | Unstratified    | u/s          |
| 5746/A5898f                | 2           | V, VI      | Unstratified    | u/s          |
| 5747/A5898g                | 2           | V, VI      | Unstratified    | u/s          |
| 5748/A5898h                | 2           | V, VI      | Unstratified    | u/s          |
| 5750/A6207                 | 2           | V, VI      | Unstratified    | u/s          |
| 5756/A6402a                | 2           | V, VI      | Unstratified    | u/s          |
| 5757/A6402b                | 2           | V, VI      | Unstratified    | u/s          |
| 5758/A6402c                | 2           | V, VI      | Unstratified    | u/s          |
| 5759/A6402d                | 2           | V, VI      | Unstratified    | u/s          |
| 5760/A6477                 | 2           | V, VI      | Unstratified    | u/s          |
| 5764/A0120b                | 3/4         | V, VI      | Unstratified    | u/s          |
| 5773/A12574c               | 3/4         | V, VI      | Unstratified    | u/s          |
| 5774/A12754d               | 3/4         | V, VI      | Unstratified    | u/s          |
| 5816/A12487g               | 2           | V, VI      | Unstratified    | u/s          |
| 5818/A6222b                | 4           | V, VI      | Unstratified    | u/s          |
| 5819/A6222c                | 4           | V, VI      | Unstratified    | u/s          |
| 5826/A03–0127c             | 7           | VI, VII    | Unstratified    | u/s          |
| 5827/A03–0127d             | 7           | VI, VII    | Unstratified    | u/s          |
| 5828/A03–0127e             | 7           | VI, VII    | Unstratified    | u/s          |
| 5832/A03–0127i             | 7           | VI, VII    | Unstratified    | u/s          |
| 5833/A03–0127j             | 7           | VI, VII    | Unstratified    | u/s          |
| 5858/A03–0133i             | 7           | VI, VII    | Unstratified    | u/s          |
| <b>North Sector</b>        |             |            |                 |              |
| 5890/A7805d                | 5           | –          | CG005           | 4(5)         |
| 5893/A6236c                | 5           | –          | CG007, Pit 0276 | 4,5          |
| 5917/A0109c                | 5, A        | –          | Lade (4)        | 6–12(b–e)    |
| 5918/A0109d                | 5, A        | –          | Lade (4)        | 6–12(b–e)    |
| 5919/A0109e                | 5, A        | –          | Lade (4)        | 6–12(b–e)    |
| 5920/A0109f                | 5, A        | –          | Lade (4)        | 6–12(b–e)    |
| 5921/A0109g                | 5, A        | –          | Lade (4)        | 6–12(b–e)    |
| 5922/A0107a                | 5, A        | –          | Lade (4)        | 6–12(b–e)    |
| 5930/A0110b                | 5, A        | –          | Lade (4)        | 6–12(b–e)    |
| 5960/A0105a                | 5, A        | –          | CG024           | 14–16        |
| <b>South/North Sectors</b> |             |            |                 |              |
| 5979/L1694f                | –           | –          | Unstratified    | u/s          |
| 5980/L1694g                | –           | –          | Unstratified    | u/s          |
| 5992/A?                    | –           | –          | Unstratified    | u/s          |



## Rands

A total of 135 fragments of rand were found, apart from those still attached to soles or uppers. They ranged in date from the early 12th to the mid-14th century, with particular concentrations in Periods II (25; 18%), IV (50; 37%) and V (30; 22%). The examples of 12th (35; 25%) and 13th century (60; 44%) date are of particular interest in view of Thornton's (1973a, 9) suggestion that they were a 14th-century innovation. However, he himself records their existence in 9th–10th-century Winchester (Thornton 1990b, 593). He also identified rands of a similar date on a thonged shoe from Little Paxton, Cambridgeshire (Thornton 1969b, 91).

Even earlier rands have apparently been recorded on a shoe from the Sutton Hoo ship burial (East 1983, 793, Fig 569, a and b). A different form of rand was found at Swinegate, York; here, a folded strip had been stitched the sole–upper seam of an 11th-century shoe (Carlisle 1998). On the other hand, thin rands that had been noted on some 10th-century shoes from London proved, on closer examination, to be delaminated fragments of the soles' edge–flesh stitching channels (Pritchard 1991, 217–18). Furthermore, Grew and de Neergaard state that rands were not a common feature before the end of the 12th century. It is certainly clear, from the evidence from the High Street and elsewhere, that they were a standard shoe component from the late 12th century, if not earlier.

In 13 instances, fragments of rand were found still attached to soles and/or uppers. Their date range mirrors that of the unattached rands: Periods II, three; IV, five; V, four and unstratified, one.

Rands.

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                      | <i>Phase</i> |
|----------------------|-------------|------------|-------------------------------------|--------------|
| <b>South Sector</b>  |             |            |                                     |              |
| 97/A12289c           | 4           | V/VI       | MC017                               | Ia–Icc>      |
| 98/A12289d           | 4           | V/VI       | MC017                               | Ia–Icc>      |
| 99/A12289e           | 4           | V/VI       | MC017                               | Ia–Icc>      |
| 100/A12289f          | 4           | V/VI       | MC017                               | Ia–Icc>      |
| 145/A7789d           | 2           | VI         | P5.2a                               | Ie           |
| 189/A7797c           | 2           | VI         | M14b(b)                             | Ie           |
| 190/A7797d           | 2           | VI         | M14b(b)                             | Ie           |
| 265/A7044Be          | 2           | VI         | MC044b                              | If           |
| 266/A7044Bf          | 2           | VI         | MC044b                              | If           |
| 290/A03–0017e        | 3           | V          | MC053a                              | If           |
| 313/A12310           | 3           | V          | MC039, Pit 2609                     | If,IIa       |
| 343/A6772c           | 2           | VI         | MC061                               | IIb          |
| 356/A6773e           | 2           | VI         | MC061                               | IIb          |
| 407/A12493b          | 3           | VI         | MC056, Pit 5155                     | Ia–IIc       |
| 408/A12493c          | 3           | VI         | MC056, Pit 5155                     | Ia–IIc       |
| 409/A12493d          | 3           | VI         | MC056, Pit 5155                     | Ia–IIc       |
| 410/A12493e          | 3           | VI         | MC056, Pit 5155                     | Ia–IIc       |
| 441/A6483k           | 2           | VI         | B4, ‘Byre’–Occupation               | IIc          |
| 451/A10773b          | 3           | VI         | MC066                               | IIc          |
| 454/A10048c          | 4           | VI         | M1.1f, Pit 2383                     | IIb,IIc      |
| 463/A10599b          | 3           | VI         | M1.1c, Pit 5005                     | IId          |
| 492/A12290b          | 1           | VI         | MC071                               | IIb–IIIf     |
| 493/A12290c          | 1           | VI         | MC071                               | IIb–IIIf     |
| 506/A3447c           | 2           | VI         | M1.1d & M1.1e                       | IId–IIIf     |
| 544/A6376c           | 2           | V          | B5, North Room–Floor/Occupation (2) | IIa–IIIf     |
| 545/A6376d           | 2           | V          | B5, North Room–Floor/Occupation (2) | IIa–IIIf     |
| 612/A9879b           | 4           | V          | M10                                 | IId–IIg      |
| 663/A9553i           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 664/A9553j           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 665/A9553k           | 4           | V          | M10, Pit 4552                       | IId–IIg      |
| 792/A9546e           | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 813/A11220b          | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 822/A11221b          | 3           | VI         | M1.2, Pit 2648                      | <IIg(IIh)    |
| 876/A8665c           | 3           | VI         | M1.3                                | IIi          |
| 877/A8665d           | 3           | VI         | M1.3                                | IIi          |
| 925/A11639d          | 1           | VI         | MC111                               | IIb–IIIb     |
| 926/A11639e          | 1           | VI         | MC111                               | IIb–IIIb     |
| 927/A11639f          | 1           | VI         | MC111                               | IIb–IIIb     |
| 1097/A03–0270c       | 9           | VII        | P8.1c                               | IIIc         |
| 1104/A03–0287b       | 9           | VII        | P8.1c                               | IIIc         |
| 1107/A03–0304b       | 9           | VII        | P8.1c                               | IIIc         |
| 1129/A03–0252b       | 9           | VII        | M15                                 | IIId         |
| 1131/A03–0263b       | 9           | VII        | M15                                 | IIId         |
| 1132/A03–0263c       | 9           | VII        | M15                                 | IIId         |
| 1133/A03–0263d       | 9           | VII        | M15                                 | IIId         |
| 1304/A8810e          | 3           | V          | P2.2b                               | IVa          |
| 1318/A7989e          | 4           | V          | MC143                               | IVaa         |
| 1390/A8021d          | 3           | V/VI       | MC144, WW2221                       | <IIId–IVaa   |
| 1391/A8021e          | 3           | V/VI       | MC144, WW2221                       | <IIId–IVaa   |
| 1392/A8021f          | 3           | V/VI       | MC144, WW2221                       | <IIId–IVaa   |
| 1393/A8021g          | 3           | V/VI       | MC144, WW2221                       | <IIId–IVaa   |
| 1394/A8021h          | 3           | V/VI       | MC144, WW2221                       | <IIId–IVaa   |
| 1395/A8021i          | 3           | V/VI       | MC144, WW2221                       | <IIId–IVaa   |
| 2315/A03–0284c       | 7           | VI         | M1.4f                               | IVc          |

(continued)

