

THE WOOD

The worked wood

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Introduction

Although there is very little direct site evidence for local woodworking, there would almost certainly have been turners and coopers in or near Perth throughout the medieval period, as well as people working with wood for construction purposes and in the manufacture of many everyday items. Amongst the worked wood itself, there are a few items which give tangible indication, however indirect, of woodworking in the vicinity. These are two waste offcuts from the technique of making large circular holes in radially-split boards, Cat Nos 337/A8114 and 242/A05-0221a, two small discs of wood, Cat Nos 375-376/A05-0068a-b, which may be the waste shavings from the augering of a hole using a spoon bit, and two possible waste cores from lathe-turning, Cat Nos 139/A9099 and 305/A05-0091. A turning core is a small, usually conical or truncated conical piece of wood which is cut away from the internal base of a bowl at the end of the turning process. It bears marks on its flat surface which result from where the mandrel was fixed to it when the roughout bowl was secured to the lathe (for further details about medieval and earlier lathe-turning in the British Isles, see below; Morris 1982, *passim*; Morris 1984a, Chapter 8; Morris 1985; and especially Morris 2000, 2116-20).

Woodworking waste

Including lathe-turned waste cores

The sheer quantity of worked wooden artefacts argues for some degree of local craftsmanship. There is, for example, a considerable range of shapes and sizes amongst the stave-built vessels. Moreover several of the staves from small bowls were discarded in good condition, indicating that they were easily and cheaply replaced (Neugebauer 1975, 121). At the other end of the scale wet and dry barrels were used extensively for the transport of goods in the Middle Ages and, although only one intact example and evidence for the existence of three or four others were recovered, there must have been a demand for the manufacture and repair of such vessels in a maritime burgh as Perth then was (and still is).

In contrast to the quantity of skilfully-produced wooden artefacts recovered from the High Street excavation, there are innumerable items for which only a general ability to work with wood is required. Some of the domestic utensils, various tools, objects bearing crudely carved decoration, pins, pegs, dowels etc. could have been home produced rather than obtained from more specialised craftsmen.

On the other hand, there are certain artefacts which may well have been brought from outside Perth and/or obtained from specialised woodworkers. Some of the stave-built vessels were probably made of imported timber. All of the turned vessels were craftsmen-made, while two turned bobbins are particularly fine when compared with the other examples of spindle turning.

Some of the more exotic items of wood were introduced into Perth from outside, through trade with the north German ports, for example, but skilled craftsmen such as turners and coopers produced goods for the local market, while others were capable of making items for everyday use.

The practice of woodland management for the regular supply of wood and timber of different sizes is thought not to have been as developed in Scotland during the Middle Ages as in Lowland Britain because there are very few documentary references to regular woodcutting and to industrial woods (Rackham 1976, 93-4). Management of woodland in Perthshire is evident as early as 1256 in a dispute between Lindores Abbey and the Earl of Strathearn over the abbey's wood supply from the earl's forest (Crone and Watson 2003, 70). However timber of various sizes must have been available in Perth in large quantities, whether or not it came from carefully cropped and rotated areas of woodland, and whether or not it was supplied from the immediate vicinity: the king granted his protection to those transporting wood and timber to Perth and forbade anyone to interfere with those selling or buying those commodities in 1209 (RRS, ii, no 467). Moreover the specimens of wattle from the site which were analysed (Skinner *nd*) consisted mainly of hazel poles of about seven years' growth, suggesting that coppicing was practised to some extent. Lack of documentary evidence should probably not be taken as proof for the absence of some degree of woodland management.

Skinner's unpublished analysis of about 180 pieces of unconserved wood from the High Street excavation included a small number of artefacts: staves, pegs, wedges, pins, etc. The wood species of each piece was identified and each one was studied to determine various aspects of its manufacture. His work provides important additions to the information which can be derived from artefacts conserved by the acetone-rosin method, as were nearly all the objects which are the subject of this report.

The conserved artefacts were not thin-sectioned for identification before conservation and are therefore subject only to surface identification. The only information of significance which has been derived

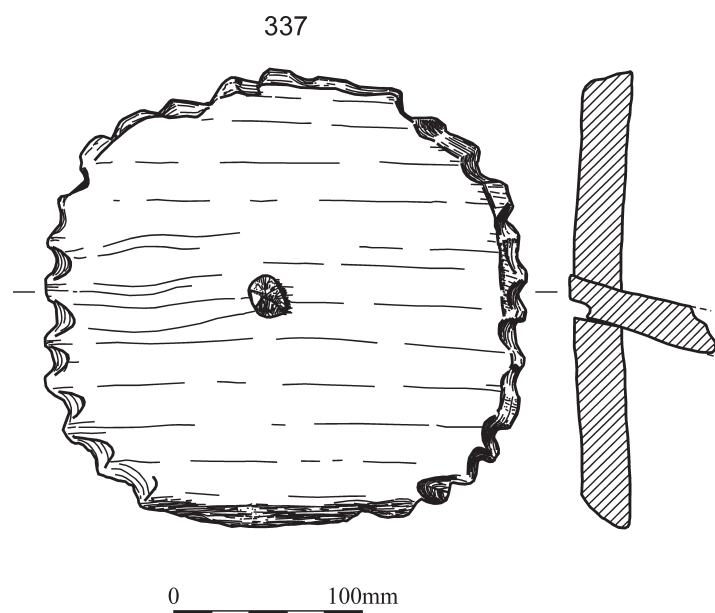
Woodworking waste, including lathe-turned waste cores.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
139/A9099	Lathe-turned waste core	3	VI	M1.2, Pit 2648	<IIg(IIh)
242/A05-0221a	Woodworking waste (offcut)	7	VII	MC126, Pit 7402	IVaa,IVb
305/A05-0091	Lathe-turned waste core/bung?	9	VII	B18 (Phase 2b), North Room, Hall & Hall South—Occupation (10)	IVb
337/A8114	Woodworking waste (offcut)	3	VI	M1.4d, Pit 2566	IVb,IVc
375/A05-0068a	Woodworking waste	9	VII	M9a	IVc,IVcc
376/A05-0068b	Woodworking waste	9	VII	M9a	IVc,IVcc

by this less satisfactory method is that certain of the stave-built vessels may, as mentioned previously, have been imported or else were made of imported softwood timber. The five staves which Skinner examined were made of ash (*Fraxinus excelsior*), Scots pine (*Pinus sylvestris*), oak (*Quercus sp.*), and alder (*Alnus glutinosa*), all native to Scotland. Indeed not one of the 180 items studied was of imported timber. Surface study also indicated that the ten turned vessels (out of 28) which could be identified were all of ash, a wood commonly used in turning in the medieval period (Morris 1984a, 231–2 and Figure 10.7; Morris 2000, 2155–9).

Just as wood of a certain species is usually chosen for a particular purpose, for example the softer ash and alder for turning, oak, being more durable, for construction etc, so too are the structural properties of the timber utilised to give optimum strength, flexibility etc. Staves for buckets and casks are usually cut from cleft or radially-split timber so that the medullary rays run parallel to the long edges, making the stave strong and waterproof. Small staves do not need to be so strong and some of the bowls and tankards from the site are made from staves which are cut from different angles of the timber, that is, tangentially.

Many of the artefacts give clues to the woodworking techniques which were used to make them. Skinner (nd, 2 and Table passim) detected planing, chiselling, and axeing; the use of an adze is more difficult to identify. Circular holes were augered for strainers, in a drain sluice, and in innumerable other objects. A combination of chiselling and whittling produced a decorative shoulder on a porringer stave. Large platters were possibly hewn rather than turned although with small fragments it is not always possible to be certain, and medieval circular vessels in the rest of the British Isles are almost always lathe-turned. Hollowing, if used, could have been achieved with a hand-adze, chisel and gouge or hollowing knife to make the concave form. It is possible that a special curved knife such as those



Illus 159 *Woodworking waste.*

found in 10th/13th-century levels at Århus in Denmark (Andersen et al 1971, 133, EKU and EQE) was used to hollow out a ladle, but it is doubtful that special hollowing or backing knives were used to finish the smaller staves, which were probably axed into shape. The axe, in the hands of a woodworking craftsman, is a very useful and versatile tool, and would almost certainly have been used for most shaping tasks.

Drawknives, either straight or curved, could have been used to make some of the larger staves, especially the wet cask. Very few drawknives have been found archaeologically, but a complete example without its wooden handles was found at Lagore crannog in Ireland (Hencken 1950, Fig 42, D), an Anglo-Saxon drawknife with a straight but broken blade was discovered at Sandtun in Kent, and many are known

from Scandinavian contexts (Wilson 1968, 148, Fig 2g). The accuracy with which wet casks must be constructed demands the use of various types of curved drawknives called hollowing and backing knives, and smaller tools known as round shaves. Iron round shaves have been found at the Anglo-Saxon settlement of Mucking (Morris 1993, 70, Fig 153.2), in 10th/11th-century Durham (Carver 1979, Fig 13), 10th-century York (Morris 2000, 2114 Fig 982, 2115, 2394 no 2259 [sf7278]) and in the Mästernyr tool chest dated to cAD1000 from Götland, Sweden (Arwidsson and Berg 1983, Fig 27.54). Descriptions of the traditional arts of wet, dry and white coopering are to be found elsewhere (Kilby 1971; Hill 1979, 99–111). These do not deal directly with medieval coopering, but give clear accounts of methods which have changed little, if at all, during many centuries.

It has been remarked (Hurley 1982, 310) that turned vessels are commonly excavated in greater numbers than coopered vessels, yet there is evidence here for at least 57 staved vessels, compared with 30 turned ones. Nowhere else in Britain or Ireland is there so much to represent the variety and skill of the work of the medieval cooper.

A few of the artefacts which were produced by less specialised craftsmen are crudely decorated. Most of them have been carved simply with a sharp point, for example a gaming piece with an abstract floral design (Cat No 428/A4325c; Illus 190) and a handle (Cat No 358/A05-0162a; Illus 187). However a tiny fragment of wood, which was probably part of a mounting of some sort, (Cat No 540/A05-0079; Illus 204) has an accurately cut chequered pattern which was executed with considerable care. Many of the turned vessels bear simple decoration in the form of grooves, usually on their outer surface, made by increasing the pressure of the chisel during turning. The carved head (Cat No 650/A11092; Illus 191), which might be part of a piece of furniture, is unfortunately incomplete. It was probably carved with a knife and chisel and is carefully finished, if lacking in artistic merit.

Although advances in conservation have now enabled archaeological wood to be excavated and preserved whenever it is discovered, it is still fairly unusual to find quantities of wood because of its tendency to decompose when buried. Compared with pottery which (unless deliberately ground up) is virtually indestructible, the survival of any wooden artefact for hundreds of years in the ground is purely fortuitous and requires the waterlogged nature of the deposits on the High Street site which prevented serious deterioration of more than 700 artefacts of worked wood. Considering that most wooden artefacts would have been reused or burnt as fuel when they were worn out and broken, those which do survive represent only a minute fraction of those made and used. This collection provides important insight into daily life and work in medieval Perth, which is complementary to the picture already built up from other sources, both archaeological and documentary.

The staved vessels

Fragments of 81 staves, five caskheads, six mug/bowl bases, and small pieces of bindings were recovered, representing about 57 staved vessels. In most cases only a single fragment survived, but in a few instances more than one stave from a vessel was recovered. Most of the pieces are somewhat decayed or damaged; nearly half of them were found in pits or middens and presumably most had been discarded, having fallen into a state of disrepair. This was true of both small and large vessels (cf Neugebauer 1975, 121), although most of the larger bucket staves are more damaged than those in other categories, possibly indicating that smaller vessels were more readily thrown away because they were more easily and cheaply replaced, or their timber was too small to be easily re-cut and re-used.

The vessels from which the fragments come comprise a wide range of forms, including bowls, mugs and tankards, a porringer, buckets, splayed buckets, and casks. Staved vessels are also represented by bindings, caskheads and mug/bowl bases. The latter categories vary considerably in size, the largest caskhead belonging to a cask, the smallest base to a drinking mug or bowl.

In spite of the survival of no more than single pieces, a number of reconstructions have been attempted and capacities estimated. These very tentative reconstructions are illustrated and the capacities are included in the catalogue. It was considered feasible to attempt to reconstruct vessels on the basis of those staves which are complete or nearly so, undamaged, and sufficiently curved and/or bevelled to give some idea of diameter. It must be realised, however, that such calculations can only be taken as a very rough guide. If the dimensions vary by even a small amount, especially on very large vessels, the related capacity can be changed by tens of gallons (Kilby 1971, 61–4). The largest buckets which fall into this category are not included, therefore, as there was too much margin for error on such a large scale.

Except in the case of the cask (Cat No 7/A05-0003; Illus 170), an isolated fragment of hoop (Cat No 364/A05-0159a), and one bowl hoop (Cat No 42/A7803; Illus 162), the form and quantity of the binding material is likewise deduced from the evidence of the staves themselves. There is no indication that vessels were constructed with dowels or feathering between the staves. The surviving withy (Cat No 42/A7803), and the cask's bands (Cat No 7/A05-0003) are types of hoop which would leave only the smallest clue to their existence, that is slightly less wear underneath than over the rest of the stave. Other smaller vessels might possibly have had metal hoops (metal and wooden hoops need not be mutually exclusive (Bersu 1947, 54), twisted twigs or twisted split withies. Iron cask hoops were however very rare at this period. Only one example of a medieval cask bound with iron hoops has been excavated from a site in Britain: an oak cask with 22 staves dated to the second half of the 13th

century, used as a pit or cistern lining at Baker Street, King's Lynn (Clarke and Carter 1977, Fig 30B). A 12th-century reference to iron-bound casks sent by the king of England to France shows that they were rare, costly and prestigious items (Kilby 1971, 110; Morris 2000, 2255). Nail holes, in situ iron nails and trenails, carved ledges, incised or worn lines and slight differences in surface wear are all clues to the position of hoops. All vessels, except the cask, had one, two, or three hoops; the number does not seem to be particularly related to the size of the vessel – the small tankard Cat Nos 626/A05–0017* (Illus 160) has three – and there are not enough examples of each form to say whether the number of hoops could reflect a chronological development (cf Neugebauer 1975, 119).

Oak is the only definitely identified wood used in the manufacture of the staves found on the site. Almost all the buckets and the porringer are made of oak. The cask stave Cat No 110/A9915 is unusual in that it is not of oak but a very hard, straight-grained wood, the same as bucket stave Cat No 62/A10525. Bowl stave Cat No 300/A05–0217 (Illus 163) is probably an imported softwood, perhaps a species of the genus *Abies* (fir) (J Barber pers comm). From surface identification only, the following staves might be made of another imported softwood: bowl staves Cat Nos 277/A05–0125 (Illus 164), 278/A05–0140, 245/A05–0204a and 247–9/A05–0211a,b,c, all of which, like Cat No 300/A05–0217, were recovered from Building 18; bowl stave Cat No 96/A10367 (Illus 162) from an earlier midden; and tankard staves Cat Nos 564/A05–0050 (Illus 160) and 626/A05–0017* (Illus 160) (see below for discussion

on North Sea trade with German ports). Three of the bowl staves are of very pale-coloured wood of at least two different species, all reminiscent of the later Scottish tradition of alternately placed light and dark staves. There is no other evidence that such a practice had already begun to develop.

The surface of several staves are coated with a layer of black residue probably related to their contents. It was not possible to analyse the substance before conservation.

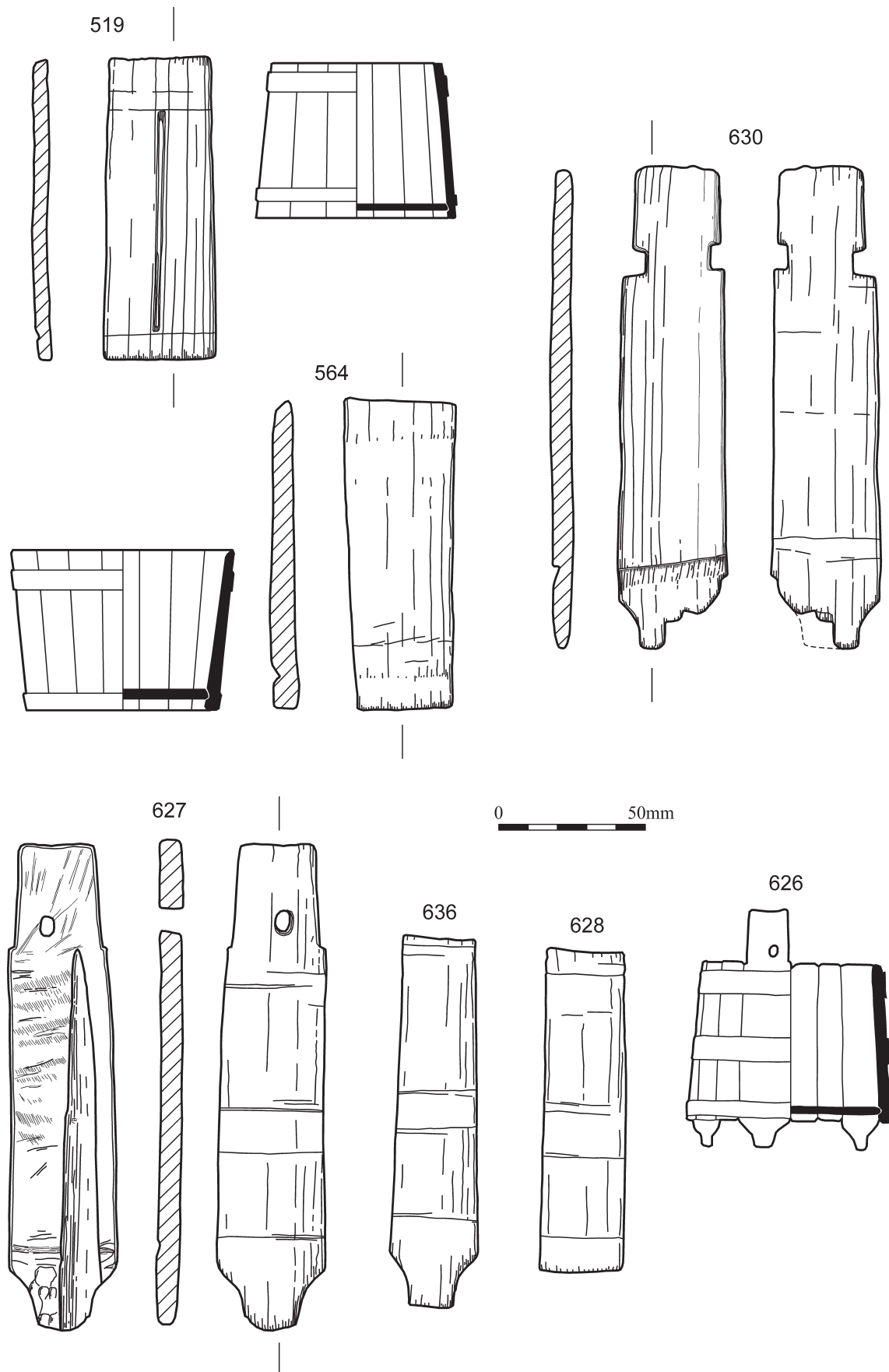
Mug and tankard staves (Illus 160)

Of the 18 staves included in this category, three (Cat Nos 112/A9922b, 564/A05–0050 Illus 160, and 595/A6744) come from staved mugs, and 15 from tankard shaped vessels. All are from a total of only six or possibly seven vessels. Five or possibly six (Cat Nos 519/A05–0150a, 595/A6744, 564/A05–0050, 630/A05–0023, 626/A05–0017* and possibly 573/A05–0021) of the mugs and tankards form a group, being of roughly the same capacity and size (Illus 160). They were recovered from Period V (14th century) deposits. As only the mug stave fragment Cat No 112/A9922b and tankard stave Cat No 169/A05–0205 came from earlier periods, the above group of four/five might be evidence for a concentration of stave-built mugs/tankards, beginning in c1300. Every example of this group was recovered from Rigs VI, VII and VIII. Moreover, two (Cat Nos 626/A05–0017* and 630/A05–0023) came from the same pit (Pit 7013), which may be associated with the destruction of Building 50, an early 14th-century stone building.

Mug and tankard staves.

Cat/Accession	Object type	Area	Rig	Feature	Phase
South Sector					
112/A9922b	Mug stave?	3	VI	M1.1e	IIf
169/A05–0205	Tankard stave	9	VII	B19 (Phase 2a), North Room–Occupation (3)	IIIb
519/A05–0150a	Tankard stave	7	VII	M8a, T7206	Va,Vaa
564/A05–0050	Mug stave	7	VII	B53 (Phase 2), North Area–Occupation (10)	Vbb
573/A05–0021*	Tankard stave	10	VIII	B50(b), North Room–Floor (5)	Va–Vc(–Vdd)
595/A6744	Mug stave	4	VI	P1a, MF2127	Vd
626/A05–0017*	Tankard stave	10	VIII	MC174, Pit 7013	Va–Vd(–Vdd)
627/A05–0022a*	Tankard stave	10	VIII	MC174, Pit 7013	Va–Vd(–Vdd)
628/A05–0022b*	Tankard stave	10	VIII	MC174, Pit 7013	Va–Vd(–Vdd)
629/A05–0022c*	Tankard stave	10	VIII	MC174, Pit 7013	Va–Vd(–Vdd)
630/A05–0023	Tankard stave	10	VIII	MC174, Pit 7013	Va–Vd(–Vdd)
631/A05–0024a*	Tankard stave	10	VIII	MC174, Pit 7013	Va–Vd(–Vdd)
632/A05–0024b*	Tankard stave	10	VIII	MC174, Pit 7013	Va–Vd(–Vdd)
633/A05–0026*	Tankard stave	10	VIII	MC174, Pit 7013	Va–Vd(–Vdd)
634/A05–0037a*	Tankard stave	10	VIII	MC174, Pit 7013	Va–Vd(–Vdd)
635/A05–0037b*	Tankard stave	10	VIII	MC174, Pit 7013	Va–Vd(–Vdd)
636/A05–0048*	Tankard stave	10	VIII	MC174, Pit 7013	Va–Vd(–Vdd)
637/A05–0058*	Tankard stave	10	VIII	MC174, Pit 7013	Va–Vd(–Vdd)

*Items from the same artefact (573/A05–0021)



Illus 160 Mug and tankard staves.

Tankard stave Cat No 573/A05–0021 came from the latest floor level of the north room of the same stone structure, and is either part of the same vessel as Cat Nos 626/A05–0017* or else part of an almost identical vessel.

Cat No 564/A05–0050 is unusually well finished, with a well formed lip, cleanly cut L-groove, and all surfaces smooth. Cat Nos 626/A05–0017*, although much more roughly worked in every respect than Cat No 564/A05–0050, form an interesting vessel in that 11, or possibly 12, of its staves survive. These include two footed examples, one of which also has a lug and cleanly augured hole either for hanging the tankard from a hook or cord, or perhaps for a small arched handle as are often seen on Anglo-Saxon bucket-shaped drinking vessels (cf for example, Morris 1984a, 128–34, Figs 93–97 and Plates I–II). Several of the staves have bands of small parallel scratches clearly visible to the naked eye. They are horizontal outside and diagonal inside the vessel. The scratches might be due to some part of the cooper's rough finishing process. The grooves are sometimes very unevenly cut. The staves seem to have been cut from various angles of small pieces of timber (some radially, some tangentially). Some of them include the central core which in two cases (Cat Nos 626/A05–0017 and 627/A05–0022a [Illus 160]) has fallen away. A smaller, footed mug, bound with three iron(?) bands, illustrated in an early 15th-century French manuscript, is set on a table before a meal is served to the king (Henisch 1976, 170). Cat Nos 626/A05–0017* demonstrate that such vessels had been in use at least a century earlier.

Stave Cat No 630/A05–0023 (Illus 160), which was recovered from the same pit as Cat Nos 626/A05–0017*, seems to have been part of a slightly tapering vessel of similar proportions to the others of the 14th-century group. The groove and rim are at a slight angle to the sides. Since, like Cat Nos 626/A05–0017*, it is footed, there would have been other feet, extending different lengths from the base to compensate for the tilt. Such a vessel is unknown elsewhere, although a 16th-century engraving of a cooper's workshop illustrates a shallow, lugged tub with a sloping rim (Barnycz-Gupienicz 1961, Fig 9).

Stave Cat No 169/A05–0205, which comes from a tall, slightly tapering vessel, was retrieved from an occupation layer within the north room of Building 19 (Phase 2a), an early 13th-century structure. Like Cat Nos 519/A05–0150a and 564/A05–0050, it came from Rig VIII. Two somewhat smaller tankard-shaped vessels appear in a 15th-century illuminated manuscript (Hartley 1931, 130, B). A woman bringing water for a

tub in which to bathe a baby bears a yoke from which the two vessels are suspended. The tapering shape would help to prevent spillage while being carried (see also Lids, below).

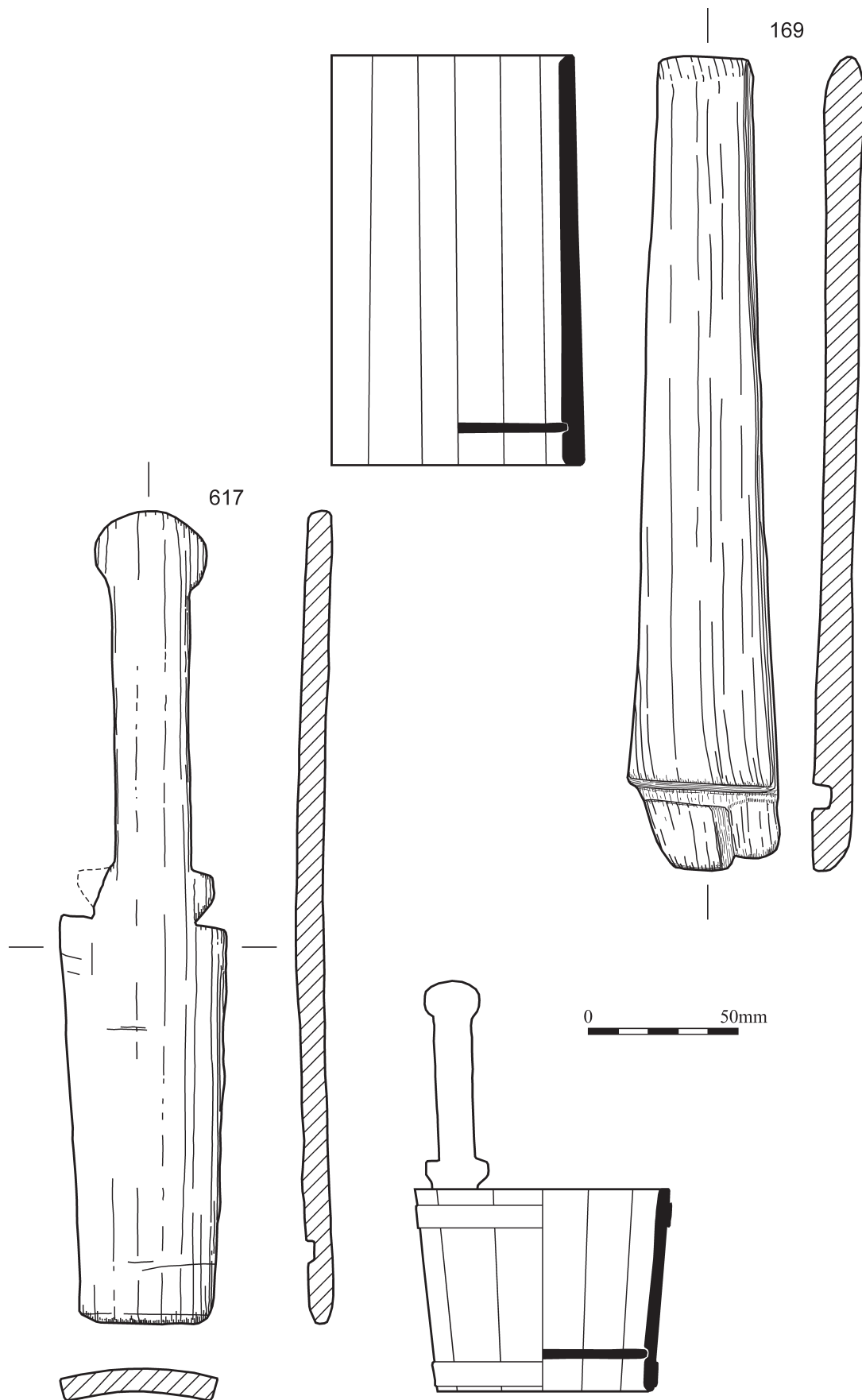
Various examples of mug- or tankard-staves from other sites suggest that this type of vessel was fairly common and has a wide date range. It would have been an alternative drinking vessel to lathe-turned wooden cups and perhaps later ceramic ones. Perth seems to have produced one of the largest archaeologically excavated collections of this type of vessel. Examples of other staves or bases have been found in Anglo-Scandinavian and medieval York (Morris 2000, 2227 Fig 1068 and 2406–7 no 8730 [sf7349], 2408 nos 8771 [sf8278] and 8774 [sf2254], 2410 no 8824 [sf3014]; MacGregor 1982, Fig 32, 3); 10th-century Lagore Crannog (Hencken 1950, Fig 76); 11th-century Dublin (Morris 1984a, Fig 114, C315–16); 13th-century Cork (Hurley 1982, Figs 16.4, 2 and 16.3, 1–2); Trim Castle, Co. Meath (Sweetman 1978, 184); 15th-century Hull and London (Morris 1984a, Fig 115, C318–20); medieval Coventry (Morris 1984a, Fig 114, C31); and late Norse period Papa Stour in Shetland (Morris 1999, 185–6, Fig 102, J71 sf11).

Porringer and lugged staves (Illus 161)

Stave Cat No 617/A3199 (Illus 161) is from a type of vessel in which only one stave has an elongated handle rising above the vessel rim edge. They have variously been termed porringers, dippers, luggies, piggins or noggins in various parts of Britain and are a type of vessel with a long history. Cat No 617/A3199, found in a mid(?)–14th-century midden is the earliest dated Scottish example of its kind, and the only archaeologically excavated example from the whole of the British Isles. The type became a very common household vessel, particularly in Scotland, Ireland, and Wales, but also in Scandinavia and elsewhere. Surviving examples range in size from tiny 75mm high noggins (Estyn Evans 1957, 74) to milking piggins somewhat larger than the Perth example (Wilson 1973, fig facing p 160). It may indeed have been a milking piggin. A 13th-century illustration in a bestiary (now in the Bodleian Library) shows a woman holding the raised handle of a vessel of this type with one hand, milking a cow into the vessel with the other hand (Fox 1985, page opposite August 13–18). Estyn Evans (1942, 122) illustrates one which is only slightly larger. On the other hand, a butter container of almost identical size was dug up from a peat bog at Tyane/Moyagoney in Co Londonderry, bearing the letters IM, the Irish word for butter, inscribed on the lugged stave (May 1950, 77).

Porringer and lugged staves.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
320/A9638b	Lugged stave	3	V	MC155, Pit 2691	IVb,IVc
617/A3199	Porringer stave	4	V	M3c	Vd



Illus 161 Tankard stave Cat No 169. Porringer stave Cat No 617.

The medullary rays are parallel to the sides of the stave (it was radially-split). The lug was chiselled and whittled into shape and fairly roughly finished. The square groove was chiselled down and then perhaps cut out with a knife.

Cat No 320/A9638b is probably a fragment of a bucket stave which had two raised perforated staves for a handle or a carrying pole. It was recovered from a Rig V backland pit which dated from the later 13th century.

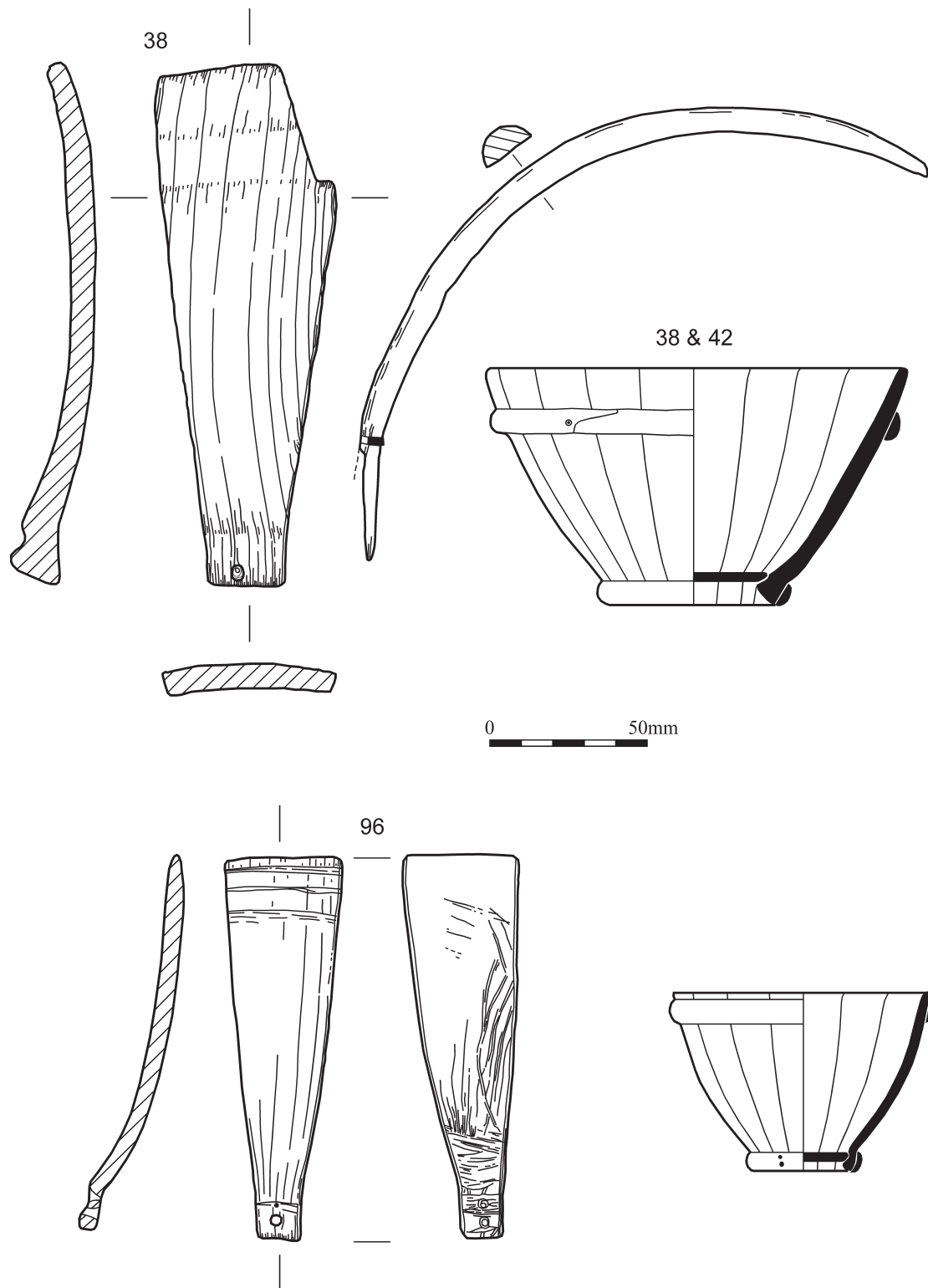
Bowl staves and hoop (Illus 162–4)

Of the 16 staves in this group, 12 came from deposits which belonged to the second half of the 13th century. Of these, nine, which would have come from three or four vessels, were recovered from the destruction and reconstruction layers of Building 18, while another (Cat No 300/A05–0217; Illus 163) was found in the cesspit (Pit 7314) attached to the north room of B18 (Phase 2b). The latter is exceptional for (unlike the others in this category) it comes from a cup-like vessel which, with its binding cord(s) fixed against a single, narrow

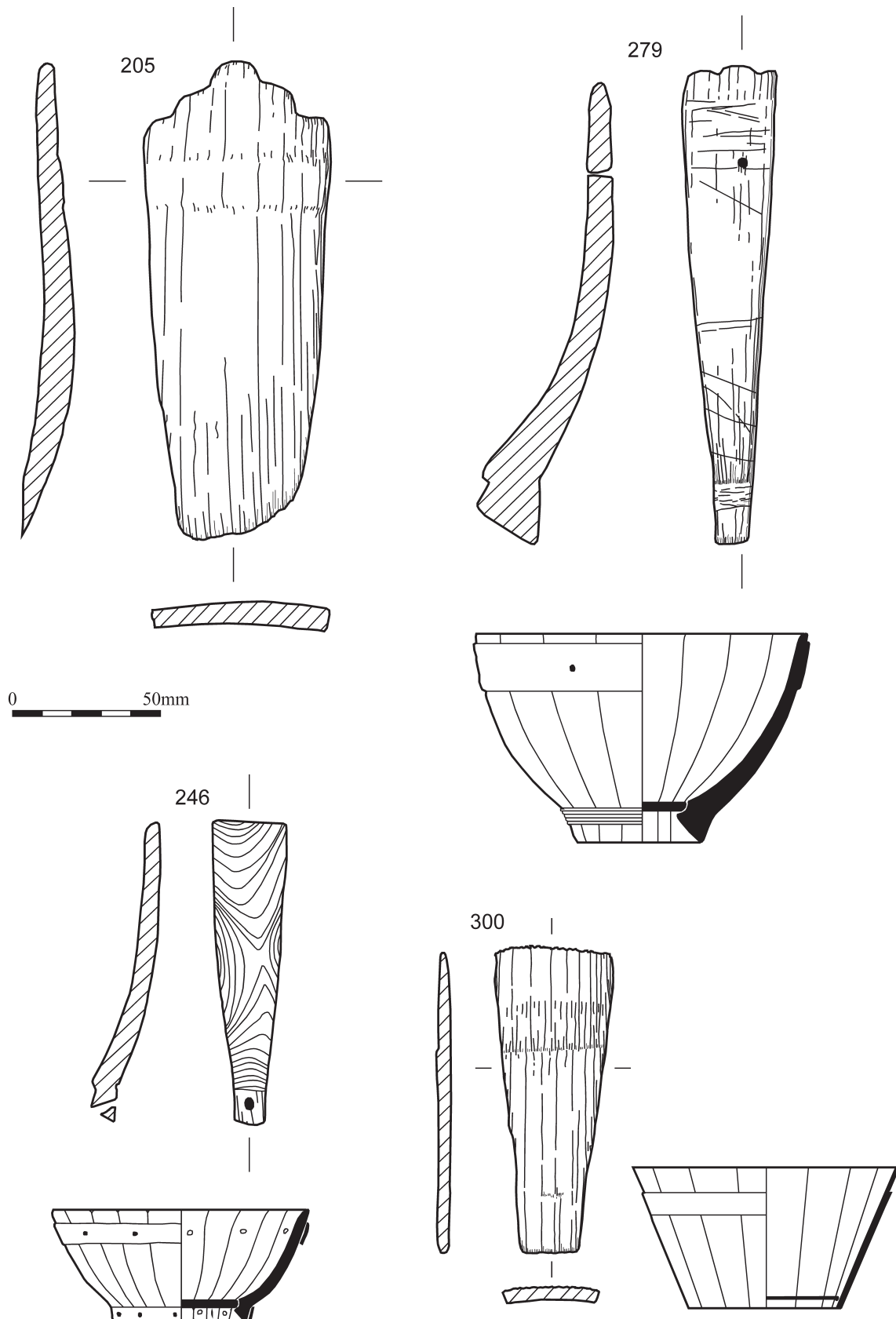
ledge, is a rather large, outlying example of the group of everyday vessels found in great quantities in Lübeck and also in several other German towns, and in other north European towns such as Southampton, Århus, Amsterdam, Gdansk, Novgorod, Buda, Ribe, Dublin etc (Neugebauer 1975, 118–20; Platt and Coleman-Smith 1975, Fig 228; Andersen et al 1971, BFM and EBF; Baart et al 1977, 346–348; Barnycz-Gupieniec 1961, Plate 5: 5, 6; Kolchin 1968, Plates 12–13; Holl 1966, Abb 60, 5–6; Bencard 1977, Figs 10–11; Morris 1984a, Fig 113, C305iii). A complete stave-built bowl of this type was also found at Kirk Close, Perth, although being made of Scots pine, alder and hazel, it is more likely to have been of local manufacture (Ford 1987, Illus 75:127, and Illus 78). As a possible imported softwood No 300/A05–0217 should probably be considered as an isolated import rather than a native product. Although it came from a backland part of Rig VII, both phases of B18 are thought to have been burgesses' houses where a find of northern European origin would not have been out of place. However, it is not typical of the Lübeck group, being larger and also

Bowl staves and hoop.

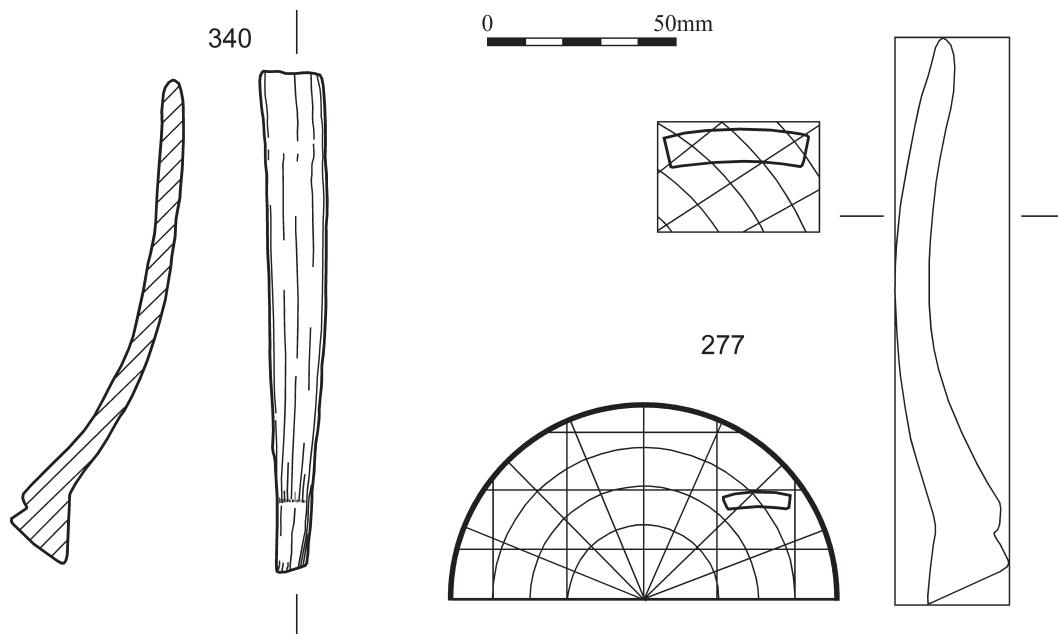
<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
2/A9816	Bowl stave	1	V	MC005, Pit 3805	(Ia–)Ic
38/A7582a	Bowl stave	2	VI	M14b(b), Pit 3625	Ie
42/A7803	Bowl hoop	2	VI	M14b(b), Pit 3625	Ie
43/A7621	Bowl stave	2	VI	M14b(b), Pit 3625	Ie
96/A10367	Bowl stave	3	VI	M1.1c, Pit 5005	IId
205/A5464	Bowl stave	2	V	P2.2a	IVa
245/A05–0204a	Bowl stave	7	VII	B18 (Phase 1/2), Pit 7324	IVaa,IVb
246/A05–0204b	Bowl stave	7	VII	B18 (Phase 1/2), Pit 7324	IVaa,IVb
247/A05–0211a	Bowl stave	7	VII	B18 (Phase 1/2), Pit 7324	IVaa,IVb
248/A05–0211b	Bowl stave	7	VII	B18 (Phase 1/2), Pit 7324	IVaa,IVb
249/A05–0211c	Bowl stave	7	VII	B18 (Phase 1/2), Pit 7324	IVaa,IVb
272/A05–0196	Bowl stave	7	VII	B18 (Phase 2a), North Room & Hall-Construction (1)	IVb
277/A05–0125	Bowl stave	9	VII	B18 (Phase 2a), Hall & Hall South-Construction (3)	IVb
278/A05–0140	Bowl stave	9	VII	B18 (Phase 2a), Hall & Hall South-Construction (3)	IVb
279/A05–0148	Bowl stave	9	VII	B18 (Phase 2a), Hall & Hall South-Construction (3)	IVb
300/A05–0217	Bowl stave	7	VII	B18 (Phase 2a), External 1, Pit 7314	IVb
340/A5366	Bowl stave	3	V	M1.4g	IVb,IVc



Illus 162 Bowl hoop and staves.



Illus 163 Bowl staves.



Illus 164 Bowl staves.

a late occurrence of a cup with a single cord. Contact with northern Europe is indicated by a letter written in 1297 by Andrew Murray and William Wallace, immediately after their victory at Stirling Bridge, to the mayors and communes of Lübeck and Hamburg. The Germans were informed that the kingdom of Scotland had been recovered from the English and that, consequently, the Scottish ports were once more open to German merchants (Stevenson 1841, 159).

While the majority of the bowl staves are of the later 13th century, it is significant that three staves (Cat Nos 2/A9816, 38/A7582a [Illus 162] and 43/A7621) came from deposits that dated from before 1150: No 2/A9816 came from the earliest phases of the High Street site. Bowls of this type, which appear to be related to the later Scottish quaich, were well developed before 1150. Their presence is evidence for a skill and inventiveness among dry coopers that exceeded contemporary Continental developments in stave-built tableware. This type of stave-built bowl with its rounded curved sides does not appear to have been made by coopers in England at this time, where lathe-turned bowls and cups were the standard high quality wooden tableware of the period.

The manufacture of these vessels, which each had a protruding foot making an obtuse angle with curved stave, required great skill in making tapered, curved and concave staves. Illus 164 shows the example of stave Cat No 277/A05–0125 and the position it occupied in the uncut block, showing that it was tangentially converted from the raw material. Nearly all the surviving staves of this type are cut with both rays and grain close to 45° across the stave, wasteful if the blocks had been radially-split, but they are more likely to have been tangentially sawn. Various grain

patterns are possible when roundwood is sawn into tangential blocks. For example, the five staves Cat Nos 245/A05–0204a, 246/A05–0204b (Illus 163) and 247–9/A05–0211a–c have the growth rings more or less parallel with their long sides. Small, curved staves do not need the strength derived from having medullary rays parallel to or at an acute angle to their sides and in this case the beautiful shiny grain is exploited to produce an attractive finish. Moreover, if there had been any warping it would have made the vessel more watertight because the staves were cut with their backs to the outside of the timber.

Stave Cat No 272/A05–0196 is also different from the others in this group in that it is cut in the conventional way, with the grain running from side to side.

Notable amongst these staves are: Cat No 205/A5464 (Illus 163) whose decorative lug was chiselled into steps, sloping towards the inside, then carefully rounded off with a knife; Cat No 38/A7582a (Illus 162) whose deeply notched rim was cut out by notching in from the side with a chisel and chipping down from the top; and Cat No 43/A7621 whose ornamental notched rim was rather roughly whittled out with a knife.

Although most of the staves give the impression of having very smooth surfaces, on closer inspection nearly all of them bear tooling marks which dispel the illusion that special sets of hollowing and backing knives were used. The insides in particular display gouge and possibly hand-adze marks. Cat No 96/A10367 (Illus 162) is an extraordinarily clear example, with gouged channels up to 1mm deep. Cat Nos 245–6/A05–0204a,b and 247–9/A05–0211a–c appear to have been fully constructed as bowls before the outer surface was shaven down. The areas under both hoops

are covered with unsmoothed facets, but the rest of each stave is smooth. This might have been the usual procedure but in this case the extreme roughness of the unsmoothed parts draws attention to it. Bevelled edges were probably axed and more or less smoothly finished, and the grooves were generally fairly roughly chiselled or whittled down from both sides.

These staved bowls are either the direct antecedents of the quaich or perhaps one of numerous, as yet undiscovered, variations of the form. A late 10th-century curved stave, 150mm long, with geometric decoration, found in Ballinderry crannog No 1, might be one such variation (Hencken 1936, 137), as might be a plain curved stave of similar proportions from Iron Age Glastonbury (Bulleid and Gray 1911, 321).

Bucket staves and tub staves (Illus 165–7)

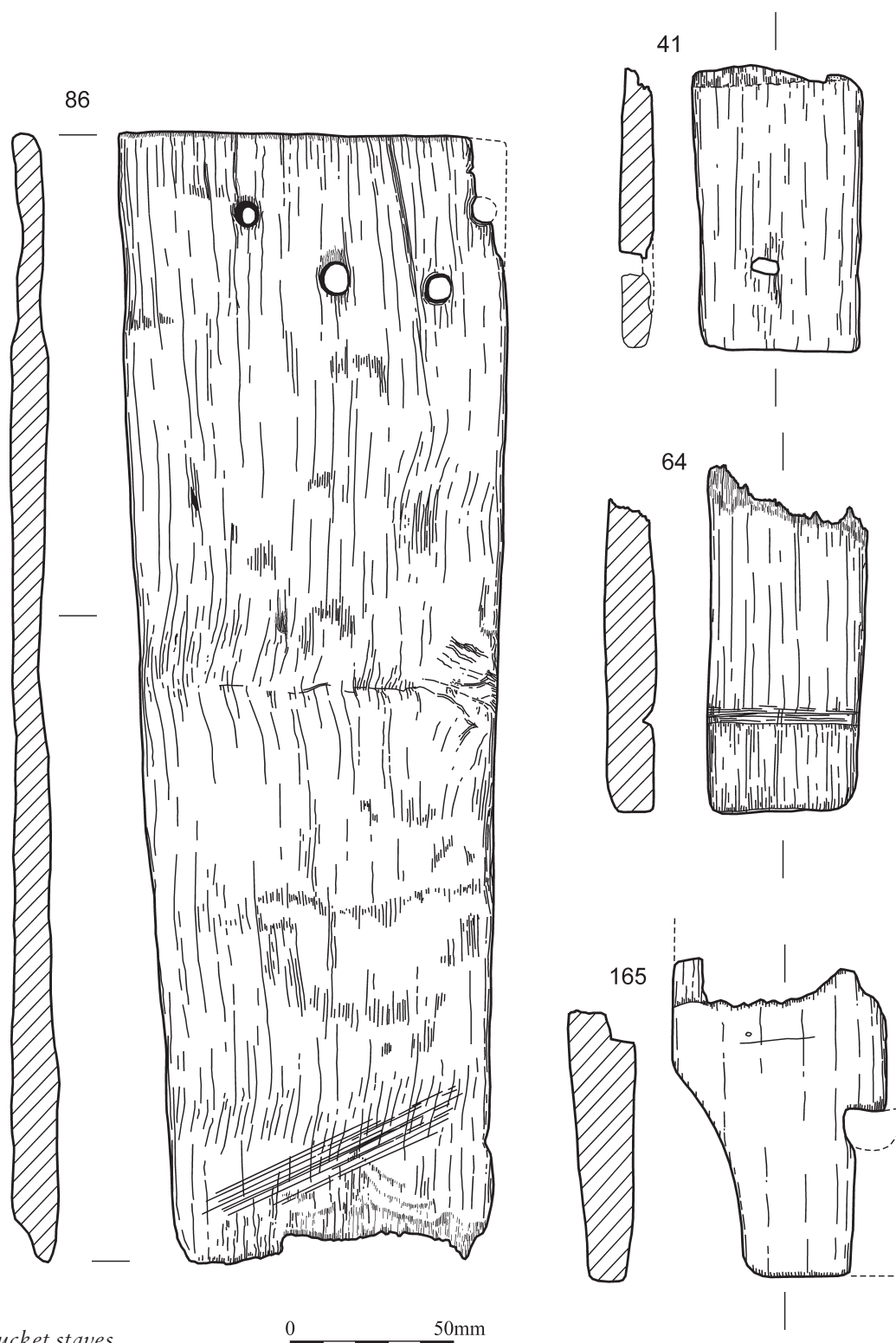
The 20 more or less straight-sided buckets or tubs recovered from the site range in height from c200mm to more than 525mm and in diameter from c260mm upwards. Examples were recovered from all periods.

With one exception, Cat No 208/A8657, they are in a worse condition than any other group of staved vessel. Cat Nos 316/A05–0191 (Illus 167) and 296/A05–0237g

are by far the largest tub staves. Cat No 316/A05–0191 (Illus 167) would have been part of a very heavy, wide, slightly tapering vessel, perhaps to be used in a fixed position, although the damaged notch in the foot of this stave might have held a knotted cord to assist in tipping the tub. A foot fragment, Cat No 165/A6742 (Illus 165), if it is a bucket stave fragment, might have served the same purpose as the broken notch of Cat No 316/A05–0191. There would have been at least two other footed staves to provide balance (cf tankard staves Cat Nos 626/A05–0017* and 630/A05–0023; Illus 160). Cat No 296/A05–0237g was part of a straight-sided vessel. Manuscript illuminations of the late 13th and early-14th centuries show tall, straight-sided tubs in use for bathing, for holding water, etc (Randall 1966, Plates XXXIX, 188; LXXXIII, 392; XC, 434; XCVI, 464). Some illustrations show that some tubs were made without provision for handles (Black 1992, Plate 34). Staves up to 570mm in height, belonging to substantial tubs, were also found at Coppergate, York (eg Morris 2000, 2233, 2234 Fig 1074, 2235–7, 2407, Figs 1073–5 nos 8751–2 [sf16097–8]). Some of them had D-shaped handle holds which allowed the vessels to be picked up and moved. An early 15th-century illustration of such a tub shows what these and some of the Perth

Bucket staves and tub staves.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
20/A10493	Bucket stave?	4	VI	B16 (Phase 1), Occupation (1b)	(Id)Ie
21/A12636a	Bucket stave?	4	VI	B16 (Phase 1)	(Id)Ie
41/A7793b	Bucket stave	2	VI	M14b(b), Pit 3625	Ie
62/A10525	Bucket stave	4	VI	B16 (Phase 2), Occupation/Destruction	If,IIa
64/A10349	Bucket stave	4	VI	B16 (Phase 2), Destruction	If,IIa
85/A12564a	Bucket stave	3	VI	B4, MW5201	IIc
86/A12564b	Bucket stave	3	VI	B4, MW5201	IIc
87/A12564c	Bucket stave	3	VI	B4, MW5201	IIc
137/A9728a	Bucket stave	4	VI	B12 & B13, WW2286	IIe–IIh
138/A9728b	Bucket stave	4	VI	B12 & B13, WW2286	IIe–IIh
165/A6742	Bucket stave	1	VI	MC111	IIb–IIIb
208/A8657	Bucket stave	3	V	P2.2b	IVa
231/A8519	Bucket stave	3	V	B3 (South), T2570	IVa,IVaa
240/A6157	Bucket stave?	4	VI	MC160, Pit 2232	IVb
252/A05–0166	Bucket stave	9	VII	B18 (Phase 1/2), PH9270	IVaa,IVb
275/A05–0198a	Bucket stave?	7	VII	B18 (Phase 2a), North Room & Hall-Construction (2)	IVb
296/A05–0237g	Bucket stave	7	VII	B18 (Phase 2a), External 1, Pit 7314, MW7319	IVb
316/A05–0191	Tub/bucket stave	10	VIII	M9b(a)	IVc
317/A05–0203	Bucket stave	10	VIII	M9b(a)	IVc
562/A05–0077	Bucket stave?	7	VII	B53 (Phase 2), North Area–Occupation (7b)	Vbb



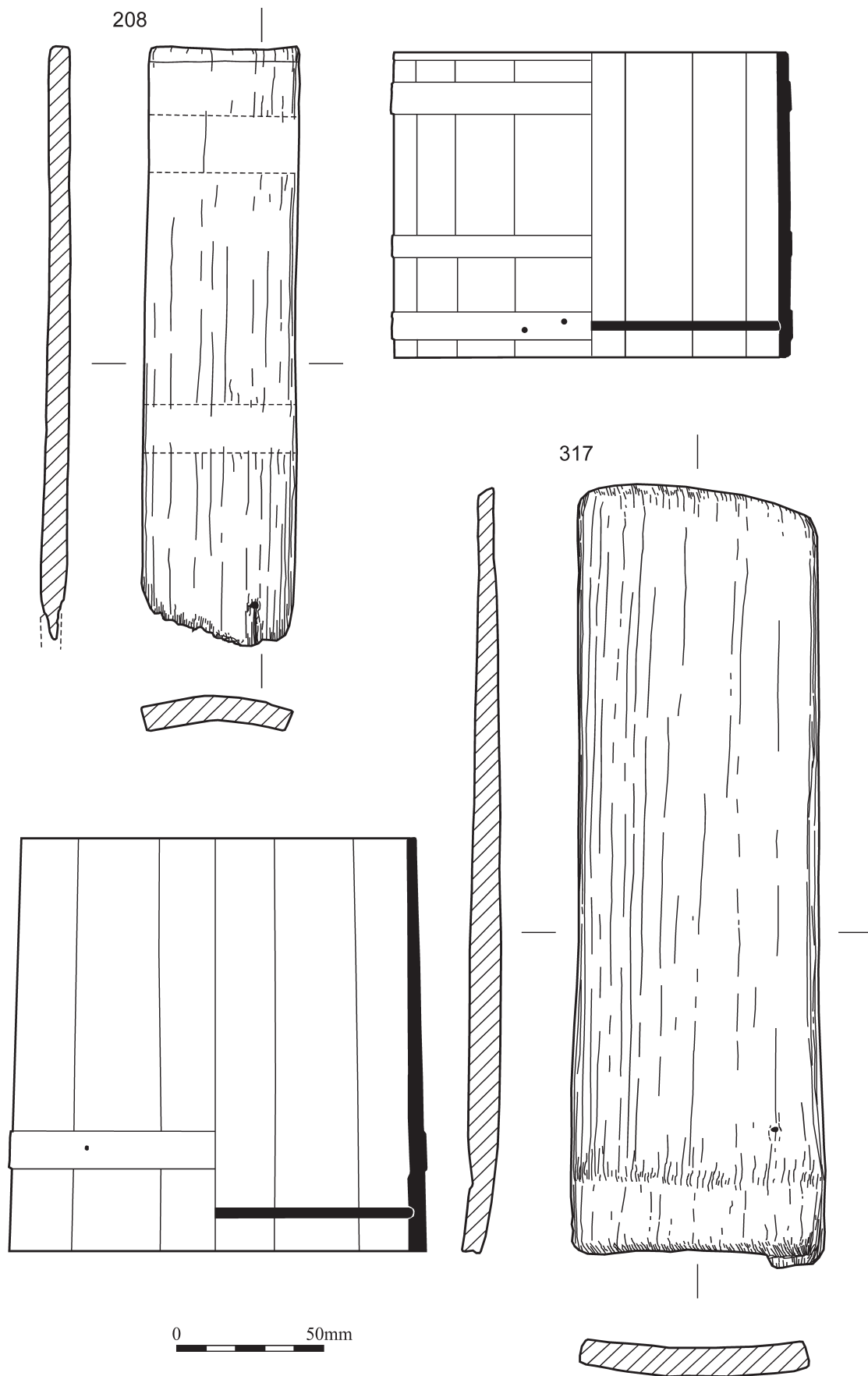
Illus 165 *Bucket staves.*

vessels may have looked like (Morris 2000, 2233, Fig 1072). Tubs have also been found at Seacash in Co. Antrim (Lynn 1978, Fig 10, 1–3) and in the Oseberg ship burial (Brøgger and Shetelig 1928, Plate 12). A 14th-century tub found deliberately placed in a river channel at St Aldate's, Oxford could have been used for storing live fish (Morris 1984b, 74–6 and microfiche E04).

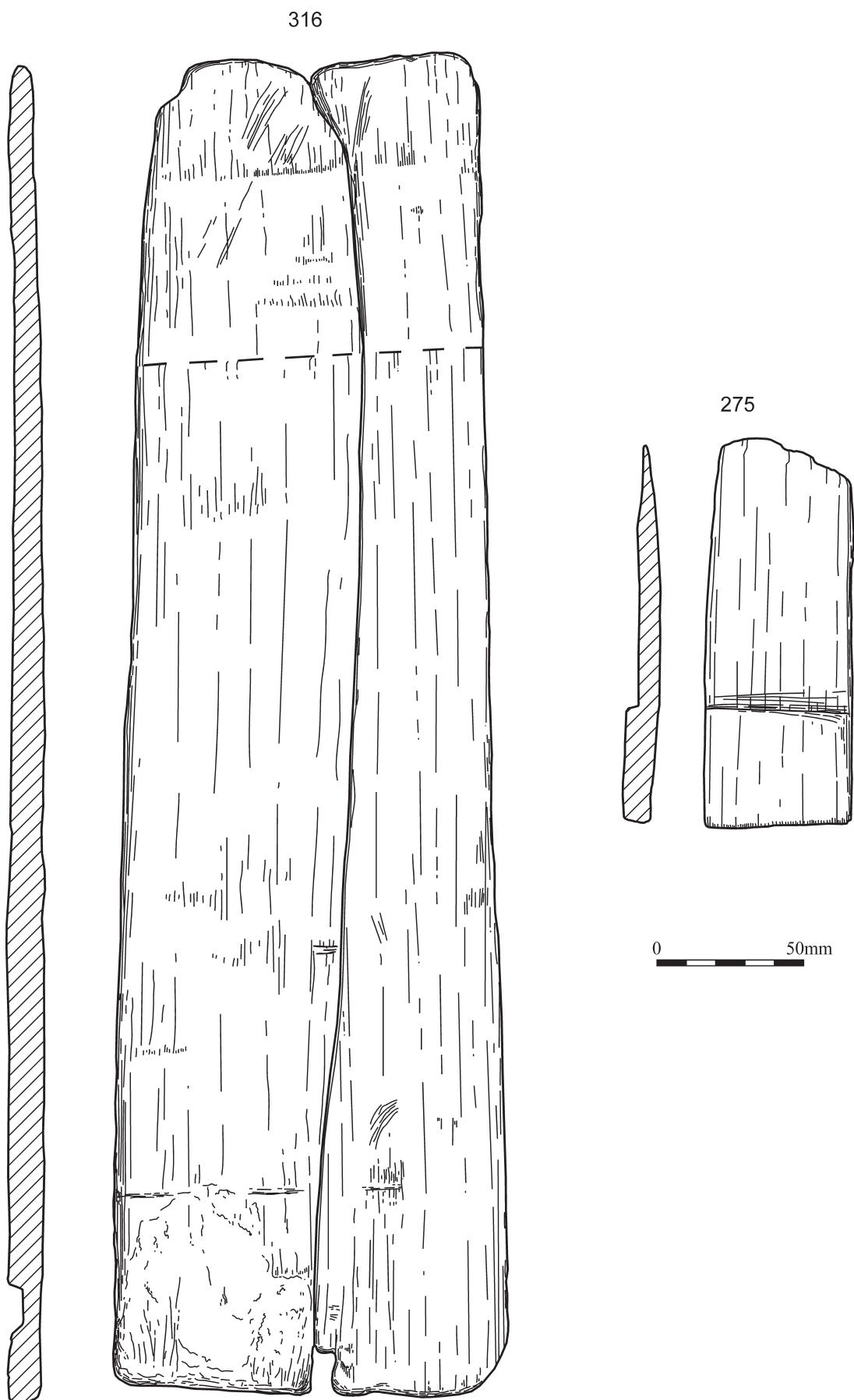
The four holes at the top of bucket stave Cat No 86/A12564b (Illus 165) were for the attachment of a handle of some sort. The broken one and the two

lower ones were augured; the fourth is smaller and much splayed to the outside. There is no wear related to a metal mounting, so perhaps four knotted cords were used, twisted into a single rope. The full vessel would have been very heavy and the break through one hole might be a result of this. Stave Cat No 252/A05–0166 has the remains of a similar broken hole, splayed towards the outside.

Bucket stave Cat No 208/A8657 and fragment Cat No 240/A6157 are strikingly different from the others in that they are much better finished.



Illus 166 *Bucket staves.*



Illus 167 *Bucket staves.*

The incised line around the rim of Cat No 208/A8657 suggests that a metal strip binding was used in addition to the three hoops. The Luttrell Psalter, an East Anglian manuscript of the mid-14th century, shows a woman carrying sheep's milk on her head in a similar-sized bucket with a narrow (metal?) binding round the rim (Randall 1966, Plate XXIX, 381a).

Included in this category are three possible staves (Cat Nos 20/A10493, 21/A12636a, 275/A05–0198a), part of whose thickness has been cut away to leave an internal ledge instead of a groove.

Splayed bucket staves (Illus 168–9)

These four staves, two of which came from mid- to later 12th-century layers, and two from deposits laid down in the second half of the 13th century, represent buckets with widely splayed sides. Cat Nos 131/A10527 (Illus 169) and 236/A05–0215 (Illus 168–9) lack proper grooves. Cat No 131/A10527 has a much worked area defined on either side by two slight grooves; Cat No 236/A05–0215 has two grooves, the upper of which is very worn. Re-use of the staves and the cutting of a second groove seem the most likely causes, although double bottoms are known in small porringers; a few dried peas were put inside to rattle when a second helping was required. Cat No 75/A6757a (Illus 168) is one of only two staves to have a ledge chiselled and cut into it to hold a hoop or cord in place. It appears to come from an extraordinarily widely splayed vessel. The other ledged staff is Cat No 300/A05–0217 (see Bowl staves; Illus 163), but, unlike it, Cat No 75/A6757a has evidence for several additional bindings (see also Bucket staves; Illus 166).

Buckets are usually parallel-sided or wider at the top. The splay on staff Cat No 75/A6757a is slightly unusual in that the splay is pronounced, but buckets wider at the rim edge are by no means uncommon. Many were found in medieval York, including a complete early 15th-century bucket which had been lost in a cask-lined well (Morris 2000, 2092 Fig 967, 2225 Figs 1066–7, 2226, 2407 no 8742 [sf4176]), and many others have already been studied together (Morris 1984a, 138–42, Figs 100–106). The rarest vessels are those which are wider at the bottom than the top, for example, three staves of similar shape were discovered in 13th-century levels in Cork, coming from a funnel shaped vessel, their wider ends being grooved to hold a base (Hurley 1982, 309).

Cask staves and hoops (Illus 170)

Although a total of 21 cask staves were discovered during the excavation, 18 (Nos 7/A05–0003a–r) come from one vessel (Illus 170) and these, and the other fragments, provide little evidence about this type of vessel. Nonetheless there were probably many types and sizes of cask in use in an early Scottish burgh, especially one like Perth which had a thriving trade by water, for casks were used for transporting all manner of wet and dry goods as well as for general storage.

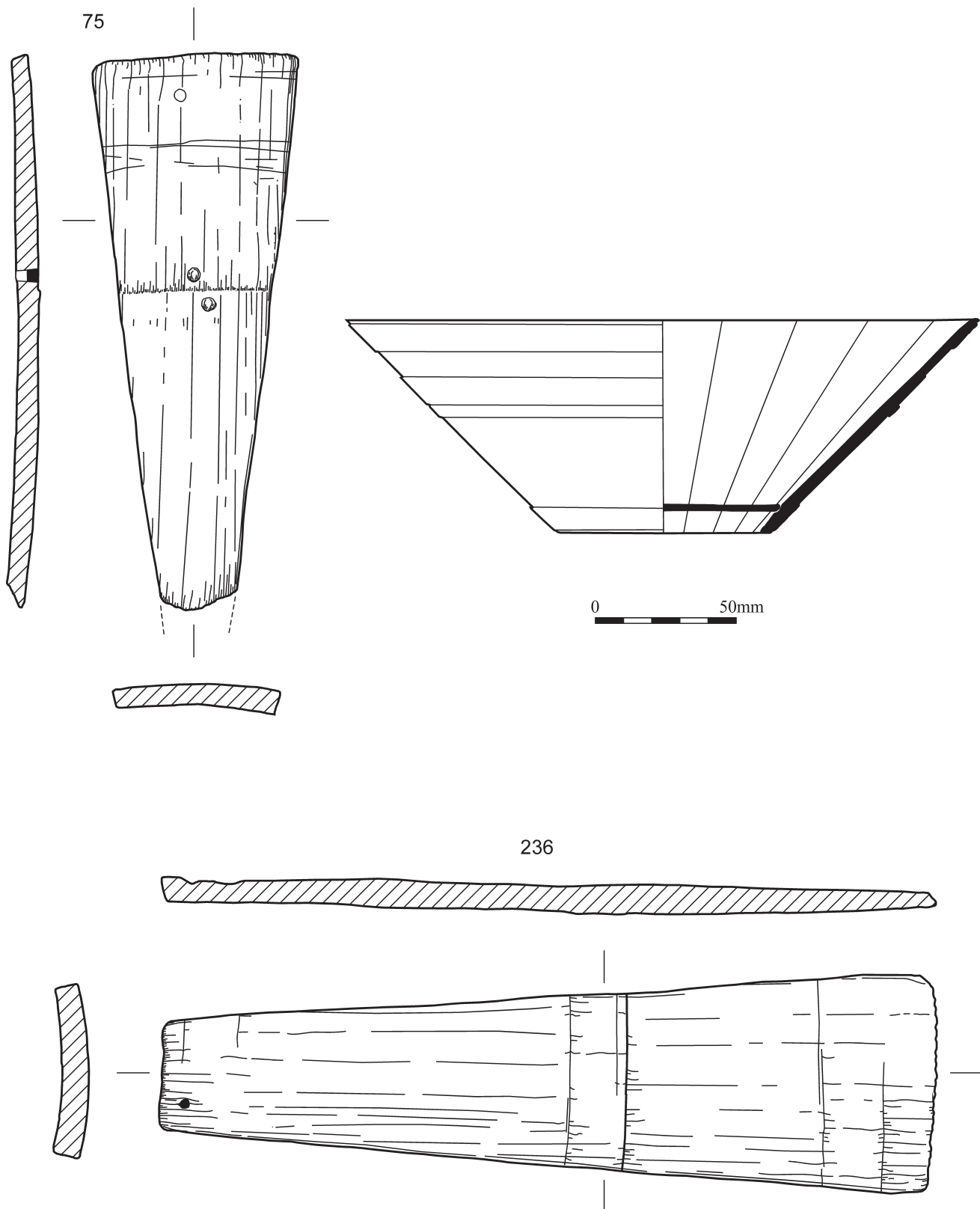
The High Street cask-lined well dates from shortly before 1150. The staves have been dated by dendrochronology to after AD 1136 and the barrel reached Perth as a probable wine barrel from north-eastern France (Crone 2005; Crone and Baillie 2010). It is one of a number that have been found during excavations in England and Scotland. Their distribution has been

Splayed bucket staves.

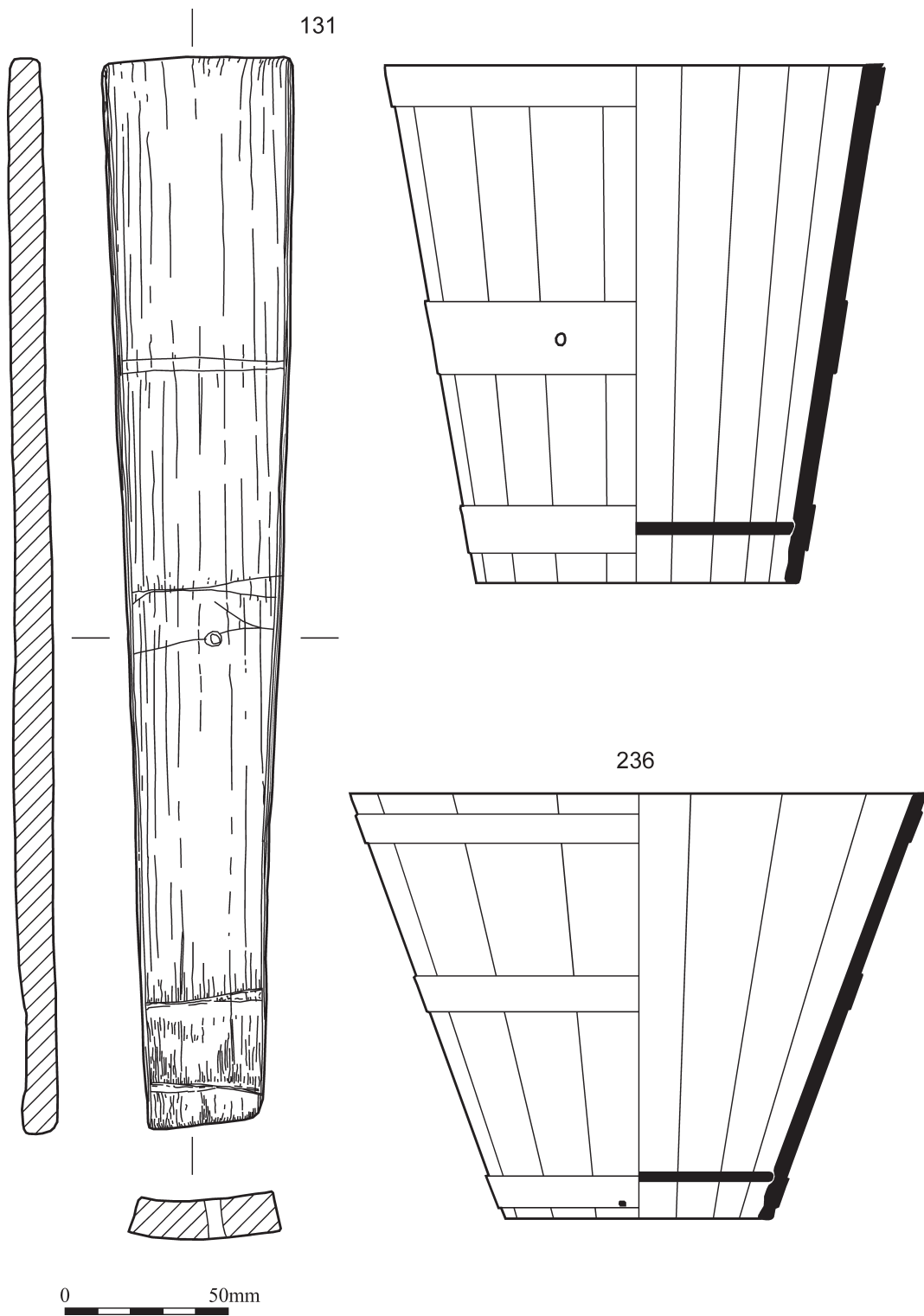
<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
75/A6757a	Bucket staff	1	VI	MC051	Ila
131/A10527	Bucket staff	4	VI	B12, Pit 2345	Ile–IIg
236/A05–0215	Bucket staff	7	VII	B18 (Phase 1b), North Room- Occupation (5b)	IVa,IVaa
285/A05–0100	Bucket staff	9	VII	B18 (Phase 2a), Hall South- Occupation (7a)	IVb

Cask staves and hoops.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
7/A05–0003a–r	Cask: 18 staves and 6 hoops	4	V	MC023, Well 4774, MW4772	Icc,Id
110/A9915	Cask staff	3	VI	M1.le	IIf
319/A9638a	Cask staff?	3	V	MC155, Pit 2691	IVb,IVc
364/A05–0159a	Cask hoop?	7	VII	M9a	IVc,IVcc



Illus 168 Splayed bucket staves.



Illus 169 Splayed bucket staves.

mapped elsewhere (Morris 1984a, Fig 7.12). The Perth cask had been re-used as a well lining. Previously it was used as a wet-cask above ground, for one of its staves has a central bung-hole. Evidence for its re-use is twofold: the trenails in its wooden hoops do not match the holes in the staves themselves, and the lower groove, which would be superfluous for a well-lining cask, since a well needed an open base to allow water to run in, follows two alignments. The tips of two of the staves survived indicating that an upper groove did exist. It is probable that the upper part of the well shaft had been revetted with wattle for fragments were discovered compressed within the barrel. The lower part of the shaft outside the barrel had been so treated.

A cask's capacity could potentially indicate the commodities it might have held, since strict rules were laid down by the medieval Coopers' Guilds as to the capacities of casks, especially of ale and beer barrels (a barrel being a specific size of cask). Different sized casks had different names, some of which have continued in use to the present day. Documentary references to barrels for example show that in the 15th century, wine barrels held 30–36 gallons, and barrels today also hold 36 gallons (Morris 1984a, Fig 7.13). A complicating factor is the lack of a standardised gallon from the medieval period to the present day. There have been four different gallons with different capacities – the wine gallon of 216 cubic inches (used at least in 1297), the Winchester gallon of 268 cubic inches (used at least in 1497), the customary gallon of 231 cubic inches (legalised in 1707 but probably used long before this time) and the modern Imperial gallon of 277 cubic inches (Huggins and Huggins 1973, 182). It would be misleading to use Imperial gallons for capacities of medieval casks such as No 7/A05–0003. The wine or customary gallon might be a more useful measure for this and other medieval casks found in well-linings which may originally have been made to contain wine.

Two methods have been used for calculating the volumes of Cat No 7/A05–0003 and excavated casks from York and other sites (Morris 1984a, Fig 7.14). One treats the cask as two truncated cones base to base; the other assumes the convex wall of the cask is a trigonometric curve rotated about a central axis. The former probably underestimates the capacity, while the latter is probably more accurate, but since all the caveats about the shape and size of excavated casks must apply, both calculations must be viewed only as estimates to be used comparatively rather than as individually accurate measures. The Perth cask's original capacity was approximately 121.5–126.4 Imperial gallons, 145.7–151.6 customary gallons or 155.8–162.1 wine gallons. It would thus approximate to the size of cask usually called a butt or pipe which in 1707 and earlier held about 126 gallons.

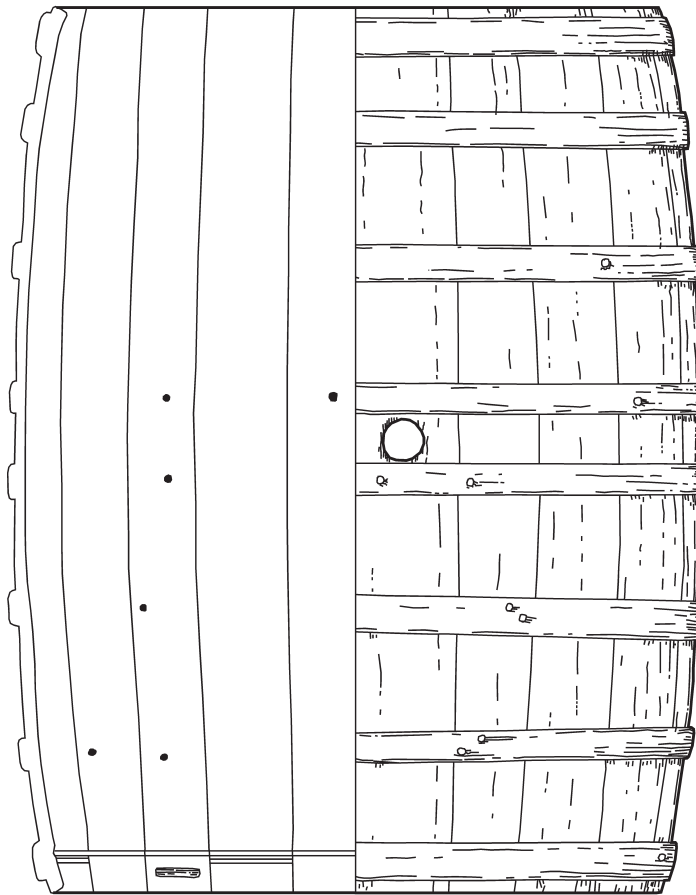
Many other cask-lined wells have been excavated especially in York, where they have been found on the Coppergate, Bedern and ABC Cinema sites (including

three different three-tier cask wells) (MacGregor et al 1977, 16–17; Morris 2000, 2237–2243 Figs 1076–9); at Union Terrace, York (a two-tier arrangement) (Webster and Cherry 1973, 173); at Aldwark; and at Feasegate where the well was 12th/13th-century in date (Dyer and Wenham 1958, Plate 3c). Of the numerous York examples, a 13th-century well from the Bedern site is notable, though not alone, in having three casks, one on top of the other, used as a lining. The lower one rested on a solid square frame of curved timbers, jointed together. The casks had almost twice the capacity of the Perth cask. They, too, were originally wet-casks with bung-holes in one stave, but, unlike Perth's cask, they were continuously bound with hazel hoops. A waterproofing of clay was packed round the outside.

Others have been found in Scotland in towns such as Elgin and Inverness, and in England at Hull (for example Armstrong 1980, Fig 8), Exeter (Allan and Morris 1984a, Fig 178) and London (for example Norman 1904, 138; Prevost 1901, 355 and 357); also at ecclesiastical sites such as Waltham Abbey (Huggins and Huggins 1973, Fig 16, F146). Many more than these few examples have been studied and listed (Morris 1984a, C236–C268, Figs 108–110). An early to mid-14th-century pit at High Street, Elgin was lined with a cask whose upper part had been cut off. The cut-off pieces were still lying at the bottom of the barrel when it was excavated, softwood fillets had been nailed near the bottom to give added strength, and part of an oak lid was also found in the fill (Murray et al 2009, 222–3). It is possible that this cask-lined feature was originally a well (although the presence of the offcuts suggests not at the end of its life), or perhaps a water-trough for livestock, a quenching bath for metalworking or even a cold store. Another cask-lined feature was found at Lossie Wynd in Elgin (*ibid*, 224).

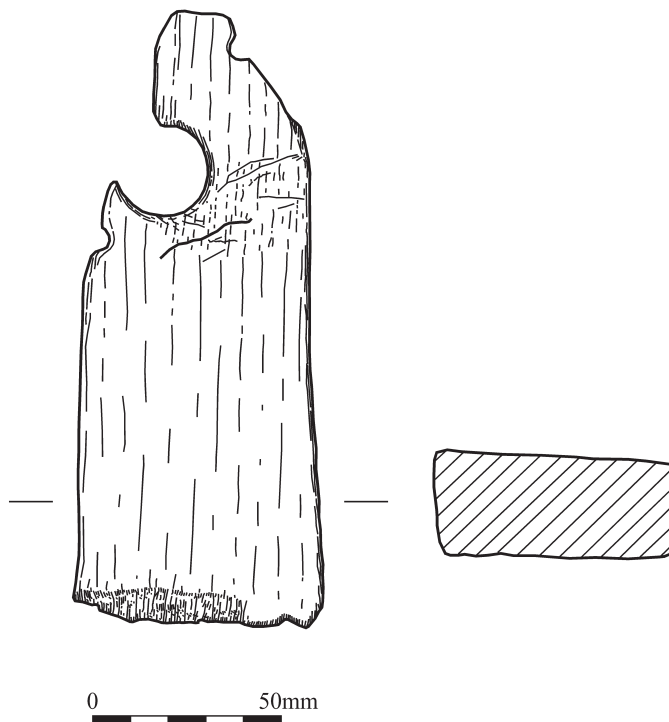
The upper part of a cask stave (No 110/A9915), from a late 12th-century midden, is unusual in that, unlike most casks, it is not of oak. Neither is one (Cat No 319/A9638a) of the two lugs which were found in a later 13th-century pit. These two fragments, if cask lugs they be, are broken away at the narrowest and weakest part of the groove. Both of them must also have broken through the hole, or hook, which would have held a rope, a metal handle, or a horizontal pole for the barrel to be carried by two people. A 15th-century French manuscript illustrates this method of carrying a large bucket (Singer et al 1956, Fig 349). The most primitive type of churn was a swinging churn which had two long staves with holes in the end (Peate 1972, 55). The two fragments from Perth might be from such a staved churn (*cf* Bersu 1947, 53–4, where the churn was suspended from iron ring(s) attached to an iron hoop). The occurrence of Cat Nos 319–320/A9638a,b together is curious: they were not found in association with any related barrel parts and were probably reused for some other purpose. (See also Caskheads).