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i> |
|----------------------|-------------|------------|---------------------------------------------------------------|--------------|
| 2335/A03-0291c       | 7           | VI         | M1.4f                                                         | IVc          |
| 2336/A03-0291d       | 7           | VI         | M1.4f                                                         | IVc          |
| 2341/A03-0308d       | 7           | VI         | M1.4f                                                         | IVc          |
| 2361/A03-0331a       | 7           | VI         | M1.4f                                                         | IVc          |
| 2482/A03-0392d       | 7           | VI         | M1.4f                                                         | IVc          |
| 2483/A03-0392e       | 7           | VI         | M1.4f                                                         | IVc          |
| 2484/A03-0392f       | 7           | VI         | M1.4f                                                         | IVc          |
| 2485/A03-0392g       | 7           | VI         | M1.4f                                                         | IVc          |
| 2719/A03-0314c       | 7           | VII        | B18 (Phase 2a), External (1), Pit 7314                        | IVb          |
| 2725/A03-0413a       | 7           | VII        | B18 (Phases 2a & 2b), T7385                                   | IVb          |
| 2756/A03-0288c       | 7           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2757/A03-0288d       | 7           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2758/A03-0288e       | 7           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2775/A03-0124a       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2776/A03-0124b       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2782/A03-0245c       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2783/A03-0245d       | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 2806/A03-0274a       | 7           | VII        | B18 (Phase 2b), Hall, Pit 7290                                | IVb          |
| 2863/A4821d          | 2           | VI         | M1.4d & B2, Late Occupation/Abandonment (2)                   | IVa–IVc      |
| 3071/A8668f          | 3           | VI         | M1.4d                                                         | IVb, IVc     |
| 3220/A6228b          | 3           | V, VI      | M1.4c                                                         | IIIa–IVcc    |
| 3319/A03-0262a       | 7           | VII        | P8.3                                                          | IVc, IVcc    |
| 3322/A03-0066b       | 9           | VII        | P8.3                                                          | IVc, IVcc    |
| 3323/A03-0066c       | 9           | VII        | P8.3                                                          | IVc, IVcc    |
| 3324/A03-0066d       | 9           | VII        | P8.3                                                          | IVc, IVcc    |
| 3325/A03-0066e       | 9           | VII        | P8.3                                                          | IVc, IVcc    |
| 3326/A03-0066f       | 9           | VII        | P8.3                                                          | IVc, IVcc    |
| 3341/A03-0205b       | 7           | VII        | M9a                                                           | IVc, IVcc    |
| 3353/A03-0246b       | 7           | VII        | M9a                                                           | IVc, IVcc    |
| 3427/A03-0051a       | 9           | VII        | M9a, Pit 9026                                                 | IVc, IVcc    |
| 3428/A03-0051b       | 9           | VII        | M9a, Pit 9026                                                 | IVc, IVcc    |
| 3429/A03-0051c       | 9           | VII        | M9a, Pit 9026                                                 | IVc, IVcc    |
| 3430/A03-0051d       | 9           | VII        | M9a, Pit 9026                                                 | IVc, IVcc    |
| 3435/A03-0086        | 10          | VIII       | M9b(b)                                                        | IVc, IVcc    |
| 3451/A03-0168a       | 10          | VIII       | M9b(b)                                                        | IVc, IVcc    |
| 3520/A03-0224d       | 7           | VI         | M1.4i                                                         | IVcc         |
| 3599/A4329b          | 3           | VI         | M1.4e                                                         | IVcc(Va)     |
| 3600/A4329c          | 3           | VI         | M1.4e                                                         | IVcc(Va)     |
| 3601/A4329d          | 3           | VI         | M1.4e                                                         | IVcc(Va)     |
| 3648/A7780c          | 3           | VI         | M1.4e                                                         | IVcc(Va)     |
| 3649/A7780d          | 3           | VI         | M1.4e                                                         | IVcc(Va)     |
| 3710/A03-0134d       | 7           | VI         | B34, Occupation                                               | Va           |
| 3711/A03-0134e       | 7           | VI         | B34, Occupation                                               | Va           |
| 3712/A03-0134f       | 7           | VI         | B34, Occupation                                               | Va           |
| 3713/A03-0134g       | 7           | VI         | B34, Occupation                                               | Va           |
| 3864/A03-0067b       | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3899/A03-0132d       | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3900/A03-0132e       | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3901/A03-0132f       | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 3983/A03-0169        | 7           | VI, VII    | M1.5b                                                         | Vaa          |

(continued)

| <i>Cat/Accession</i>       | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                   | <i>Phase</i> |
|----------------------------|-------------|------------|----------------------------------|--------------|
| 4043/A03-0159c             | 7           | VII        | P8.4                             | Va           |
| 4044/A03-0159d             | 7           | VII        | P8.4                             | Va           |
| 4045/A03-0159e             | 7           | VII        | P8.4                             | Va           |
| 4046/A03-0159f             | 7           | VII        | P8.4                             | Va           |
| 4047/A03-0159g             | 7           | VII        | P8.4                             | Va           |
| 4107/A03-0211b             | 7           | VII        | P8.4                             | Va           |
| 4123/A03-0214a             | 7           | VII        | P8.4                             | Va           |
| 4128/A03-0214f             | 7           | VII        | P8.4                             | Va           |
| 4129/A03-0214g             | 7           | VII        | P8.4                             | Va           |
| 4398/A2247d                | 3           | V, VI      | M1.5a                            | Va, Vaa(VI)  |
| 4817/A6237c                | 3           | V, VI      | M1.5a                            | Va, Vaa      |
| 4830/A03-0175c             | 7           | VII        | M8a                              | Va, Vaa      |
| 4833/A03-0175f             | 7           | VII        | M8a                              | Va, Vaa      |
| 4917/A03-0162p             | 7           | VII        | M8a                              | Va, Vaa      |
| 4918/A03-0162q             | 7           | VII        | M8a                              | Va, Vaa      |
| 4919/A03-0162r             | 7           | VII        | M8a                              | Va, Vaa      |
| 4973/A03-0174m             | 7           | VII        | M8a                              | Va, Vaa      |
| 5104/A03-0147c             | 7           | VII        | M8a, Pit 7183                    | Va, Vaa      |
| 5135/A03-0137b             | 7           | VII        | M8a, Pit 7183                    | Va, Vaa      |
| 5241/A03-0216              | 7           | VII        | B53(Phase 1), Central Area-T7152 | Vb           |
| 5293/A6071b                | 2           | V, VI      | M4a                              | Vaa-Vc       |
| 5768/A9821a                | 3/4         | V, VI      | Unstratified                     | u/s          |
| 5769/A9821b                | 3/4         | V, VI      | Unstratified                     | u/s          |
| 5781/A0800c                | 3/4         | V, VI      | Unstratified                     | u/s          |
| 5782/A0800d                | 3/4         | V, VI      | Unstratified                     | u/s          |
| 5857/A03-0133h             | —           | VI, VII    | Unstratified                     | u/s          |
| <b>North Sector</b>        |             |            |                                  |              |
| 5916/A0109b                | 5, A        | —          | Lade (4)                         | 6-12(b-e)    |
| <b>South/North Sectors</b> |             |            |                                  |              |
| 5974/L1694a                | —           | —          | Unstratified                     | u/s          |
| 5975/L1694b                | —           | —          | Unstratified                     | u/s          |
| 5976/L1694c                | —           | —          | Unstratified                     | u/s          |
| 5977/L1694d                | —           | —          | Unstratified                     | u/s          |

### Stitching channels (see list)

*Edge-flesh stitching channels: soles* (see list)

*Edge-flesh stitching channels: uppers* (see list)

*Edge-flesh stitching channels* (see list)

*Grain to flesh stitching channels* (see list)

There were 146 fragments of stitching channels which survived separately. These included sole and upper edge-flesh stitching channels and lasting margins of uppers. They occurred in all the South Sector periods (Period I: 10, 7%; Period II: 8, 5%; Period III: 6, 4%; Period V: 31; 21%; unstratified: 7, 5%) and with the largest group coming from Period IV (74, 51%), that is the second half of the 13th century. Seven (5%) were also recovered from the North Sector of the High Street excavation and three (2%) had lost their labels in conservation.

*Stitching channels.*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                 | <i>Phase</i>  |
|----------------------|-------------|------------|----------------------------------------------------------------|---------------|
| <b>South Sector</b>  |             |            |                                                                |               |
| 131/A12308d          | 3           | V          | MC025, Pit 5337                                                | (Ia-)Id       |
| 132/A12308e          | 3           | V          | MC025, Pit 5337                                                | (Ia-)Id       |
| 133/A12308f          | 3           | V          | MC025, Pit 5337                                                | (Ia-)Id       |
| 547/A6376f           | 2           | V          | B5, North Room-Floor/Occupation (2)                            | IIa-IIff      |
| 932/A03-0380         | 9           | VII        | B19 (Phases 1 & 2a), South Room-Floor (2) & Destruction, T9574 | IIIa,IIIb     |
| 1030/A03-0320a       | 9           | VII        | P8.1b                                                          | IIIc          |
| 1708/A03-0396e       | 10          | VIII       | MC131                                                          | <IVa-IVb      |
| 1709/A03-0396f       | 10          | VIII       | MC131                                                          | <IVa-IVb      |
| 1710/A03-0396g       | 10          | VIII       | MC131                                                          | <IVa-IVb      |
| 1711/A03-0396h       | 10          | VIII       | MC131                                                          | <IVa-IVb      |
| 1712/A03-0396i       | 10          | VIII       | MC131                                                          | <IVa-IVb      |
| 1755/A03-0350d       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 1756/A03-0350e       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 1757/A03-0350f       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 1758/A03-0350g       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 1778/A03-0366b       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 1779/A03-0366c       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 1892/A03-0357h       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 1893/A03-0357i       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 1894/A03-0357j       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 1895/A03-0357k       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 1896/A03-0357l       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 2182/A03-0385b       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 2183/A03-0385c       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 2184/A03-0385d       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 2185/A03-0385e       | 7           | VII        | MC126, Pit 7402                                                | IVaa,IVb      |
| 2349/A03-0322b       | 7           | VI         | M1.4f                                                          | IVc           |
| 2405/A03-0342c       | 7           | VI         | M1.4f                                                          | IVc           |
| 2456/A03-0326e       | 7           | VI         | M1.4f                                                          | IVc           |
| 2457/A03-0326f       | 7           | VI         | M1.4f                                                          | IVc           |
| 2458/A03-0326g       | 7           | VI         | M1.4f                                                          | IVc           |
| 2459/A03-0326h       | 7           | VI         | M1.4f                                                          | IVc           |
| 2575/A03-0329g       | 7           | VII        | B18 (Phase 1/2)                                                | IVaa,IVb      |
| 2576/A03-0329h       | 7           | VII        | B18 (Phase 1/2)                                                | IVaa,IVb      |
| 2577/A03-0329i       | 7           | VII        | B18 (Phase 1/2)                                                | IVaa,IVb      |
| 2578/A03-0329j       | 7           | VII        | B18 (Phase 1/2)                                                | IVaa,IVb      |
| 2601/A03-0184b       | 9           | VII        | B18 (Phase 1/2)                                                | IVaa,IVb      |
| 2738/A03-0368f       | 10          | VII        | B18 (Phases 2a & 2b), MW6155                                   | IVb           |
| 2815/A03-0388        | 10          | VIII       | MC153                                                          | IVb           |
| 2845/A03-0319d       | 10          | VIII       | M9b(a)                                                         | IVc           |
| 2846/A03-0319e       | 10          | VIII       | M9b(a)                                                         | IVc           |
| 2847/A03-0319f       | 10          | VIII       | M9b(a)                                                         | IVc           |
| 2850/A03-0328a       | 10          | VIII       | M9b(a)                                                         | IVc           |
| 2851/A03-0328b       | 10          | VIII       | M9b(a)                                                         | IVc           |
| 2852/A03-0328c       | 10          | VIII       | M9b(a)                                                         | IVc           |
| 2853/A03-0328d       | 10          | VIII       | M9b(a)                                                         | IVc           |
| 3286/A03-0227g       | 7           | VII        | P8.3                                                           | IVc,IVcc      |
| 3366/A03-0229a       | 7           | VII        | M9a                                                            | IVc,IVcc      |
| 3423/A03-0077a       | 9           | VII        | B18 (Phases 2a & 2b) & M9a, PH7237                             | (IVb)IVc,IVcc |
| 3424/A03-0077b       | 9           | VII        | B18 (Phases 2a & 2b) & M9a, PH7237                             | (IVb)IVc,IVcc |
| 3475/A03-0173b       | 10          | VIII       | M9b(b)                                                         | IVc,IVcc      |
| 3476/A03-0173c       | 10          | VIII       | M9b(b)                                                         | IVc,IVcc      |
| 3477/A03-0173d       | 10          | VIII       | M9b(b)                                                         | IVc,IVcc      |

*(continued)*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i> | <i>Phase</i> |
|----------------------|-------------|------------|----------------|--------------|
| 3478/A03–0173e       | 10          | VIII       | M9b(b)         | IVc,IVcc     |
| 3479/A03–0173f       | 10          | VIII       | M9b(b)         | IVc,IVcc     |
| 3480/A03–0173g       | 10          | VIII       | M9b(b)         | IVc,IVcc     |
| 3481/A03–0173h       | 10          | VIII       | M9b(b)         | IVc,IVcc     |
| 3504/A03–0208a       | 10          | VIII       | M9b(b)         | IVc,IVcc     |
| 3514/A03–0185a       | 10          | VIII       | M9b(b), MF6064 | IVc,IVcc     |
| 3766/A03–0190g       | 7           | VI         | B34, Courtyard | Va           |
| 3828/A03–0177c       | 7           | VI         | B34, Courtyard | Va           |
| 3829/A03–0177d       | 7           | VI         | B34, Courtyard | Va           |
| 4156/A03–0198e       | 7           | VII        | P8.4, Pit 7216 | Va           |
| 4157/A03–0198f       | 7           | VII        | P8.4, Pit 7216 | Va           |
| 5033/A03–0212n       | 7           | VII        | M8a            | Va,Vaa       |
| 5034/A03–0212o       | 7           | VII        | M8a            | Va,Vaa       |
| 5786/A0800h          | 3/4         | V, VI      | Unstratified   | u/s          |
| <b>North Sector</b>  |             |            |                |              |
| 5932/A0110d          | 5, A        | –          | Lade (4)       | 6–12(b–e)    |
| 5937/A0119a          | 5, A        | –          | Lade (4)       | 6–12(b–e)    |
| 5938/A0119b          | 5, A        | –          | Lade (4)       | 6–12(b–e)    |

*Edge–flesh stiching channels: soles.*

| <i>Cat/Accession</i>       | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                | <i>Phase</i> |
|----------------------------|-------------|------------|---------------------------------------------------------------|--------------|
| <b>South Sector</b>        |             |            |                                                               |              |
| 1134/A03–0263e             | 9           | VII        | M15                                                           | IIIId        |
| 1135/A03–0263f             | 9           | VII        | M15                                                           | IIIId        |
| 2376/A03–0333c             | 7           | VI         | M1.4f                                                         | IVc          |
| 2532/A03–0401s             | 7           | VII        | P8.2b                                                         | IVb          |
| 2787/A03–0245h             | 9           | VII        | B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10) | IVb          |
| 3268/A03–0242a             | 7           | VII        | P8.3                                                          | IVc,IVcc     |
| 3388/A03–0233e             | 7           | VII        | M9a                                                           | IVc,IVcc     |
| 3456/A03–0168f             | 10          | VIII       | M9b(b)                                                        | IVc,IVcc     |
| 3820/A03–0164d             | 7           | VI         | B34, Courtyard                                                | Va           |
| 3826/A03–0177a             | 7           | VI         | B34, Courtyard                                                | Va           |
| 3827/A03–0177b             | 7           | VI         | B34, Courtyard                                                | Va           |
| 3959/A03–0140m             | 7           | VI, VII    | M1.5b                                                         | Vaa          |
| 4110/A03–0211e             | 7           | VII        | P8.4                                                          | Va           |
| 4183/A03–0199h             | 7           | VII        | P8.4, Pit 7216                                                | Va           |
| 5035/A03–0212p             | 7           | VII        | M8a                                                           | Va,Vaa       |
| 5036/A03–0212q             | 7           | VII        | M8a                                                           | Va,Vaa       |
| 5117/A03–0151e             | 7           | VII        | M8a, Pit 7183                                                 | Va,Vaa       |
| 5787/A0800i                | 3/4         | V, VI      | Unstratified                                                  | u/s          |
| <b>North Sector</b>        |             |            |                                                               |              |
| 5961/A0105b                | 5, A        | –          | CG024                                                         | 14–16        |
| <b>South/North Sectors</b> |             |            |                                                               |              |
| 5972/L1694b                | –           | –          | Unstratified                                                  | u/s          |
| 5987/A?                    | –           | –          | Unstratified                                                  | u/s          |

*Edge–flesh stiching channels: uppers.*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>  | <i>Phase</i> |
|----------------------|-------------|------------|-----------------|--------------|
| <b>South Sector</b>  |             |            |                 |              |
| 109/A6403c           | 1           | V          | MC029, Pit 3125 | Id           |
| 110/A6403d           | 1           | V          | MC029, Pit 3125 | Id           |
| 4021/A03–0155b       | 7           | VII        | P8.4            | Va           |
| <b>North Sector</b>  |             |            |                 |              |
| 5883/A0812b          | 5, A        | –          | Natural         | 0            |

*Edge–flesh stitching channels.*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i> | <i>Phase</i> |
|----------------------|-------------|------------|----------------|--------------|
| <b>South Sector</b>  |             |            |                |              |
| 301/A12632g          | 4           | V          | B16b, Pit 4726 | Id–IIa       |
| 302/A12632h          | 4           | V          | B16b, Pit 4726 | Id–IIa       |
| 303/A12632i          | 4           | V          | B16b, Pit 4726 | Id–IIa       |
| 304/A12632j          | 4           | V          | B16b, Pit 4726 | Id–IIa       |
| 679/A9553y           | 4           | V          | M10, Pit 4552  | IId–IIg      |
| 2491/A03–0392m       | 7           | VI         | M1.4f          | IVc          |
| 2492/A03–0392n       | 7           | VI         | M1.4f          | IVc          |
| 3528/A03–0225f       | 7           | VI         | M1.4i          | IVcc         |
| 4313/A1251f          | 3           | V, VI      | M1.5a          | Va, Vaa(VI)  |
| 4314/A1251g          | 3           | V, VI      | M1.5a          | Va, Vaa(VI)  |

*Grain–flesh stitching channels.*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i> | <i>Phase</i> |
|----------------------|-------------|------------|----------------|--------------|
| <b>South Sector</b>  |             |            |                |              |
| 118/A03–0002c        | 4           | V, VI      | MC023          | Icc, Id      |
| 119/A03–0002d        | 4           | V, VI      | MC023          | Icc, Id      |
| 1028/A03–0317c       | 9           | VII        | P8.1b          | IIIc         |
| 3529/A03–0225g       | 7           | VI         | M1.4i          | IVcc         |
| 3530/A03–0225h       | 7           | VI         | M1.4i          | IVcc         |
| 3531/A03–0225i       | 7           | VI         | M1.4i          | IVcc         |
| 5765/A0120c          | 3/4         | V, VI      | Unstratified   | u/s          |

**Clumps** (see list)**Upper repair patches**

The 67 clump soles and three upper repair patches listed below do not include those still attached to soles and those indicated by stitch holes on soles. Both seat and forepart clumps survive. One unusual seat clump (Cat No 5855/A03–0133f; Illus 104) has been made out of two separate fragments, joined together with a butted edge–flesh seam. Two items, Cat Nos 1761/A03–0360 and 5780/A0800b (Illus 104), may be upper repair patches.