7



0 0.5m

320



0 50mm

Illus 170 Cask Cat No 7. Lugged stave Cat No 320.

Caskheads (Illus 171)

Three caskheads were recovered from later 13th century deposits, whilst two possible examples came from the later 12th century and the early 14th century. Cat Nos 318/A5581 (Illus 171), 206/A5762 and perhaps 63/A10029 are either broken off from large circular heads or else they are cants from smaller, elliptical heads constructed from at least three staves. There are no traces, however, of pegs or dowels for joining. Several similar fragments from the late 13th century were excavated in Southampton (Platt et al 1975, 231: 1657–9, 1664–5) and other examples come from ninth-century Gloucester (Morris 1979, 199), 10th-century York (MacGregor 1978, 51) and a complete elliptical head from 12th-century Pevensey (Dunning 1958, 213–215).

Cat No 383/A05–0182 (Illus 171) is part of a much smaller round head with two very splayed vent- and spout-holes (8mm and 21mm diameter) near one edge. (Cat No 450/A6745, which might be a caskhead 118mm in diameter, is distorted and charred at one side and has a semicircular vent-hole, 14mm by 22mm). An oak

caskhead of 250mm diameter from Hungate, York, had a vent-hole c25mm diameter (Richardson 1959, 86; see also Cask staves).

Staved bowl, mug and vessel bases (Illus 171)

Although there are several staved bowl bases, only Cat No 673/L2766 (Illus 171) is complete, with a diameter of 64mm. Cat No 24/A7578 comes from a disc c90mm in diameter, and Cat No 243/A05–0221 is too fragmentary to reconstruct. The five bowls represented by the bowl staves Cat Nos 43/A7621, 277/A05–0125, 278/A05–0140, 279/A05–0148, 272/A05–0196, 245–6/A05–0204a–b, 247–9/A05–0211a–c and 96/A10367 are the only stave-built vessels recovered which would have had such small bases as Cat Nos 673/L2766 and 24/A7578.

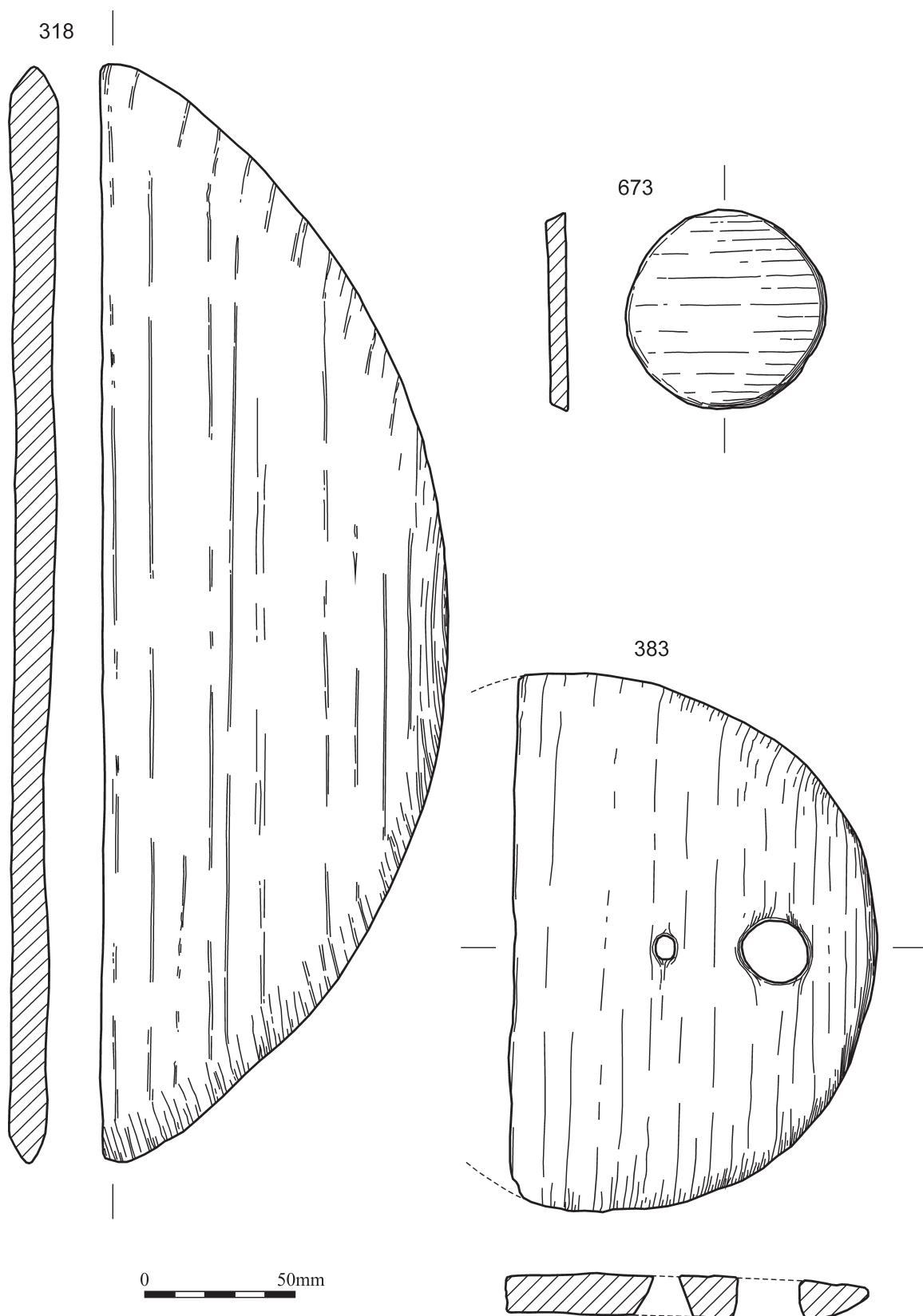
An oak disc of 100mm diameter, thought to have come from a stave-built mug, was discovered at 6–8 Pavement, York (MacGregor 1978, 52). Others have been found at sites such as High Street in Hull (Watkin 1987, Fig 124, 361).

Caskheads.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
63/A10029	Caskhead?	4	VI	B16 (Phase 2), Destruction	If,IIa
206/A5762	Caskhead	4	V	MC138, MW2231B	IIh–IVa
318/A5581	Caskhead	2	VI	B2-Late Occupation/ Abandonment & M1.4d	IVa–IVc
383/A05–0182	Caskhead	10	VIII	M9b(b), MW6085	IVc,IVcc
450/A6745	Caskhead?	3	V & VI	M1.5a	Va,Vaa(VI)

Staved bowl, mug and vessel bases.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
24/A7578	Staved mug/bowl base	1/2	VI	B6 (Phase 1), South Room-Occupation (2)	Ie
243/A05–0221b	Staved mug/bowl base	7	VII	MC126, Pit 7402	IVaa,IVb
390/A6758a	Staved vessel base?	3	VI	M1.4e	IVcc(Va)
430/A2118	Staved mug/bowl base	3	V & VI	M1.5a	Va,Vaa(VI)
North/South Sectors					
673/A–	Staved mug/bowl base				
688/A–	Staved bowl base?/disc?				



Illus 171 Caskheads Cat Nos 318, 383. Staved mug/bowl base Cat No 673.

Bungs and stoppers (Illus 172)

Most of the bungs and stoppers were recovered from 12th-century deposits (Periods I and II). Cat Nos 47/A7516 and 15/A7286 are very alike, as are the two, Cat Nos 23/A7820 and 28/A7796b (Illus 172), from B6 (Phase 1); all four date from slightly before 1150 and came from Area 2 behind the street frontage. Cat No 133/A9375 (Illus 172), which was found further back in Area 4, is slightly larger but of the same type. All of these might have come from large casks. Cat No 147/A8014 (Illus 172) is a very rough stopper; like Cat No 124/A9375 it came from Area 4 and might have been associated with Building 12. Various types of wooden stoppers have also been found in York (Morris 2000, 2249–2251, 2265–6, 2412, 2427). Wooden stoppers would have been used not only with wooden containers, but also with ceramic spouted pitchers, costrels and bottles, and probably other vessels of leather and even glass.

It is probable that Cat No 89/A10510a is a lid rather than a stopper (see Lids). The two conical-shaped objects, Cat Nos 203/A8689 and 305/A05–0091 (Illus 172) are likewise classed as bungs only tentatively. The former could be a re-used turning core, smoothed and cut down so that the cup centre attachment marks from the mandrel have almost disappeared, whereas the latter

almost certainly is a turning core with an unusual type of three-point centre attachment mark (Morris 2000, fig 992e). The cork, Cat No 649/A11505 (Illus 172), was recovered from an early 19th-century well (Well 3819) from which many beer, wine and medicine bottles were also recovered (see Fascicule 4, The glass, Cat Nos 43–72; the cellar in which the well was constructed had formed part of a drugstore in the 19th and early 20th centuries).

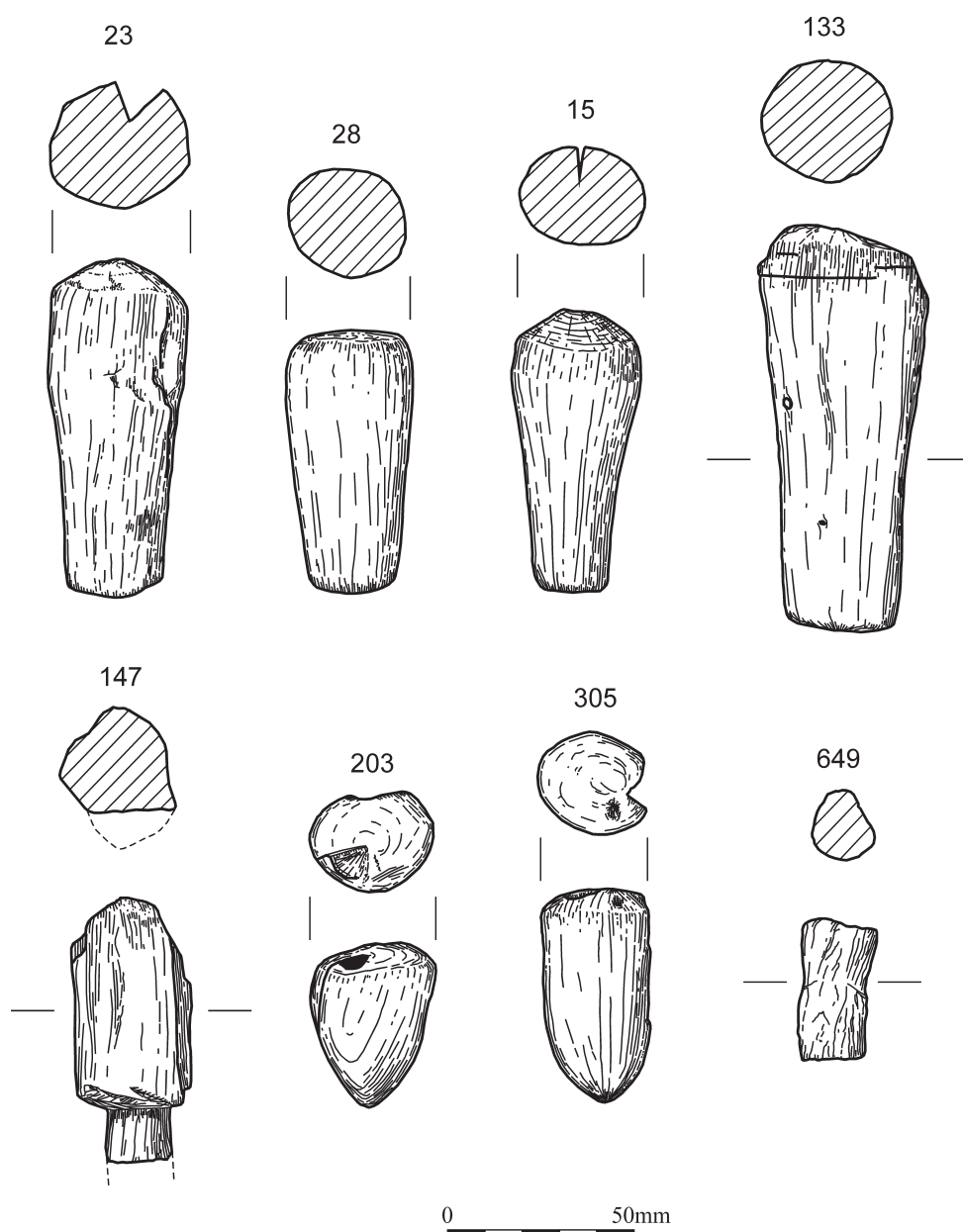
Lids (Illus 173–4)

The lids include one, Cat No 312/A05–0098 (Illus 174), from a rectangular box and one, Cat No 80/A6878 (Illus 173), from a mug-like container.

Cat No 312/A05–0098 (Illus 174) could be the lid of an ornately-decorated composite rectangular box, whose width is unknown as the piece is broken. There are three iron bifurcated mounts, one near each intact edge, nailed directly into the wood, but seemingly having no structural function. Since the piece has nail holes along one intact long edge and also through shallow rebates on the two short sides, it is also possible that this piece is not the lid but the side or front of the box, hence the lack of any hinge remains which may have been fastened to the missing fragment. It appears to have been nailed together rather than jointed at

Bungs and stoppers.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
15/A7286	Bung	2	VI	MC030b	Id,Ie
23/A7820	Bung	1/2	VI	B6 (Phase 1), South Room- Floor (1)	Ie
28/A7796b	Bung	1/2	VI	B6 (Phase 1), South Room- Floor (5)	Ie
47/A7516	Bung	2	V	M14b(a)	Id
89/A10510a	Lathe-turned lid/stopper	3	VI	B4, Construction	IIC
133/A9375	Bung	4	VI	B12, Occupation (1b)	Ile–IIg
135/A9534	Peg/stopper	4	VI	B12, Occupation (1b)	Ile–IIg
147/A8014	Bung?	4	V & VI	M11	IIh
203/A8689	Bung?	3	V	M6b	IIg–IIId
305/A05–0091	Lathe-turned waste core/bung?	9	VII	B18 (Phase 2b), North Room, Hall & Hall South- Occupation (10)	IVb
649/A11505	Stopper	2	VI	Building T, Well 3819	VIa–VI f
North/South Sectors					
681/A–	Peg/stopper				
682/A–	Bung				
708/NN002	Bung/stopper				



Illus 172 Bungs and stoppers.

the corners. Similar nailed box fragments (with no decorative mounts) have been found in 10th/11th-century levels at Brook Street, Winchester (Keene 1990, Fig 302, 3445–6) and late 13th-century levels at Cuckoo Lane, Southampton (Platt and Coleman-Smith 1975, Fig 234, 1683).

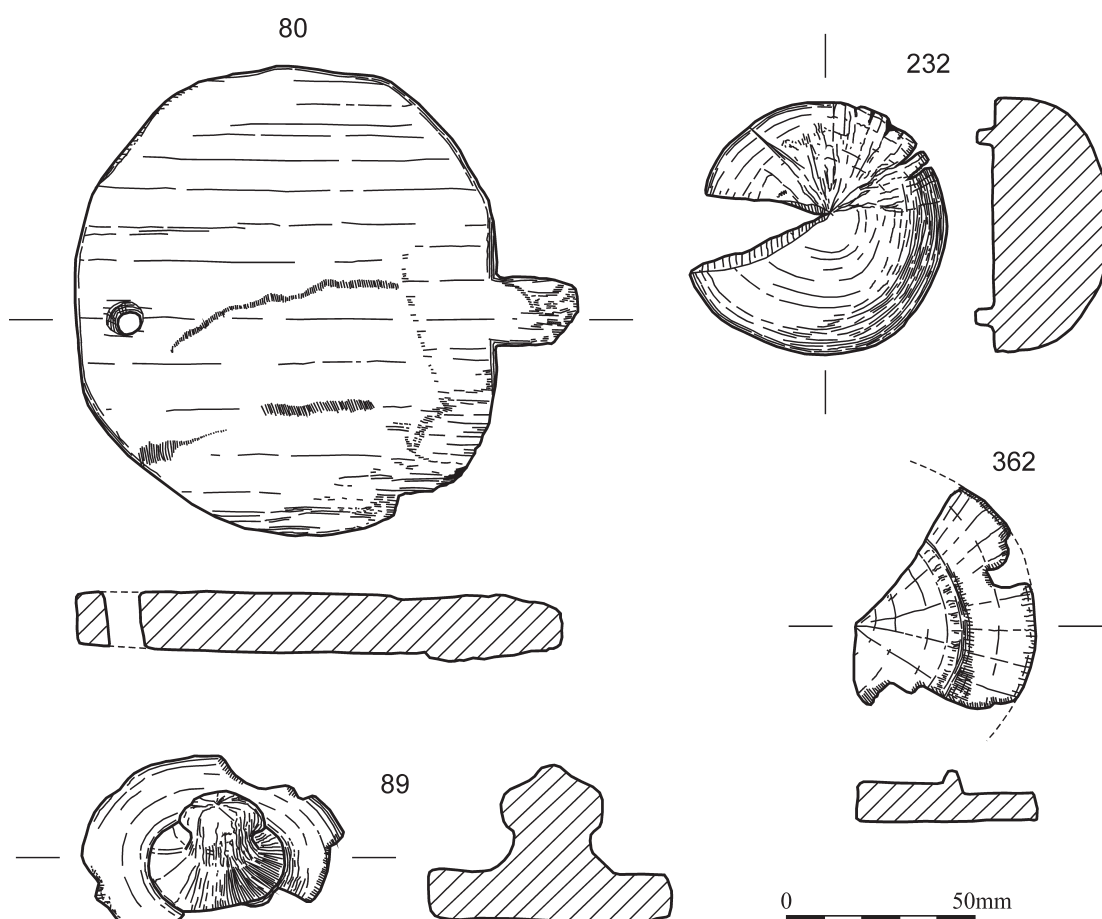
Cat No 80/A6878 (Illus 173), the earlier of the lids, comes from a larger mug-like vessel, c123mm in diameter. It would have rested on the rim over most of the mug's circumference, while the lug was inserted into a gap in a raised part (perhaps a stave or two) c60mm wide. Although the lug is broken, it may originally have

been longer and perforated by a horizontal hole so that it could be pegged and hinged between two staves. It could then have been lifted by pulling on a cord tied through the hole.

Cat No 80/A6878 is the hinged lid of a type of stave-built container which looked like a tankard but was made in various sizes. In post-medieval references it was often called a tigg and was very common in northern Europe from the 16th century onwards but was obviously used earlier as shown by the Perth lid's mid 12th-century date. Many examples of tankard-like tiggs have been excavated from the wreck of Henry

Lids.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
80/A6878	Lid?	2	VI	MC061	IIb
312/A05-0098	Lid (box)	9	VII	B18 (Phase 2b), Hall South- Occupation (13b)	IVb

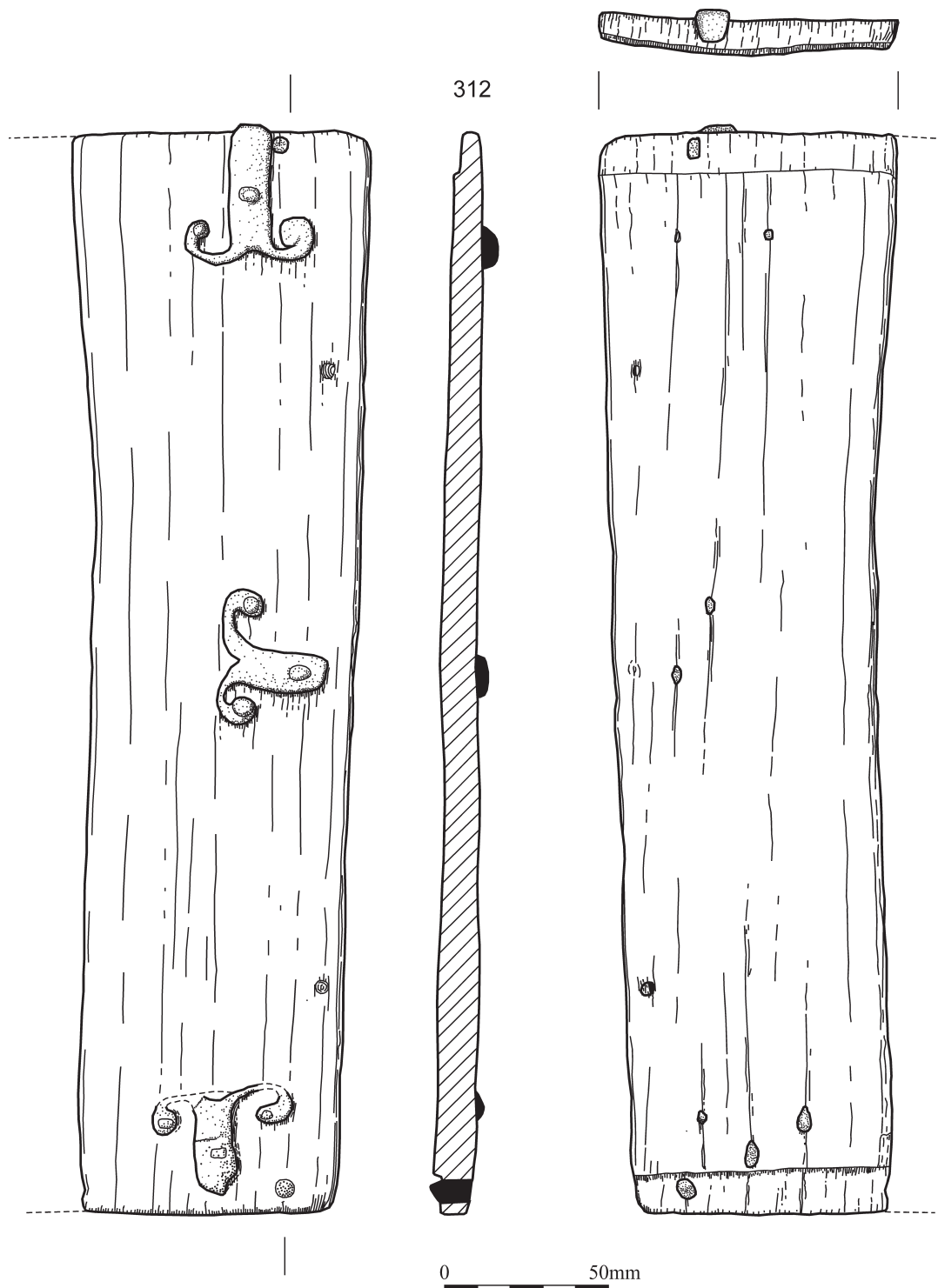


Illus 173 Lid Cat No 80. Lathe-turned lids Cat Nos 89, 232, 362.

VIII's ship *Mary Rose* which sank in 1545, and an illustration of a complete container of this kind can be seen in Amman and Sachs' *Ständebuch* (Book of Trades) first published in 1568 (Rifkin 1973, 51). A 15th-century lid similar to Cat No 80/A6878 was found on the Queen Anne House site in Shrewsbury (Morris 2002, 118) probably dating from the 15th/16th-century. This had one surviving lug perforated by a peg on which it had hinged, fastened to an upstanding stave on the vessel. Another, larger hinged lid of this kind was found at the late Norse/medieval site at Papa Stour in Shetland (Morris 1999, 184–5, Fig 101, sf426) although it was

very fragmentary, and the object itself was very flattened and compressed when found. It and the Shrewsbury lid were leaf-shaped rather than rounded like Cat No 80/A6878. The Papa Stour lid comes from a bigger vessel, perhaps a milk container, whereas the Perth and Shrewsbury tigg lids are nearer the size of large tankards.

Similar lids can be found on other north European stave-built vessels, such as Icelandic porringers and Norwegian butter moulds (for example Pinto 1949, 104, Plate 128 and 108, Plates 136–137), but the latter were often more elaborately decorated.



Illus 174 Rectangular box lid.

The lathe-turned artefacts

Forty-three pieces of the worked wood recovered show evidence of having been turned. Many of these were simple turned bowls with continuously curving profiles. However, three turned plates and fragments of three or four platters were also recovered, as well as three turned containers of various forms. The other turned artefacts included two furniture fragments, five lids, two gaming pieces, an awl handle, a button, two turned bobbins, a turned candle holder and two bungs.

Lathe-turned waste cores

Most vessels in medieval households were made in only one material. Wood, pottery and metal were used side by side to manufacture a complete range. Wood was not a cheap substitute for another medium. Any medieval household, whatever its social scale, peasant, merchant or noble, would have had a large range of wooden vessels and utensils for storing, preparing, presenting and consuming food and drink, and for many other household tasks. Lathe-turned wooden bowls, dishes, cups etc complemented the range of stave-built wooden vessels, and between them, these wooden vessels complemented the contemporary pottery jugs, jars and cooking pots, and metal cooking vessels.

Evidence for turning in the local area lies in the two lathe-turned waste cores Cat Nos 139/A9099 and 305/A05–0091. In the medieval period, although lathe-turning was a specialist craft, and bowls and cups were obtained from lathe-turners rather than home-made on a do-it-yourself-when-needed basis, everyday treen was still probably produced and obtained locally, and the majority of the turned items found on the site are likely to have been made in or near Perth on pole lathes.

There are two main types of turning. Spindle-turning is one of these. A prepared roughout length of wood itself is slotted into the lathe and attached to the driving rope. Straight lengths of round or cleft wood can be used; all the spindle-turned pieces from Perth are of roundwood. For the turning of vessels, a different technique called face-turning is often used, blanks being cut from halved or quartered logs whose natural curvature coincides roughly with the profile of the finished article. The direction of growth of the wood runs horizontally across the rim and base of the bowl (that is, perpendicular to the main axis of the

lathe). A separate mandrel or drive shaft is attached to the centre of the roughout bowl blank which is then mounted on the lathe between two pointed metal centres on the head and tail stocks. In both spindle- and face-turning, the use of the pole lathe limits the cutting action to the downward motion of the treadle.

The turner first shaped the outside of the bowl completely, preparing the rim and base as far as possible. The wood was then cut from the inside of the bowl leaving an upstanding core of wood to sustain the assembly of mandrel/bowl until all the necessary internal shaping had been finished. The assembly would then have been taken off the lathe and the core removed from the vessel. The inside and outside bases could then be cleaned up. Cat Nos 139/A9099 and 305/A05–0091 are two of these waste cores. Each has evidence for the type of centre attachment used on the mandrel (cf Morris 2000, 2145–59 Figs 992 and 1003–1010 for centre attachment types and core shapes from the British Isles). Cat No 139/A9099 had a mandrel-hole type of attachment, where the end of the mandrel was formed into a usually cylindrical shape to fit into a circular augered hole in the roughout bowl. In the case of the Perth core, however, it is probable that the mandrel had a D-shaped cross-section. Cat No 305/A05–0091 had an unusual multiple metal point type centre attachment which is very rare archaeologically and as yet has only been found at one other site in Britain – Nantwich (Morris 1984a, Fig 132, L110ii). Both Cat No 305/A05–0091 and the Nantwich core were 13th-century in date.

(For further details about medieval and earlier lathe-turning in the British Isles see Morris 1982, *passim*; Morris 1984a, Chapter 8; Morris 1985; and especially Morris 2000, 2116–20, where the results of nearly twenty years' research and reconstruction of medieval lathe-turning tools, techniques and products are presented).

The turned vessels alone give little indication of general chronological development, although it is worth noting that they occur from the early 12th century to the late 14th century. This compares well with the published British examples, many of which date from the 10th–15th centuries (cf Morris 1984a, L123–L218). Occasionally two or more occur in the same feature, for example, five in the fill of Pit 4695, but little information can be derived from these small concentrations. If all the other turned articles are included in a broad view

Lathe-turned waste cores.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
139/A9099	Lathe-turned waste core	3	VI	M1.2, Pit 2648	<IIg(IIh)
305/A05–0091	Lathe-turned waste core/bung?	9	VII	B18 (Phase 2b), North Room, Hall & Hall South-Occupation (10)	IVb

of the assemblage, however, a slight impression of increasing skill and elaboration towards the end of the period is discerned. Apart from the two bobbins Cat Nos 98/A11403 (Illus 185) and 101/A10570, which are exceptionally finely turned, the saucer-like plate Cat No 107/A11578 (Illus 178), one or two bowls and the 'furniture' fragment Cat No 152/A8653 (Illus 191), the better finished and more finely worked or elaborate pieces are dated from c1250, that is, the two gaming pieces Cat Nos 226/A8499 and 533/A05-0083 (Illus 190), a ?button Cat No 453/A05-003, the two round containers with lids Cat Nos 254/A05-0207 (Illus 179) and 532/A05-0067, the very thin bowl Cat No 366/A05-0181 (Illus 176), the awl handle Cat No 543/A05-0036 (Illus 187), the candleholder Cat No 385/A05-0167 (Illus 179), and the fragment of a jar Cat No 365/A05-0159b (Illus 179). There is thus a subtle improvement in the quality of turned ware during the latter half of the occupation at the Perth site. It is not

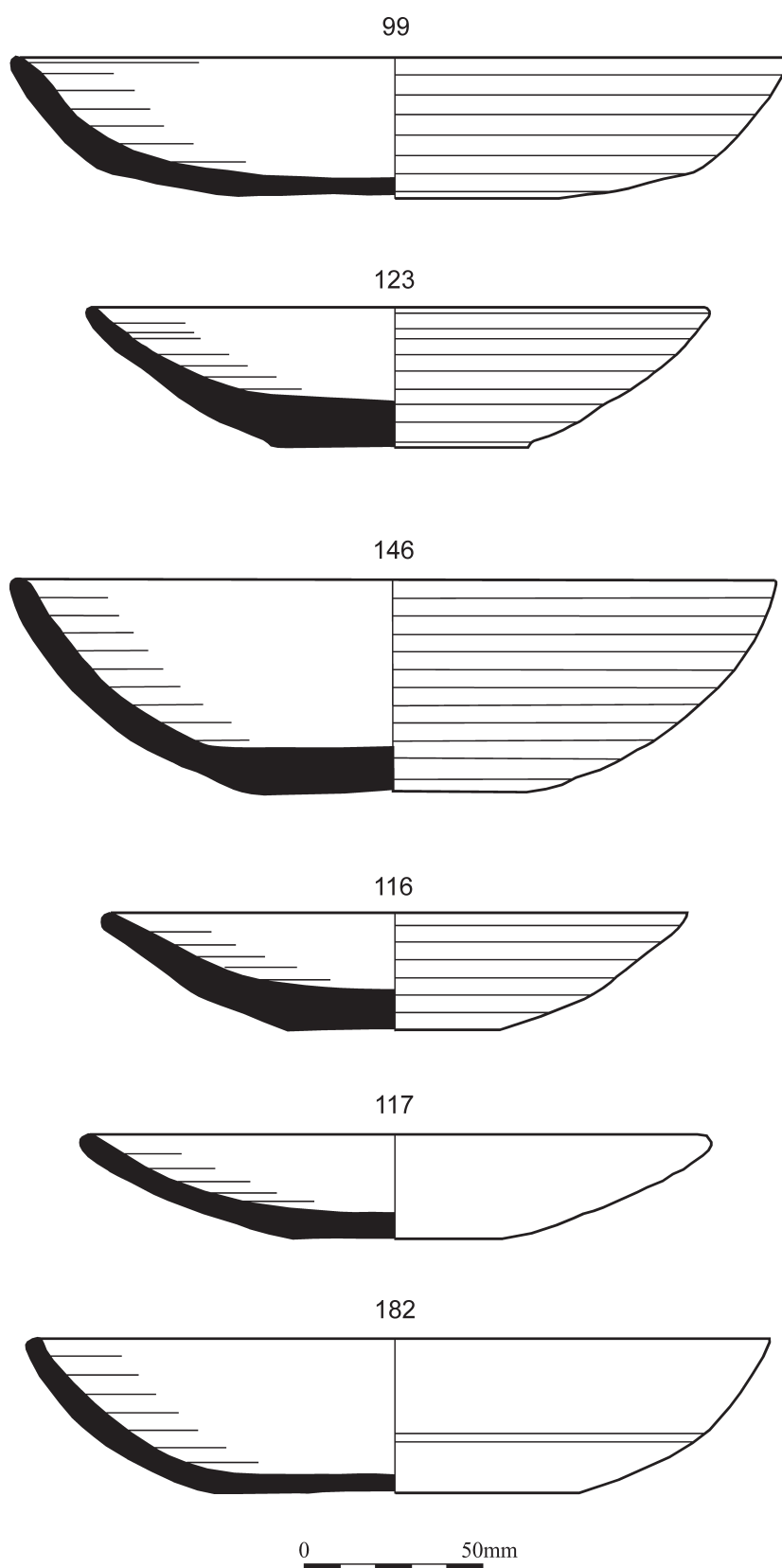
overwhelming, however, and it is impossible to say whether it occurs as a result of a genuine improvement in local turnery, or of something as intangible as social change. At least ten of the 21 turned artefacts from Period IV and V deposits (c1250–c1370) came from Rig VII, indicating the possibility of one family's lifestyle significantly affecting the archaeological record.

Lathe-turned bowls, lathe-turned plates, lathe-turned platters and vessels (Illus 175–8)

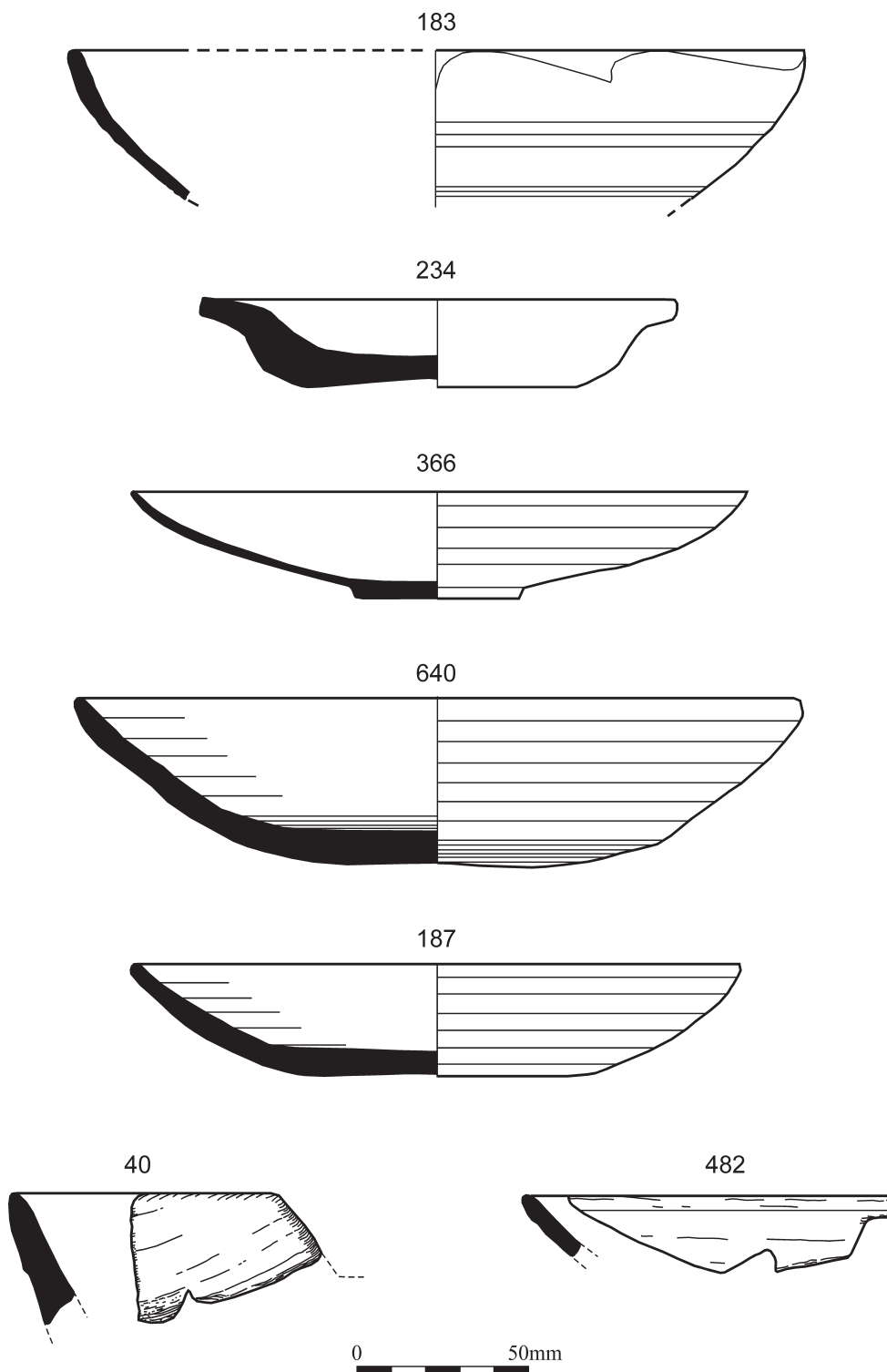
Although ceramic wares were in use in Scotland during the 12th to 14th centuries, the wooden vessels (see also Staved vessels) from the High Street fill an important gap in our knowledge of the local production of domestic wares. Comparable turned bowls have been excavated at Threave Castle (Good and Tabraham 1981, Fig 14), Iona (Barber 1981, Figs 29 and 30) and Aberdeen (Murray et al 1978, 21).

Lathe-turned bowls, lathe-turned plates, lathe-turned platters and vessels.

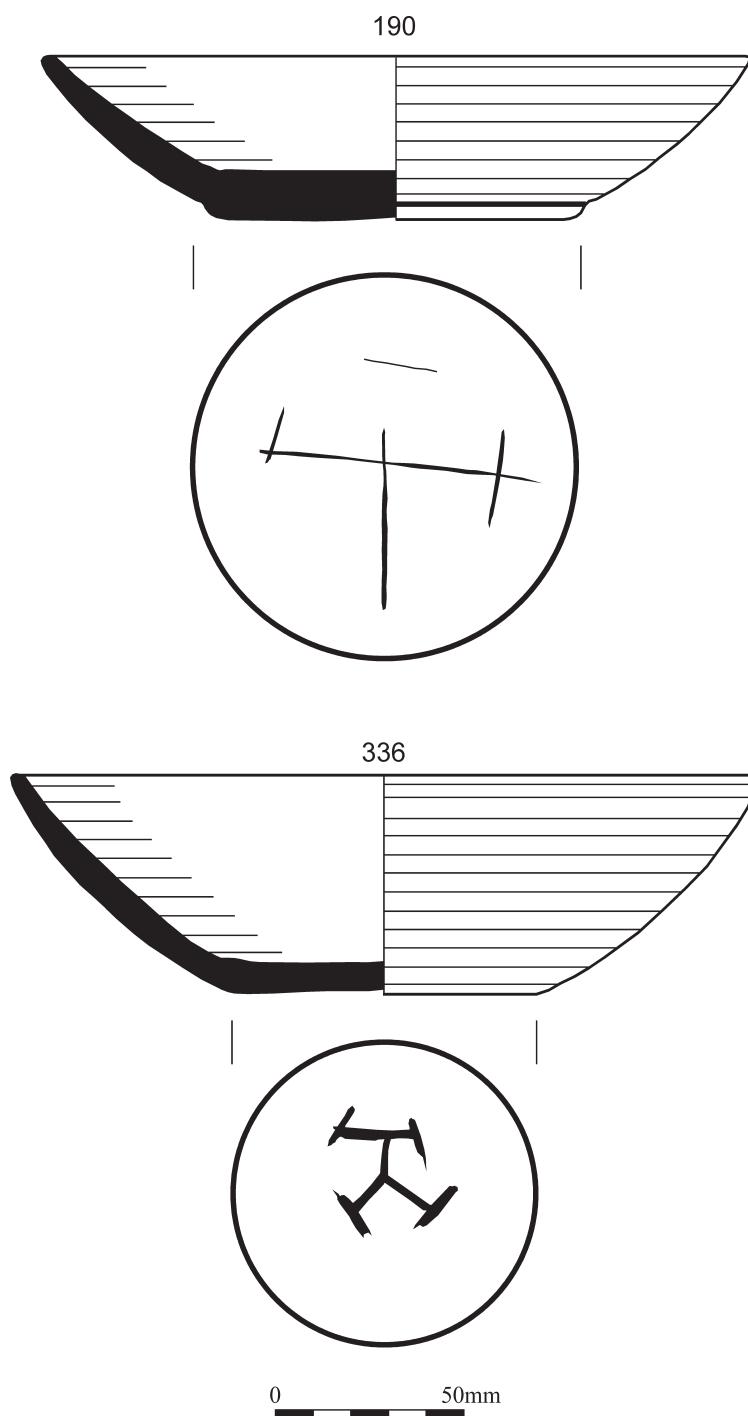
<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
10/A11180	Platter/bowl?	3	V	MC025, Pit 5357	(Ia-)Id
40/A7793a	Bowl	2	VI	M14b(b), Pit 3625	Ie
46/A7062	Vessel	2	V	M14b(c)	Ie,If
78/A6757d	Platter	1	VI	MC051	Ila
99/A10488	Bowl	4	V	MC081a	IId
105/A10475	Plate	3	VI	M1.1a	IId-IIe
107/A11578	Plate	1	VI	MC071	IIf-IIIf
116/A6805	Bowl	2	V	B5, North Room-Floor/Occupation (1)	Ila-IIIf
117/A6830	Bowl	2	VI	B5, North Room-Floor/Occupation (1)	Ila-IIIf
123/A8501	Bowl	4	V	M10, Pit 2330	IId-IIg
146/A9376	Bowl	3	VI	M1.2	<IIg(IIh)
167/A11179	Plate	1	VII	MC112b	IIIb
182/A8147	Bowl	3	V	MC117, Pit 4695	Ile-IIIc
183/A8528	Bowl	3	V	MC117, Pit 4695	Ile-IIIc
187/A8670a	Bowl	3	V	MC117, Pit 4695	Ile-IIIc
188/A8670b	Platter	3	V	MC117, Pit 4695	Ile-IIIc
189/A8670c	Bowl	3	V	MC117, Pit 4695	Ile-IIIc
190/A10859	Bowl	4	V	MC117, Pit 4695	Ile-IIIc
213/A8035a	Platter?	3	V	P2.2a/P2.3	IVa,IVaa
234/A05-0213a	Bowl	7	VII	B18 (Phase 1b), North Room-Occupation (5b)	IVa,IVaa
332/A12503	Bowl	3	VI	M1.4d, Pit 2566	IVb,IVc
336/A8108	Bowl	3	VI	M1.4d, Pit 2566	IVb,IVc
366/A05-0181	Bowl	7	VII	M9a, Pit 7230	IVc,IVcc
462/A05-0092b	Bowl?	7	VI & VII	M1.5b	Vaa
482/A05-0117a	Bowl	7	VI & VII	M1.5b	Vaa
640/A05-0043	Bowl	10	VIII	MC174, Pit 7013	(Va-)Vd (Vdd)
North/South Sector					
675/A-	Bowl				



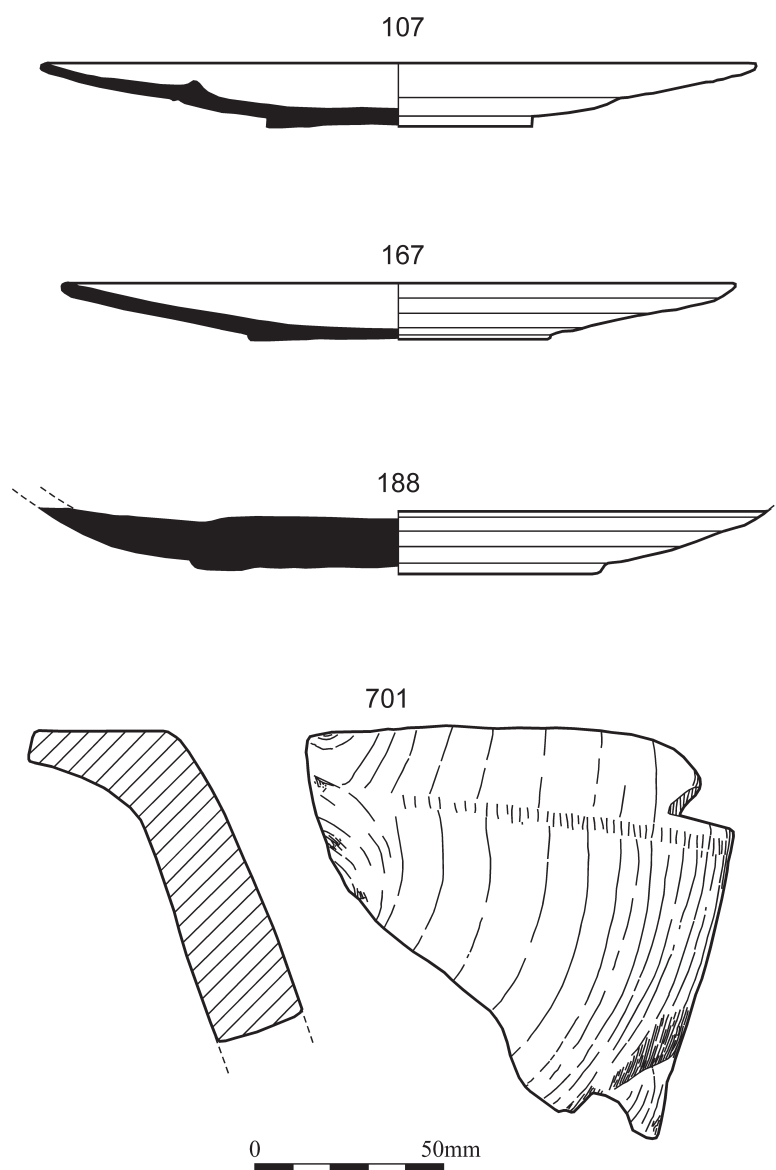
Illus 175 Lathe-turned bowls.



Illus 176 Lathe-turned bowls.



Illus 177 Lathe-turned bowls.



*Illus 178 Lathe-turned plates Cat Nos 107, 167.
 Lathe-turned platter Cat No 188.
 Trough fragment Cat No 701.*

Of the 15 vessels which are complete enough to reconstruct, 12 (Cat Nos 99/A10488, 116/A6805, 117/A6830, 123/A8501, 146/A9376, 182/A8147 [Illus 175], 234/A05–0213a, 366/A05–0181, 640/A05–0043 [Illus 176], 336/A8108, 190/A10859 [Illus 177] and 10/A11180) have diameters which are from four to six times their height and are deep enough to be called bowls, although Cat Nos 116/A6805 and 123/A8501 (Illus 175) seem shallower and flatter because they have very thick bases. Both came from the north room of Building 5. Cat Nos 107/A11578 and 167/A11179 (Illus 178) are plates with diameters eleven and ten and a half times their height respectively. Cat No 107/A11578 is the only example of a radically different type of vessel: a flat saucer-like plate with marked changes of contour, coinciding with deep grooves. It is the earliest complete vessel from the site, dating from the second half of the 12th century, and has fairly close parallels in medieval London (Henig 1975, 153: 10, 12), 14th-century Novgorod (Kolchin 1968, Plate 25: 12), medieval Lübeck (Neugebauer 1975, Figure 17) and late medieval York (Morris 2000, 2175 fig 1026, 2176, 2431 no 9231 [sf312] from Bedern site).

Cat No 366/A05–0181 is a very fine, thin bowl, another example which is strikingly different from the main group of Perth bowls, but this time in quality, not in basic form. It has contemporary parallels in Southampton (Platt and Coleman-Smith 1975, 228: 1627, 1628, 1631) and might have been imported into Perth as an exception to the likely pattern of local production, but since fine bowls are likely to have been rare in any case, it might just be a rare survival of the cream of the local turneries. One other complete vessel also departs from the overall group of plain bowls and plates with diameters from 160 to 220mm. Cat No 234/A05–0213a (Illus 176) is a thick coarsely made bowl, c140mm in diameter, with a rim and angular profile, resembling a thick modern cereal bowl. Both Cat Nos 366/A05–0181 and 234/A05–0213a were recovered from Rig VII, where other exotic items were also found. (see Bowl staves).

The most common type of base for wooden bowls of this period is a slight concavity cut into the under surface. Five Perth bowls have this feature: Cat Nos 99/A10488, 182/A8147 (Illus 175), 336/A8108 (Illus 177), 187/A8670a (Illus 176), 188–189/A8670b,c (Illus 178) and 10/A11180. Two others, Cat Nos 123/A8501 and 146/A9376 (Illus 175), have the same type of base,

slightly accentuated by a delineating groove, while Cat No 640/A05–0043 (Illus 176), and platter fragment Cat No 188/A8670b (Illus 178) have multiple grooves round their bases and very shallow but wide foot rings.

Some vessels are smoothly finished and lack any decoration whatsoever. In other cases, turning lines or deeper grooves inside and/or outside provide the only decoration available for a plain, turned vessel. Cat No 640/A05–0043 has a profile like that of most medieval bowls, a combination of linear segments rather than a smooth curve. It is, however, more markedly angular than most and might be an attempt at variation. Some of the turned fragments bear further types of decoration: Cat Nos 40/A7793a and 482/A05–0117a (Illus 176) have moulded rims.

Nearly all the bowls display cutting marks on their undersides, evidence that they were used as chopping surfaces as well as food containers. Two bowls, Cat Nos 190/A10859 and 336/A8108 (Illus 177), have devices on their bases, one incised, the other branded. Sometimes such marks are clearly owners' marks, as at Threave Castle (Good and Tabraham 1981, Fig 14) but it is often not certain whether they are owners' or turners' marks, and they could be either (Morris 1979, 200; Morris 1984a, 186–187, Fig 8.21; Neugebauer 1975, 129). The evidence from Perth is not substantial enough to lend support to either viewpoint. Drawings of 42 marks found on medieval lathe-turned vessels (41 on bowls, one on a churn lid) can be found elsewhere and compared to those from Perth (Morris 1984a, Fig 8.21).

Cat No 46/A7062, which was thin-sectioned by Skinner is of ash wood and the ten vessels subject to surface identification are all probably of ash, one of the species frequently used in turnery.

The greatest concentration of turned bowls (five), plates (two) and platters (one) occurs in the second half of the 12th century. Only three vessels are earlier and, although 13th-century deposits produced twelve, there are only three altogether dating from the 14th century.

Lathe-turned containers (Illus 179)

Although grouped together, these artefacts differ substantially from one another. However, they are all complete or fragmentary turned containers as opposed to open vessels.

Lathe-turned containers.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
254/A05–0207	Container and lid	7	VII	B18 (Phase 1/2)	IVaa,IVb
365/A05–0159b	Container	7	VII	M9a	IVc,IVcc
532/A05–0067	Container and lid	7	VII	B53 (Phase 1), Central Area– Occupation (2a)	Vb

A small round box with a knobbed lid, Cat No 254/A05–0207 (Illus 179), was recovered from the later 13th-century destruction/reconstruction layers between Building 18 (Phase 1b) and Building 18 (Phase 2a). Although it appears to be a finely executed piece of work with a nicely finished exterior, it has thick walls and a very thick base, and the narrower rim is somewhat deceptive as to its actual quality. The turning of globular vessels with narrow mouths is very difficult. However it is practical to do so on a pole-lathe such as was universally in use in the Middle Ages, because the speed of the reciprocal motion can be carefully controlled while special hook-ended irons are used to work inside the walls (Morris 1982, 256). A globular vessel is illustrated in the 14th-century Luttrell Psalter (BL Add MS 42130, fol 208; Millar 1932, 168). It is being used on a table set for laymen and clerics of some standing and probably contains salt or some other condiment.

A neck fragment, Cat No 365/A05–0159b (Illus 179), came from a late 13th-century midden and might be part of a straight-sided or curved-sided jar, perhaps with a stopper. No exact parallel is known.

A round box-like object with a lid, Cat No 532/A05–0067, was found in an occupation layer within an early 14th-century ‘workshop’ (Building 53): it is perhaps significant that, like Cat Nos 254/A05–0207 and 365/A05–0159b, it came from Rig VII. Unfortunately, it did not survive conservation but it had been X-rayed before being sent to the laboratory. It was undoubtedly an object of special interest, decorated with two(?) plates of horn-like material painted/inscribed with an eye device. Its purpose remains uncertain, but the possibility that it might be the wooden equivalent of the contemporary metal mirror lockets that were also recovered should be borne in mind (see this Fascicule, Hall, Devotional objects Cat Nos 10 and 11).

Lathe-turned candleholder (Illus 179)

The wooden evidence for methods of lighting consists of one piece (Illus 179), a late 13th-century turned candleholder. It is an unusual object, the only roughly contemporary British example coming from an 11th-century deposit at New Fresh Wharf in London (Pritchard and Morris 1991, Fig 3.127, 374). It would probably have held the iron spike of a candlestick (see this Fascicule, Franklin and Goodall) and/or pincers for fir splinters or rush-lights. The charred area of the head

would have been due to dripping tallow, fat or other hot material, while the blackened surface of the hole might have resulted from the spike becoming very hot.

It seems likely that in the Scottish Highlands at least candles and candlesticks were used ‘by the gentry from early times, but they do not figure in early accounts of humbler cottages and only gradually came into use’ (Grant 1961, 185). However, candlesticks were evidently in use on the High Street site, apart from one 12th-century example, from the mid-13th-century onwards (see this Fascicule, Candlesticks).

The simplest candles were made by dipping strips of cloth or a peeled rush repeatedly into tallow, mutton-fat or beeswax: tin moulds were used much later. Other forms of lighting included crusies using rush wicks and fish oil, which were common in areas near the sea, while dried out splinters of bog fir (fir candles) were used further inland. The latter were held in iron pincers whose other end was pushed into a drystone wall or driven into a wooden block (Grant 1961, 182–6; Estyn Evans 1957, 89–91; Peate 1972, 58–60).

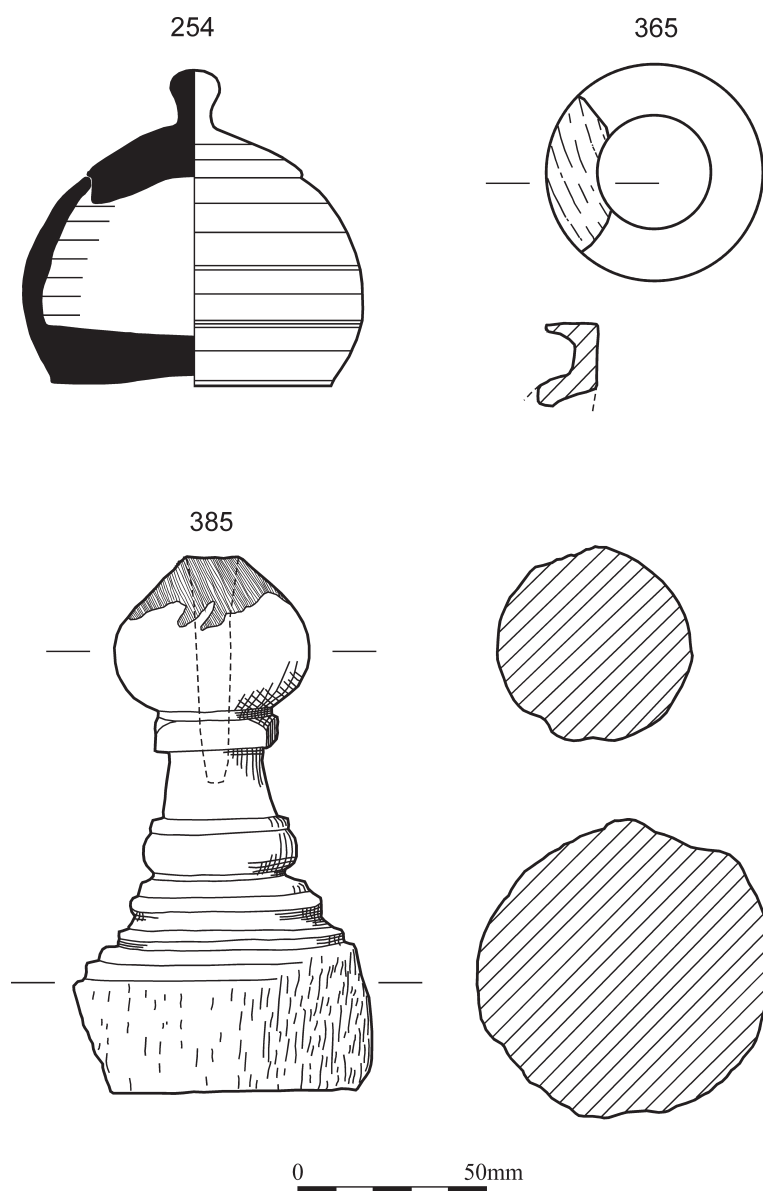
The Perth candleholder came from a late 13th-century Rig VIII midden which also contained a very thin bowl, Cat No 366/A05–0181, and other exotic objects. All might have been the possessions of a family of some standing, as they are notably finer than the majority of wooden finds.

Lathe-turned button, discs and gaming pieces (Illus 190)

Four possible wooden circular gaming counters were recovered from the excavations, all of which came from late 13th- or early 14th-century deposits. Three of these, Cat Nos 226/A8499, 453/A05–0039 and 533/A05–0083, are turned, while the fourth, Cat No 428/A4325c (see Gaming pieces, below), has a crudely carved floral (?) design on one surface. Turned wooden gaming pieces with similar turned grooves have also been found on other sites. A 15th/16th-century yew counter 26mm diameter was found in Coppergate, York (Morris 2000, 2351, Fig 1158, 2352–3, 2419 no 9036 [sf2519]), a similar 14th-century counter was found at Trig Lane in London (Morris 1984a, Fig 83, M307) and other decorated medieval wooden counters have come from Threave Castle (Good and Tabraham 1981, Fig 15, 151–3), Hull (Watkin 1987, Fig 123, 348–9), Trondheim in Norway (Christophersen 1987, 106–07) and Lund in Sweden (Persson 1976, Fig 331).

Lathe-turned candleholder.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
385/A05–0167	Candleholder	10	VIII	M9b(b), MF6027	IVc, IVcc



Illus 179 Lathe-turned containers Cat Nos 254, 365.
Lathe-turned candleholder Cat No 385.

Lathe-turned button, discs and gaming pieces.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
226/A8499	Gaming piece?/disc	3	VI	B2, Floor (2a)	IVa, IVaa
428/A4325c	Gaming counter (decorated)/disc	1	V & VI	M5a, Pit 3540	IVb–Vc
453/A05–0039	Button?/disc	7	VI & VII	M1.5b	Vaa
533/A05–0083	Gaming piece/disc	7	VII	B53 (Phase 1), Central Area– Occupation (3)	Vb

Lathe-turned lids (Illus 173)

Apart from Cat Nos 254/A05–0207 and 532/A05–0067 (see Turned containers) no lid occurs with the vessel to which it belonged.

Five round lids were recovered: Cat Nos 89/A10510a (Illus 173), 254/A05–0207 (Illus 179), 362/A05–0155a (Illus 173), 232/A5647 (Illus 173) and 532/A05–0067. All are examples of spindle-turning, in which the axis of the lathe is parallel to the direction of the grain. This type of lid varies considerably. Two (Cat Nos 362/A05–0155a and 232/A5647) have circular inner ridges which fit inside the neck of the vessel; Cat No 254/A05–0207 rested on the rim of its turned box by means of a small horizontally projecting ridge; Cat No 89/A10510a, if it is a lid, would simply have sat upon the top of a vessel, or on a rebated rim. There were knobs for handles on Cat Nos 89/A10510a and 254/A05–0207, while Cat Nos 362/A05–0155a and 232/A5647 were picked up by grasping their edge. A flanged fragment, more sophisticated but of similar form to Cat No 232/A5647, came from Anglo-Scandinavian levels in York (MacGregor 1978, Figure 33, 2) and the flattened form like Cat No 362/A05–0155a occurs at Haithabu (Schietzel 1970, 80). Five other turned lids were found at Coppergate, York (Morris 2000, 2186, 2187 fig 1039, 2188, 2194, 2196, 2206–12, 2405 nos 8638–8642 [sf12525, sf10962, sf8121, sf9700 and sf0717]), the largest 130mm in diameter. Medieval Novgorod also produced a wide variety of turned lids, some of which are comparable to the Perth material (Kolchin 1968, Plate 26). Similar lids are also known from late 13th-century levels in Southampton (Platt and Coleman-Smith 1975, 231, Fig 229, 1636, 1637).

The hewn artefacts

Trough (Illus 178)

Cat No 701/NN001 is a fragment of the end wall and handle grip of a rectangular trough which was hollowed from half-section roundwood. It was originally U-shaped in cross-section whose end has an everted lip with one end of an originally fish-tail shaped handle. There are very few surviving examples from the British Isles. These include three from York, two of Anglo-Scandinavian and one of 15th-century date (Morris 2000, 2099, 2101–2, 2273–5, 2413, Figs 1104–5, nos 8915–8917 [sf10902b, sf2666 and sf13159]), one of which was nearly one metre long, an 11th-century example from London (Pritchard and Morris 1991, Fig 3.126, 372), fragments from Ballinderry 2 and Lagore crannogs (Hencken 1942, Fig 25, W187; Hencken 1950, Fig 78, W189) and two Viking Age troughs from Christchurch Place, Dublin (Morris 1984a, M72–73). Others have been found at European sites such as 9th–11th-century Haithabu (Schietzel 1970, Abb 4), 14th-century Novgorod (Kolchin 1989, Plate 69, 7–8) and Lübeck (Neugebauer 1954, Abb 7, F). The shape of this type of vessel changed very little over time, since ones similar to those made in medieval times were still being made in recent centuries (cf Morris 2000, 2275 Fig 1106). They may have had a variety of uses, depending on their size, but some of them were traditionally used as bread-making utensils; as in north-west Europe for kneading dough (Brøgger and Shetelig 1928, 142, Fig 80).

Lathe-turned lids.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
89/A10510a	Lid/stopper	3	VI	B4, Construction	IIc
232/A5647	Lid	2	V	B3 (South), Construction-Levelling	IVa, IVaa
254/A05–0207	Container and lid	7	VII	B18 (Phase 1/2)	IVaa, IVb
362/A05–0155a	Lid	7	VII	M9a	IVc, IVcc
532/A05–0067	Container and lid	7	VII	B53 (Phase 1), Central Area–Occupation (2a)	Vb

Trough.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
701/NN001	Trough (part)				

Hewn platters

As well as the turned platters, the remains of three large hewn platters were recovered. All had been over 400mm in length or diameter. Cat No 14/A05–0010, which dates from slightly before 1150, is roughly finished and rounded with a slightly raised wall and concave base. Despite its damaged and fragmentary state, Cat No 9/A11178 might have been a similar piece. It also was recovered from deposits that had been laid down during the first half of the 12th century. Cat No 270/A05–0234, from a later 13th-century structure, is of different form, having two straight edges and two rounded ones. It is almost flat and has an elliptical hole near one end for suspension.

Ladle and spoons (Illus 180–1)

Although none of the four spoons and a ladle dates from before 1250, wooden spoons were almost certainly being used in Perth before that time as wooden spoons were the main medieval eating and cooking utensil after the knife. Two, Cat Nos 545/A05–0062 and 565/A05–0064 (Illus 180), came from the northern area of an early 14th-century ‘workshop’ (B53). Cat Nos 214/A8035b (Illus 180) and 545/A05–0062 (Illus 180) are small enough to have been personal

eating spoons. They are both fairly well finished. Cat No 565/A05–0064 is more of a stirrer than a spoon, as it has an extremely shallow bowl, while Cat No 215/A5434 (Illus 180) is a crudely fashioned large spoon.

There are several other sites in the British Isles which have produced examples of wooden spoons, with a great variety of bowl shapes which have less to do with chronological variation than with individual hand-shaping. Seven were found in excavations in York (Morris 2000, 2102, 2267 Fig 1101, 2268–9, 2412, Figs 1101–2, 2425, 2431), one in Gloucester (Morris 1979, Fig 17, 13), one at the late Norse/medieval site on Papa Stour in Shetland (Morris 1999, 100, 405), a 14th-century example from King’s Lynn (Clarke and Carter 1977, Figure 171, 1), four from Cork (Hurley 1982, Fig 16.2, 1–4) and others from Coventry, Covehithe and Dublin (Morris 1984a, Fig 67, M33, M32i and M9).

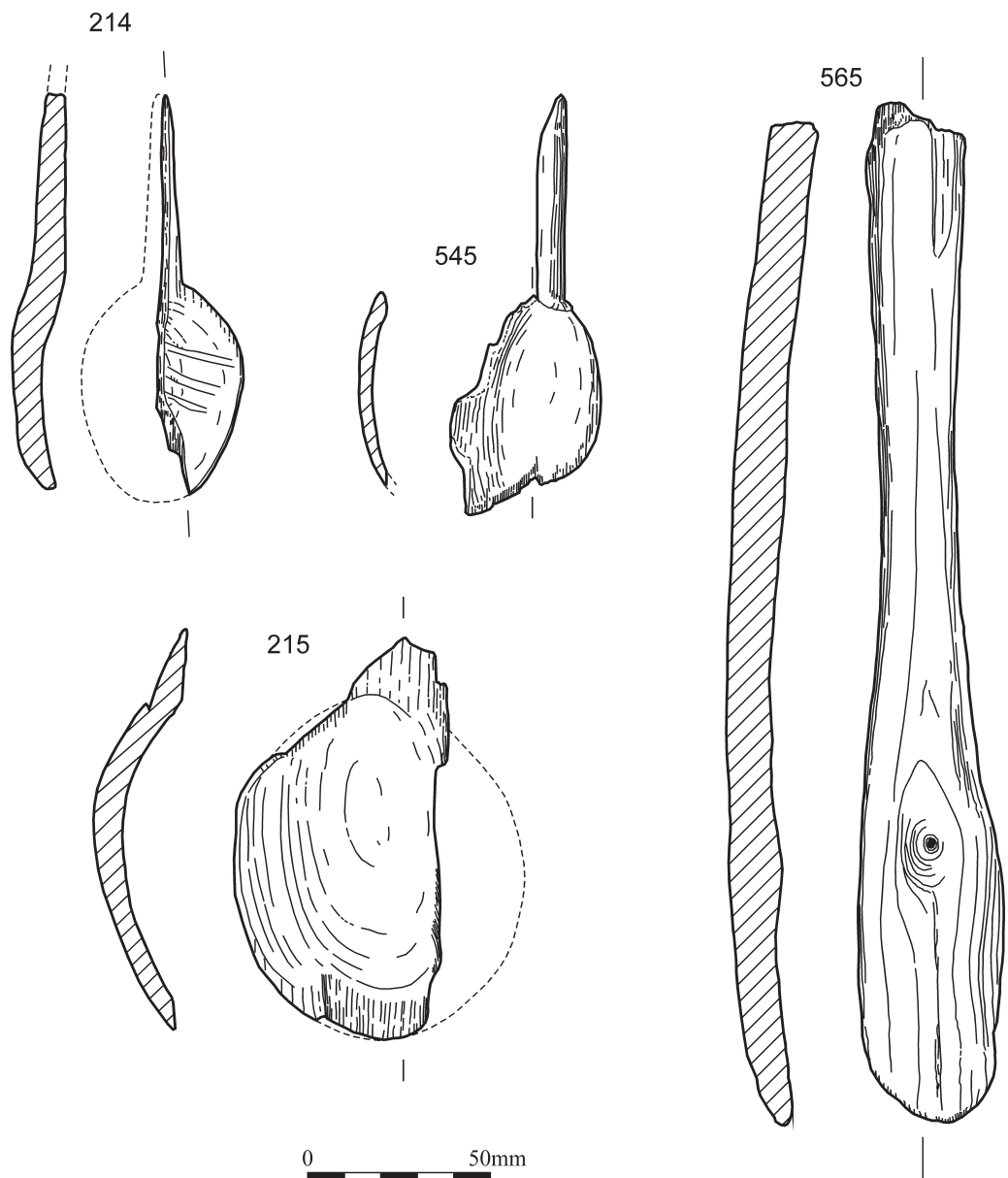
The large ladle, Cat No 643/A05–0065 (Illus 181), is of a type well known from manuscript illumination (Henisch 1976, 66: early 13th-century; and 133: mid-14th-century). An earlier example of the same type occurs in 10th century Ireland (Hencken 1936, 137). The Perth example is well made and carefully finished. Its deep bowl perhaps implies the use of a special curved knife blade (Hill 1979, 78–9). It was discovered in a (later) 14th-century pit (Pit 7013) which also contained a number of tankard staves.

Hewn platters.

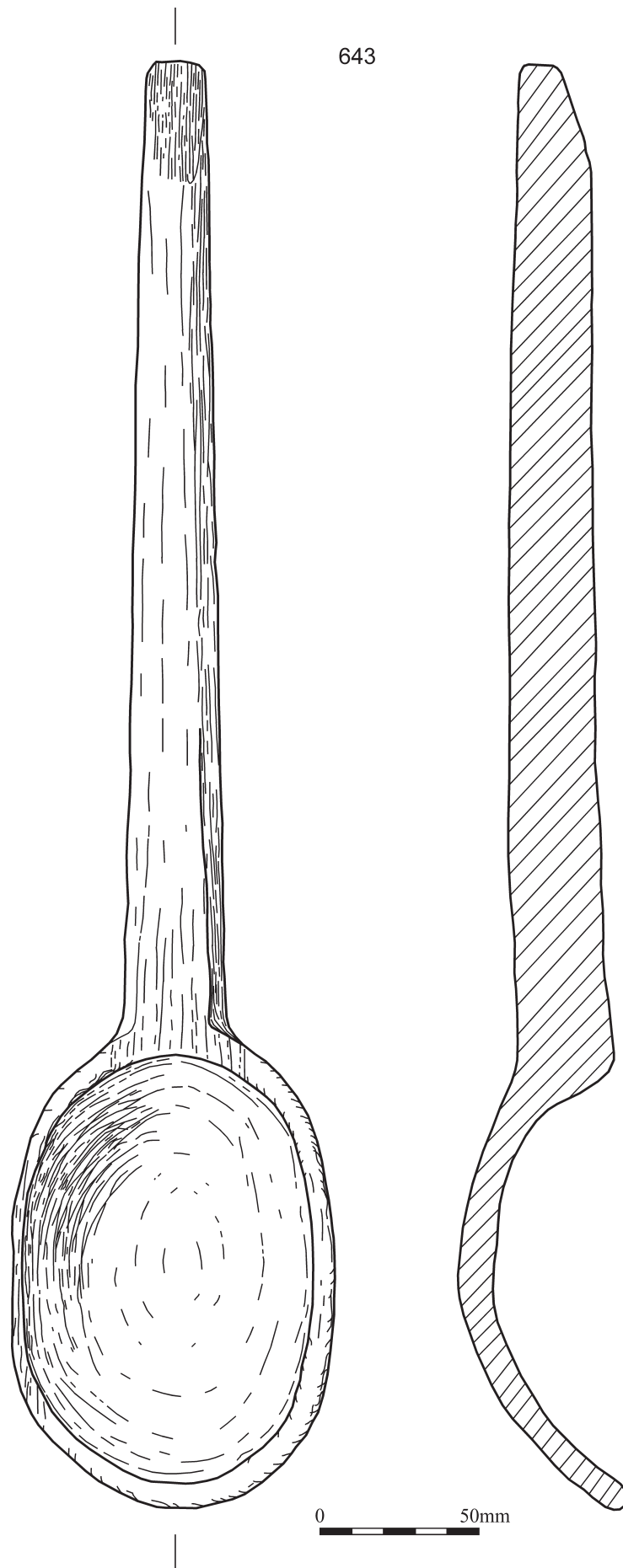
<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
9/A11178 & A11454	Hewn Platter?	3	V	MC025, Pit 5337	(Ib–)Id
14/A05–0010	Hewn Platter?	3	VI	P5.1b	Icc,Id
270/A05–0234	Hewn Platter?	10	VII	B18 (Phase 2), MW6158	IVb

Ladle and spoons.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
214/A8035b	Spoon	3	V	P2.2a/P2.3a	IVa,IVaa
215/A5434	Spoon	4	V	MC156	IVaa
545/A05–0062	Spoon	7	VII	B53 (Phase 2), North Area–T7072	Vbb
565/A05–0064	Spoon/spatula	7	VII	B53 (Phase 2), North Area–Occupation (10)	Vbb
643/A05–0065	Ladle	10	VII	MC174, Pit 7013	(Va–)Vd(Vdd)



Illus 180 *Spoons.*



Illus 181 *Ladle.*

Wooden knife (Illus 182)

This wedge-shaped object, Cat No 159/A9918 (Illus 182) narrows to a very sharp point, 12mm wide, rather than to a lateral blade. It would be capable of cutting through soft substances, though it might have been used for scoring or inscribing. At least one Bronze Age wooden knife was found in the Somerset Levels (Coles et al 1973, 285, Figs 13; 10) and a 13th-century yew knife was excavated in Cork (Hurley 1982, Fig 16.2 no 5).

Scoops (Illus 182)

Two of the scoops, Cat Nos 51/A7007b (Illus 182) and 55/A12323, came from Rig VI deposits that dated from shortly before 1150, while the third, Cat No 223/A5630a, was found in a Rig V layer that should probably be ascribed a mid 13th-century date.

The earliest, Cat No 51/A7007b, consists of one large, and several smaller, fragments of a large scoop of well known type (Hencken 1936, 150; 1942, 60; 1950, 160). However its rounded shape and straight all-in-one handle differ in detail from any of the published early medieval Irish ones.

Cat No 55/A12323 might be seen as a naturally occurring hollow twig, perhaps of elder, but it has been carefully cut at the ends. One might imagine it in use for measuring out small quantities of some powder or grain, for example, in a domestic or an industrial context.

Cat No 223/A5630a could have been part of a bread peel or flat wooden shovel with a long handle used to move bread in and out of deep ovens. A handle could have been originally fixed to it by the nails, pegs or straps indicated by the marks on the flat blade. A similar-sized bread peel was found at Coppergate, York (Morris 2000, 2279, 2280, 2413 Fig 1110 [sf13176]) but this had an all-in-one piece wooden handle.

'Spatulae' (Illus 182)

Perhaps significantly all three of the 'spatulae' discovered during the excavations came from deposits that had been laid down during the 14th century (Period V).

Cat Nos 596/A5767 and 604/A1133c (Illus 182) are about the same size and with a similar proportion broken away from each one; they were discovered within a backland midden (M3b) and its associated path (P1a). Cat No 604/A1133c is very well made, with cleanly cut, chamfered edges, whereas Cat No 596/A5767, which might have been in one piece with a handle, is rather rougher.

Cat No 639/A05-0033, a possible spatula fragment, is of different form. It was recovered from a Rig VIII pit (Pit 7013) which probably dated from the mid-14th century.

Wooden knife.

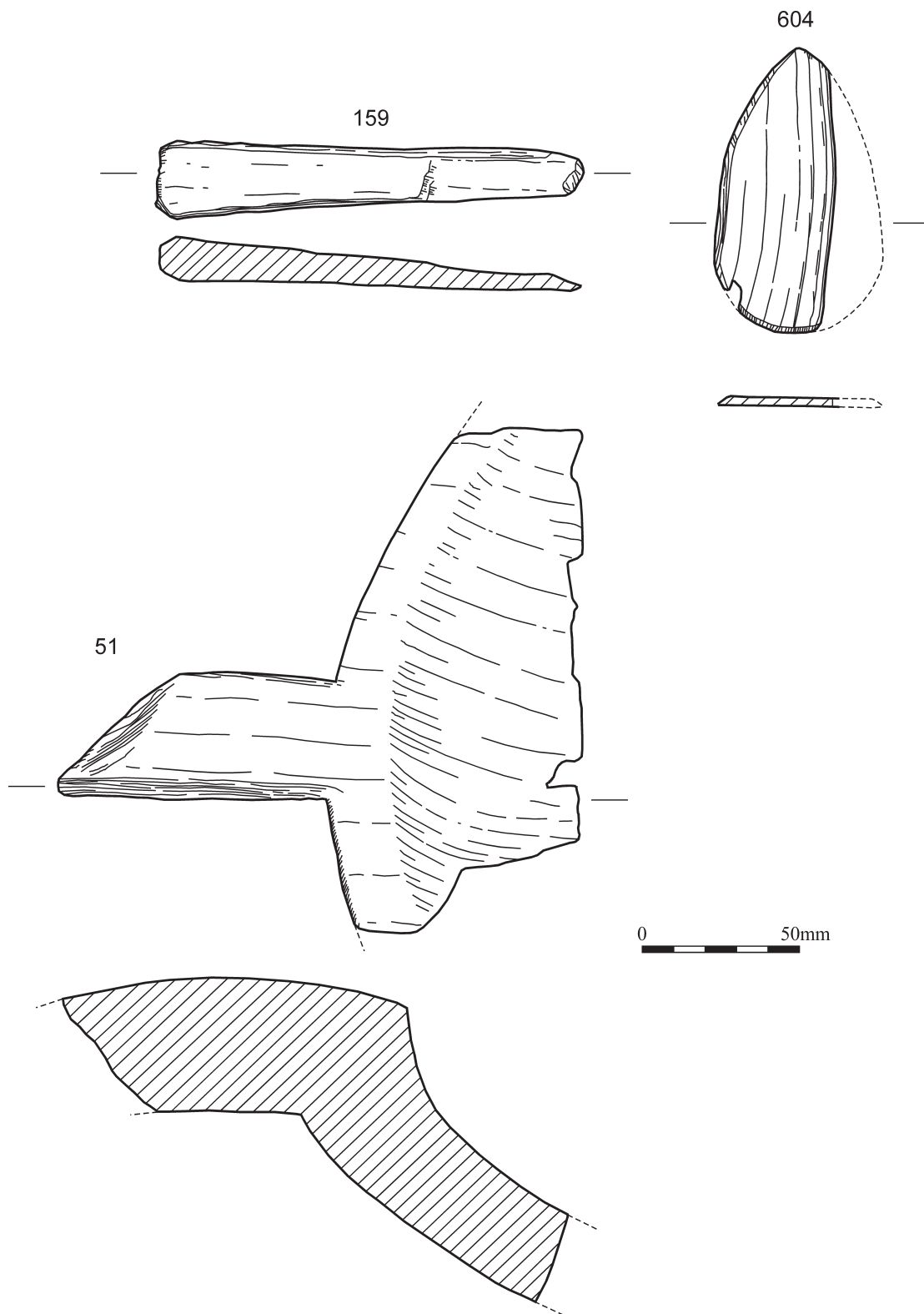
<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
159/A9918	Wooden knife	3	VI	M1.3	Ili

Scoops.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
51/A7007b	Shovel/scoop?	2	VI	MC044b	If
55/A12323	Scoop?	3	VI	MC053c	If
223/A5630a	Bread peel?	2	V	B26, Floor/ Occupation (10c)	Ilg-IVaa

'Spatulae'.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
596/A5767	Spatula?	4	VI	P1a	Vd
604/A1133c	Spatula	4	VI	M3b	Vd
639/A05-0033	Spatula?	10	VIII	Pit 7013	(Va-)Vd(Vdd)



Illus 182 Wooden knife Cat No 159. Shovel/scoop Cat No 51. Spatula Cat No 604.

Strainers and skimmers (Illus 183)

The two strainers were probably used in a domestic context, for example for lifting solid pieces of food out of a cooking pot. Cat No 237/A05–0216 has a hole for a hafted handle which was restrained by a peg running through the second, smaller hole above it. Both strainers are darkly stained in places, particularly Cat No 237/A05–0216 (Illus 183), and this might be the result of frequent immersion in hot fat.

The strainers were recovered from deposits which had been laid down during the second half of the 13th century. They came, however, from different properties. Cat No 237/A05–0216 was discovered in an occupation layer that had been laid down in the north room of B18 (Phase 1b), an aisled hall that occupied a backland part of Rig VII. Cat No 342/A5311 came from a midden (M1.4g) that had built up in part of Rig V during the later 13th century.

Tally stick (Illus 183)

The tally stick Cat No 60/A12604 (Illus 183) found in a cesspit (Pit 4726) in B16b is more than a century earlier (c1150) than those found at Southampton and King's Lynn (Platt and Coleman-Smith 1975, 231, nos 1647–1654; Clarke and Carter 1977, 372). It is also considerably larger, being 238mm long as opposed to 70mm (the largest from Southampton) and 132mm (the broken one from King's Lynn whose cross-section is only 9mm by 4mm). Otherwise, however, it seems to have in common with these the fact of being a private not an Exchequer tally (Jenkinson 1911, 289–351) and one which was used for counting rather than accounting. The evidence against being an accounting tally is as follows: the shape of the ends does not correspond to that of a 'foil' cut from a 'stock'; the notches do not continue through the edge, except in a few cases, but are enclosed within the surface; the notches occur on two opposite sides, they are not of uniform size and the increasing roughness of their execution suggests that they were not cut

simultaneously but over a period of time. Other private medieval counting tallies have been found in York (Richardson 1959, 102; Morris 2000, 2338 Fig 1150, 2339, 2418, Fig 1150, no 9015 [sf177b] and no 9016 [sf2885/2890]) and London (Morris 1984a, Fig 81, M263).

Pins (Illus 184)

See also Miscellaneous (d)

Nearly all the pins discussed here were whittled from small billets of radially-split wood and range in length from 60mm to c120mm, with a maximum diameter of less than 10mm. There are also several longer 'pins' included in this category, which provide a contrast to the majority of the pins and, although discussed here, should possibly be seen as a separate class of artefact. In any case, it is likely that wooden pins were used for a variety of purposes.

Two hundred and three pins (including three unstratified from the South/North Sectors) were recovered and of these 186 are from datable contexts: 150 of them were from 14th century deposits (Period V). Only 13 of the datable pins came from Periods I, II and III (c1100–c1250) deposits, while 19 were recovered from deposits which had been laid down during the second half of the 13th century (Period IV). Seventy came from Rig VII alone and most of these were recovered from Area 7. Fifty-six pins were found in only four early 14th-century main features in Rig VII (P8.4, M8a and the two phases of B53). Most (47) of the pins from these four features fall within the main size group.