Another survives with its upper (Cat No 626/A9885b; Illus 104). Clump soles were found in contexts of all periods, but were especially numerous in Period IV

(27; 41%). Clump soles surviving in situ or tunnel stitch holes for them show that 85 soles had been patched. Type 1 soles were the most patched, with 28 examples, which represent 33% of the repaired soles, or 50% of their type. Types 2, 3 and 4 accounted for 15%, 9% and 7% of the patched soles, respectively.

Substantial proportions of the two-part soles had been repaired: 28.5% of Type 7, 6% of Type 8, and 24% of Type 9. This reinforces the suggestion that two-part soles represent repairs or cobbling.

Period IV, the second half of the 13th century, produced the most evidence for repairs (40.4%), followed by Periods II (21.3%), V (16.3%) and I (11.3%). (These last figures are based on the combined evidence of surviving separate clumps, those in situ and stitching for them.)

Table 12 *Clump soles and evidence for repair.*

| period       | date       | separate clump soles |       | clumps in situ and/or stitching |       | total evidence for repair |       |
|--------------|------------|----------------------|-------|---------------------------------|-------|---------------------------|-------|
|              |            | number               | %     | number                          | %     | number                    | %     |
| I            | 1100–1150  | 5                    | 9%    | 11                              | 13%   | 16                        | 11.3% |
| II           | 1150–1200  | 12                   | 21.4% | 18                              | 21%   | 30                        | 21.3% |
| III          | 1200–1250  | 3                    | 5.3%  | 6                               | 7%    | 9                         | 6.4%  |
| IV           | 1250–1300  | 24                   | 43%   | 33                              | 39%   | 57                        | 40.4% |
| V            | 1300–1350> | 9                    | 16%   | 14                              | 16.5% | 23                        | 16.3% |
| unstratified |            | 3                    | 5.3%  | 3                               | 3.5%  | 6                         | 4.3%  |



*Clumps.*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                     | <i>Phase</i> |
|----------------------|-------------|------------|----------------------------------------------------|--------------|
| <b>South Sector</b>  |             |            |                                                    |              |
| 7/A12300c            | 1           | V, VI      | MC002                                              | Ia           |
| 108/A6403b           | 1           | V          | MC029, Pit 3125                                    | Id           |
| 115/A10799b          | 4           | V, VI      | MC023                                              | Icc, Id      |
| 129/A12308b          | 3           | V          | MC025, Pit 5337                                    | (Ia-)Id      |
| 222/A7436a           | 2           | VI         | P5.2b                                              | Ie           |
| 223/A7436b           | 2           | VI         | P5.2b                                              | Ie           |
| 240/A7072c           | 2           | V          | M14b(c)                                            | Id-If        |
| 259/A6984a           | 2           | VI         | MC044b                                             | If           |
| 284/A9556a           | 3           | VI         | MC053c                                             | If           |
| 313/A12310           | 3           | V          | MC039, Pit 2609                                    | If, IIa      |
| 330/A6769            | 1/2         | VI         | P5.4a                                              | IIb          |
| 379/A12282e          | 1           | VI         | MC065, Pit 3908                                    | IIa-IIc      |
| 387/A12374a          | 1           | VI         | MC065, T3907                                       | IIa-IIc      |
| 438/A6483h           | 2           | VI         | B4, 'Byre'-Occupation                              | IIc          |
| 439/A6483i           | 2           | VI         | B4, 'Byre'-Occupation                              | IIc          |
| 440/A6483j           | 2           | VI         | B4, 'Byre'-Occupation                              | IIc          |
| 528/A6748            | 2           | V          | B5, North Room-Floor/Occupation (1)                | IIa-IIff     |
| 554/A6498b           | 2           | V          | B5, Destruction                                    | IIa-IIff     |
| 799/A10494           | 3           | VI         | M1.2, Pit 2648                                     | <IIg(IIh)    |
| 854/A8655            | 4           | VI         | B13, Floor (1b)                                    | IIh          |
| 920/A12536b          | 4           | VI         | M1.3                                               | IIi          |
| 936/A03-0358         | 9           | VII        | P8.0                                               | IIIa, IIIb   |
| 943/A03-0397         | 9           | VII        | M13                                                | IIg-IIIb     |
| 944/A03-0400a        | 9           | VII        | M13                                                | IIg-IIIb     |
| 1316/A7989c          | 4           | V          | MC143                                              | IVaa         |
| 1317/A7989d          | 4           | V          | MC143                                              | IVaa         |
| 1554/A03-0422b       | 7           | VII        | MC130                                              | <IIIc-IVaa   |
| 1649/A8522a          | 3           | VI         | B2, Floor (2a)                                     | IVa, IVaa    |
| 1660/A03-0417b       | 7           | VI         | P3.3                                               | IVa-IVb      |
| 1661/A03-0417c       | 7           | VI         | P3.3                                               | IVa-IVb      |
| 1763/A03-0360c       | 7           | VII        | MC126, Pit 7402                                    | IVaa, IVb    |
| 1810/A03-0374b       | 7           | VII        | MC126, Pit 7402                                    | IVaa, IVb    |
| 2313/A03-0284a       | 7           | VI         | M1.4f                                              | IVc          |
| 2314/A03-0284b       | 7           | VI         | M1.4f                                              | IVc          |
| 2334/A03-0291b       | 7           | VI         | M1.4f                                              | IVc          |
| 2362/A03-0331b       | 7           | VI         | M1.4f                                              | IVc          |
| 2542/A03-0375a       | 7           | VII        | P8.2b                                              | IVb          |
| 2597/A03-0191        | 9           | VII        | B18 (Phase 1/2)                                    | IVaa, IVb    |
| 2650/A03-0305        | 7           | VII        | B18 (Phase 1/2), Pit 7324                          | IVaa, IVb    |
| 2803/A03-0088a       | 9           | VII        | B18 (Phase 2b), Hall & Hall South-Occupation (12a) | IVb          |
| 3075/A8679           | 3           | VI         | M1.4d                                              | IVb, IVc     |
| 3118/A8681b          | 3           | VI         | M1.4d, Pit 2566                                    | IVb, IVc     |
| 3199/A6191d          | 3           | V, VI      | M1.4c                                              | IIIa-IVcc    |
| 3232/A6395b          | 3           | V, VI      | M1.4c                                              | IIIa-IVcc    |
| 3237/A6728a          | 3           | V, VI      | M1.4c                                              | IIIa-IVcc    |
| 3398/A03-0268c       | 7           | VII        | M9a                                                | IVc, IVcc    |
| 3399/A03-0268d       | 7           | VII        | M9a                                                | IVc, IVcc    |
| 3508/A03-0221        | 10          | VIII       | M9b(b)                                             | IVc, IVcc    |
| 3511/A03-0251        | 10          | VIII       | M9b(b), Pit 6127                                   | IVc, IVcc    |
| 3519/A03-0224c       | 7           | VI         | M1.4i                                              | IVcc         |
| 3523/A03-0225a       | 7           | VI         | M1.4i                                              | IVcc         |
| 3865/A03-0068        | 7           | VI, VII    | M1.5b                                              | Vaa          |
| 3927/AA03-0136c      | 7           | VI, VII    | M1.5b                                              | Vaa          |

*(continued)*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                    | <i>Phase</i> |
|----------------------|-------------|------------|-----------------------------------|--------------|
| 3928/AA03–0136d      | 7           | VI, VII    | M1.5b                             | Vaa          |
| 3929/AA03–0136e      | 7           | VI, VII    | M1.5b                             | Vaa          |
| 3936/A03–0136l       | 7           | VI, VII    | M1.5b                             | Vaa          |
| 3957/A03–0140k       | 7           | VI, VII    | M1.5b                             | Vaa          |
| 4310/A1251c          | 3           | V, VI      | M1.5a                             | Va,Vaa(VI)   |
| 4532/A6245c          | 3           | V, VI      | M1.5a                             | Va,Vaa(VI)   |
| 5242/A03–0119a       | 7           | VII        | B53 (Phase 1), Central Area–T7152 | Vb           |
| 5260/A03–0089a       | 10          | VIII       | M8b                               | Va,Vaa(–Vc)  |
| 5403/A6414a          | 4           | VI         | P1a                               | Vd           |
| 5556/A6242b          | 4           | V          | M3c                               | Vd           |
| 5780/A0800b          | 3/4         | V, VI      | Unstratified                      | u/s          |
| 5855/A03–0133f       | 7           | VI, VII    | Unstratified                      | u/s          |
| 5856/A03–0133g       | 7           | VI, VII    | Unstratified                      | u/s          |
| <b>North Sector</b>  |             |            |                                   |              |
| 5953/A0108a          | 5, A        | –          | Lade (3)                          | 6–12(d,e)    |

*Upper repair patches.*

| <i>Cat/Accession</i> | <i>Area</i> | <i>Rig</i> | <i>Feature</i>  | <i>Phase</i> |
|----------------------|-------------|------------|-----------------|--------------|
| <b>South Sector</b>  |             |            |                 |              |
| 626/A9885b           | 4           | V          | M10             | IId–IIg      |
| 1761/A03–0360a       | 7           | VII        | MC126, Pit 7402 | IVaa,IVb     |
| 5780/A0800b          | 3/4         | V, VI      | Unstratified    | u/s          |