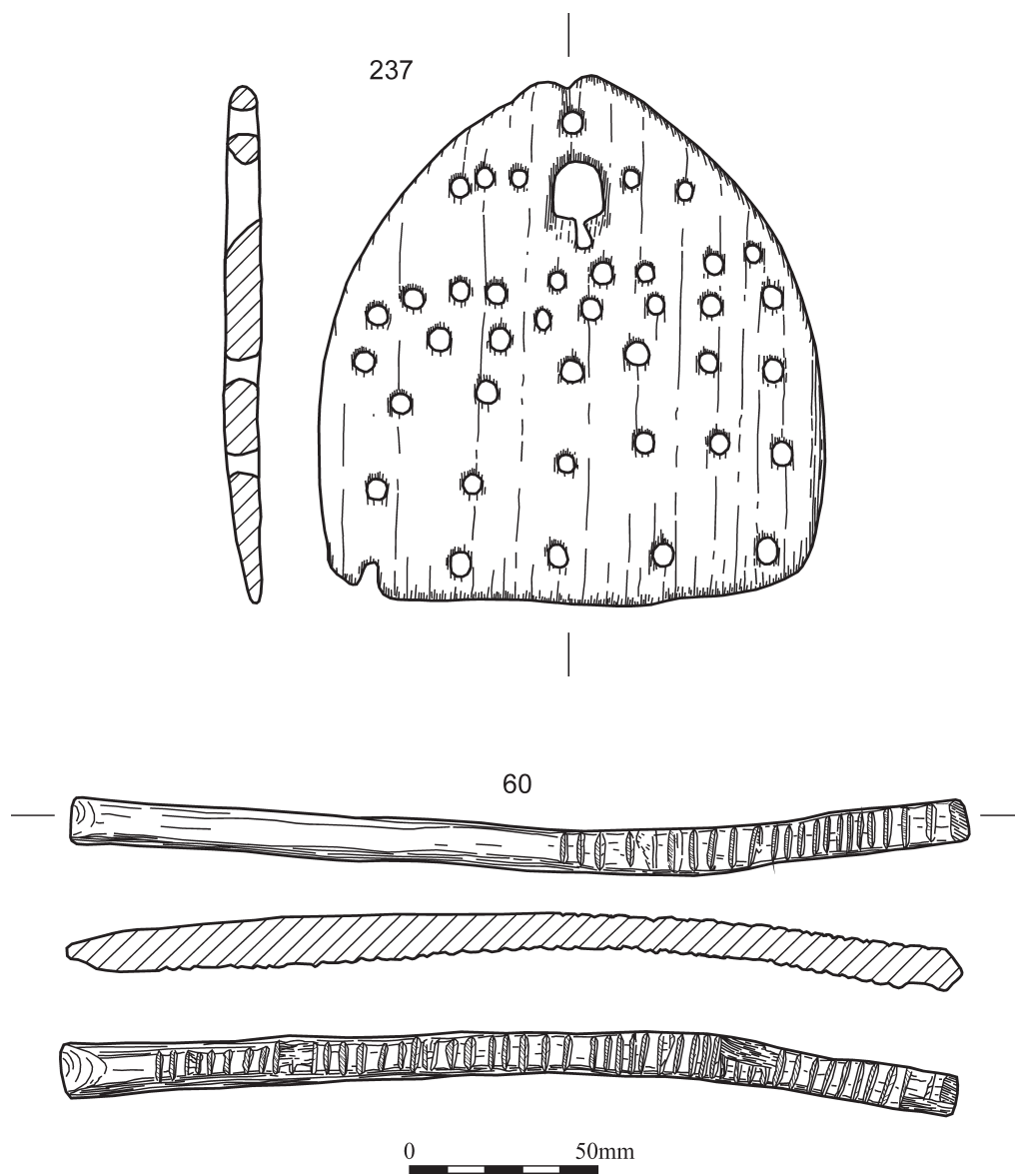
Some of the pins from P8.4 are fairly smoothly finished; the others range from being well whittled to very rough and splintery; all are fairly straight and most have slightly blunted points. M8a contained 13 pins, only a few of which are well shaped and smooth. The others are roughly whittled, one being no more than a twig with a point. All are more or less straight and one (Cat No 518/A05–0151) is roughly pointed at both ends. There is considerable damage to the points; all are blunted and six are broken or buckled.

Strainers and skimmers.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
237/A05–0216	Strainer/skimmer	7	VII	B18 (Phase 1b), North Room-Occupation (5b)	IVa,IVaa
342/A5311	Strainer	3	V	M1.4g	IVb,IVc

Tally stick.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
60/A12604	Tally stick	4	V	B16b, Pit 4726	Id–IIa



Illus 183 Strainer Cat No 237. Tally stick Cat No 60.

Pins.

<i>Cat/Accession</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
18/A10492a	4	VI	B16 (Phase 1), Occupation (1b)	(Id)Ie
39/A7582b	2	VI	M14b(b), Pit 3625	Ie
49/A05-0011	3	V	MC034a	Ie(If)
53/A7073a	2	VI	MC044b	If
54/A7073b	2	VI	MC044b	If
65/A10362	4	VI	B16 (Phase 2), Destruction	If,IIa
94/A11100	3	VI	MC066	IIc
102/A11097a	3	VI	MC080	IIId,Ile
103/A11097b	3	VI	MC080	IIId,Ile
128/A9489	4	VI	B12, Pit 2345	IIe-IIg
150/A8640a	3	VI	M1.3	Ili
151/A8640b	3	VI	M1.3	Ili
196/A9727b	3	VI	M6a	IIg-IIIId
218/A8112	4	V	MC158a, Pit 2228	IVaa
259/A05-0157	9	VII	B18 (Phase 1/2)	IVaa,IVb
268/A05-0219	7	VI	M1.4f	IVb
299/A05-0214	7	VII	B18 (Phase 2a), External 1, Pit 7314	IVb
304/A05-0090	9	VII	B18 (Phase 2b), North Room, Hall and Hall South-Occupation (10)	IVb
315/A05-0200c	7	VII	B18 (Phase 2b), Hall-Pit 7290	IVb
321/A10363a	3	V	MC155, Pit 2691	IVb,IVc
322/A10363b	3	V	MC155, Pit 2691	IVb,IVc
328/A5444	3	VI	M1.4d	IVb,IVc
343/A5432a	3	V & VI	M1.4c	IIIa-IVcc
344/A5432b	3	V & VI	M1.4c	IIIa-IVcc
345/A5432c	3	V & VI	M1.4c	IIIa-IVcc
352/A7355	3	V & VI	M1.4c	IIIa-IVcc
369/A05-0019a	9	VII	M9a	IVc,IVcc
370/A05-0019b	9	VII	M9a	IVc,IVcc
372/A05-0032	9	VII	M9a	IVc,IVcc
377/A05-0089a	10	VIII	M9b(b), MF6027	IVc,IVcc
378/A05-0089b	10	VIII	M9b(b), MF6027	IVc,IVcc
382/A05-0160	10	VIII	M9b(b)	IVc,IVcc
386/A05-0170	7	VI	M1.4i	IVcc
387/A05-0172a	7	VI	M1.4i	IVcc
388/A05-0172b	7	VI	M1.4i	IVcc
389/A05-0172c	7	VI	M1.4i	IVcc
397/A5448b	3	VI	P6	IVcc,Va
399/A05-0143a	7	VI	B34 'Courtyard'	Va
400/A05-0143b	7	VI	B34 'Courtyard'	Va
401/A05-0143c	7	VI	B34 'Courtyard'	Va
402/A05-0143d	7	VI	B34 'Courtyard'	Va
403/A05-0145	7	VII	P8.4	Va
406/A05-0142a	7	VII	P8.4	Va
407/A05-0142b	7	VII	P8.4	Va
408/A05-0142c	7	VII	P8.4	Va
409/A05-0144a	7	VII	P8.4	Va
410/A05-0144b	7	VII	P8.4	Va
411/A05-0171	7	VII	P8.4	Va
412/A05-0141	7	VII	P8.4	Va
413/A05-0152a	7	VII	P8.4	Va

(continued)

<i>Cat/Accession</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
414/A05-0152b	7	VII	P8.4	Va
415/A05-0153a	7	VII	P8.4	Va
416/A05-0153b	7	VII	P8.4	Va
417/A05-0056a	9	VII	P8.4	Va
418/A05-0056b	9	VII	P8.4	Va
422/A6719a	3	VI	B1(b)-Tumble 2775, & P6	IVcc,Va
423/A6719b	3	VI	B1(b)-Tumble 2775, & P6	IVcc,Va
424/A5407	2	VI	B1(b)-Tumble 2775	IVcc,Va
429/A1177	3	V & VI	M1.5a	Va,Vaa(VI)
431/A2121	3	V & VI	M1.5a	Va,Vaa(VI)
432/A2124	3	V & VI	M1.5a	Va,Vaa(VI)
435/A5450a	3	V & VI	M1.5a	Va,Vaa(VI)
436/A5450b	3	V & VI	M1.5a	Va,Vaa(VI)
437/A5450c	3	V & VI	M1.5a	Va,Vaa(VI)
438/A5752a	3	V & VI	M1.5a	Va,Vaa(VI)
439/A5752b	3	V & VI	M1.5a	Va,Vaa(VI)
440/A5758Ba	3	V & VI	M1.5a	Va,Vaa(VI)
441/A5758Bb	3	V & VI	M1.5a	Va,Vaa(VI)
442/A5758Bc	3	V & VI	M1.5a	Va,Vaa(VI)
443/A5758Bd	3	V & VI	M1.5a	Va,Vaa(VI)
444/A5766a	3	V & VI	M1.5a	Va,Vaa(VI)
445/A5766b	3	V & VI	M1.5a	Va,Vaa(VI)
446/A5766c	3	V & VI	M1.5a	Va,Vaa
447/A5766d	3	V & VI	M1.5a	Va,Vaa(VI)
448/A5780	3	V & VI	M1.5a	Va,Vaa(VI)
449/A5783	3	V & VI	M1.5a	Va,Vaa(VI)
454/A05-0040a	7	VI & VII	M1.5b	Vaa
455/A05-0040b	7	VI & VII	M1.5b	Vaa
456/A05-0040c	7	VI & VII	M1.5b	Vaa
458/A05-0045	7	VI & VII	M1.5b	Vaa
459/A05-0061	7	VI & VII	M1.5b	Vaa
463/A05-0106a	7	VI & VII	M1.5b	Vaa
464/A05-0106b	7	VI & VII	M1.5b	Vaa
465/A05-0106c	7	VI & VII	M1.5b	Vaa
466/A05-0106d	7	VI & VII	M1.5b	Vaa
467/A05-0108a	7	VI & VII	M1.5b	Vaa
468/A05-0108b	7	VI & VII	M1.5b	Vaa
469/A05-0108c	7	VI & VII	M1.5b	Vaa
470/A05-0108d	7	VI & VII	M1.5b	Vaa
471/A05-0108e	7	VI & VII	M1.5b	Vaa
472/A05-0109a	7	VI & VII	M1.5b	Vaa
473/A05-0109b	7	VI & VII	M1.5b	Vaa
474/A05-0109c	7	VI & VII	M1.5b	Vaa
475/A05-0109d	7	VI & VII	M1.5b	Vaa
476/A05-0109e	7	VI & VII	M1.5b	Vaa
477/A05-0109f	7	VI & VII	M1.5b	Vaa
478/A05-0126	7	VI & VII	M1.5b	Vaa
479/A05-0116a	7	VI & VII	M1.5b	Vaa
480/A05-0116b	7	VI & VII	M1.5b	Vaa
481/A05-0116c	7	VI & VII	M1.5b	Vaa
485/A05-0122	7	VI & VII	M1.5b	Vaa
486/A05-0123	7	VI & VII	M1.5b	Vaa
487/A05-0124a	7	VI & VII	M1.5b	Vaa
488/A05-0124b	7	VI & VII	M1.5b	Vaa
489/A05-0124c	7	VI & VII	M1.5b	Vaa
490/A05-0124d	7	VI & VII	M1.5b	Vaa
491/A05-0124e	7	VI & VII	M1.5b	Vaa

(continued)

<i>Cat/Accession</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
492/A05-0124f	7	VI & VII	M1.5b	Vaa
493/A05-0124g	7	VI & VII	M1.5b	Vaa
494/A05-0124h	7	VI & VII	M1.5b	Vaa
495/A05-0124i	7	VI & VII	M1.5b	Vaa
496/A05-0124j	7	VI & VII	M1.5b	Vaa
497/A05-0127a	7	VI & VII	M1.5b	Vaa
498/A05-0127b	7	VI & VII	M1.5b	Vaa
499/A05-0127c	7	VI & VII	M1.5b	Vaa
500/A05-0127d	7	VI & VII	M1.5b	Vaa
502/A05-0139	7	VI & VII	M1.5b	Vaa
505/A05-0110	7	VII	M8a	Va,Vaa
506/A05-0099a	7	VII	M8a	Va,Vaa
507/A05-0099b	7	VII	M8a	Va,Vaa
508/A05-0104a	7	VII	M8a	Va,Vaa
509/A05-0104b	7	VII	M8a	Va,Vaa
510/A05-0104c	7	VII	M8a	Va,Vaa
511/A05-0101	7	VII	M8a	Va,Vaa
512/A05-0102	7	VII	M8a	Va,Vaa
513/A05-0103	7	VII	M8a	Va,Vaa
514/A05-0115a	7	VII	M8a, Pit 7183	Va,Vaa
515/A05-0115b	7	VII	M8a, Pit 7183	Va,Vaa
516/A05-0115c	7	VII	M8a, Pit 7183	Va,Vaa
518/A05-0151	7	VII	M8a	Va,Vaa
521/A05-0081a	7	VII	B53 (Phase 1), North Area–D7080	Vb
522/A05-0081b	7	VII	B53 (Phase 1),North Area–D7080	Vb
523/A05-0081c	7	VII	B53 (Phase 1), North Area–D7080	Vb
528/A05-0088a	7	VII	B53 (Phase 1), Central Area–T7152	Vb
529/A05-0088b	7	VII	B53 (Phase 1), Central Area–T7152	Vb
530/A05-0097a	7	VII	B53 (Phase 1), Central Area–T7152	Vb
534/A05-0084a	7	VII	B53(Phase 1), Central Area–Occupation(3c)	Vb
535/A05-0084b	7	VII	B53 (Phase 1), Central Area–Occupation (3c)	Vb
536/A05-0084c	7	VII	B53 (Phase 1), Central Area–Occupation (3c)	Vb
537/A05-0084d	7	VII	B53 (Phase 1), Central Area–Occupation (3c)	Vb
538/A05-0086a	7	VII	B53 (Phase 1), Central Area–Occupation (3c)	Vb
539/A05-0086b	7	VII	B53 (Phase 1), Central Area–Occupation (3c)	Vb
541/A05-0080	7	VII	B53 (Phase 1), North Area–Occupation (1b)	Vb
542/A05-0020	7	VII	P8.5	Vb,Vbb
544/A05-0051	7	VII	B53 (Phase 2), North Area–T7072	Vbb
547/A05-0031a	7	VII	B53 (Phase 2), South Area–Occupation (7a)	Vbb
548/A05-0031b	7	VII	B53 (Phase 2), South Area–Occupation (7a)	Vbb
549/A05-0055a	7	VII	B53 (Phase 2), South Area–	Vbb

(continued)

<i>Cat/Accession</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
			Occupation (7a)	
550/A05–0055b	7	VII	B53 (Phase 2), South Area–Occupation (7a)	Vbb
551/A05–0059a	7	VII	B53 (Phase 2), South Area–Occupation (7a)	Vbb
552/A05–0059b	7	VII	B53 (Phase 2), South Area–Occupation (7a)	Vbb
554/A05–0046a	7	VII	B53 (Phase 2), North Area–Occupation (7b)	Vbb
555/A05–0046b	7	VII	B53 (Phase 2), North Area–Occupation (7b)	Vbb
556/A05–0049a	7	VII	B53 (Phase 2), North Area–Occupation (7b)	Vbb
557/A05–0049b	7	VII	B53 (Phase 2), North Area–Occupation (7b)	Vbb
558/A05–0049c	7	VII	B53 (Phase 2), North Area–Occupation (7b)	Vbb
559/A05–0076a	7	VII	B53 (Phase 2), North Area–Occupation (7b)	Vbb
563/A05–0047	7	VII	B53 (Phase 2), North Area–Occupation (8)	Vbb
566/A05–0052	7	VII	B53 (Phase 2), North Area–Occupation (12)	Vbb
571/A05–0057	7	VII	B53 (Phase 2), North Area–Occupation (14)	Vbb
572/A05–0035	7	VII	B53 (Phase 2), North Area–Occupation (15), H7075, T7076	Vbb
575/A5757B	4	V & VI	M3a	Vb–Vc
576/A5460	4	V & VI	M3a	Vb–Vc
579/A5765a	4	V & VI	M3a	Vb–Vc
580/A5765b	4	V & VI	M3a	Vb–Vc
581/A5765c	4	V & VI	M3a	Vb–Vc
582/A5754	4	V & VI	M3a	Vb–Vc
583/A5449	4	V & VI	M3a, T2187	Vb–Vc
585/A05–0006a	7	VII	M7	Vc
587/A05–0008a	7	VII	M7	Vc
588/A05–0008b	7	VII	M7	Vc
593/A5775a	4	VI	M3b	Vd
594/A5775b	4	VI	M3b	Vd
598/A5440a	4	VI	P1a	Vd
599/A5440b	4	VI	P1a	Vd
600/A1111a	4	VI	M3b	Vd
603/A1133b	4	VI	M3b	Vd
611/A2424b	4	V	M3c	Vd
619/A5437a	4	V	M3c	Vd
620/A5437b	4	V	M3c	Vd
621/A6161	4	V	M3c	Vd
622/A5438a	4	V	M3c	Vd
623/A5438b	4	V	M3c	Vd
624/A5753a	4	V	M3c	Vd
625/A5753b	4	V	M3c	Vd
651/A10345	3	V	Unstratified	Unstratified
653/A12566a	3/4	V & VI	Unstratified	Unstratified
654/A12566b	3/4	V & VI	Unstratified	Unstratified
655/A12566c	3/4	V & VI	Unstratified	Unstratified
656/A05–0053a	7	VII	Unstratified	Unstratified

(continued)

<i>Cat/Accession</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
657/A05-0053b	7	VII	Unstratified	Unstratified
658/A05-0114a	7	VI/VII	Unstratified	Unstratified
659/A05-0114b	7	VI/VII	Unstratified	Unstratified
660/A05-0114c	7	VI/VII	Unstratified	Unstratified
661/A05-0004a	7-10	VI-VIII	Unstratified	Unstratified
662/A05-0004b	7-10	VI-VIII	Unstratified	Unstratified
663/A05-0004c	7-10	VI-VIII	Unstratified	Unstratified
664/A05-0005	7-10	VI-VIII	Unstratified	Unstratified
North Sector				
667/A0511	5 & A		Lade (4)	6-12(b-e)
669/A0919	5 & A		Lade (4)	6-12(b-e)

Thirty pins were found in Building 53; 13 in B53 (Phase 1), and 17 in B53 (Phase 2). As these two groups are similar, they are discussed together. All except five are neatly whittled and smoothly, or quite smoothly, finished. All are fairly straight, except for one from B53 (Phase 1). Four from each phase are broken or buckled near the point, the others being slightly blunted. Five from B53 (Phase 2) have worn or broken heads.

Over half of the 14th-century (Period V) pins (80 out of 149) came from M1.5 and M3 – parts of an extensive midden which extended over the backland areas of Rigs V and VI which had apparently been combined as one property by that period. All these are comparable with the others from Period V (14th century) despite a small part of M1.5 being affected by post-medieval contamination. A number from M1.5 are well shaped and smoothly finished; one, Cat No 502/A05-0139 (Illus 184), is very fine and thin. Others range from fairly smooth to rough and splintery; most are straight. One smooth pin (Cat No 438/A5752a) is curved and the rougher ones tend to be bent. One (Cat No 445/A5766b) is pointed at both ends. All have slightly blunted points.

Unlike the pins from M1.5, which are contemporary with the group from P8.4 and M8a, the 27 examples from M3 are slightly later in date, albeit still from the 14th century. Nearly all are well shaped and smoothly finished, some very much so. They are virtually all straight, only one being knotty and another particularly rough. Six have been broken near the point and all have very slightly blunted points.

Although the remaining 12 pins from Period V (14th-century) contexts came from different parts of the site, they all fall within what will henceforth be referred to as the Period V group.

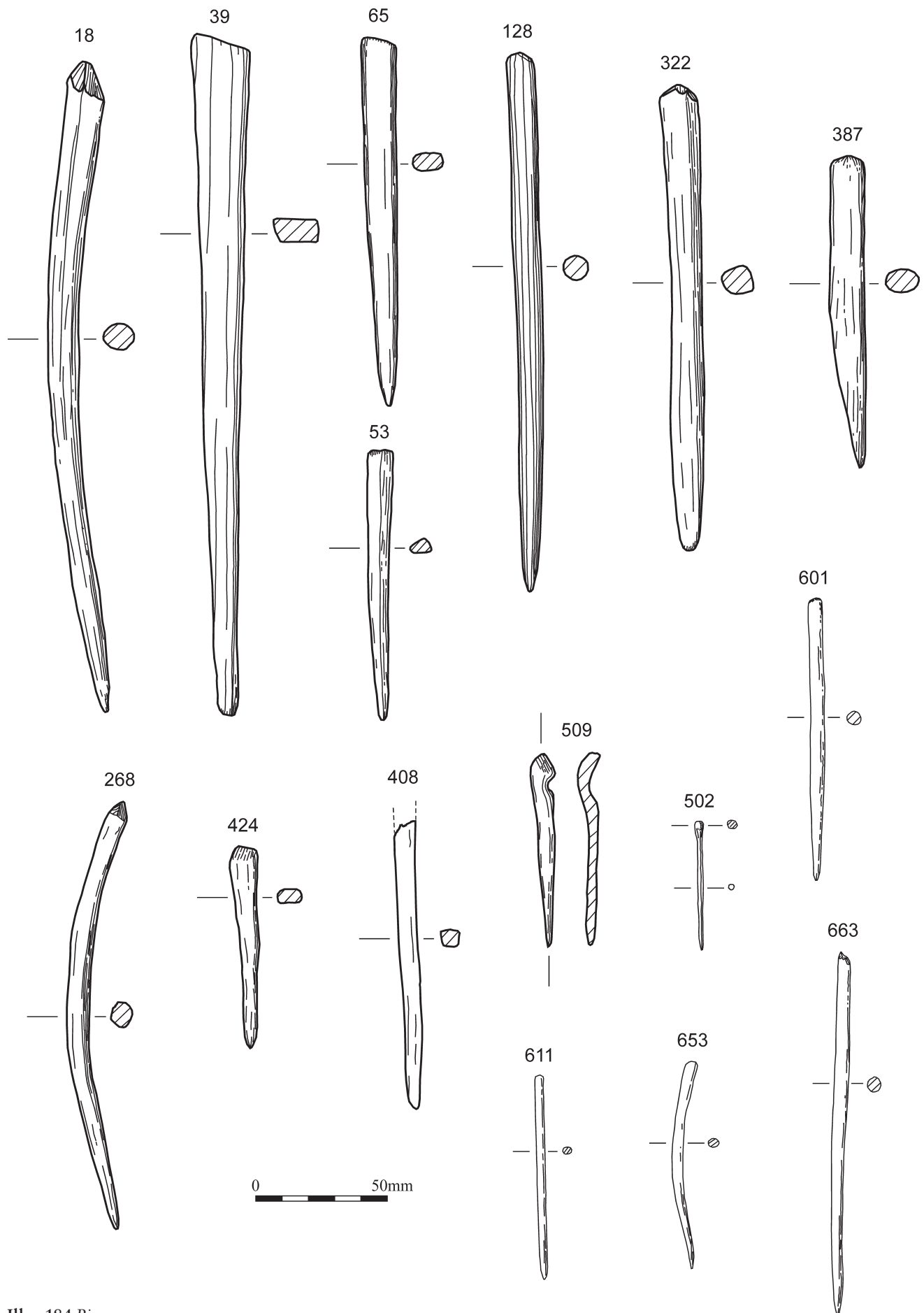
The 12 pins from Periods I and II (12th-century) are a mixed collection. They do not include a single example of the Period V group, although two rather wide pins (Cat Nos 53/A7073a and 54/A7073b) are close to the form. The two pins from B16, Cat Nos 18/10492a and 65/10362 (Illus 184), are of widely differing size, but both are very well made and smoothly finished. Apart from these and Cat No 39/A7582b (Illus 184), which is a long, straight, tapering length of wood of rectangular cross-section, the others are all more or less roughly pointed stakes from 96–240mm long.

Only eight of the 24 pins from Periods III and IV (including Cat No 196/A9727b) are examples of the Period V groups: Cat Nos 218/A8112, 343/A5432a, 344/A5432b, 352/A7355, 369/A05-0019a, 370/A05-0019b, 378/A05-0089b and 382/A05-0160. The others are all longer and/or thicker.

Unstratified contexts contained 15 pins. Cat Nos 653-5/A12566a,b,c (Illus 184) are three very well made small pins, one finely curved. The others include a twig with bark, roughly pointed (Cat No 659/A05-0114b), but are mainly well within the Period V group. Two pins (Cat Nos 667/A0511 and 669/A0919) from fills of the Lade also fit into this group. Cat No 670/L2600 is a rough example of the Period V type.

The concentration of a large group of pins in Period V and in a limited number of features leads one to speculate either that they were used in a particular process or that they came into common usage for a number of purposes during the early 14th century. The central area of B53 (Phase 1) is thought to have been used for some form of metalworking, but there are no other independent clues to the use of the pins. Hardly any of them show any wear on their heads; only the points are worn, usually blunted and sometimes broken, suggesting that they were used for scratching, marking, pegging, skewering or for stretching a fragile substance (such as parchment) without piercing it, rather than for being hammered to make holes in tough substances. It is notable that although many of them were carefully made and smoothly finished a significant number of them were not. Use with textile is therefore ruled out. Although their occurrence on the site begins abruptly and therefore a specific use is sought, it must be remembered that short lengths of cleft wood could be mass produced and might have been used generally in a domestic context, in the preparation of food, for example, as well as for some of the above mentioned functions.

In Northampton several wooden 'points' up to 175mm long were found in a drain-trench with leather shoes and offcuts, possibly the site of a cobbler's repair shop, dating sometime after 1367. It is suggested that the points were cobblers' tools (Swann 1972, 46). This end of the High Street in Perth is close to the Skinnergate and very large quantities of leather were recovered (see Fascicule 3, The leather), but



Illus 184 Pins.

reservations are held as to the ability of the Perth pins to pierce leather or to be of any other use in cobbling.

Twenty eight pins from medieval sites in York, measuring between 89mm and 275mm have been interpreted as bale pins used in the handling and packaging of raw wool which in medieval England was exported in 'sacks' which were probably bales of raw wool held together by sacking attached with wooden bale pins (Morris 2000, 2328, 2329, 2417–18, fig 1146, 2428, 2430–1). A total of nearly 300 of this type of bale pin has been found at large inland medieval trading centres such as Oxford, or at ports or on rivers (for example, London, King's Lynn, Gloucester and Hull) which would have handled wool in its raw state as a commodity en route to Europe (Morris 1984a, 35–6, Fig 19). Perhaps significantly among the large amounts of animal hair recovered from the High Street excavation, there was a considerable amount of wool (see Fascicule 3, The textiles). A large number of bale pins have been found at the waterfront Custom's House site in London (for example Henig 1974, 201, Figure 42; 1975, 153), a site known to have been the 'Wool Quay' at least from 1376 (Dyson 1974, 144). Many (but perhaps not all) of the Perth pins may have been bale pins, and size does not seem to have been a limiting factor as bale pins vary in length from 53mm (London) to 275mm (York), the variation also occurring within large associated groups. The 20 pins from King's Lynn date from c1050–1350 and range from 104mm to 200mm long (Clarke and Carter 1977, 368–9, Fig 171). The Custom House site, London, has produced 32 medieval pins from 53mm to 140mm long (Tatton-Brown 1974, 210, Fig 42; Henig 1975, 153).

Many other sites, from the Neolithic period onwards, have produced small numbers of pins of varying sizes (Hencken 1942, 17; Hencken 1950, 166, Fig 84; Coles et al 1973, 284–5, Fig 15; Wilson and

Hurst 1961, 311). Suggestions for their use have included cloak pins, hairpins, nose pins and in connection with weaving (Coles et al 1973, 41). The profusion of 14th-century pins from the High Street is an interesting addition to this list.

Textile working tools: bobbins, flax-breaking mallet, spindles, whorls, yarn-winder and heckle board (Illus 185 and 206)

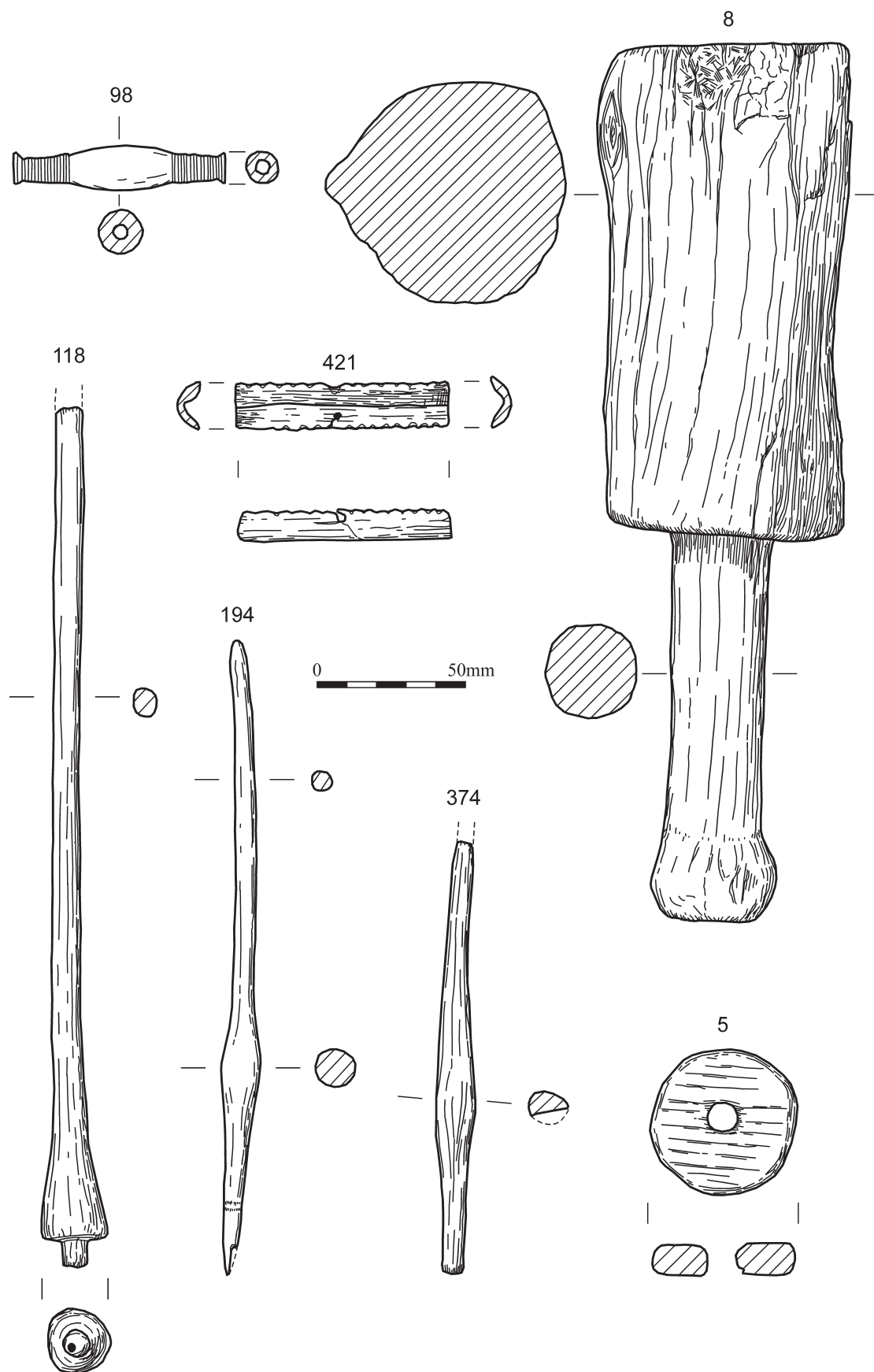
Amongst the wooden artefacts, evidence for the preparation and working of textiles consists of a flax-breaking mallet, three spindles, a whorl, two unusual bobbins, a possible yarn winder and a possible flax heckle (for further information see Fascicule 3, The textiles).

The possible flax-breaking mallet, Cat No 8/A11104 (Illus 185), is roughly made from roundwood and worn round its cylindrical head. If its function was in flax production, it would have been used to beat the retted and dried stalks of the flax on wooden or stone blocks in order to extract the fibres (Singer et al 1956, 196). There are two Anglo-Scandinavian flax pounders from York (Morris 2000, 2417, Fig 1144, no 6643 [sf6282] and no 6642 [sf9057]), and other Scandinavian parallels for such mallets (Brøgger and Schetelig 1928, 183; Schietzel 1970, 85) as well as many examples from Novgorod (Kolchin 1968, Plates 3 and 4), medieval Cork (Hurley 1982, Fig 16.2, 9) and numerous other unpublished Irish examples. Cat No 8/A11104 would probably have been too roughly finished to be used a pounder for washing clothes (Estyn Evans 1957, 61).

Wooden spindle whorls are not commonly found in archaeological contexts, though no doubt partly because they do not survive, rather than because they rarely existed. This one, Cat No 5/A11409 (Illus 185), weighed 15.4g after conservation and would have been used in the spinning of a very light woollen thread. It was one

Textile working tools: bobbins, flax-breaking mallet, spindles, whorls, yarn-winder and heckle board.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
5/A11409	Whorl	4	V/VI	MC017	Ia–Icc>
8/A11104	Mallet (flax breaking?)	3	V	MC031, Pit 5096	Ia–Id
98/A11403	Lathe-turned bobbin	3	VI	M1.1c, Pit 5005	IId
101/A10570	Lathe-turned bobbin	3	VI	MC080	IId,IIe
118/A6890	Spindle	2	V	B5, North Room-Floor/Occupation (1)	Ila–IIff
194/A9299	Spindle	3	VI	M6a	IIg–IIId
219/A4854	Heckle board?	2	V	B26, Floor/Occupation (8b)	IIg–IVaa
374/A05–0119a	Spindle	9	VII	M9a	IVc,IVcc
421/A5749	Yarn winder?	2	V	B1(a), South Room-Floor (2b)	IVcc,Va



Illus 185 Textile-working artefacts. Lathe-turned bobbin Cat No 98. Mallet Cat No 8. Yarn winder Cat No 421. Spindles Cat Nos 118, 194, 374. Whorl Cat No 5.

of a number of whorls recovered from the excavation (see Fascicule 4, The miscellaneous finds, for details of the stone and bone examples recovered from the site). Other spindle whorls have been found at Christchurch Place in Dublin (Morris 1984a, T93) and Ballinderry Crannog 1 (Hencken 1936, 165).

One of the spindles, Cat No 374/A05–0119a (Illus 185), was associated with a charred bone whorl (see Fascicule 4, The worked bone) and has a bulbous thickening, similar to that of the only spindle which still retains its smooth finish, Cat No 194/A9299 (Illus 185). The third spindle, Cat No 118/A6890 (Illus 185), has a conical end, terminating in a small tenon on to which the whorl would have been pushed. The finding of this spinning equipment suggests that Building 5 at least might have been an ordinary family home, in which the woman or women practised the ancient 'spinster's' occupation.

Spindles and whorls were still widely used in Scotland in the late 19th century in Shetland, Orkney, The Hebrides, Ross, Sutherland, Inverness and Gallo-way, etc. In Inverness in 1866 an old woman was seen using a potato for a whorl; she had never known otherwise (Mitchell 1880, 5–8).

There are two bone bobbins of the same type as the two wooden ones, Cat Nos 101/A10570 and 98/A11403 (Illus 185) (see Fascicule 4, The worked bone, for information on the bone examples). The wooden ones occurred close together on the site and are earlier (late 12th-century) than any of the bone examples, whether of collared type (as here) or of simple, cylindrical shape, the latter being less certainly bobbins (*ibid*). Their exact use is not known but a wooden plug found in the end of one of the bone bobbins (Fascicule 4, The worked bone, Cat No 33/A5369) might have held the end of a thread in place. Moreover the wooden ones are very smoothly finished, as is required of any object used in textile production.

The description of Cat No 421/A5749 (Illus 185) as a yarn-winder is very tentative. It was recovered from a floor level in the south room of B1(a).

Cat No 219/A4854 (Illus 206) may be a frame for a flax heckle and the seven regularly-spaced holes may originally have held teeth which could be positioned upright, and through which flax stems were pulled.

Handles (Illus 186, 187)

Most of the handles are of the socketed type, enclosing strip (or rounded?) tangs in those cases where the handle is sufficiently damaged to reveal such information. There are also T-bar handles, scaled handles, handles set into the heads of hammers, and two miscellaneous fragments which might be two further types of handle.

Eleven out of the 12 socketed handles retain all or part of the knife blade or awl. There are eight knives, Cat Nos 108/A6084, 220/A5185, 284/A04–0112, 553/A04–0157, 567/A04–0313, 590/A04–0037 and 592/A3140; one empty handle, Cat No 527/A05–0087 (Illus

186); and one handle whose iron attachment is too corroded to identify, Cat No 546/A04–0096. The two awls (Cat Nos 405/A04–0422 and 543/A05–0036) are discussed separately (see below, 'Awl (handles)'). The longest socketed handle, Cat No 108/A6084 (Illus 186), is 127mm long and encloses the tapering strip tang of a knife blade extending 300mm beyond the end of the handle. After the handle had been put into position on the tang, the pointed end of the tang was bent into a hooked shape to ensure that the long, heavy blade did not come loose. At the other end of the scale is Cat No 592/A3140 (Illus 186), a round handle 53mm long, with a knife blade extending only 41mm beyond the handle.

All the socketed handles are straight and either rounded, circular or elliptical in cross-section, sometimes with a slightly constricted central part (eg Cat No 527/A05–0087). Cat No 284/A04–0313 has a carved decoration at the blade end (Illus 186). Only handle Cat No 567/A04–0112 is clearly made from cleft wood, whereas all the other socketed handles are of roundwood, where this is determinable, and the consequent radial splitting is visible in many cases. Cat No 546/A04–0096 (Illus 186), a bladeless handle, becomes abruptly narrower at the blade end, where there might have been a decorative metal strip.

Five of these tools occur in B53 (Phases 1 and 2), while an awl from P8.4 and a knife from M7 both come from the same area (7), period (V) and rig (VII). Although one would expect knives of some sort to be used by almost everyone and in both domestic and industrial contexts, this concentration of two awls, three knives and two other handles assumes greater significance in view of the fact that B53 (Phases 1 and 2) is thought to have been an early 14th-century workshop.

Cat Nos 31/A7597 and 276/A05–0198b (Illus 186) are probably single halves of two pairs of scaled handles. They would have been held together around the flat tang of a knife, for example, either by metal or leather strips, or with rivets. Cat No 31/A7597 has no nail holes but is clearly worn on the side at one point, and Cat No 276/A05–0198b, which is broken away at its narrow end, has nail holes which do not penetrate it and which might have held a binding in place. Two unpublished riveted examples of this type of handle come from the medieval Trig Lane site in London (TL74 1955 A2252, TL74 2671 A2201). Another example from the High Street is provided by the sword hilt (see below) the scaled grip of which remains.

The two T-bar handles, Cat Nos 100/A9921 (Illus 187) and 574/A05–0085), are of varying sizes. Cat No 100/A9921 is like the top of a modern spade handle, to be grasped in one or two hands while digging. It has a long ancestry, two examples occurring in Iron Age Glastonbury (Bulleid and Gray 1911, 319, 331); the type is also illustrated in a 15th-century manuscript (Singer et al 1956, 98). Cat No 574/A05–0085 is longer and narrower and is more likely to have been attached to a light boring bit or gouge.

Handles.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
4/A11072	Handle (hammer)	4	V/VI	MC017	Ia–Icc>
31/A7597	Handle (scaled)	2	VI	M14b(b)	Ie
71/A12452b	Handle? (decorated)	3	V	MC039, Pit 2609	If,IIa
100/A9921	Handle (T-bar)	3	VI	MC080	IId,IIe
108/A6084	Handle (socketed with blade)	2	VI	M1.1d & M1.1e	IId–IIIf
220/A5185	Handle (socketed with blade)	2	V	B26, Floor/Occupation (8b)	Ilg–IVaa
228/A11254	Handle (socketed with blade)	3	VI	B2, Floor (2a)	IVa,IVaa
238/A04–0617	Handle (hammer)	7	VII	B18 (Phase 1b), North Room–Occupation (5b)	IVa,IVaa
276/A05–0198b	Handle (scaled)	7	VII	B18 (Phase 2a), North Room & Hall–Construction (2)	IVb
284/A04–0313	Handle (socketed with blade)	9	VII	B18 (Phase 2a), Hall South–Occupation (3)	IVb
358/A05–0162a	Handle?	7	VII	M9a	IVc,IVcc
405/A04–0422	Handle (socketed with awl)	7	VII	P8.4	Va
527/A05–0087	Handle (socketed)	7	VII	B53(Phase 1), Central Area–T7152	Vb
543/A05–0036	Handle (socketed with awl)	7	VII	B53 (Phase 2), North Area–T7072	Vbb
546/A04–0096	Handle (socketed)	7	VII	B53 (Phase 2), North Area–T7072	Vbb
553/A04–0157	Handle (socketed with blade)	7	VII	B53 (Phase 2), South Area–Occupation (7a)	Vbb
567/A04–0112	Handle (socketed with blade)	7	VII	B53 (Phase 2), North Area–Occupation (14)	Vbb
574/A05–0085	Handle (T-bar)	10	VIII	M8b	Va,Vaa(–Vc)
590/A04–0037	Handle (socketed with blade)	7	VII	M7	Vc
592/A3140	Handle (socketed with blade)	4	VI	M3b	Vd

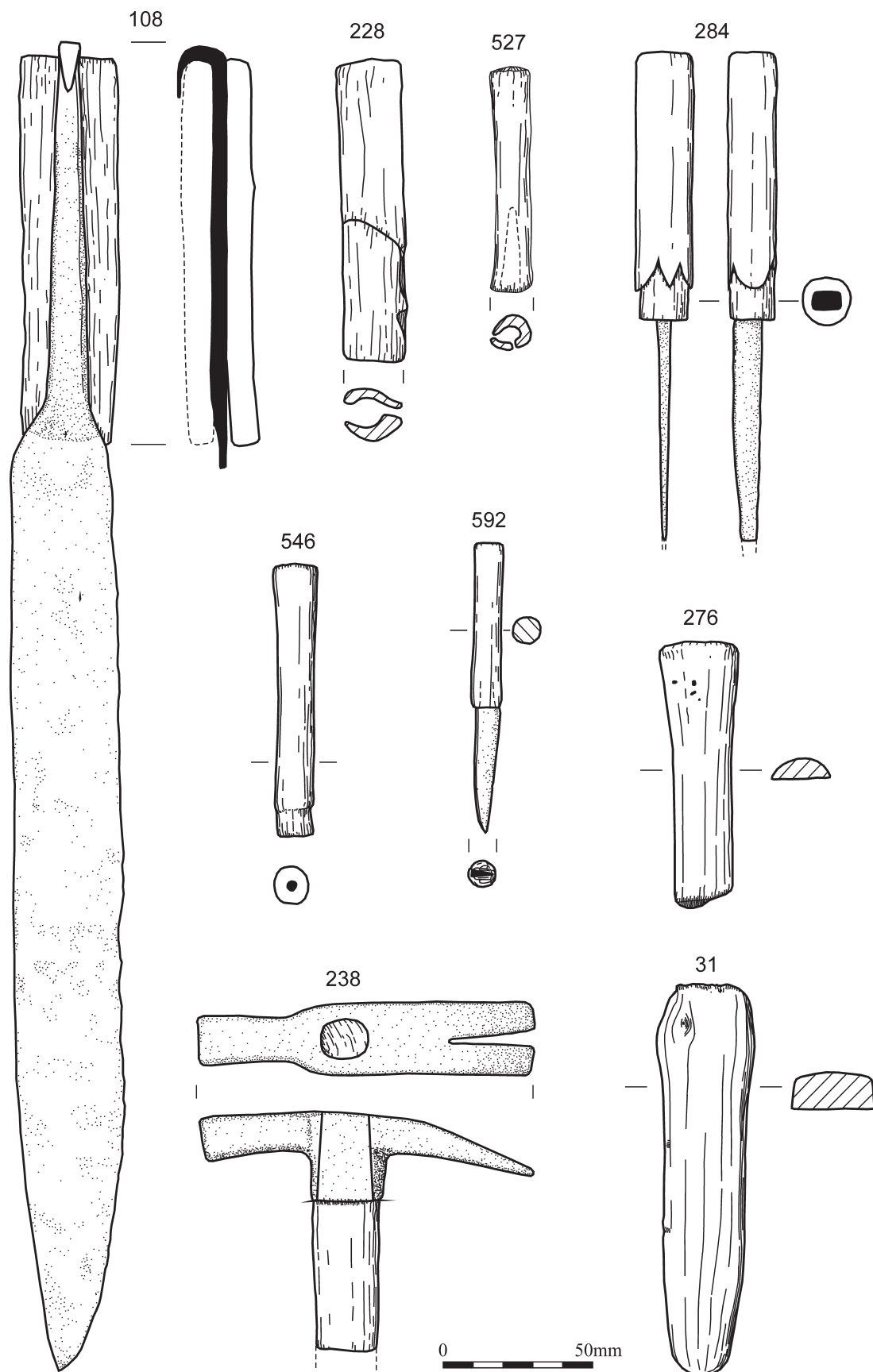
There are two hammers, Cat Nos 4/A11072 and 238/A04–0617 (Illus 186), which have straight handles set into holes in their heads. The hammer shafts were set into the hammerheads while the iron was hot, allowing the holes to clamp tightly round them when they cooled. The handle of Cat No 238/A04–0617 is of cleft wood.

Cat No 358/A05–0162a (Illus 187) might be a handle for a socketed metal tool which would have fitted tightly onto a narrow projection and groove cut from the wood. Franks (1855, 329–30) recorded such a knife, riveted onto the shaft of a yew handle, amongst the Bronze Age weapons found on Arreton Down, Isle of

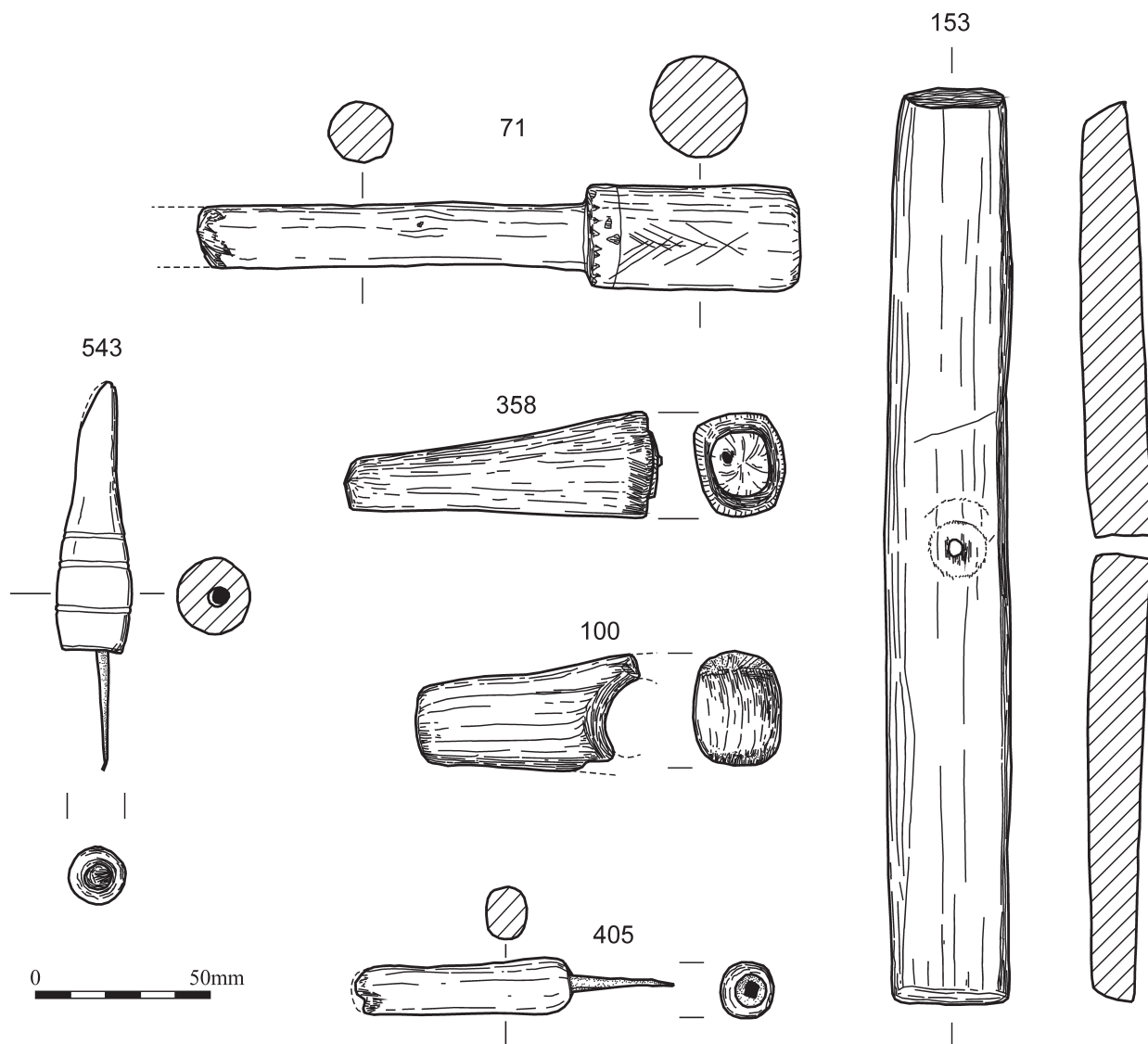
Wight. At that time no other of this type was known in the British Isles or in northern Germany.

Cat No 71/A12452b (Illus 187) might also be a handle of some sort. It is one of the few wooden artefacts to be decorated, being crudely incised with a herringbone pattern and chevrons.

The variety of handles, with or without iron attachments, found on the site gives some indication of what tools were used and how they were made. It is extremely unusual for both iron and wood to survive well together in archaeological contexts. This collection of knives, with blades from 40–300mm long, awls and hammers is therefore of some importance.



Illus 186 Handles.



Illus 187 *Handles*.

Awl (handles) (Illus 187)

The two awls (Illus 187) are of similar size, though their handles are very different. Cat No 543/A05–0036 has an attractive, finely spindle-turned handle. In common with the two bladeless handles (Cat Nos 527/A05–0087 and 546/A04–0096; see above, ‘Handles’) it has a round socket, although it is much larger than necessary and, as far as one can determine, the tang seems to be rectangular rather than circular in cross-section. Perhaps an originally rectangular socket became enlarged and rounded through constant use. The other awl, Cat No 405/A04–0422, has a simple, straight handle whittled from roundwood and a circular flange at the base of the spike in order to prevent the tang from working its way into the handle.

The two awls are examples of tools which are here of medieval date but of a type of iron awl whose form was the same from the Roman period to the present day and of which there are many surviving examples, albeit most without their handles. Awls like these were used

for making channels and small holes in leather prior to stitching, among other tasks, but it is possible that they were also used for marking out holes to be bored in woodwork, etc. Both were recovered from early 14th-century deposits in the same area (7) and rig (VII). P8.4 and B53 (Phase 2) also contained, amongst other items, large numbers of small, wooden pins. One might speculate about a possible connection between these pins and the awls, perhaps in leatherworking.

Two wooden-handled awls were found at Coppergate, York (Morris 2000, 2339, 2418 no 9017 [sf8047], 2419 no 9018 [sf1700]), a small Anglo-Scandinavian wooden awl handle made of beech or *Prunus sp* with a circular tanghole for the tang of an iron awl which is now missing and another of medieval date is an iron awl which has only traces of the wooden handle surviving whose species is unidentifiable. Similar Anglo-Scandinavian awls have been found at 6–8 Pavement, York (MacGregor 1982, Fig 41, 422–426), two of which

Awls (handles).

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
405/A04–0422	Handle (socketed with awl)	7	VII	P8.4	Va
543/A05–0036	Handle (socketed with awl)	7	VII	B53 (Phase 2), North Area–T7072	Vbb

were complete with their wooden handles. Thirty-nine Anglo-Scandinavian iron awls without handles have been found on the 16–22 Coppergate site (Ottaway 1992, 552–4, Fig 222). Another Viking awl with a complete wooden handle and suspension loop and an awl handle were found in the ninth century Oseberg ship burial (Brøgger and Shetelig 1928, Figs 146–147). Viking Age and 13th-century awls with wooden handles were found at Fishamble Street and Winetavern Street, Dublin (Lang 1988, Plate XII; NMI 1973, 41) and Viking period and medieval wooden awl handles without their iron points have been found at Lagore Crannog (Hencken 1950, Fig 84), High Street, Dublin and Norton Priory, Runcorn (Morris 1984a, Fig 80, M242–3 and M253), King's Lynn (Clarke and Carter 1977, Fig 171, 3), Oxford, Westgate (Henig 1976, Fig 16, 2) and six sites in London – Customs House, Milk Street, Trig Lane, Blossoms Inn, Worship Street and Seal House (Henig 1974, Fig 42, 247; Morris 1984a, Fig 80, M247–M251). Iron awl points without handles have been found at many other sites in England, some with other leatherworking tools and heavy concentrations of manufacturing waste, for example at Eastgate, Beverley (Atkinson and Foreman 1992, 175, Fig 80, 303–311).

Mallets and clubs (Illus 185, 188)

This disparate group of objects, used for various sorts of pounding, consists of a possible flax-breaking mallet, Cat No 8/A11104 (Illus 185); a small, roughly shaped club or mallet-like object, Cat No 647/A1899 (Illus 188); a spherical, nail-studded club which had a straight,

wooden(?) handle, 204/A11238 (Illus 188); two flat clubs, Cat Nos 225/A6736 and 384/A05–0183 (Illus 188), which taper towards one end; and two mallet heads which would have had separate handles, Cat Nos 56/A10031a and 57/A10031b.

The small mallet or club-like object, Cat No 647/A1899 (which is only tentatively included in this category) is damaged on one side of its head. It was recovered from a cesspit (Pit 2111).

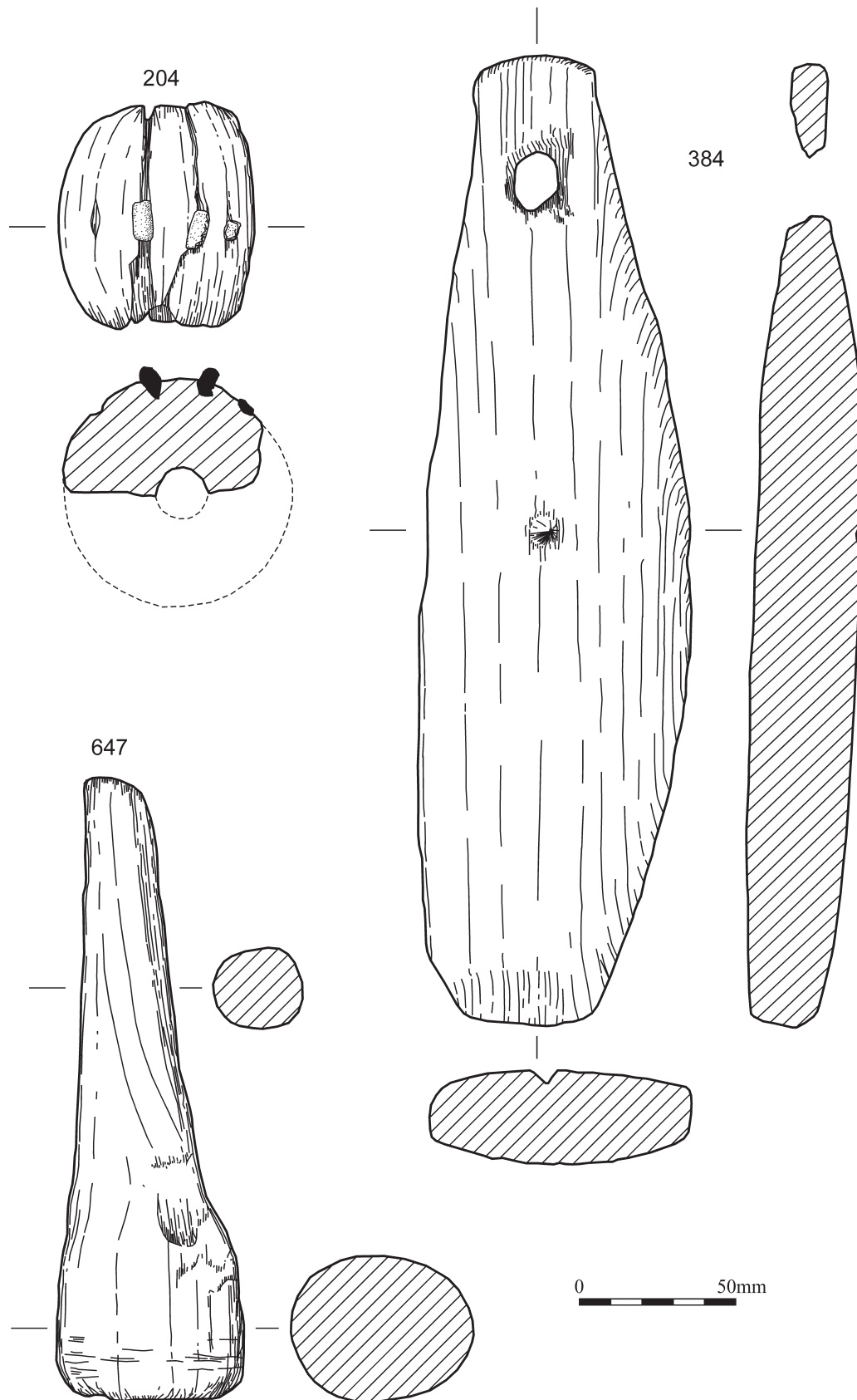
If the flat, club-like object, Cat No 225/A6737, were at all worn along one or both of its edges, one might have thought of it as a flax-scrunching board, used in the process described above. However, like Cat No 384/A05–0183, it is slightly worn on one of its flat sides only. One can say no more than that both these objects were probably used for some sort of pounding.

The spherical object, Cat No 204/A11238, looks as though it might be a fragment of a mace-like weapon with T-shaped headed nails set round its circumference. It would have had a straight, wooden(?) handle, secured in a cylindrical hole running through the centre of the head, at right angles to the circle of nails.

Cat Nos 56/A10031a and 57/A10031b are two-piece mallets with separate heads and handles. They both still have their original handles, the latter secured in the hole by a small wooden wedge. Wooden mallets like this were used for woodworking and other specialised crafts. They were used in circumstances where a wooden object needed to be struck repeatedly and where a metal hammer would cause damage. They are the kind of mallet which would have been used, for example, with woodworking chisels and gouges.

Mallets and clubs.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
8/A11104	Mallet (flax breaking?)	3	V	MC031, Pit 5096	(Ia–)Id
56/A10031a	Mallet	3	V	MC033, MW4479	If
57/A10031b	Mallet	3	V	MC033, MW4479	If
204/A11238	Club?	3	V	M6b	IIg–IIId
225/A6736	Club?	1	VI	B20, Occupation (2b)	<IIId–IVaa
384/A05–0183	Club?	10	VIII	M9b(b), MW6086	IVc, IVcc
647/A1899	Club?	4	VI	M3e, Pit 2111	Vdd>



Illus 188 Clubs.

Shovels, separate-bladed shovels and mattock heads (Illus 189)

All three shovel blades fall within the 10th- to 14th-century group of British and north European shovel blades which are the subject of two articles by Morris (1980, 1981). The term separate-bladed shovel has come to describe the complete object precisely (Morris 1981, 51). A further find of a separate-bladed shovel at Moynagh Lough in County Meath, Ireland, pushed the earliest date of these tools back to at least the eighth/ninth century (Bradley 1982). Two of the Perth blades were recovered from later 13th-century deposits, while the other was discarded in the late 12th century.

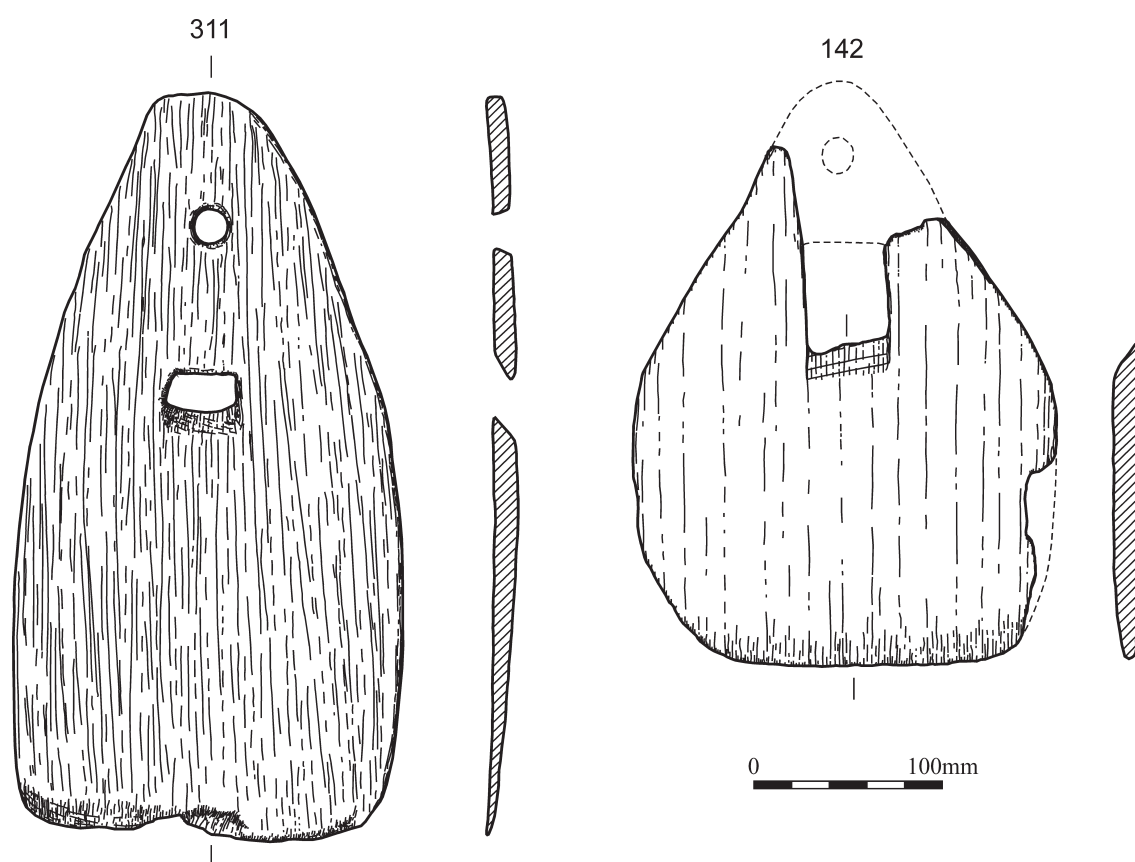
A hafted handle would have been attached to each blade by slotting into an oblong hole and being secured by a round peg (holes are extant in Cat No 311/A05–0121 [Illus 189] and assumed for Cat Nos 142/A10033 [Illus 189] and 329/A5494). A length of rope or cord might also have been used to secure the shaft, although the most complete example, Cat No 311/A05–0121, has a pointed fixing end and smooth, regularly sloping shoulders which would give no purchase to a fixing cord. Neither shafts, pegs nor cords survive. None of the blades bears evidence for the attachment of an iron spade shoe, though one was found on the site (see this

Fascicule, Franklin and Goodall, Iron Cat No 211).

All three are worn at the working end to some extent, especially Cat No 329/A5494. Cat No 311/A05–0121 is thinner than the other two (c10mm max thickness) narrowing to quite a sharp end.

The two incomplete examples were recovered from middens, illustrating the point that a separate-bladed shovel could be repaired by fixing a new blade onto the shaft. In both length and width all three are close to the mean for all the shovels studied by Morris (1981, 57). Shovels of this type were probably used for lifting loose materials rather than for cutting into a hard surface. Examples have been found in a clay pit, in various mines and in association with the stabling of animals (ibid, 58). Documentary evidence from the 14th and 15th centuries illustrates such shovels being used for clearing mud from a water course, for mixing mortar, for shovelling earth and lifting sand (BL, Egerton MS 1894, fols 5b, 14a, 17b; Morris 1981, Fig II). Cat No 311/A05–0121 was found in an occupation layer of building B18 (Phase 2b) and perhaps used to clear general domestic refuse.

The distribution of separate-bladed shovels in Ireland, England north of the Danelaw, Scotland, Sweden and northern Germany led to the hypothesis that this type of tool was possibly of Scandinavian



Illus 189 Shovel blades.

origin (*ibid*, 59). The Scottish evidence consists of the Perth shovel blades alone and, while Perth was not in a Viking part of Scotland, it might have been possible for the Vikings' tools to have had influence beyond the areas of their settlement, but the Moynagh Lough find from eighth/ninth century Ireland now suggests that this type of tool has a more widespread chronological distribution and was common to a large part of north-west Europe.

Cat No 356/A05–0156b is a roughly rectangular mattock head with one chisel-like end, and one rough, blunt end. It is the type of tool used manually for breaking up soil in small-scale tillage (*cf* Morris 1984a, 21–3, Fig 16, *passim* for parallels, including a complete mattock and handle from north Unst, Shetland).

Toggles (Illus 190)

Although these three items were recovered from deposits dating to c1300, toggles like Cat No 501/A05–0128 (Illus 190) were found in 12th- and 14th-century levels at Novgorod (Kolchin 1968, Plate 80) and in 13th- to 14th-century King's Lynn (Clarke and Carter 1977, 369: 35). Although they are of the type commonly used on duffel coats and rope fixing, etc, today, this one may have served as a rope-runner on a

boat. Cat No 395/A6739 consists of two fragments which might have made up a toggle of the same type. Cat No 361/A05–0165b (Illus 190) is perhaps another type, being flat with a rounded notch between two asymmetrically expanded ends. A Neolithic example was found in the Somerset Levels (Coles *et al* 1973, 285, Fig 13:9).

Bone toggles were also recovered from the High Street site (see Fascicule 4, The worked bone).

'Buttons' (Illus 190)

Three wooden 'buttons' were recovered from the excavation. Although one was unstratified, the others date from c1300. Apart from Cat No 453/A05–0039 (Illus 190), an example of a lathe-turned button, which has already been discussed, two hewn examples, Cat Nos 339/A6768 and 652/A9132 (Illus 190), had plainly been worked by hand. These three so-called 'buttons' consist of flat discs with a central, circular perforation. They could have been attached to a garment by a thickly knotted cord.

Metal buttons or studs were also recovered from the site. They seem to have been broadly contemporary with these wooden examples (see this Fascicule, Goodall, Non-ferrous metal objects Cat Nos 67–70).

Shovels, separate-bladed shovels and mattock heads.

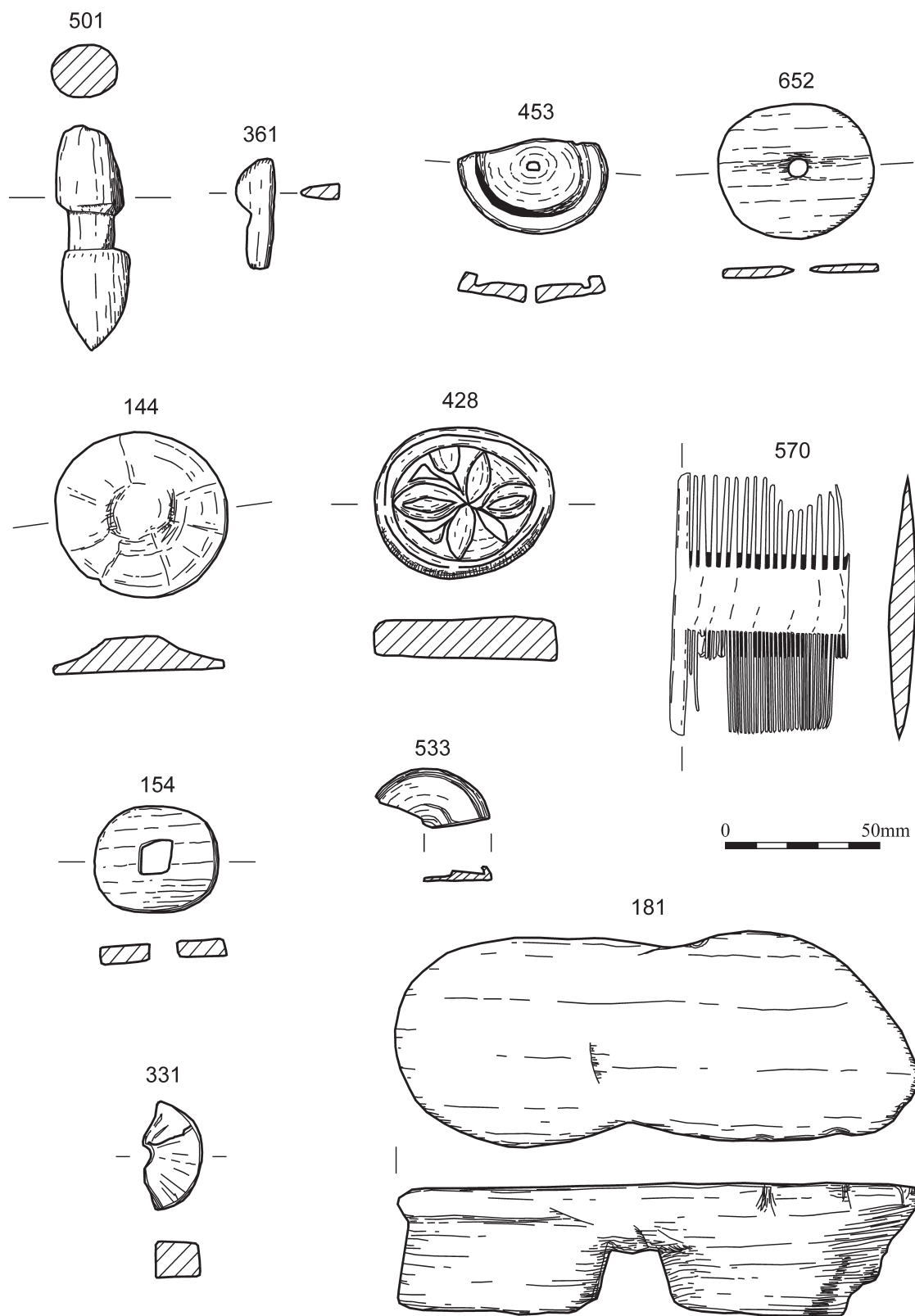
<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
51/A7007b	Shovel/scoop?	2	VI	MC044b	If
142/A10033	Separate-bladed shovel	3	VI	M1.2, Pit 2648	<IIg(IIh)
311/A05–0121	Separate-bladed shovel	9	VII	B18 (Phase 2b), North Room, Hall & Hall South-Occupation (10)	IVb
329/A5494	Separate-bladed shovel	3	VI	M1.4d	IVb,IVc
356/A05–0156b	Mattock head	7	VII	M9a	IVc,IVcc

Toggles.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
361/A05–0165b	Toggle?	7	VII	M9a, H7224	IVc,IVcc
395/A6739	Toggle?	3	VI	M1.1e	IVcc(Va)
501/A05–0128	Roperunner?/toggle	7	VI & VII	M1.5b	Vaa

'Buttons'.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
339/A6768	Button?/disc	3	V	M1.4g	IVb,IVc
453/A05–0039	Lathe-turned button?/disc	7	VI & VII	M1.5b	Vaa
652/A9132	Button?	3/4	V & VI	Unstratified	Unstratified



Illus 190 Toggles Cat Nos 501, 361. Buttons Cat Nos 453, 652. Gaming counters Cat Nos 144, 428, 533. Discs Cat Nos 154, 331. Comb Cat No 570. Patten Cat No 181.

Gaming pieces (Illus 190)

Comparatively little can be said of this category, all of which came from late 13th- or early 14th-century deposits. Two of these wooden gaming pieces, Cat Nos 226/A8499 and 533/A05–0083 (Illus 190), are turned, while the third, Cat No 428/A4325 (Illus 190), has a crudely carved design on one surface. It was recovered from a cesspit (Pit 3540).

In addition to these, it is possible that a number of unperforated wooden discs, which were recovered from the site might also be gaming counters (see Discs).

A particularly fine worked bone gaming piece and a number of dice were also recovered (see Fascicule 4, The worked bone).

Discs (with and without perforations) (Illus 190)

This group contained a number of wooden discs or circular pieces, some of which are perforated. While some might have been buttons or gaming pieces, the use of the other remains indeterminate. The perforated discs include three possible buttons, Cat Nos 339/A6768, 453/A05–0039 (Illus 190) and 652/A9132 (Illus 190); a large button-like object, Cat No 239/A05–0179; a square-holed disc, Cat No 154/A8816 (Illus 190); and a thicker disc with a circular hole, Cat No 331/A6320 (Illus 190).

The unperforated discs, which are more likely to be gaming pieces (eg Cat No 74/A11099), include Cat No 144/A11227a (Illus 190), which comes from the same context as a grooved wedge-shaped object, Cat No 145/A11227b (Illus 200), probably of the same wood; the two pieces might have been used together for some purpose (see also 'Buttons' and Gaming pieces).

Gaming pieces.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
226/A8499	Lathe-turned gaming piece?/disc	3	VI	B2, Floor (2a)	IVa,IVaa
428/A4325c	Gaming counter (decorated)/disc	1	V & VI	M5a, Pit 3540	IVb–Vc
533/A05–0083	Lathe-turned gaming piece/disc	7	VII	B53 (Phase 1), Central Area–Occupation (3c)	Vb

Discs (with and without perforations).

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
50/A7007a	Disc	2	VI	MC044b	If
74/A11099	Disc	3	V	MC049, Pit 5259	IIa
144/A11227a	Disc	3	VI	M1.2, Pit 2648	<IIg(IIh)
154/A8816	Disc (perforated)	3	VI	M1.3	IIi
226/A8499	Lathe-turned gaming piece?/disc	3	VI	B2, Floor (2a)	IVa,IVaa
239/A05–0179	Disc (perforated)	9	VII	B18 (Phase 1b), North Room & South Room–Occupation (6)	IVa,IVaa
331/A6320	Disc (perforated)	3	VI	M1.4d	IVb,IVc
339/A6768	Button?/disc	3	V	M1.4g	IVb,IVc
428/A4325c	Gaming counter (decorated)/disc	1	V & VI	M5a, Pit 3540	IVb–Vc
453/A05–0039	Lathe-turned button?/disc	7	VI & VII	M1.5b	Vaa
533/A05–0083	Lathe-turned gaming piece/disc	7	VII	B53 (Phase 1), Central Area–Occupation (3c)	Vb
560/A05–0076b	Disc	7	VII	B53 (Phase 2), North Area–Occupation (7b)	Vbb
North/South Sector					
688/A–	Disc?/bowl base?				

Comb (Illus 190)

The comb, Cat No 570/A05–0042 (Illus 190), is one of several found on the site, but it is the only one made of wood, the others being composite combs of bone (see Fascicule 4, The worked bone). It was recovered from an occupation layer in B53 (Phase 2), an early 14th-century Rig VII ‘workshop’.

This example, with its almost straight-sided end bar, falls into the commonest category of double-sided wooden comb. Over 70 medieval double-sided wooden combs have been found on at least 18 sites in Britain and Ireland (Morris 1984a, 122, M394–M411): eg one was found in Cork, fragments were excavated at Southampton and King’s Lynn, two were found in York and a number of examples come from the Trig Lane and Custom House sites in London (Hurley 1982, 303–4; Platt and Coleman-Smith 1975, 231: 1641; Henig 1974, 199 no 245; Henig 1975, 153 nos 4–8; Morris 2000, 2415, Fig 1133; TL74 C – A2350; TL74, C368, A1135; TL74, C104, A1134). Double-sided combs from Novgorod were long-lived (Kolchin 1968, 84: 9th–15th centuries).

Barber has remarked that a wooden comb can be made as strong as possible by cutting away the soft wood of each growth ring and leaving the hard parts as teeth (McGrail 1982, 371–2), but the Perth comb does not follow the grain of the wood.

Patten (Illus 190)

Pattens were originally worn by ‘herdsmen in marshy fields (but) in the 14th century they were adopted by “the quality” for walking in wet weather’ (Hartley 1931, 122).

This small left patten (Illus 190) belonged to a child or a small adult. The leather uppers were strapped on as there are no nail holes. The somewhat rough shape

and finish suggest that it was worn by someone of humble origins and, as it is dated to the first half of the 13th century or slightly earlier, it does not conflict with Dorothy Hartley’s views. A well known illustration of a pair of pattens belonging to an upper class gentleman occurs in Van Eyck’s ‘Arnolfini Wedding’ (Faggins 1970, Plate XLIII), and examples dating to the first half of the 14th century are known from Amsterdam (Baart et al 1977, 89, Fig 21).

Sword hilt

The fragmentary remains of a hilt of a Petersen Type U sword included two wooden scales and the remains of its grip (see this Fascicule, Caldwell, Cat No 1/A11698). Recovered from a context that dated from shortly after 1150, it was recovered near the street frontage of Rig VI.

Furniture (Illus 191)

Three turned or carved baluster-type elements of ‘furniture’ were recovered, all coming from 12th-century deposits. The tenons at the ends of Cat No 45/A7595 (Illus 191) would have slotted into mortice holes forming one element of the frame of an open construction piece of furniture such as a chair back or sides, stool, cradle etc. Although at first it appears to be spindle-turned, it is rather roughly worked, probably by hand. Only one side is properly finished as though the reverse were not meant to be visible. Cat Nos 143/A10044 (Illus 191) and 152/A8653 (Illus 191) might also be components of open construction furniture, one turned, the other roughly whittled in imitation of spindle-turning.

The legs and uprights of open construction chairs etc. were joined by stretchers, themselves sometimes joined by smaller rods. Components were either carved or lathe-turned and were used for chairs, beds, stools,

Comb.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
570/A05–0042	Comb (double)	7	VII	B53 (Phase 2), North Area–Occupation (14)	Vbb

Patten.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
181/A8541	Patten	4	V	MC117, Pit 4695	Ile–IIIc

Sword hilt.

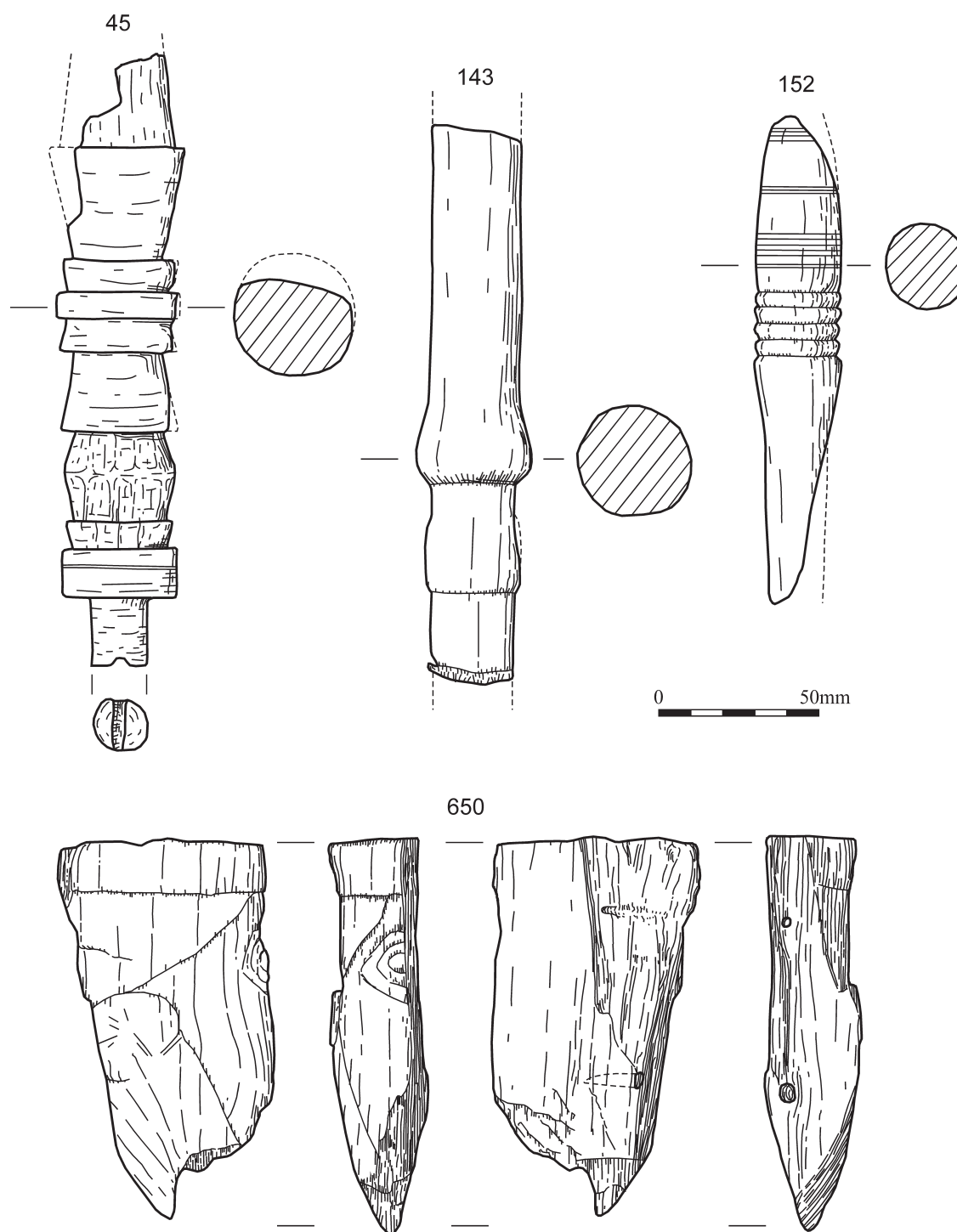
<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
82/A11698	Sword hilt	1	VI	MC065	Ila–IIc

tables etc from at least the sixth to 17th centuries. Similar components have been found at other sites, but furniture in general is a rare find on archaeological sites. Spindle-turned components have been found at sites such as tenth century Winchester (Keene 1990) and ninth century Lissue Rath in Co Antrim (Morris 1984a, Fig 85, M334ii–iii). The nearest parallel for Cat No 45/A7595 is the complete 12th-century turned chair in Hereford Cathedral, reputedly used by King Stephen (1135–1154) at a service (Barrett 1980, 6), some of whose turned elements are similar. A fragment similar

to Cat No 152/A8653 was found in a mid-17th-century deposit in a well in London (unpublished: Museum of London, Dept of Medieval Antiquities, A21475).

Carved head (Illus 191)

Although no exact parallel for this decorative piece (Cat No 650/A11092; Illus 191) is known, it too may be a fragment of a piece of furniture. The human face (of which an eye, an ear and some form of head dress remains) appears at some stage to have been nailed



Illus 191 Furniture. Lathe-turned balusters and chair leg Cat Nos 45, 152, 143. Carved head Cat No 650.