*Welted soles.*

| <i>Cat/Accession</i>       | <i>Area</i> | <i>Rig</i> | <i>Feature</i> | <i>Phase</i> |
|----------------------------|-------------|------------|----------------|--------------|
| <b>South Sector</b>        |             |            |                |              |
| 5793/A0817b                | 3/4         | V, VI      | Unstratified   | u/s          |
| <b>South/North Sectors</b> |             |            |                |              |
| 5983/L2766b                | –           | –          | Unstratified   | u/s          |
| 5984/L2766c                | –           | –          | Unstratified   | u/s          |

*Bunions.*

| <i>Cat/Accession</i> | <i>Leather type</i>  | <i>Area</i> | <i>Rig</i> | <i>Feature</i>  | <i>Phase</i> |
|----------------------|----------------------|-------------|------------|-----------------|--------------|
| <b>South Sector</b>  |                      |             |            |                 |              |
| 129/A12308b          | Sole (Type 1), clump | 3           | V          | MC025, Pit 5337 | (Ia–)Id      |
| 363/A2296a           | Sole (Type 1)        | 1           | V          | M14a, Pit 3040  | Id–IIc       |
| 364/A2296b           | Upper (Type Aii)     | 1           | V          | M14a, Pit 3040  | Id–IIc       |
| 406/A12493a          | Sole (Type 1)        | 3           | VI         | MC056, Pit 5155 | Ia–IIc       |
| 776/A9371b           | Sole (Type 2)        | 3           | VI         | M1.2, Pit 2648  | <IIg(IIh)    |
| 2985/A10521          | Sole (Type 3)        | 3           | V          | MC155, Pit 2691 | IVb,IVc      |
| 4153/A03–0198b       | Upper (Type Kii)     | 7           | VII        | P8.4, Pit 7216  | Va           |

**Welted soles** (Illus 145)

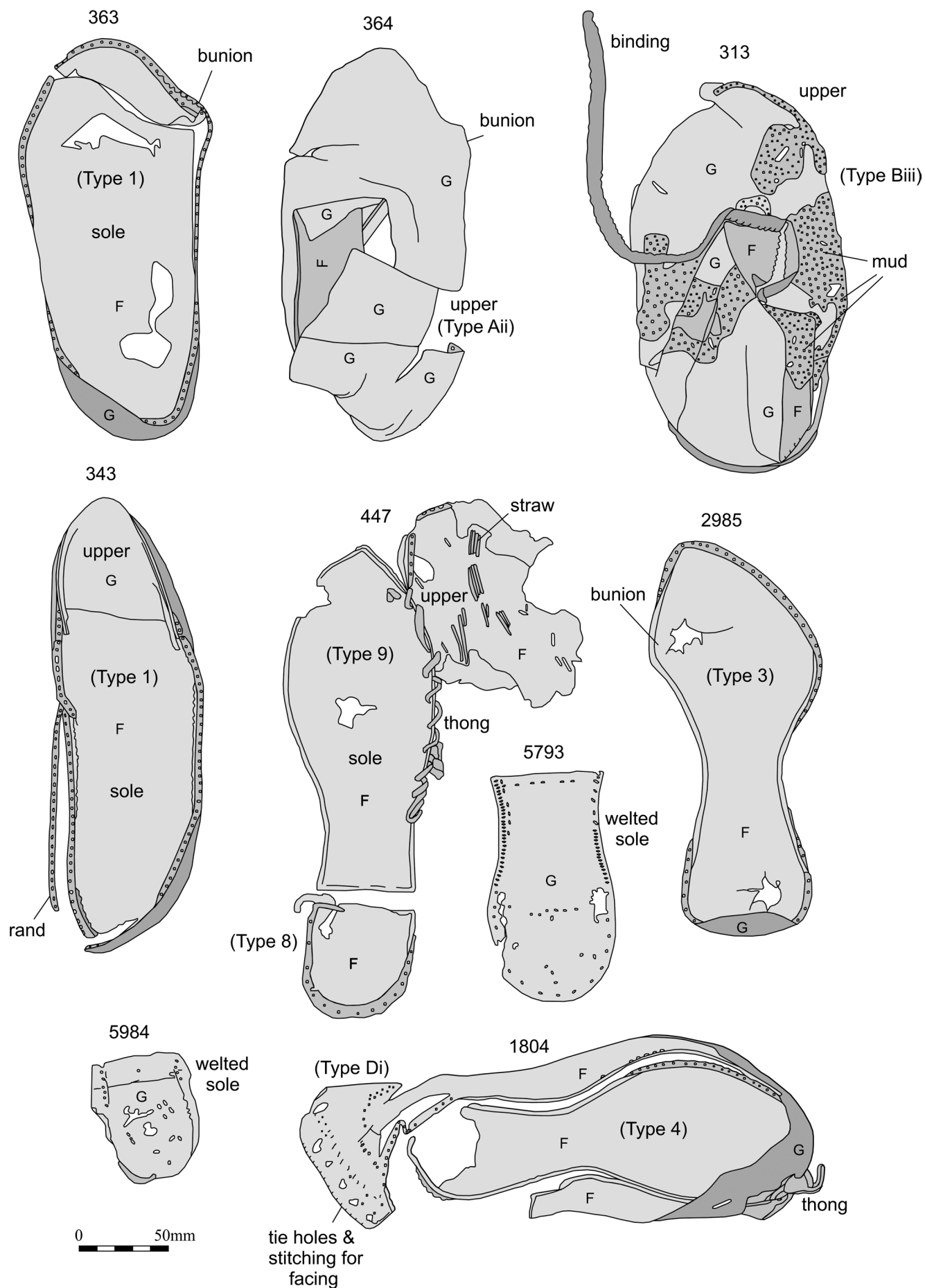
Three welted outer soles were found at the High Street. All three came from unstratified deposits (Illus 145).

**Bunions** (Illus 145)

Bulges on five soles and two uppers have almost certainly been caused by *hallux valgus* or bunion joint in the wearer. As the great toe is pushed sideways,

the metatarso-phalangeal joint becomes very swollen, creating a bulge on the vamp of the shoe, as on upper Cat No 364/A2296b (Illus 145). As medieval turnshoe soles are slightly dishd, the edge of the sole is often pushed out of shape, as on the examples listed above. On sole Cat No 2985/A10521, the strain of the bulge on the sole has also resulted in a hole (Illus 145) (cf Swallow 1973, 29–30).

No indications of any other foot problems, such as hammertoe, were recognised.



*Illus 145 Two soles damaged by bunions, one with matching upper; three soles with uppers attached; two welted soles; one upper with mud (sole not visible).*