Carved head.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
650/A11092	Carved head	1	VI	Unstratified	Unstratified

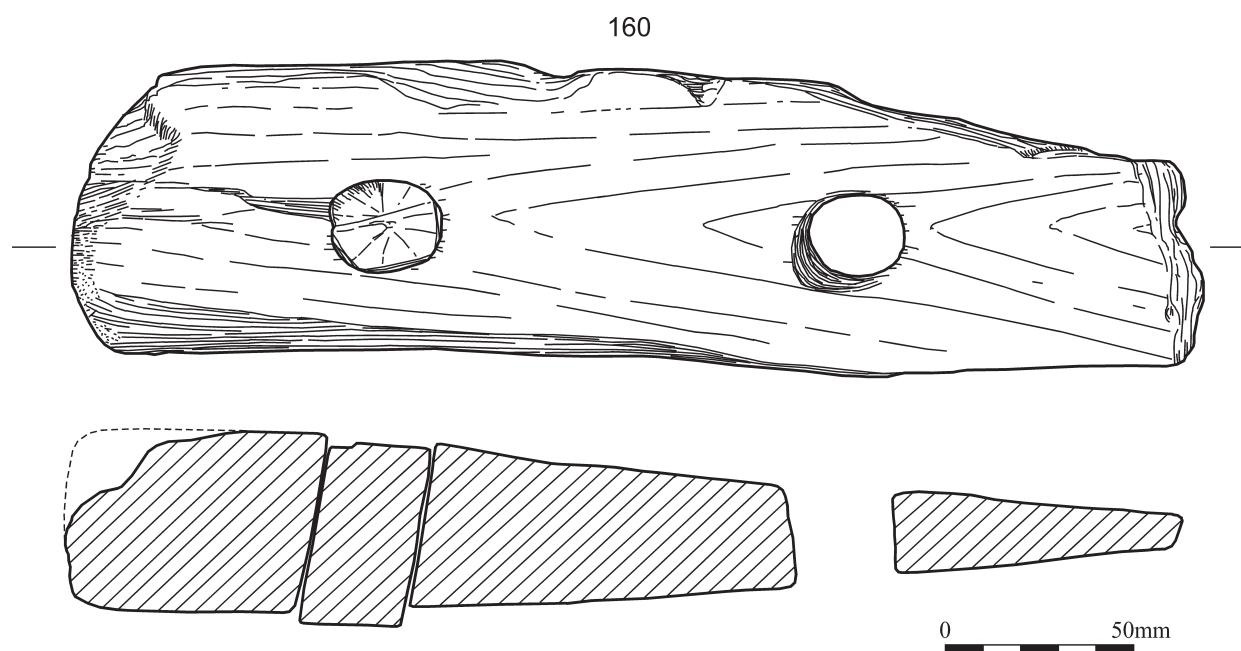
onto something from behind. Unfortunately it was recovered from an unstratified context. However, like virtually all of the worked wood on the site, it probably dates from sometime between the early 12th and later 14th centuries. Dr Dransart suggests that 'although it is not clear whether the lower item is a barbette partially obscured by a veil, or whether it is the corner of a wimple, covering the ear of the wearer ... stylistically it would seem to be no later than the 14th century' (Fascicule 3, The textiles).

Sneck and door fragments (pegged) (Illus 192–3)

Amongst the worked wood from the site, there were three pieces which probably related to doors or something of that sort. All three came from one property, Rig VI. Two of these possible door fragments

were pegged (see also Pegs and Perforated Pegs). Cat No 227/A9768 (Illus 193), which was recovered within a later 13th-century house (B2), consists of two chamfered planks, charred along their broken edge and held together by a horizontal spar. It might be part of either the top or bottom of a door or of a fence or shutter. Cat No 160/A10030 (Illus 192), which was discovered in a late 12th-century backland midden, might be a door spar, although a similar wedge-shaped object with one hole (unlike Cat No 160/A10030 which has two) from King's Lynn is identified as a rafter toe wedge (Clarke and Carter 1977, 374).

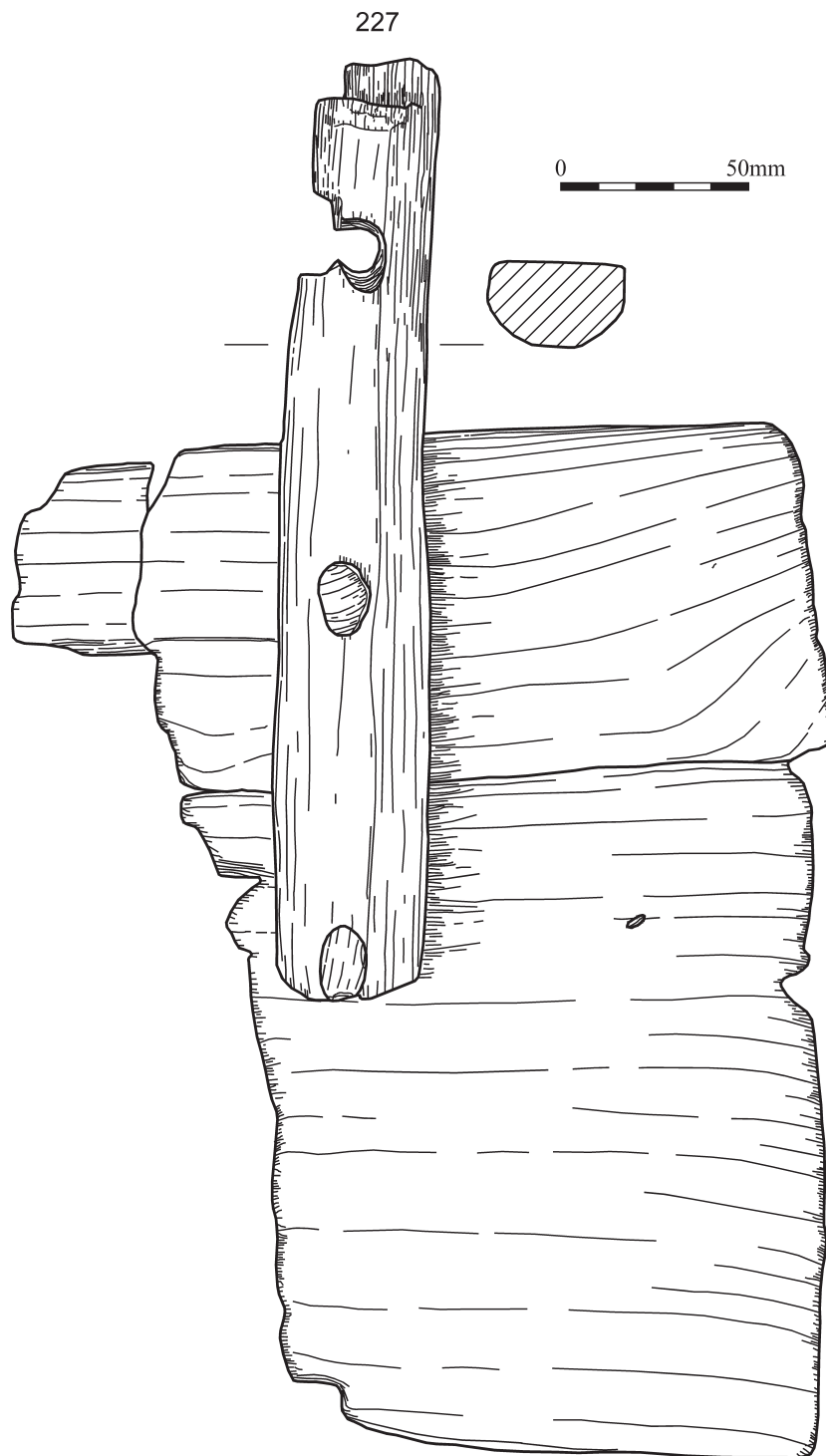
Cat No 153/A8812 (Illus 187) is probably a sneck (or wooden securing catch) from a door, pivoting on a central nail which is now missing but has left a circular depression on the outside surface of the object. Like Cat No 160/A10030, it was recovered from M1.3.



Illus 192 Pegged door fragment.

Sneck and door fragments (pegged).

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
153/A8812	Sneck?	3	VI	M1.3	Ili
160/A10030	Door fragment (pegged)	3	VI	M1.3	Ili
227/A9768	Door fragment (pegged)	3	VI	B2, Floor (2a)	IVa,IVaa



Illus 193 Pegged door fragment.

Roof shingle.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
119/A11257	Roof shingle	3	V	B23, North Room-Occupation (1a)	IIf–IIff

Roof shingle (Illus 194)

Cat No 119/A11257 (Illus 194) is rather too insubstantial to be identified with certainty as a roof shingle. If it is, however, it is one of a small number of survivors from what must at one time have been a large group. Some English examples are larger and differ considerably in form (Biddle et al 1959, 182; Biddle and Quirk 1962, 192–4; Platt and Coleman-Smith 1975, 235, nos 1670–1671; ‘the shingle’ in Carver 1979, 24–5 is a separate-bladed shovel blade). Others, such as a medieval example found at Coppergate, York (Morris 2000, 2365, 2366 Fig 1168, 2367 Fig 1169, 2368, 2420, Fig 1168, no 9054 [sf3094]), and one found at the Viking fortress at Trelleborg in Denmark (Schmidt 1973, Fig 35) are not only of the same shape as Cat No 119/A11257, but show that something used in tens of thousands can leave but one example on an archaeological site.

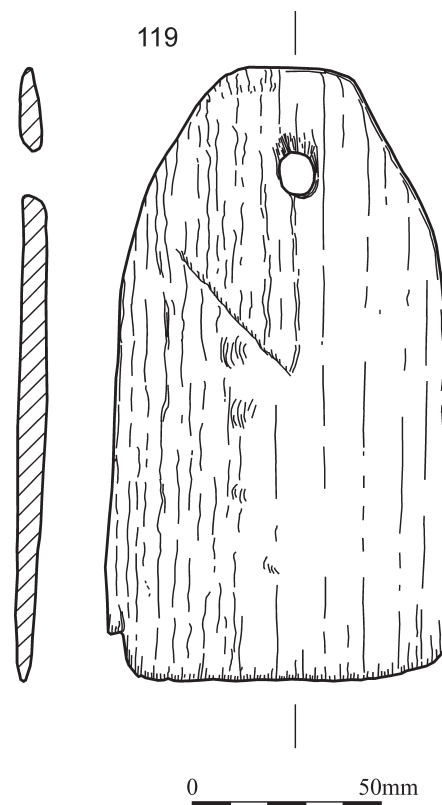
Other forms of roofing material were also recovered (see this Fascicule, di Folco and Hall for further details and discussion of this subject). The ceramic tiles from the site were nearly all recovered from contexts that dated from later than 1250. Since the wooden shingle dates from the second half of the 12th century, its presence does not conflict with the suggestion that cheaper pottery tiles became increasingly popular from the mid-13th century onwards, while wooden shingles, which were still popular in the 13th century, declined in use thereafter (Biddle and Quirk 1962, 194).

Drain cover and sluice (Illus 195–6)

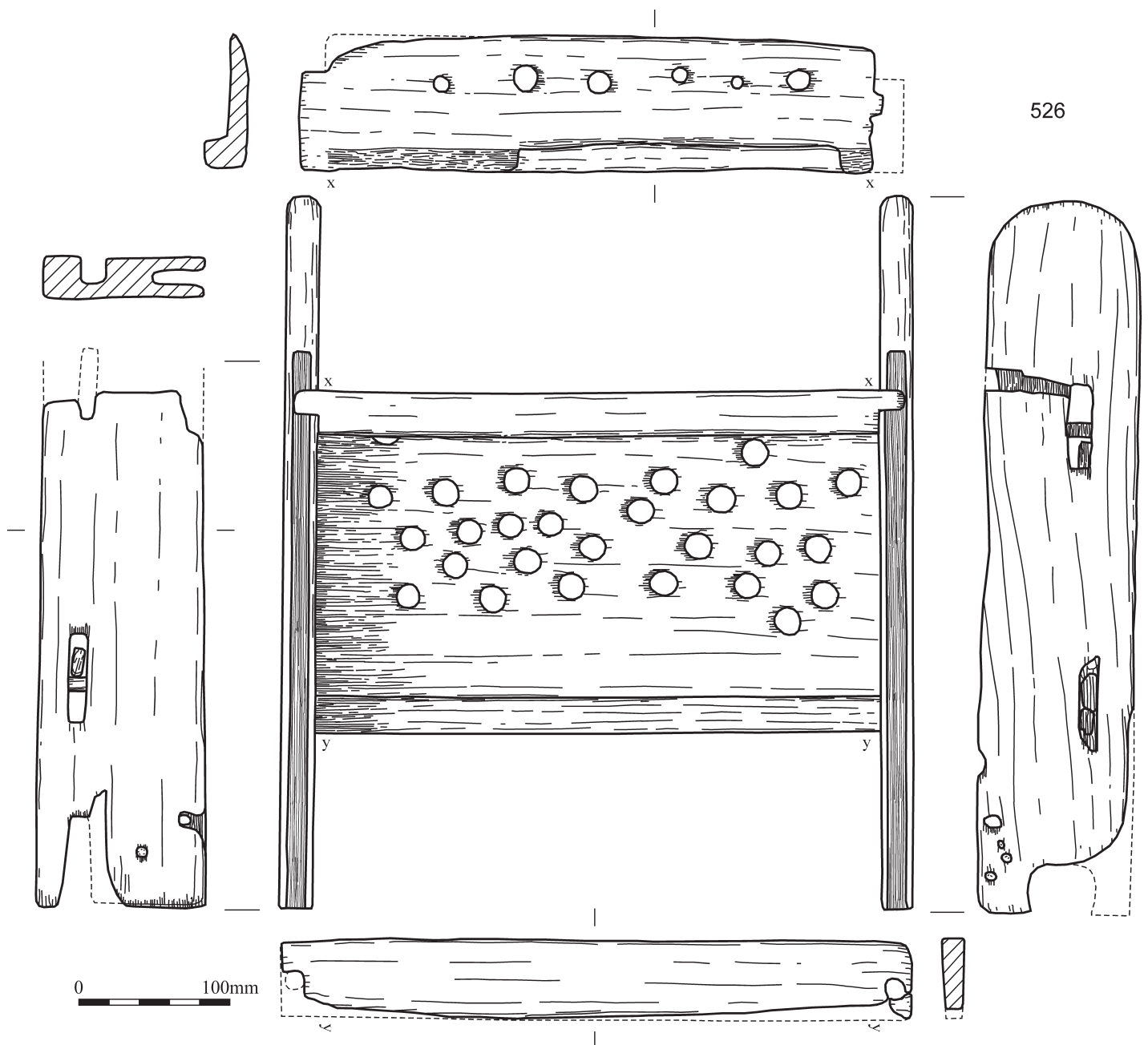
One of the more conspicuous features of the early 14th-century Rig VII ‘workshop’, B53 (Phase 1), was a drain (D7080) which ran east–west across its width, between its north and central areas (see Fascicule 1, 75–7 and Illus 83–85). On the extreme east side of Area 7, it appeared to flow into a gully (T7152) which was aligned north–south along the property boundary between Rigs VII and VIII. The drain (D7080) was about 350mm deep and was edged by vertical slabs of sandstone. In places,

Drain cover and sluice.

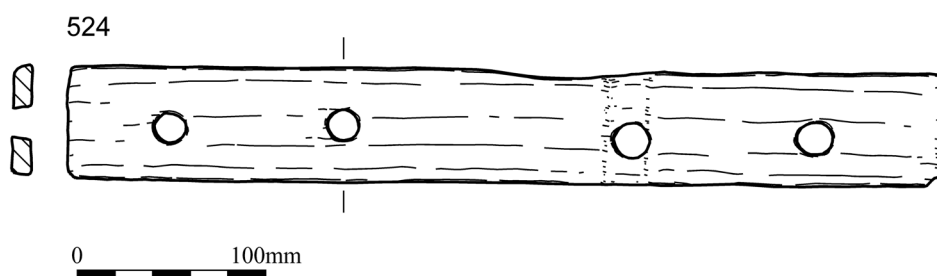
<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
524/A05–0095	Drain cover	7	VII	B53 (Phase 1), North Area–D7080, MW7126	Vb
526/A05–0013	Drain sluice	7	VII	B53 (Phase 1), North Area–D7080, MW7149	Vb

**Illus 194** *Shingle.*

timbers, such as Cat No 524/A05–0095 (two planks held together by a cross-piece, pegged into position and supported by yet another timber), had been incorporated into its capping (Illus 196). At the east end of the drain, a sieve-like sluice, Cat No 526/A05–0113 (Illus 195), was positioned. Its side arms were grooved for the insertion of tongued edges of planks. The nearest parallel for the sieve-like sluice is a tangentially converted oak board found in the lower fill of a late 13th/early 14th-century linear ditch or gully and a fragment of another but Anglo-Scandinavian example on the Coppergate site, York (Morris 2000, 2421, Fig 1173 no 9061 [sf2659]). The medieval example was perforated by 42 holes 20mm in diameter.



Illus 195 *Drain sluice.*



Illus 196 *Drain cover.*

Pegs (including perforated pegs and dowels) (Illus 197–9)

There are many different sizes and shapes of pegs (trenails with enlarged heads) and dowels (cylindrical), but their distribution through the site and their relationship to other finds give little clue to their use or chronological development. Having said this, it will be noticed that just over 50% of the stratified pegs occurred in Area 4, and within this area there were five in, or contemporary with, Building 12. It has yet to be established why these apparent concentrations exist, and whether they give a misleading impression of the use of pegs and dowels; any building or subsidiary structure would have required numerous such objects.

Five pegs have holes bored or cut through them. Cat No 301/A05–0199 (Illus 198) has a round hole in its shaft and resembles the swivels for pulleys found in Novgorod (Kolchin 1968, Plates 72:6, 73 *passim*). On the other hand, it might have been used to tighten a cord or thread on a musical instrument or in a rugmaking process etc. The hole through the head of one, Cat No 699/A– (Illus 198), is rectangular, while those in Cat Nos 504/A05–0082 and 578/A5451 (Illus 198) are round. The latter two, both from 14th-century layers, are comparable with material from Novgorod (*ibid*, Plate 80:3) and Oxford (Durham 1977, 155). They might have secured a rope or thong tied through their holes by being dropped vertically into a narrow staple driven through a post or wall.

Wedges were often used to tighten a peg's grip, as in Cat Nos 126/A12601 (Illus 197), 227/A9768 (Illus 193), 353/A5436 (Illus 197) and 212/A8200 (Illus 202). Nearly all pegs and dowels are fairly roughly shaped, being neither perfectly circular nor squared in cross-section. Cat No 217/A5538 (Illus 197), a very smoothly finished peg of circular cross-section, is a notable exception. Where the heads are enlarged they are either markedly different in shape from the shaft, for example

Cat Nos 135/A9534 and 201/A05–0195 (Illus 197), or are extensions of the shaft, for example Cat No 136/A9819 (Illus 197).

Notched pegs and dowels (Illus 199)

The only feature which these objects have in common is a notch or notches of different size and form, chiselled from one end. Otherwise they differ in that Cat No 35/A7435b (Illus 199) is a long, roughly rounded dowel(?); Cat No 90/A10510 (Illus 199) is a short, smoothly rounded dowel (?); Cat No 148/A8645 (Illus 199) is a peg with an expanded roughly squared head; Cat Nos 172/A05–0229 and 306/A05–0105 (Illus 199) are pegs of similar size with flattish widened heads, roughly faceted; and Cat No 577/A5383 (Illus 199) is a small, smooth object whose notched end is complex.

Not all the notches are definitely original features, but where they are they might have been used for keying the pegs into some structure. On the other hand some small object might have been clamped to the end, its narrow projection filling the notch, perhaps being bound into position with a thong.

Tenoned dowels (Illus 199)

Both these objects are straight with regular, circular cross-sections. Their projecting ends were probably keyed into some structure; both are slightly broken and it is difficult to tell their original forms. Cat No 286/A05–0187a (Illus 199) might have had a complex 'tenon' as suggested in the diagram, or it might have been of simple square section. It was recovered from an occupation layer in the 'Hall' in B18 (Phase 2a), a Rig VII structure that is best interpreted as an aisled hall of later 13th-century date. By contrast, the other example of this category, Cat No 52/A7044B, was recovered from a deposit that had been laid down in Rig VI shortly before 1150.

Tenoned dowels.

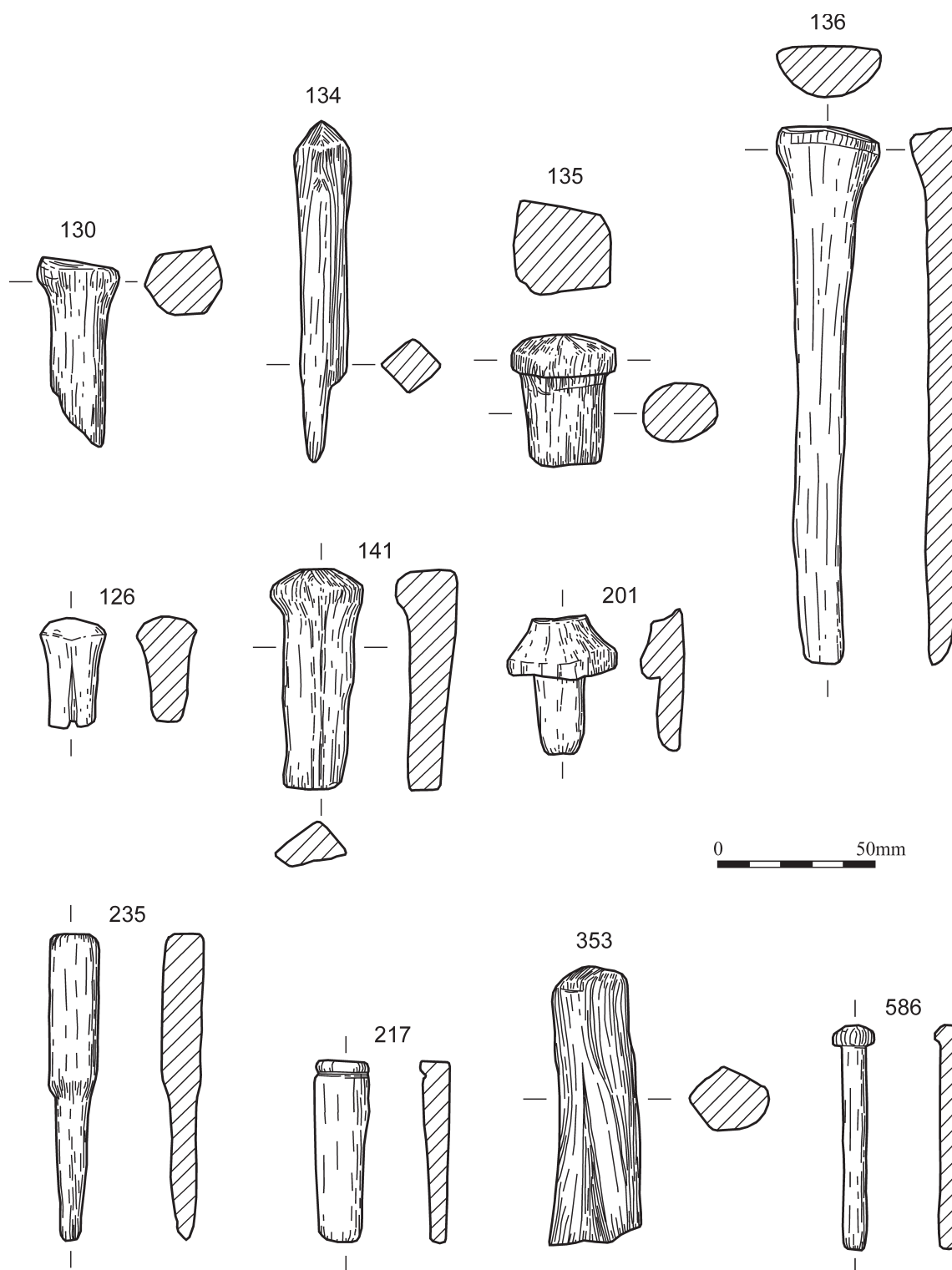
<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
52/A7044B	Tenoned dowel	2	VI	MC044b	If
286/A05–0187a	Pegged & tenoned dowel	7	VII	B18 (Phase 2a), Hall–Occupation (9a)	IVb

Notched pegs and dowels.

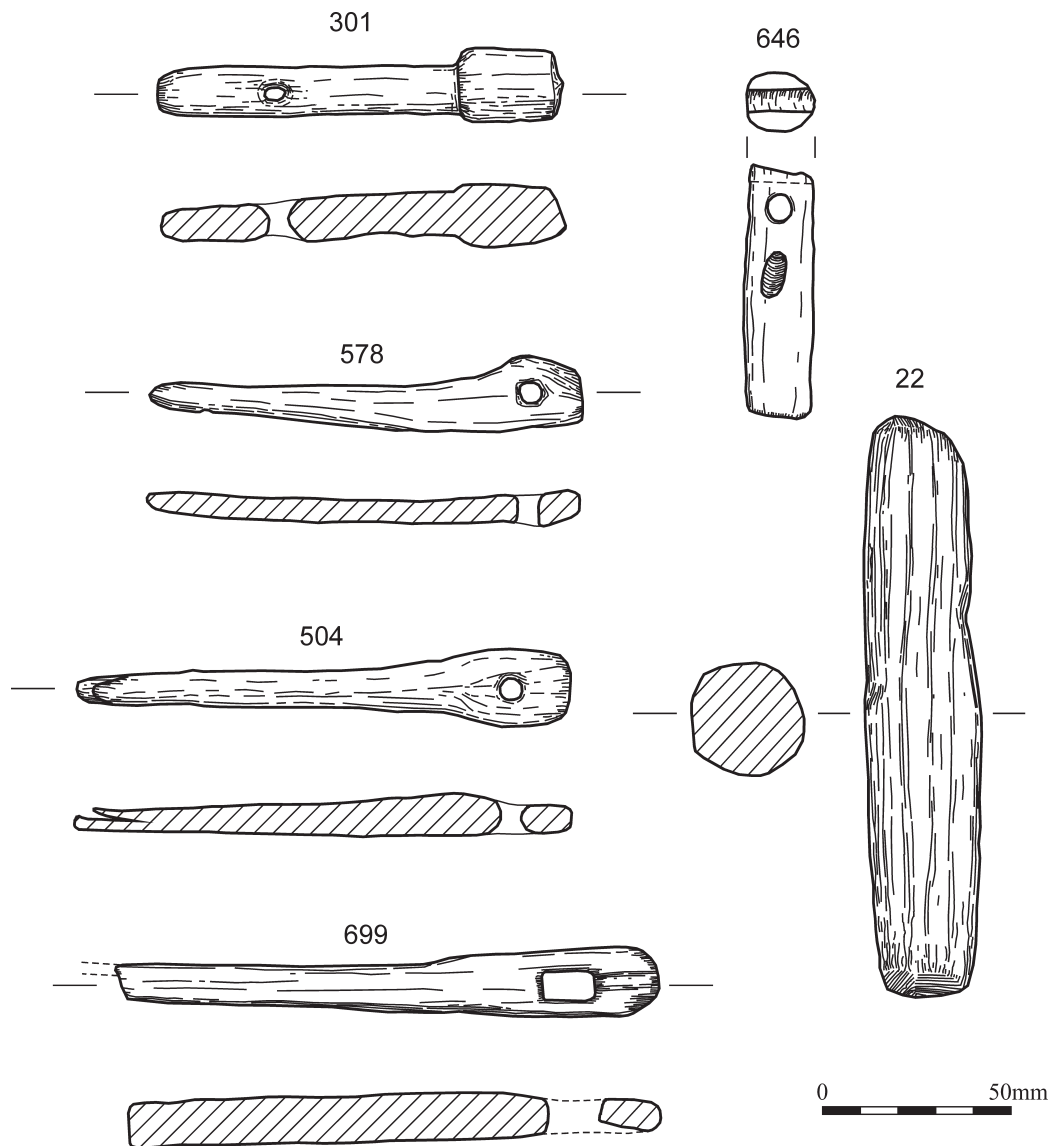
<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
35/A7435b	Notched dowel	2	VI	M14b(b), Pit 3625	Ie
90/A10510b	Notched dowel	3	VI	B4, Construction	Iic
148/A8645	Notched peg	4	V & VI	M11	IIh
172/A05–0229	Notched peg	9	VII	M13	IIg–IIIb
306/A05–0105	Notched peg	9	VII	B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10)	IVb
577/A5383	Notched peg	4	V & VI	M3a	Vb–Vc

Pegs (including perforated pegs and dowels).

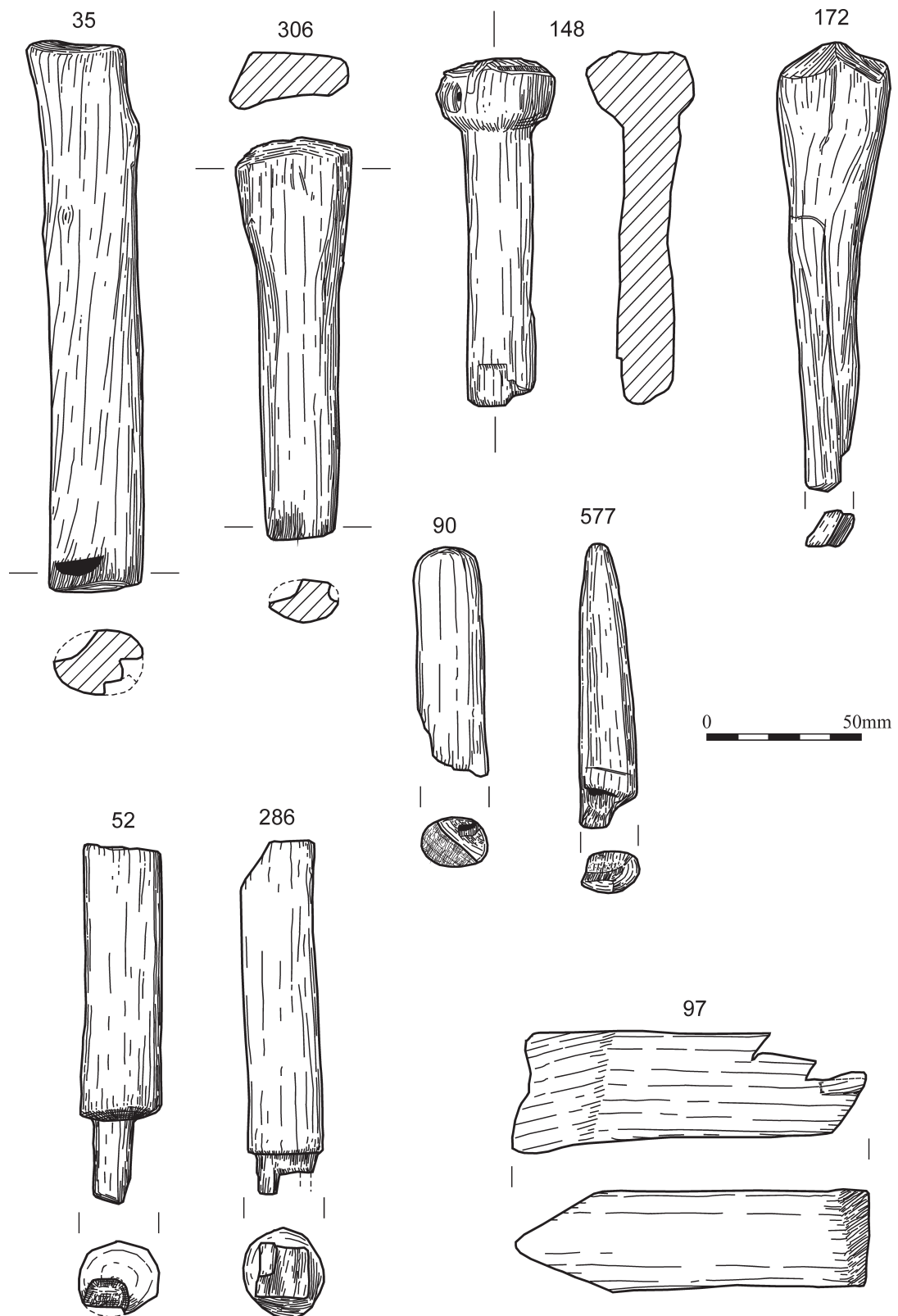
<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
16/A10432	Pegged, perforated plank	4	VI	B16 (Phase 1), Occupation (1b)	(Id)Ie
22/A12636b	Dowel	4	VI	B16 (Phase 1), Occupation (1b)	(Id)Ie
111/A9922a	Pegged, perforated plank/chair?	3	VI	M1.1e	IIf
126/A12601	Peg	4	V	M10	IId–IIg
129/A9846a	Peg?	4	VI	B12, Pit 2345	IId–IIg
130/A9846b	Peg	4	VI	B12, Pit 2345	IId–IIg
134/A9517	Peg	4	VI	B12, Occupation (1b)	IId–IIg
135/A9534	Peg/stopper	4	VI	B12, Occupation (1b)	IId–IIg
136/A9819	Peg	4	VI	B12, Occupation (1b)	IId–IIg
141/A9919	Peg	3	VI	M1.2, Pit 2648	<IIg(IIh)
149/A12577	Pegged, perforated post	4	VI	B13, T4703	IIh
160/A10030	Door fragment (pegged)	3	VI	M1.3	IIi
168/A11182	Pegged, perforated post	1	VII	MC112b	IIIb
175/A8109b	Peg	4	VI	M1.4a(a)	IIIa–IIIc
201/A05–0195	Peg	9	VII	M15, Pit 9464	IIId
212/A8200	Pegged, perforated post	4	V	B3 (North), MW2230	IVa,IVaa
217/A5538	Miscellaneous (b)/peg	4	V	MC156	IVaa
227/A9768	Door fragment (pegged)	3	VI	B2, Floor (2a)	IVa,IVaa
235/A05–0213b	Peg	7	VII	B18 (Phase 1b), North Room–Occupation (5b)	IVa,IVaa
286/A05–0187	Pegged & tenoned dowel	7	VII	B18 (Phase 2a), Hall Occupation (9c)	IVb
291/A05–0237b	Pegged, perforated post	7	VII	B18 (Phase 2a), External 1, Pit 7314, MW7319	IVb
297/A05–0237h	Pegged, grooved Plank	7	VII	B18 (Phase 2a), External 1, Pit 7314, MW7319	IVb
301/A05–0199	Peg (perforated)	7	VII	B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10)	IVb
307/A05–0107	Miscellaneous (a)/peg	9	VII	B18 (Phase 2b), North Room, Hall & Hall South–Occupation (10)	IVb
353/A5436	Dowel with wedge	4	V & VI	M1.4b	IVb–IVcc
396/A5448a	Peg	3	VI	P6	IVcc,Va
504/A05–0082	Peg (perforated)	7	VII	M8a	Va,Vaa
578/A5451	Peg (perforated)	4	V & VI	M3a	Vb–Vc
586/A05–0006b	Peg	7	VII	M7	Vc
613/A5764	Dowel?	4	V	M3c	Vd
645/A1897a	Pegged, perforated post	4	VI	M3e, Pit 2111	Vdd>
646/A1897b	Peg (perforated)	4	VI	M3e, Pit 2111	Vdd>
North/South Sector					
679/A–	Peg				
680/A–	Peg				
681/–A	Peg/stopper				
699/A–	Peg				
700/A–	Peg				
709/NN003	Pegged, perforated post				
710/NN004	Pegged, perforated batten				



Illus 197 Pegs and dowels.



Illus 198 Pegs.



Illus 199 Notched/tenoned pegs, dowels and other notched artefacts.

Notched artefacts (Illus 199)

All the above artefacts are of oak, but this, and the fact that all are notched (for joinery?) are their only common features. They are of different shapes with various sorts of notches, eg single V, Cat No 92/A10884; double V, Cat No 97/A11356 (Illus 199); and W, Cat No 255/A05–0154. They were not found in association with other objects or features which might indicate their use. The two 12th-century examples were both detected in the Area 3 part of Rig VI, the other three examples of this category all came from deposits that built up within Rig VII.

Wedges (Illus 200)

None of these wedges is of the type used for splitting wood nor, except perhaps for Cat No 156/A9920b (Illus 200), do they appear to have been used in tightening pegs or dowels. Only Cat Nos 338/A5408 (Illus 200) and 610/A2424a are alike and might have served a similar purpose.

Tongued and grooved planks (Illus 201)

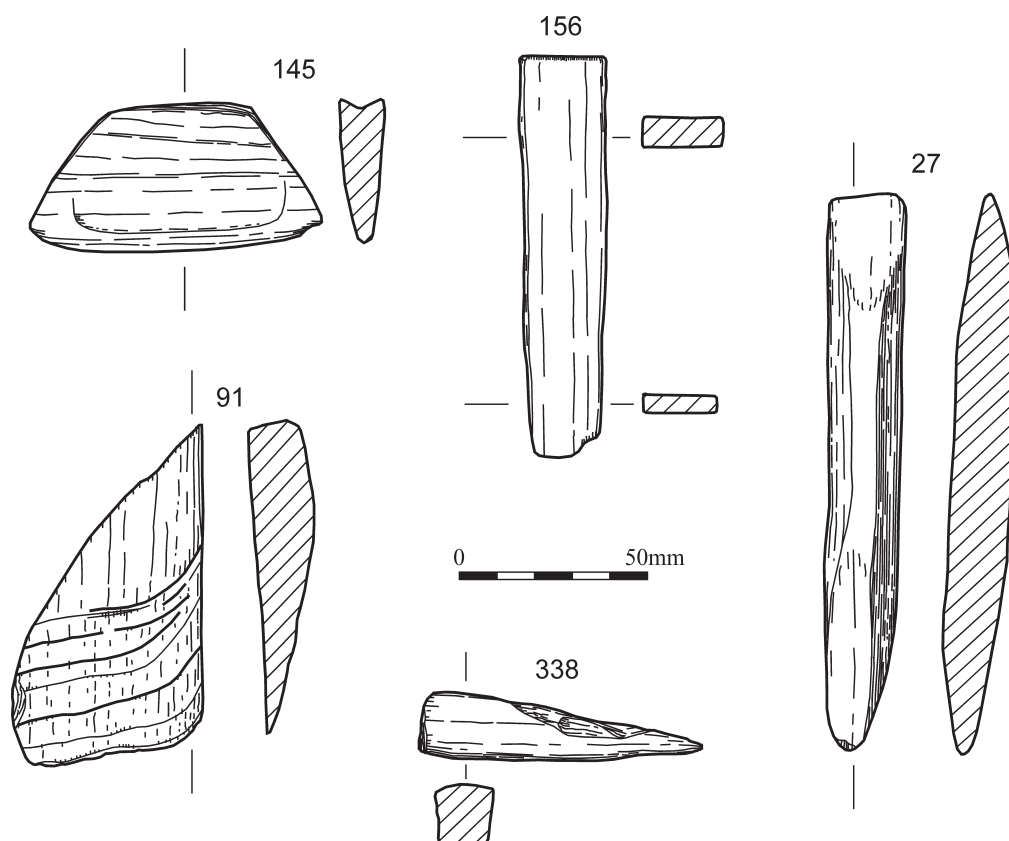
With the exception of Cat No 68/A11591 which was recovered from a Rig V pit (Pit 2609) that dated from c1150, all of the tongued and grooved planks came from Rig VII. Seven of these were in or near B18 (Phase 2), an aisled hall, one wall of which consisted of vertical planks set into a ground sill. It seems likely that the stratigraphically earliest of the B18 examples, Cat No 260/A05–0176 (Illus 201), should in fact be associated with the construction of B18 (Phase 2) rather than with the destruction of its predecessor B18 (Phase 1b). Although Cat No 271/A05–0168 appears too insubstantial for a major structural purpose, its context indicates that it formed part of the west wall of B18 (Phase 2). This screen wall consisted of vertical planks inserted into a ground-fast sill beam (MW7277). A 13th-century door at Lakenheath Church, Suffolk was made of tongued and grooved boards of similar thickness to Cat No 271/A05–0168 (Rackham 1982, 216 Fig 11.5a).

Notched artefacts.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
92/A10884	Notched artefact	3	VI	B4 'Courtyard'-Occupation	IIc
97/A11356	Notched artefact	3	VI	M1.1c, Pit 5005	IId
255/A05–0154	Notched artefact	9	VII	B18 (Phase 1/2)	IVaa,IVb
420/A05–0056d	Notched artefact	9	VII	P8.4	Va
531/A05–0097b	Notched artefact	7	VII	B53 (Phase 1), Central Area–T7152	Vb

Wedges.