*Soles with attached or matching uppers (Illus 104, 124, 137, 139–41, 145–7).*

| <i>Cat/Accession</i> | <i>Leather type</i>                           | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                      | <i>Phase</i> |
|----------------------|-----------------------------------------------|-------------|------------|-------------------------------------|--------------|
| <b>South Sector</b>  |                                               |             |            |                                     |              |
| 28/A10800b           | Sole (Type 6)                                 | 1           | V          | MC008, T3774                        | Ib           |
| 30/A10800d           | Upper (Type Bi)                               | 1           | V          | MC008, T3774                        | Ib           |
| 125/A12297a          | Sole (Type 1)                                 | 3           | V          | MC025, Pit 5337                     | (Ia–)Id      |
| 126/A12297b          | Upper (Type Bi)                               | 3           | V          | MC025, Pit 5337                     | (Ia–)Id      |
| 156/A7787c           | Sole (Type 3)                                 | 1/2         | VI         | B6 (Phase 1), South Room–Floor (1)  | Ie           |
| 163/A7787j           | Upper (Type H)                                | 1/2         | VI         | B6(Phase 1) 1, South Room–Floor (1) | Ie           |
| 173/A7580b           | Sole (Type 2)                                 | 2           | VI         | M14b(b)                             | Ie           |
| 174/A7580c           | Upper (Type Aii)                              | 2           | VI         | M14b(b)                             | Ie           |
| 182/A7597a           | Sole                                          | 2           | VI         | M14b(b)                             | Ie           |
| 183/A7597b           | Upper (Type Bi)                               | 2           | VI         | M14b(b)                             | Ie           |
| 187/A7797a           | Sole                                          | 2           | VI         | M14b(b)                             | Ie           |
| 191/A7797e           | Upper (Type Bi)                               | 2           | VI         | M14b(b)                             | Ie           |
| 222/A7436a           | Sole (Type 1), upper, clump, thong            | 2           | VI         | P5.2b                               | Ie           |
| 286/A03–0017a        | Sole (Type 1)                                 | 3           | V          | MC053a                              | If           |
| 287/A03–0017b        | Upper (vamp)                                  | 3           | V          | MC053a                              | If           |
| 306/A12635b          | Sole (Type 2)                                 | 4           | V          | B16b, Pit 4726                      | Id–IIa       |
| 307/A12635c          | Upper (Type Bi)                               | 4           | V          | B16b, Pit 4726                      | Id–IIa       |
| 313/A12310           | Sole (Type 1), rand, clump, upper (Type Biii) | 3           | V          | MC039, Pit 2609                     | If,IIa       |
| 314/A10365a          | Sole (Type 6)                                 | 3           | V          | MC049                               | IIa          |
| 315/A10365b          | Upper (Type F)                                | 3           | V          | MC049                               | IIa          |
| 331/A6774a           | Sole (Type 1)                                 | 1/2         | VI         | P5.4a                               | IIb          |
| 332/A6774b           | Upper (Type Ai)                               | 1/2         | VI         | P5.4a                               | IIb          |
| 343/A6772c           | Sole (Type 1), rand, upper                    | 2           | VI         | MC061                               | IIb          |
| 352/A6773a           | Sole (Type 2)                                 | 2           | VI         | MC061                               | IIb          |
| 353/A6773b           | Sole (Type 1)                                 | 2           | VI         | MC061                               | IIb          |
| 357/A6773f           | Upper (Type Bi)                               | 2           | VI         | MC061                               | IIb          |
| 358/A6773g           | Upper (Type Bii)                              | 2           | VI         | MC061                               | IIb          |
| 363/A2296a           | Sole (Type 1), bunion                         | 1           | V          | M14a, Pit 3040                      | Id–IIc       |
| 364/A2296b           | Upper (Type Aii)                              | 1           | V          | M14a, Pit 3040                      | Id–IIc       |
| 389/A12296a          | Sole (Type 1)                                 | 1           | VI         | MC065                               | IIa–IIc      |
| 390/A12296b          | Upper (Type Bi)                               | 1           | VI         | MC065                               | IIa–IIc      |
| 447/A6722            | Sole (Types 8 & 9), upper                     | 2           | VI         | B4, ‘Byre’–Occupation               | IIc          |
| 452/A10048a          | Sole (Type 1)                                 | 4           | VI         | M1.1f, Pit 2383                     | IIb,IIc      |
| 453/A10048b          | Sole (Type 2)                                 | 4           | VI         | M1.1f, Pit 2383                     | IIb,IIc      |
| 455/A10048d          | Upper (Type Aii)                              | 4           | VI         | M1.1f, Pit 2383                     | IIb,IIc      |
| 456/A10048e          | Upper (Type J)                                | 4           | VI         | M1.1f, Pit 2383                     | IIb,IIc      |
| 462/A10599a          | Sole (Type 1)                                 | 3           | VI         | M1.1c, Pit 5005                     | IIId         |
| 464/A10599c          | Upper                                         | 3           | VI         | M1.1c, Pit 5005                     | IIId         |
| 475/A12302a          | Sole (Type 1)                                 | 3           | VI         | M1.1c, Pit 5005                     | IIId         |
| 476/A12302b          | Upper (Type E)                                | 3           | VI         | M1.1c, Pit 5005                     | IIId         |
| 491/A12290a          | Sole (Type 1)                                 | 1           | VI         | MC071                               | IIb–IIIf     |
| 494/A12290d          | Upper                                         | 1           | VI         | MC071                               | IIb–IIIf     |
| 504/A3447a           | Sole (Type 1)                                 | 2           | VI         | M1.1d & M1.1e                       | IIId–IIIf    |
| 505/A3447b           | Sole (Type 1)                                 | 2           | VI         | M1.1d & M1.1e                       | IIId–IIIf    |
| 507/A3447d           | Upper (Type Aii)                              | 2           | VI         | M1.1d & M1.1e                       | IIId–IIIf    |
| 508/A3447e           | Upper (Type Bi)                               | 2           | VI         | M1.1d & M1.1e                       | IIId–IIIf    |
| 625/A9885a           | Sole (Type 1)                                 | 4           | V          | M10                                 | IIId–IIg     |

(continued)

| <i>Cat/Accession</i> | <i>Leather type</i>                      | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                                                       | <i>Phase</i>   |
|----------------------|------------------------------------------|-------------|------------|----------------------------------------------------------------------|----------------|
| 626/A9885b           | Upper                                    | 4           | V          | M10                                                                  | IId–IIg        |
| 810/A11219a          | Upper (Type F)                           | 3           | VI         | M1.2, Pit 2648                                                       | <IIg(IIh)      |
| 811/A11219b          | Sole (Type 4)                            | 3           | VI         | M1.2, Pit 2648                                                       | <IIg(IIh)      |
| 813/A11220b          | Sole, rand, upper                        | 3           | VI         | M1.2, Pit 2648                                                       | <IIg(IIh)      |
| 821/A11221a          | Sole (Type 4)                            | 3           | VI         | M1.2, Pit 2648                                                       | <IIg(IIh)      |
| 823/A11221c          | Upper (Type Ai)                          | 3           | VI         | M1.2, Pit 2648                                                       | <IIg(IIh)      |
| 826/A12292           | Sole, upper                              | 3           | VI         | M1.2, Pit 2648                                                       | <IIg(IIh)      |
| 875/A8665b           | Sole (rounded forepart)                  | 3           | VI         | M1.3                                                                 | Ili            |
| 878/A8665e           | Upper (Type Kiv)                         | 3           | VI         | M1.3                                                                 | Ili            |
| 897/A11260a          | Sole (Type 2)                            | 3           | VI         | M1.3                                                                 | Ili            |
| 898/A11260b          | Upper (Type Ai)                          | 3           | VI         | M1.3                                                                 | Ili            |
| 916/A12490a          | Sole (Type 8)                            | 4           | VI         | M1.3                                                                 | Ili            |
| 917/A12490b          | Sole (Type 9)                            | 4           | VI         | M1.3                                                                 | Ili            |
| 918/A12490c          | Upper (Type Aii)                         | 4           | VI         | M1.3                                                                 | Ili            |
| 933/A03–0327a        | Sole (Type 2)                            | 9           | VII        | P8.0                                                                 | IIIa,IIIb      |
| 934/A03–0327b        | Upper (Type Biii)                        | 9           | VII        | P8.0                                                                 | IIIa,IIIb      |
| 1103/A03–0287a       | Sole (Type 2)                            | 9           | VII        | P8.1c                                                                | IIIc           |
| 1105/A03–0287c       | Upper (Type Dii)                         | 9           | VII        | P8.1c                                                                | IIIc           |
| 1144/A4817a          | Sole (Type 2)                            | 1           | V          | M12                                                                  | IIg–IIIc(–IVa) |
| 1145/A4817b          | Upper (Type Ai)                          | 1           | V          | M12                                                                  | IIg–IIIc(–IVa) |
| 1215/A9373a          | Sole (Type 3)                            | 3           | V          | M6b                                                                  | IIg–IIId       |
| 1216/A9373b          | Upper (Type Ai)                          | 3           | V          | M6b                                                                  | IIg–IIId       |
| 1300/A8810a          | Sole (Type 3)                            | 3           | V          | P2.2b                                                                | IVa            |
| 1306/A8810g          | Upper                                    | 3           | V          | P2.2b                                                                | IVa            |
| 1553/A03–0422a       | Sole (Type 4)                            | 7           | VII        | MC130                                                                | <IIIc–IVaa     |
| 1555/A03–0422c       | Upper (Type Bi)                          | 7           | VII        | MC130                                                                | <IIIc–IVaa     |
| 1804/A03–0367a       | Sole (Type 4), upper<br>(Type Di), thong | 7           | VII        | MC126, Pit 7402                                                      | IVaa,IVb       |
| 1879/A03–0353b       | Sole (Type 2)                            | 7           | VII        | MC126, Pit 7402                                                      | IVaa,IVb       |
| 1880/A03–0353c       | Upper (Type Bii)                         | 7           | VII        | MC126, Pit 7402                                                      | IVaa,IVb       |
| 2333/A03–0291a       | Sole (Type 3)                            | 7           | VI         | M1.4f                                                                | IVc            |
| 2337/A03–0291e       | Upper                                    | 7           | VI         | M1.4f                                                                | IVc            |
| 2361/A03–0331a       | Sole (Type 2), upper,<br>rand            | 7           | VI         | M1.4f                                                                | IVc            |
| 2652/A03–0316b       | Sole (Type 1)                            | 7           | VII        | B18 (Phase 1/2), Pit 7324                                            | IVaa,IVb       |
| 2653/A03–0316c       | Upper (Type Bii)                         | 7           | VII        | B18 (Phase 1/2), Pit 7324                                            | IVaa,IVb       |
| 2725/A03–0413a       | Sole (Type 3), rand,<br>upper (Type C)   | 7           | VII        | B18 (Phases 2a & 2b), T7385                                          | IVb            |
| 2754/A03–0288a       | Sole (Type 2)                            | 7           | VII        | B18 (Phase 2b), North Room,<br>Hall & Hall South–<br>Occupation (10) | IVb            |
| 2759/A03–0288f       | Upper (Type Dii)                         | 7           | VII        | B18 (Phase 2b), North Room,<br>Hall & Hall South–<br>Occupation (10) | IVb            |
| 2775/A03–0124a       | Sole (Type 2), rand                      | 9           | VII        | B18 (Phase 2b), North Room,<br>Hall & Hall South–<br>Occupation (10) | IVb            |
| 2777/A03–0124c       | Upper                                    | 9           | VII        | B18 (Phase 2b), North Room,<br>Hall & Hall South–<br>Occupation (10) | IVb            |
| 3321/A03–0066a       | Sole (Type 3)                            | 9           | VII        | P8.3                                                                 | IVc,IVcc       |
| 3327/A03–0066g       | Upper (Type Aii)                         | 9           | VII        | P8.3                                                                 | IVc,IVcc       |
| 3343/A03–0183a       | Sole, upper                              | 7           | VII        | M9a                                                                  | IVc,IVcc       |
| 3419/A03–0217a       | Sole (Type 2)                            | 7           | VII        | B18 (Phases 2a & 2b) & M9a,<br>PH7237                                | (IVb)IVc,IVcc  |
| 3421/A03–0217c       | Upper (lasting margin)                   | 7           | VII        | B18 (Phases 2a & 2b) & M9a,<br>PH7237                                | (IVb)IVc,IVcc  |

(continued)

| <i>Cat/Accession</i>      | <i>Leather type</i>                 | <i>Area</i> | <i>Rig</i> | <i>Feature</i>                    | <i>Phase</i> |
|---------------------------|-------------------------------------|-------------|------------|-----------------------------------|--------------|
| 3427–3430/A03–0051a–d     | Sole, rand, upper                   | 9           | VII        | M9a, Pit 9026                     | IVc, IVcc    |
| 4123/A03–0214a            | Sole (Type 3), rand                 | 7           | VII        | P8.4                              | Va           |
| 4131/A03–0214i            | Upper                               | 7           | VII        | P8.4                              | Va           |
| 5241/A03–0216             | Sole (Type 2), upper, rand          | 7           | VII        | B53 (Phase 1), Central Area–T7152 | Vb           |
| 5768/A9821a & 5769/A9821b | Sole (Type 2), rand, upper (Type J) | 3/4         | V, VI      | Unstratified                      | u/s          |
| 5820/A0801a               | Sole                                | 4           | V, VI      | Unstratified                      | u/s          |
| 5821/A0801b               | Sole                                | 4           | V, VI      | Unstratified                      | u/s          |
| 5822/A0801c               | Upper (Type Ai)                     | 4           | V, VI      | Unstratified                      | u/s          |
| <b>North Sector</b>       |                                     |             |            |                                   |              |
| 5915/A0109a               | Sole (pointed forepart)             | 5, A        | –          | Lade (4)                          | 6–12(b–e)    |
| 5917/A0109c               | Upper                               | 5, A        | –          | Lade (4)                          | 6–12(b–e)    |

### Soles with attached or matching uppers

(Illus 104, 124, 137, 139–141, 145–7)

Thirteen soles still had uppers attached, while another 40 had matching uppers. Type 1 soles had uppers of Types A (3), B (5), D and J. Type 2 Soles were matched by uppers of Types A (3), B (4), Dii (2) and J. Uppers of Type A (2), C and H were found with Type 3 soles. Type 4 soles had Type A, B and F uppers; two Type 6 soles had matching B and F uppers. Unfortunately none of the matching pairs include Type 5 soles or Type K uppers. Nine soles and 20 uppers were too fragmentary for their type to be defined; this leaves 31 pairs which are hardly representative of the 251 soles of Types 1 and 9 or of the 178 uppers of Types A–K.

### Discussion

As described above, the shoes, apart from the three unstratified welted soles, were all of turnshoe construction. Rands were evidently common from the early 12th century onwards. Some shoes were stitched with wool, but it is possible that linen was also used. Silk added a touch of luxury to two boots. The worn out state of many of the fragments and the use of half or three-quarter length soles suggests cobbling, particularly during Periods IV and V (c1250–1350>). The nature of the distribution suggests small concerns, possibly including domestic repairs.

A comparison of the sole types shows that Type 3 (63) and Type 1 (58) were the most common, followed by Type 2 (46), Type 4 (26) and Type 8/9 (17/23). Type B uppers were the most numerous with 53: Bi (17), Bii (16), Biii (16) and Biv (4). Type A (29) came next, followed by Types K (15 fragments of 14 uppers), C (14), D (16) and E (10).

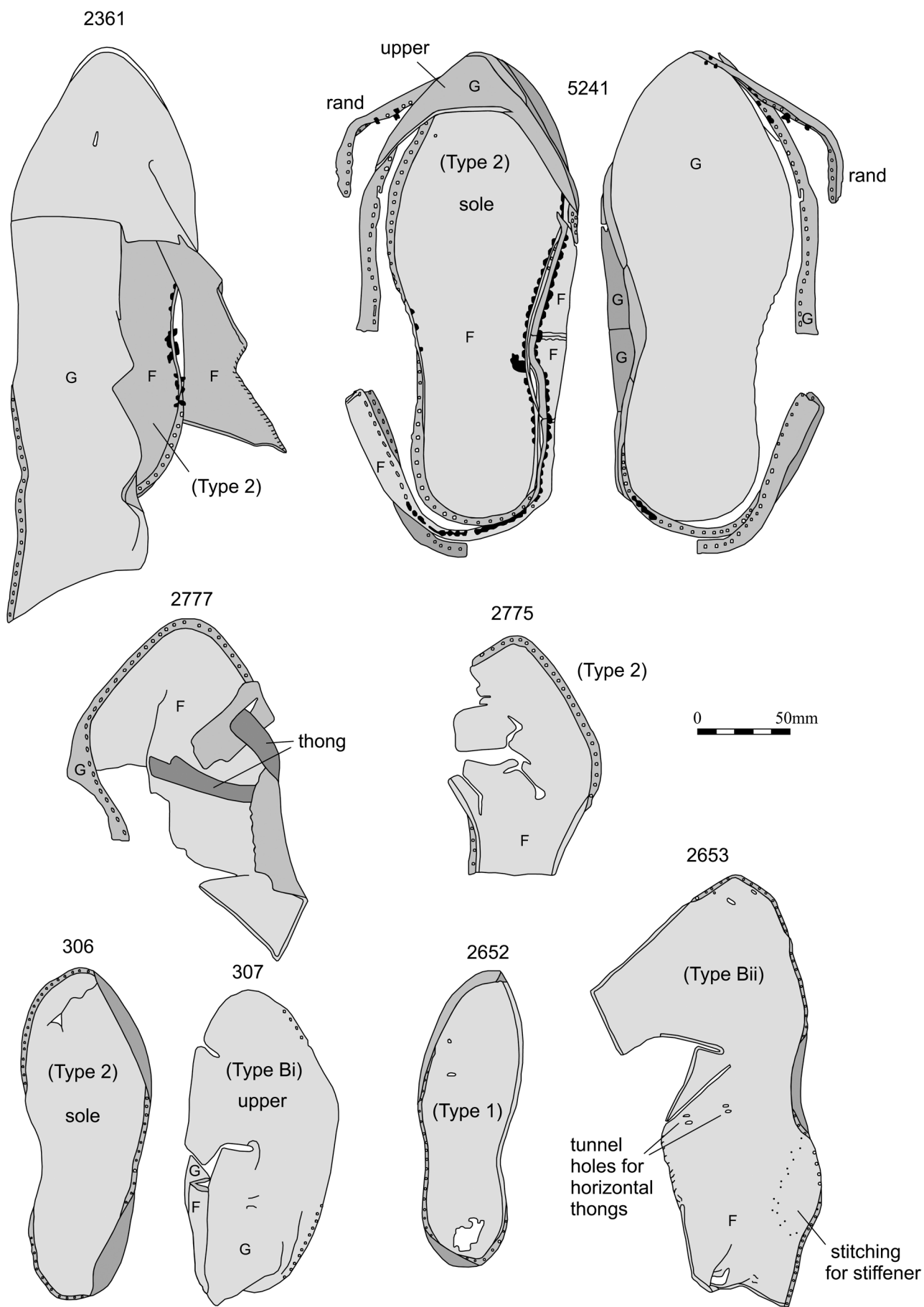
Both sole and upper styles are fairly typical, with many parallels, especially for the soles. The uppers are much more numerous than at most other published sites; hence, it is not surprising that some features are not well represented in the literature. Twelfth-century types included sole Types 1 and 6 and upper Types A, B, E, F, G and H. The more shapely soles of Types 2

and 3 and the side-laced uppers of Types C and D belonged mainly to the second half of the 13th century. Elegant sole Types 4 (asymmetrical variant) and 5, composite sole Types 7, 8 and 9 and the more elaborate uppers of Type K were of late 13th- to mid-14th-century date. Upper Type J covers a much longer time-span, which is not surprising considering it is a broad grouping of footwear with separate vamps and quarters, some of which probably represent repair.

The exceptions serve as a reminder that these dating trends are only a guideline; there are early examples of later styles, for example, Cat No 811/A11221a (Sole, Type 4), or Cat No 156/A7787c (Sole, Type 3). There are also later examples of earlier styles, for instance, Cat No 2652/A03–0316b (Sole, Type 1); its relationship with an upper (Type Dii) in a mid–late 13th-century context shows that it is an instance of a late use of an earlier shape, not a surviving item of rubbish.

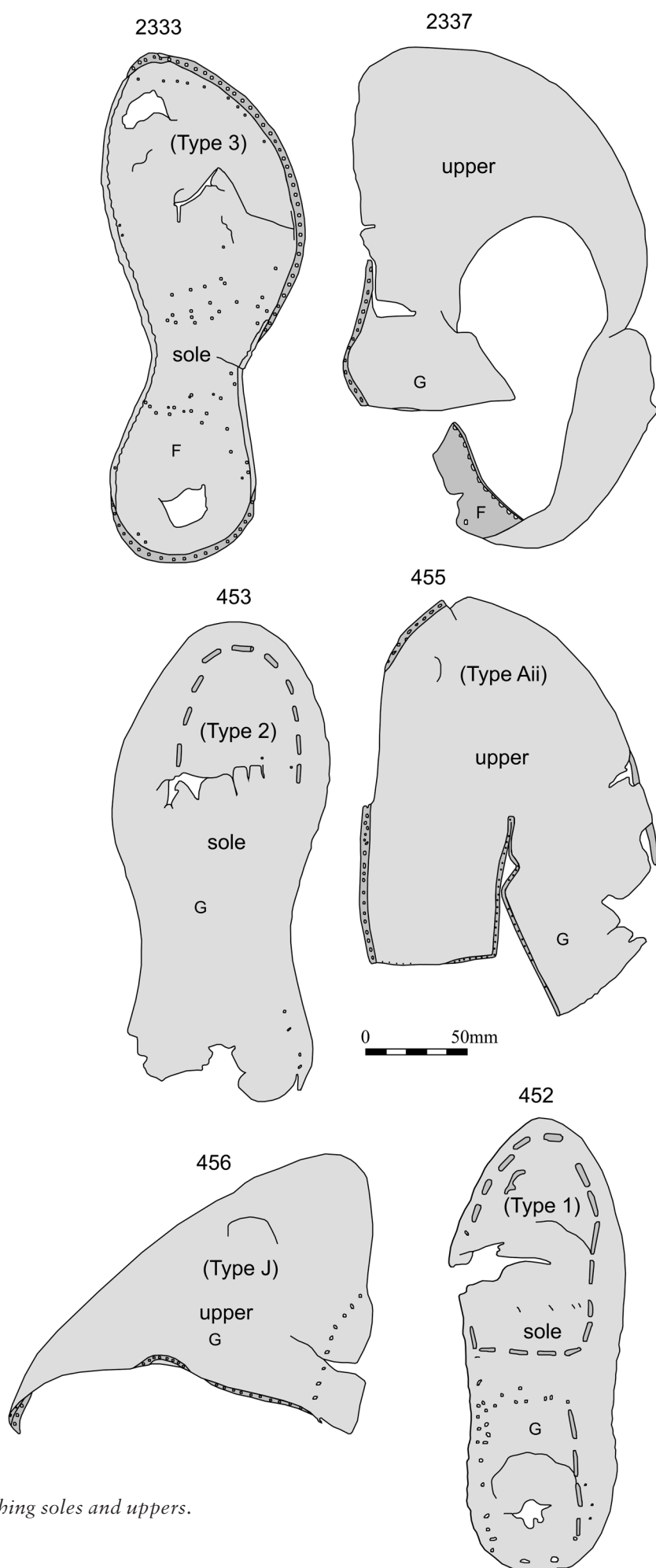
The date ranges outlined above, based on contextual data and reinforced by external parallels, are supported further by the absence of certain features of medieval footwear. Thus, there is no evidence at all for soles with pointed seats, and only two possible uppers with raised or notched quarters (Cat Nos 239/A7072b and 785/A9372c), as were found in Winchester (late 9th–10th centuries); Oxford (late Saxon); Durham (Saxo–Norman); York (late 9th–late 11th centuries); London (10th–11th centuries, but also early 12th century from Billingsgate) and Schleswig (11th, also 12th century) (Thornton 1990b, 593; Thornton 1977, 160; Carver 1979, 30; Mould et al 2003; Richardson 1959, 86–90; Goodfellow and Thornton 1972, 97–105; Pritchard 1991, 213–30; Grew and de Neergaard 1988, 10; Schnack 1992b, 39–40). Furthermore, there is no indication of the use of thongs instead of thread for sole–upper seams, nor are there any soles with a raised rib for tunnel stitching, instead of the later edge–flesh stitching channel; these are features found on soles from London (mid-11th century and early 12th century); Winchester (10th century); Oxford (late Saxon); York (late 9th–11th centuries) and Schleswig (11th–12th centuries) (Pritchard 1991, 218–21; Grew and de Neergaard 1988, 10; Thornton 1990b, 592; Thornton 1977, 160; Mould et al 2003; Schnack 1992b, 35–6).





Illus 146 Two soles with uppers attached; three matching soles and uppers.





Illus 147 Three matching soles and uppers.

Table 13 *Chronological distribution of upper fragments.*

|                 |   | period |     |      |     |     |              |
|-----------------|---|--------|-----|------|-----|-----|--------------|
|                 |   | I      | II  | III  | IV  | V   | unstratified |
| almost complete | a | 33%    | 43% | 3%   | 13% | 2%  | 6%           |
|                 | d | 22     | 29  | 2    | 9   | 1   | 4            |
|                 | e | 29%    | 26% | 5%   | 4%  | 2%  | 12%          |
| large fragments | b | 15%    | 21% | 9%   | 39% | 8%  | 8%           |
|                 | d | 13     | 18  | 8    | 34  | 7   | 7            |
|                 | e | 17%    | 16% | 22%  | 17% | 14% | 21%          |
| small fragments | c | 11.5%  | 18% | 7.5% | 45% | 12% | 6%           |
|                 | d | 41     | 64  | 27   | 161 | 42  | 22           |
|                 | e | 54%    | 58% | 73%  | 79% | 84% | 67%          |

- a      % of almost complete uppers, by period  
b      % of large fragments of uppers, by period  
c      % of small fragments of uppers, by period  
d      no of pieces, by size  
e      % of upper fragments, by size and period

Similarly, although the asymmetrical variants of Type 4 soles resemble those of late 14th–early 15th century date from Threave Castle, the accompanying upper style found there, with its central opening (Type L), is not represented at all in the leather from Perth High Street (Thomas 1981, 123–6). English examples of this type of shoe are also of a comparable date: London (late 14th century); Leicester (14th–15th centuries) and Chapel Lane Staith, Hull (the end of the first quarter of the 14th century–post 1350) (Grew and de Neergaard 1988, 36, 65–7; Allin 1981a, 145–9; Jackson 1979, Fig 22, no 36). The Continental parallels, on the other hand, appear to date from slightly earlier: Amsterdam (1275–1350); Schleswig (13th–14th centuries); Bremen (13th–15th centuries) and Konstanz (13th–15th centuries) (Baart et al 1977, 77, 80; Schnack 1992b, Figs 35–37, Halbschuh D 1; Schnack 1993, 61, 64; Schnack 1992a; Schnack 1994, 25).

Likewise, there are no examples of shoes with a strap and buckle, of the type found in late 14th-century contexts in London and in York, and with a slightly earlier appearance abroad: Amsterdam (1275–1350), Schleswig (13th–14th centuries), Bremen (13th–15th centuries) and Konstanz (13th–15th centuries) (Grew and de Neergaard 1988, 32–3; Mould et al 2003; Baart et al 1977, 74; Schnack 1992b, 93–7, Fig 49, no 1; Schnack 1993, 66, Fig 3b; Schnack 1994, 22).

A study of the phasing shows that more attached or matching soles and uppers survive from the earlier periods than from the later ones: Period I–13%, II–44%, III–7%, IV–26%, V–4%, Unstratified–4%. The reasons for this are not clear. As discussed above, the leather from Periods IV and V (1250–1350+) may represent cobbling, the evidence for which will be examined further in connection with the waste material.

Possibly the leather from the earlier phases represents domestic rubbish, which was dumped and not reused,

whereas the later material may have been deposited after it had been cut up for reuse. This might help to explain the smaller numbers of matching or attached soles and uppers from the later phases.

A similar pattern appears from a study of the chronological distribution of upper fragments. The vast majority of large, almost complete uppers belong to 12th-century Periods I and II (33% and 43%) deposits. The more incomplete but still large uppers and the small fragments have a more even distribution, but with the largest concentrations in Period IV (39% and 45% respectively). The increased evidence for translation and cobbling in the later phases onwards probably explains the paucity of virtually whole uppers from Period III.

The shoes also provide some evidence regarding the wealth and status of the medieval population of Perth. First of all, it has been assumed that the shoes were made for sale to the local population, and not for export. This assumption is supported by the worn and patched nature of the shoes, which implies that they were worn, then patched, reused or discarded locally. The worn and patched nature of the shoes indicates that the shoes were well used. However, this is not necessarily an indication of poverty, as turnshoes, with a single sole, would have worn very quickly, almost certainly within a few months, if worn outdoors regularly. Moreover, signs of wear and evidence for repair are a standard feature of shoes from medieval sites. The exceptions are few, such as the shoes from burials at Sandwell Priory, which had been deliberately fitted on the corpses and left on them when they were buried within the Priory. Even these shoes, although in quite good condition, were obviously not new when buried (Thomas 1991, 110).

Furthermore, it is probable that the shoes went through at least two, if not more, stages of ownership, being worn first by one person, then repaired and

handed down, for instance to servants, or sold as second-hand, repaired shoes. It used to be common, until the last quarter of the twentieth century, for shoes to be handed down in a family to younger children. This practice only ceased because of concerns that the interior of a shoe, moulded to the shape of one foot, might damage the soft, immature foot of a subsequent wearer. Even today, charity shops quite commonly sell nearly new shoes. Accordingly, the High Street shoes probably represent two different classes of wearer: the original purchaser, and the less well-off recipient or purchaser of a repaired pair.

Two of the High Street shoes also carry a feature that most definitely implies wealth, silk. Although relatively common in 12th-century Europe, it must be regarded as an indication of luxury (The Textiles, this volume). Another possible sign of wealth is the vamp stripes. These have been noted on shoes worn by a king or other important figure in 11th–12th-century manuscripts. However, Grew and de Neergaard (1988, 119) discount the significance of this feature, given the high proportion of shoes with such decoration in the London assemblages.

Nevertheless, vamp stripes imply extra work and, probably, materials and therefore suggest that shoes possessing them were more expensive. Furthermore, although foot-wear with vamp stripes features significantly in the London assemblages, other parallels are not so common, thus suggesting that they are an indicator of wealth. It is therefore of interest that the boot with the most elaborate vamp stripe is a child's.

Another possible indicator of wealth is the linings, represented by a scrap of felt in one boot, and suggested by internal tunnel stitching on three others (Types Di, F and H), and by inturned quarters on two Type Bi uppers.

The shoes also reflect a few signs of bunions. The cause of bunions (*hallux valgus*) is incompletely understood but may include genetic predisposition, arthritis, gout and other factors all of which may be exacerbated by ill-fitting or tight footwear. Thus this foot condition may have been caused in part by the shoes themselves, although three of the shoes had Type 1 soles, which were least likely to push the big toe inwards. It is possible that these straight, wide soles were deliberately chosen in order to accommodate a swollen joint.