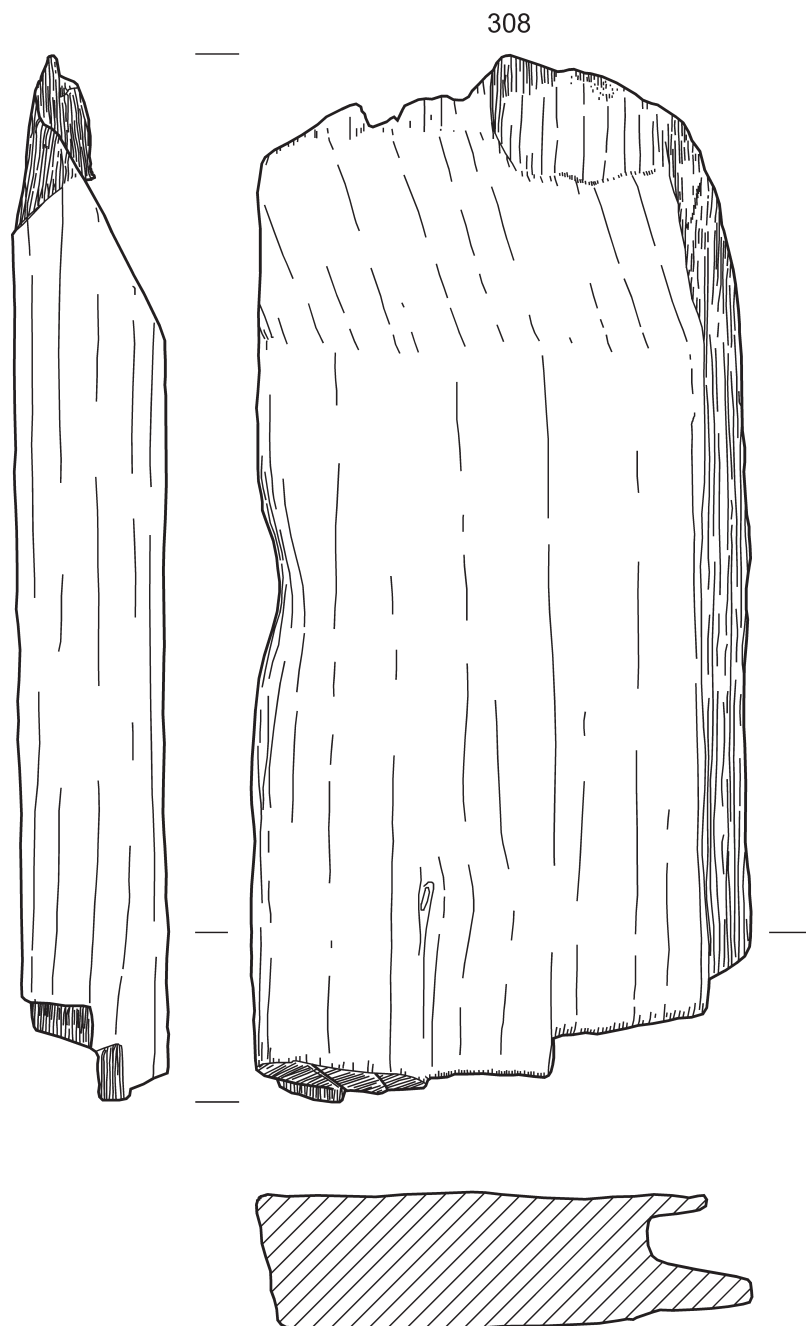
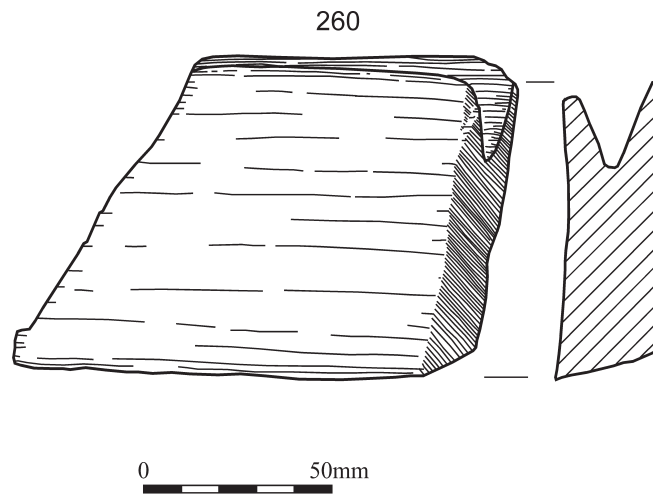
<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
1/A11228	Wedge	1	V	M0, Pit 3776	Ia(Ib)
27/A7796a	Wedge	1/2	VI	B6 (Phase 1), South Room Floor (5)	Ie
34/A7435a	Wedge	2	VI	M14b(b), Pit 3625	Ie
91/A10853	Wedge	3	VI	B4 'Courtyard'-Occupation	IIc
145/A11227b	Wedge	3	VI	M1.2, Pit 2648	<IIg(IIh)
156/A9920b	Wedge	3	VI	M1.3	IIi
174/A8109a	Wedge	4	VI	M1.4a(a)	IIIa–IIIc
253/A08–0329	Wedge	9	VII	B18 (Phase 1/2), Pit 9301	IVaa,IVb
274/A05–0197	Wedge	7	VII	B18 (Phase 2a), North Room & Hall-Construction (2)	IVb
338/A5408	Wedge	2	VI	M1.4d, Pit 2801	IVb,IVc
353/A5436	Dowel with wedge	4	V & VI	M1.4b	IVb–IVcc
610/A2424a	Wedge	4	V	M3c	Vd
614/A6730a	Wedge	4	V	M3c	Vd
615/A6730b	Wedge	4	V	M3c	Vd



Illus 200 Wedges.

Tongued and grooved planks.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
68/A11591	Grooved plank	3	V	MC039, Pit 2609	If,IIa
260/A05-0176	Grooved plank	9	VII	B18 (Phase 1/2)	IVaa,IVb
271/A05-0168	Tongued and grooved plank	7	VII	B18 (Phase 2), MW7277	IVb
298/A05-0237i	Grooved plank	7	VII	B18 (Phase 2a), External 1, Pit 7314, MW7319	IVb
302/A05-0093	Tongued plank	9	VII	B18 (Phase 2b), North Room, Hall & Hall South-Occupation (10)	IVb
308/A05-0184	Grooved plank	9	VII	B18 (Phase 2b), North Room, Hall & Hall South-Occupation (10)	IVb
309/A08-0553a	Grooved plank	9	VII	B18 (Phase 2b), North Room, Hall & Hall South-Occupation (10)	IVb
310/A08-0553b	Grooved plank	9	VII	B18 (Phase 2b), North Room, Hall & Hall South-Occupation (10)	IVb
568/A05-0025	Grooved plank	7	VII	B53 (Phase 2), North Area-Occupation (14)	Vbb



Illus 201 *Tongued and grooved planks.*

Four other pieces from B18 (Phase 2b), Cat Nos 302/A05-0093, 308/A05-0184 (Illus 201), 309/A08-0553a and 310/A08-0553b, were recovered from Occupation (10), which seems to have been laid down when the Hall was extended to include the Hall South. Thus they might have come from a partition.

Cat Nos 271/A05-0168 and 298/A05-0237i are of similar proportions, although the latter is long, 1140mm. All the other planks from Rig VII are most substantial, ranging from 28mm to 30mm in thickness.

As it was recovered from B53 (Phase 2), a structure that is best interpreted as an early 14th-century Rig VII 'workshop', Cat No 568/A05-0025 may originally have been associated with the drain sluice (Cat No 526/A05-0013). Alternatively, it may have been residue from the earlier Rig VII aisled hall. It is a narrow, thin plank, tapering from 17mm to 7mm away from the groove.

Tongued and grooved planks of similar proportions and dating to Cat No 308/A05-0184 were recovered at Southampton. There they seemed to have formed part of the superstructure of a pit (Platt and Coleman-Smith 1975, 231, 235, nos 1667, 1669).

Perforated posts, planks and battens (Illus 202)

These lengths of timber are all fragments of longer pieces. They are of varying dimensions and they are all pierced by round or rectangular holes, sometimes in regular rows, sometimes unevenly. While some of them might be structural fragments, others are too narrow.

Cat Nos 168/A11182, 212/A8200 (Illus 202), 163/A5195 and 645/A1897a have plugged holes at right angles to the main row of perforations. Cat No 212/A8200 (part of a longer piece, the rest of which was discarded) was found together with another horizontal timber (also discarded) inserted into the wall of B3 (North), and might therefore have been reused in a repair to the building.

One should not be tempted to see any of these pieces as fragments of horizontal or vertical looms. None of them is at all smoothly finished, as would be required for all the elements of a loom (see Hoffman 1964, *passim*, for example).

Boards

Little can be said of these large, flat boards, except that Cat No 77/A6757c might have been a chopping-board as it has parallel cuts in the surface near one edge. Cat No 170/A05-0223 could have been suspended from a hook or rope through its smaller hole. Cat No 69/A11592 is a long, narrow fragment of thin cleft timber, and contains 6 round holes.

Bark

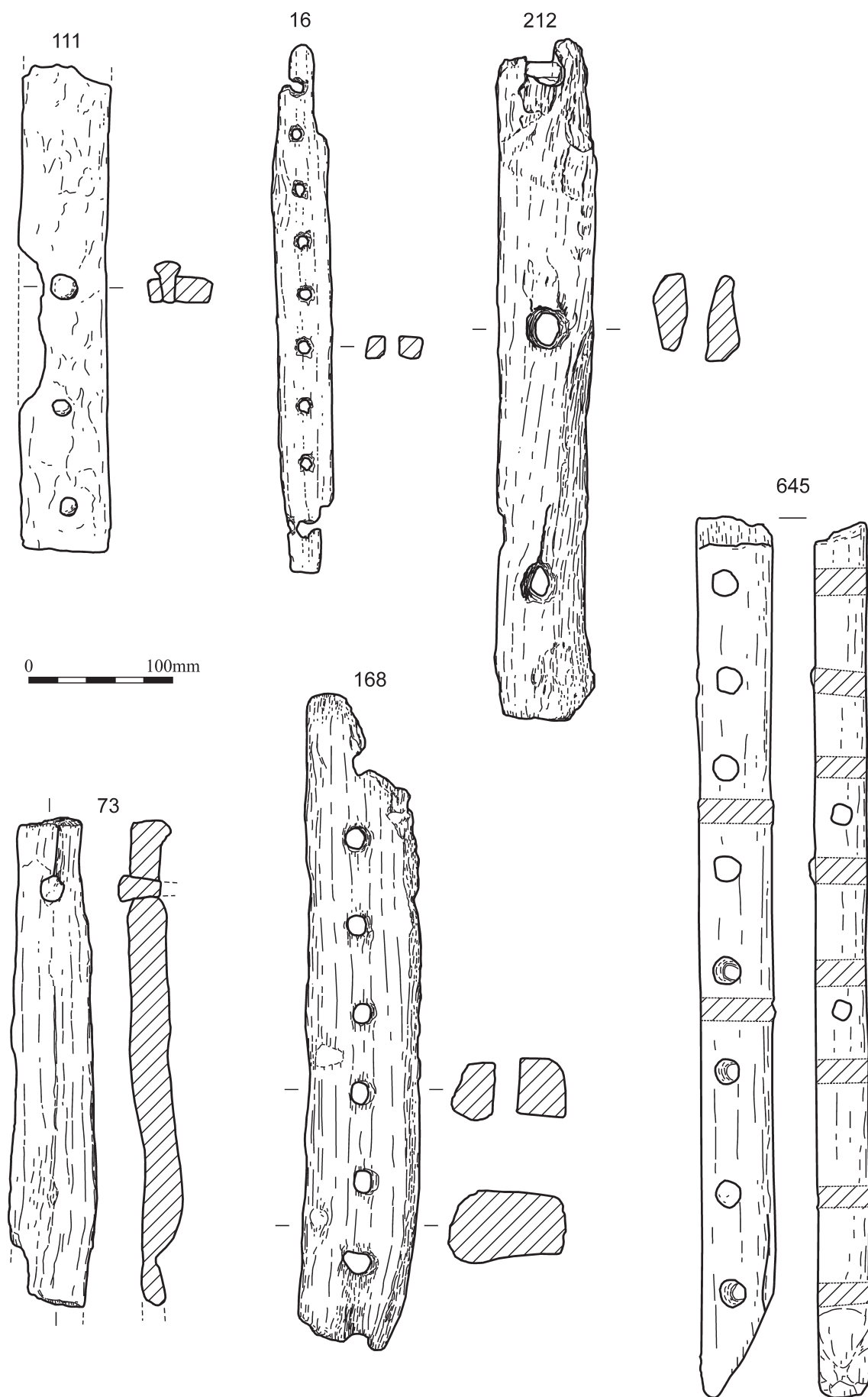
Birch bark can be readily peeled from the tree in thin strips and used in various ways. In medieval Novgorod in Russia, wide strips of birch bark were used to make different sizes of round and rectangular containers with or without lids (Kolchin 1989, 75-6, Plates 70-3). Birch bark has also been used for insulation, roofing material and making canoes (Edlin 1949, 41 and 45). It is possible that some of the fragments of flatter sheets (eg Cat No 273/A05-0120) could have been intended for roofing material. However, three of the most probable uses for birch bark were the same as for most of the birch bark fragments and rolls found in York (Morris 2000, 2348-9, 2419), that is, either as a tanning material, for burning as a light source or for making glue. As late as the 19th century in Scotland, birch bark was harvested and used for tanning hides, sails, nets and cordage where the inner bark was whittled from the wood and chopped up into little pieces to be sold to the tanner, and when dried and twisted into a rope, birch bark would also function as a candle (Edlin 1949, 45). Birch bark also contains a high proportion of pitch, and rolled pieces burn with a clear flame. If the pitch is extracted and prepared, it can be made into a resin-like glue (Taylor 1981, 47). During the course of the excavation, it became clear that in Perth, birch was frequently used for wattling and for structural timbers.

Boards.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
69/A11592	Board	3	V	MC039, Pit 2609	If,IIa
77/A6757c	Board	1	VI	MC051	IIa
170/A05-0223	Board	9	VII	B19 (Phase 1), Destruction & (Phase 2a), South Room-Floor (2)	IIIb
184/A8531	Board	3	V	MC117, Pit 4695	Ile-IIIc
264/A05-0235b	Board	7	VII	MC146, Pit 7357, MW7349	<IVb
North/South Sectors					
677/A-	Board?				
678/A-	Board?				

Perforated posts, planks and battens.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
16/A10432	Pegged, perforated plank	4	VI	B16 (Phase 1), Occupation (1b)	(Id)Ie
58/A7686	Perforated post	2	VI	B6 (Phase 1 and 2), PW3700E,F, MW3609	Ie–IIa
70/A12452a	Perforated post?	3	V	MC039, Pit 2609	If,IIa
93/A12552	Perforated post	3	VI	B4 ‘Courtyard’-Occupation	IIc
111/A9922a	Pegged, perforated plank/chair?	3	VI	M1.1e	II f
114/A7046	Perforated post	2	V	B5, PW3616	IIa–IIff
122/A9622	Perforated post	3	VI	B21; South Room – Destruction	IIff
149/A12577	Pegged, perforated post	4	VI	B13, T4703	IIh
163/A5195	Perforated post	1	VI	MC111, MF3568	IIb–IIIb
168/A11182	Pegged, perforated post	1	VII	MC112b	IIIb
198/A08–0429	Perforated post	9	VII	M15	III d
212/A8200	Pegged, perforated post	4	V	B3 (North), MW2230	IVa,IVaa
261/A05–0225	Perforated plank	7	VII	MC146, Pit 7357, MW7349	<IVb
262/A05–0226	Perforated plank	7	VII	MC146, Pit 7357, MW7349	<IVb
266/A05–0236	Perforated post	7	VII	MC146, Pit 7357, MW7349	<IVb
291/A05–0237b	Pegged, perforated post	7	VII	B18 (Phase 2a), External 1, Pit 7314, MW7319	IVb
292/A05–0237c	Perforated post?	7	VII	B18 (Phase 2a), External 1, Pit 7314, MW7319	IVb
293/A05–0237d	Perforated post	7	VII	B18 (Phase 2a), External 1, Pit 7314, MW7319	IVb
294/A05–0237e	Perforated post	7	VII	B18 (Phase 2a), External 1, Pit 7314, MW7319	IVb
295/A05–0237f	Perforated post	7	VII	B18 (Phase 2a), External 1, Pit 7314, MW7319	IVb
333/A8107a	Perforated plank	3	VI	M1.4d, Pit 2566	IVb,IVc
334/A8107b	Perforated plank	3	VI	M1.4d, Pit 2566	IVb,IVc
645/A1897a	Pegged, perforated post	4	VI	M3e, Pit 2111	Vdd>
North/South Sectors					
709/NN003	Pegged, perforated post				
710/NN004	Pegged, perforated batten				
711/NN005	Perforated post				
712/NN006	Perforated post				



Illus 202 Perforated posts, straps and wedges.

Bark.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
273/A05-0120	Bark	9	VII	B18 (Phase 2a), North Room & Hall-Construction (1)	IVb
North/South Sectors					
691/A-	Bark				
692/A-	Bark				
693/A-	Bark				
694/A-	Bark				
695/A-	Bark				
696/A-	Bark				

Stakes.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
3/A9917	Stake	1/2	V & VI	M2.1b	Ic
13/A8062	Stake	2	VI	P5.1b	Icc,Id
30/A7467	Stake	2	VI	M14b(b)	Ie
36/A7579a	Stake	2	VI	M14b(b), Pit 3625	Ie
44/A7483	Stake	2	VI	P5.2b	Ie
155/A9920a	Stake	3	VI	M1.3	Ili
173/A05-0239	Stake	9	VII	M13	Ilg-IIIb
178/A8113	Stake	4	VI	M1.4a(a)	IIIa-IIIc
179/A8217	Stake	4	VI	M1.4a(a)	IIIa-IIIc
180/A7994	Stake	4	V	MC117, Pit 4695	Ile-IIIc
191/A7794a	Stake	4	VI	MC129	(IIIa-)IIIc
192/A7794b	Stake	4	VI	MC129	(IIIa-)IIIc
197/A9727	Stake	3	VI	M6a	Ilg-IIIId
241/A05-0220	Stake	7	VII	MC126, Pit 7402	IVaa,IVb
256/A05-0161	Stake	9	VII	B18 (Phase 1/2)	IVaa,IVb
323/A12383a	Stake	3	V	MC155, Pit 2691	IVb,IVc
324/A12383b	Stake	3	V	MC155, Pit 2691	IVb,IVc
325/A12383c	Stake	3	V	MC155, Pit 2691	IVb,IVc
326/A12383d	Stake	3	V	MC155, Pit 2691	IVb,IVc
327/A12383e	Stake	3	V	MC155, Pit 2691	IVb,IVc
330/A5622	Stake	3	VI	M1.4d	IVb,IVc
379/A05-0112	Stake	10	VIII	M9b(b)	IVc,IVcc
381/A05-0149	Stake	10	VIII	M9b(b), Pit 6132	IVc,IVcc
419/A05-0056c	Stake	9	VII	P8.4	Va
451/A6759a	Stake	3	V & VI	M1.5a	Va,Vaa(VI)
525/A05-0111	Stake	7	VII	B53 (Phase 1), North Area- D7080, MW7134	Vb
584/A5763	Stake?	4	V & VI	M3a	Vb-Vc
607/A5628c	Stake	4	VI	M3b	Vd
608/A5628d	Stake	4	VI	M3b	Vd
612/A2424c	Stake	4	V	M3c	Vd
644/A05-0070	Stake?	10	VIII	MC174, Pit 7013	(Va-)Vd(Vdd)
648/A5619	Stake	4	VI	M3e, Pit 2111	Vdd>
North/South Sector					
426/L3303	Stake				
674/L2794	Stake				
690/A-	Stake?				
704/A-	Stake				

Stakes (Illus 203)

This group comprises a variety of stakes and sticks. Most are fairly, or very roughly, made: only Cat No 525/A05–0111 is very well made, with its squared shaft and neatly faceted head. The group includes ten lengths of branch or twig, with or without bark intact, most of them whittled or cut with an axe to a point with one, two, three or four facets: Cat Nos 30/A7467, 36/A7579a, 155/A9920a, 191/A7794a, 241/A05–0220, 330/A5622 (Illus 203), 381/A05–0149, 419/A05–0056c, 607/A5628c and 608/A5628d. Most of these have probably broken away from longer pieces. Eight pieces are shaped from cleft timber: Cat Nos 180/A7994, 192/A7794b, 379/A05–0112, 525/A05–0111 (Illus 203), 584/A5763 and 648/A5619. Eight other pieces are neither cleft nor of whole roundwood.

As for function, contexts give little information because nearly all pieces were found in middens and

without any clearly associated material. However, some of them are presumably fragments of stakes which were driven into the ground for some light structural or tethering purpose, eg Cat Nos 30/A7467, 155/A9920a, 330/A5622, 451/A6759a and 648/A5619. Cat No 173/A05–0239, which is roughly shaped but smooth and with a cleanly cut pointed end of two facets, has the impression of thin metal wire(?) wrapped three or four times round it, 80mm from the point. Cat No 525/A05–0111, the well made stake from B53 (Phase 1), is buckled towards the point and perhaps charred, but its head shows no sign of wear.

Laths

These three pieces are very thin radially split laths of wood perforated by nailholes. They are the type of battening often used in internal lath and plaster wall construction.

Miscellaneous

Miscellaneous (a):

unidentified objects not classifiable in other categories, but clearly performing some specific function
(Illus 204–12)

The 29 objects, or parts of objects, in this category are somewhat arbitrarily separated from the other groups of miscellaneous fragmentary objects (see below). However, they are considered to be potentially more recognisable because many of them are complete and all of them have distinctive shapes and/or features. Indeed, many of them are items of particular interest, for example Cat Nos 221/A5433 (Illus 208), 222/A4746 (Illus 212), 282/A05–0230 (Illus 210), 540/A05–0079 (Illus 204) and 642/A05–0063 (Illus 211).

The chronological list (below) is not, of course, expected to be of use in studying the objects because, by its nature, this group is not subject to such development. However, a table is included in order to list the objects. The catalogue contains all the relevant information and should be referred to in each case.

Miscellaneous (b) (Illus 213–14)

The chronological table is included simply to list the 63 fragments in this category. The catalogue contains all the relevant information and should be referred to in each case.

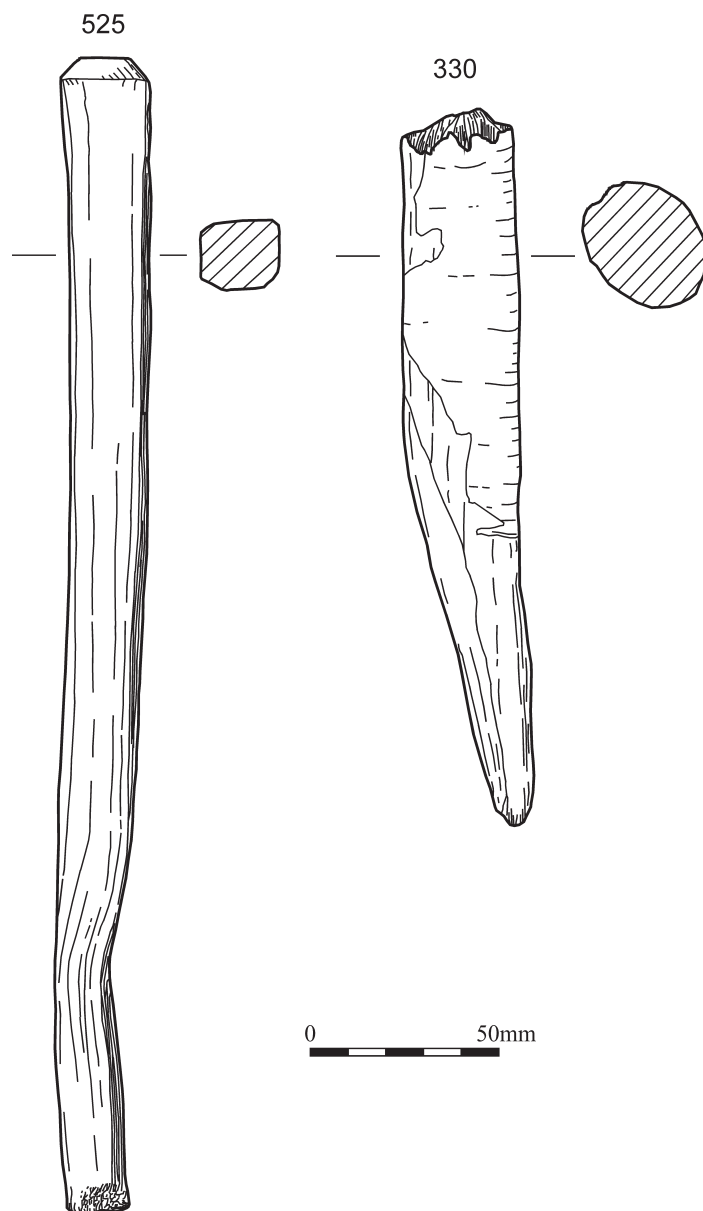
Miscellaneous (c):

fragments with a minimum of working

Miscellaneous (d):

rough pin or peg-like fragments

None of these objects is in sufficiently good condition to be identified more satisfactorily than as rough pin- or peg-like fragments. Some are charred; others are badly split; all are fragmentary. However, they all bear some evidence of having been roughly worked from lengths of round or cleft wood for a specific purpose.



Illus 203 Stakes and sharpened sticks.

Laths.

<i>Cat/Accession</i>	<i>Object type</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector					
713/NN016a	Lath				
714/NN016b	Lath				
715/NN016c	Lath				

Miscellaneous (a): unidentified objects not classifiable in other categories, but clearly performing some specific function.

<i>Cat/Accession</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector				
17/A10491	4	VI	B16 (Phase 1), Occupation (1b)	(Id)Ie
25/A7569a	1/2	VI	B6 (Phase 1), South Room Floor (3)	Ie
48/A10602	3	V	MC034a	Ie(If)
61/A11181	3	V	B16b, Occupation (2)	Id–IIa
72/A10885a	3	V	MC049, Pit 5259	IIa
73/A10885b	3	V	MC049, Pit 5259	IIa
76/A6757b	1	VI	MC051	IIa
120/A9818	3	V/VI	MC092, WW2631	IIc–IIff
125/A10598	4	V	M10	IId–IIg
132/A9813	4	VI	B12, Pit 2348	IIe–IIg
195/A9727a	3	VI	M6a	IIg–IIId
207/A8646	4	VI	M1.4a(b)	IIIa–IVa
210/A8683	3	V/VI	MC144, WW2221	<IIId–IVaa
221/A5433	2	V	B26, Floor/Occupation (10b)	IIg–IVaa
222/A4746	2	V	B26, Floor/Occupation (10c)	IIg–IVaa
224/A5630b	2	V	B26, Floor/Occupation (10c)	IIg–IVaa
280/A05–0146	9	VII	B18 (Phase 2a), Hall South-Construction (4)	IVb
282/A05–0230	10	VII	B18 (Phase 2a), Hall/Hall South, WW6174	IVb
303/A05–0094	9	VII	B18 (Phase 2b), North Room, Hall & Hall South-Occupation (10)	IVb
307/A05–0107	9	VII	B18 (Phase 2b), North Room, Hall & Hall South-Occupation (10)	IVb
313/A05–0200a	7	VII	B18 (Phase 2b), Hall-Pit 7290	IVb
484/A05–0117c	7	VI & VII	M1.5b	Vaa
540/A05–0079	7	VII	B53 (Phase 1), North Area–Occupation (1b)	Vb
589/A05–0014	7	VII	M7	Vc
642/A05–0063	10	VIII	MC174, Pit 7013	(Va–)Vd(Vdd)
665/A05–0015	7–10	VI–VIII	Unstratified	Unstratified
North Sector				
668/A0513	5 & A		Lade (4)	6–12 (b–e)
North/South Sector				
671/A–				
676/A–				

Miscellaneous (b): worked pieces, too fragmentary to be classed as objects or identified.

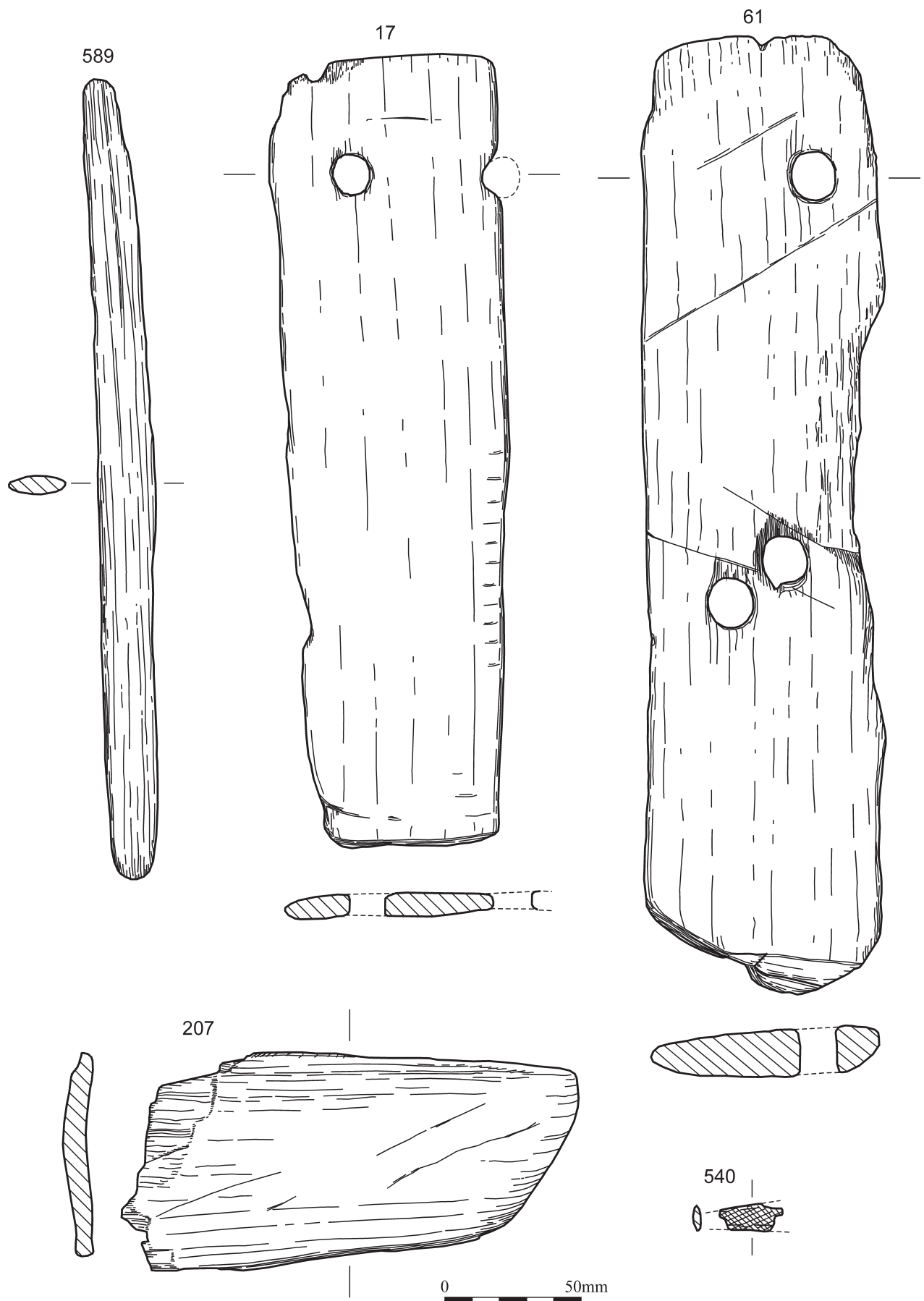
<i>Cat/Accession</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector				
26/A7569b	1/2	VI	B6 (Phase 1), South Room-Floor (3)	Ie
32/A7430a	2	VI	M14b(b), Pit 3625	Ie
33/A7430b	2	VI	M14b(b), Pit 3625	Ie
59/A12598	4	V/VI	B16 (Phase 1) and B16b, WW4718	Id-IIa
67/A11102	3	V	MC039, Pit 2609	If,IIa
81/A05-0012	3	VI	MC055, WW5209B	IIb,IIc
83/A12379	1	VI	MC065, T3907	IIa-IIc
95/A10323	3	VI	M1.1c, Pit 5005	IId
106/A10517	3	VI	M1.1a	IId-IIe
109/A10435	3	VI	B21, PH2696	IIff
113/A10516	3	VI	M1.1e	IIff
115/A6777	2	V	B5, North Room-Floor/Occupation (1)	IIa-IIff
140/A9637	3	VI	M1.2, Pit 2648	<IIg(IIh)
158/A9817	3	VI	M1.3	IIi
161/A10514	3	VI	M1.3	IIi
164/A5626	1	VI	MC111, MF3568	IIb-IIIb
166/A05-0233	9	VII	P8.0	IIIa,IIIb
176/A8109c	4	VI	M1.4a(a)	IIIa-IIIc
177/A8110	4	VI	M1.4a(a)	IIIa-IIIc
185/A8535	3	V	MC117, Pit 4695	Ile-IIIc
193/A05-0175	9	VII	B19 (Phase 2b), North Room-Occupation (3)	IIIc
200/A08-0432	9	VII	M15	IIId
209/A7930	4	V	MC143	IVaa
217/A5538	4	V	MC156	IVaa
233/A7784	3	V	B3 (South), Floor (1b)	IVa,IVaa
244/A05-0222	7	VII	MC126, Pit 7402	IVaa,IVb
251/A05-0212b	7	VII	B18 (Phase 1/2), Pit 7324	IVaa,IVb
258/A05-0158	9	VII	B18 (Phase 1/2)	IVaa,IVb
281/A05-0138	9	VII	B18 (Phase 2a), Hall/Hall South, T9198	IVb
290/A05-0237a	7	VII	B18 (Phase 2a), External 1, Pit 7314, MW7319	IVb
335/A8107c	3	VI	M1.4d, Pit 2566, MW2571	IVb,IVc
341/A5452	3	V	M1.4g	IVb,IVc
346/A5458	3	V & VI	M1.4c	IIIa-IVcc
348/A5623b	3	V & VI	M1.4c	IIIa-IVcc
351/A5447c	3	V & VI	M1.4c	IIIa-IVcc
355/A05-0156a	7	VII	M9a	IVc,IVcc
357/A05-0156c	7	VII	M9a	IVc,IVcc
359/A05-0162b	7	VII	M9a	IVc,IVcc
363/A05-0155b	7	VII	M9a	IVc,IVcc
368/A05-0186	7	VII	M9a	IVc,IVcc
393/A6737a	3	VI	M1.4e, Pit 2446	IVcc(Va)
394/A6737b	3	VI	M1.4e, Pit 2446	IVcc(Va)
398/A5770	3	VI	B34, MF2407	Va
425/A6433	1	V & VI	M5a	IVb-Vc
452/A6759b	3	V & VI	M1.5a	Va,Vaa(VI)
457/A05-0041	7	VI & VII	M1.5b	Vaa
503/A05-0054	7	VII	M8a	Va,Vaa

Miscellaneous (c): fragments with a minimum of working.

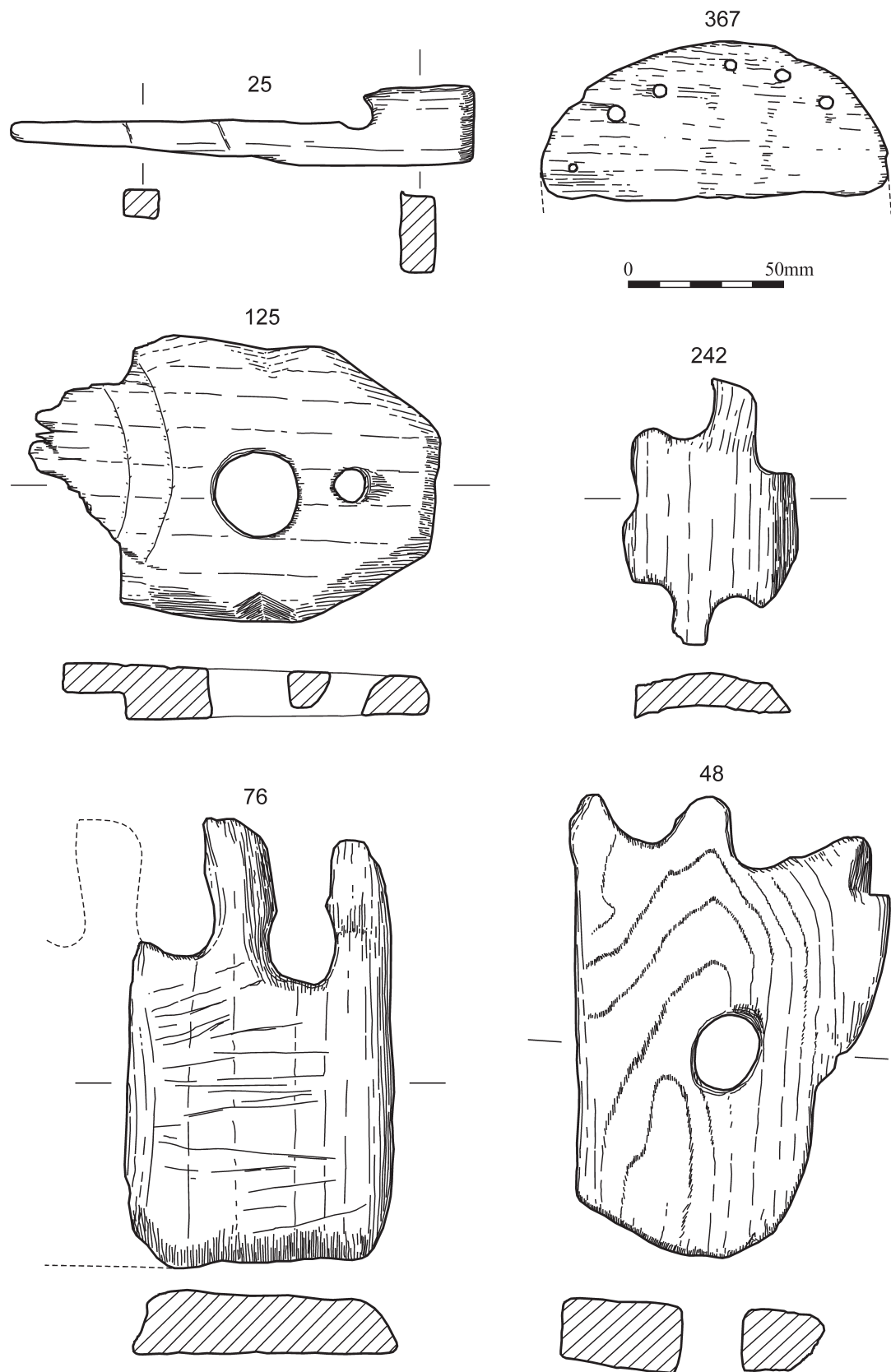
<i>Cat/Accession</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector				
11/A7785a	2	VI	P5.1b	Icc,Id
12/A7785b	2	VI	P5.1b	Icc,Id
37/A7579b	2	VI	M14b(b), Pit 3625	Ie
79/A8052	1	VI	MC051, T6515	Ila
127/A11226	4	VI	B12, H2276	Ile–IIg
186/A8542	3	V	MC117, Pit 4695	Ile–IIIc
199/A05–0174	9	VII	M15	IIId
229/A05–0173	9	VII	B18 (Phases 1a & 1b), T9363 & PH9364	IVa,IVaa
230/A05–0178	9	VII	B18 (Phases 1a & 1b), T9363 & PH9364	IVa,IVaa
250/A05–0212a	7	VII	B18 (Phase 1/2), Pit 7324	IVaa,IVb
263/A05–0235a	7	VII	MC146, Pit 7357, MW7349	<IVb
265/A05–0235c	7	VII	MC146, Pit 7357, MW7349	<IVb
283/A05–0177	9	VII	B18 (Phase 2a), Hall South, MF9335	IVb
287/A05–0187b	7	VII	B18(Phase 2a); Hall-Occupation (9c)	IVb
350/A5447b	3	V & VI	M1.4c	IIIa–IVcc
360/A05–0165a	7	VII	M9a, H7224	IVc,IVcc
380/A05–0118	10	VIII	M9b(b), Pit 6132, MW6133	IVc,IVcc
433/A2420a	3	V & VI	M1.5a	Va,Vaa(VI)
434/A2420b	3	V & VI	M1.5a	Va,Vaa(VI)
666/A05–0016	7–10	VI–VIII	Unstratified	Unstratified
North/South Sector				
685/A–				
686/A–				
687/A–				
689/A–				
697/A–				

Miscellaneous (d): Rough pin or peg-like fragments.

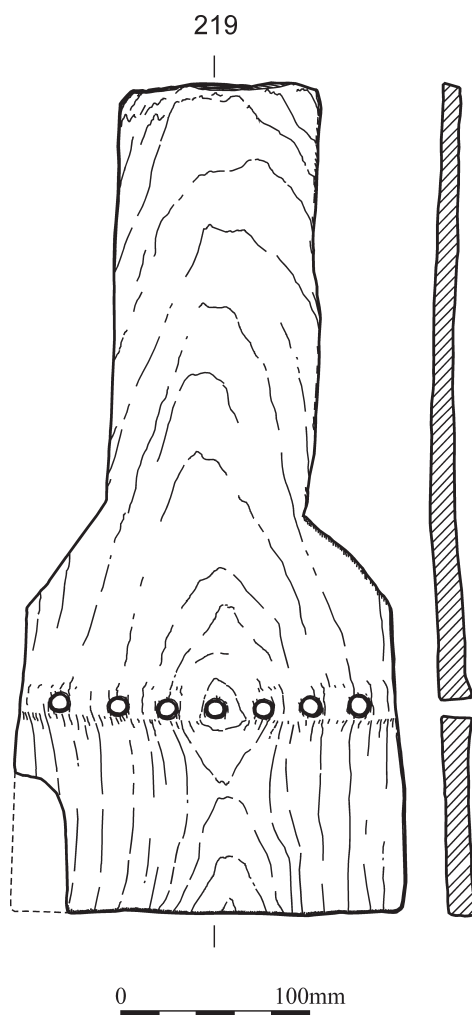
<i>Cat/Accession</i>	<i>Area</i>	<i>Rig</i>	<i>Feature</i>	<i>Phase</i>
South Sector				
19/A10492b	4	VI	B16 (Phase 1), Occupation (1b)	(Id)Ie
66/A05–0009	3	VI	P5.3b	If,IIa
124/A8938	4	V	M10	IId–IIg
157/A8814	3	VI	M1.3	Ili
257/A05–0164	9	VII	B18 (Phase 1/2)	IVaa,IVb
314/A05–0200b	7	VII	B18 (Phase 2b), Hall-Pit 7290	IVb
347/A5623a	3	V & VI	M1.4c	IIIa–IVcc
349/A5447a	3	V & VI	M1.4c	IIIa–IVcc
371/A05–0034	9	VII	M9a	IVc,IVcc
391/A6758b	3	VI	M1.4e	IVcc(Va)
392/A6758c	3	VI	M1.4e	IVcc(Va)
404/A05–0147	7	VII	P8.4	Va
460/A05–0069	7	VI & VII	M1.5b	Vaa
461/A05–0092a	7	VI & VII	M1.5b	Vaa
483/A05–0117b	7	VI & VII	M1.5b	Vaa
520/A05–0150b	7	VII	M8a, T7206	Va,Vaa
561/A05–0076c	7	VII	B53 (Phase 2), North Area–Occupation (7b)	Vbb
618/A5778	4	V	M3c	Vd
North/South Sector				
683/A–				
705/A–				



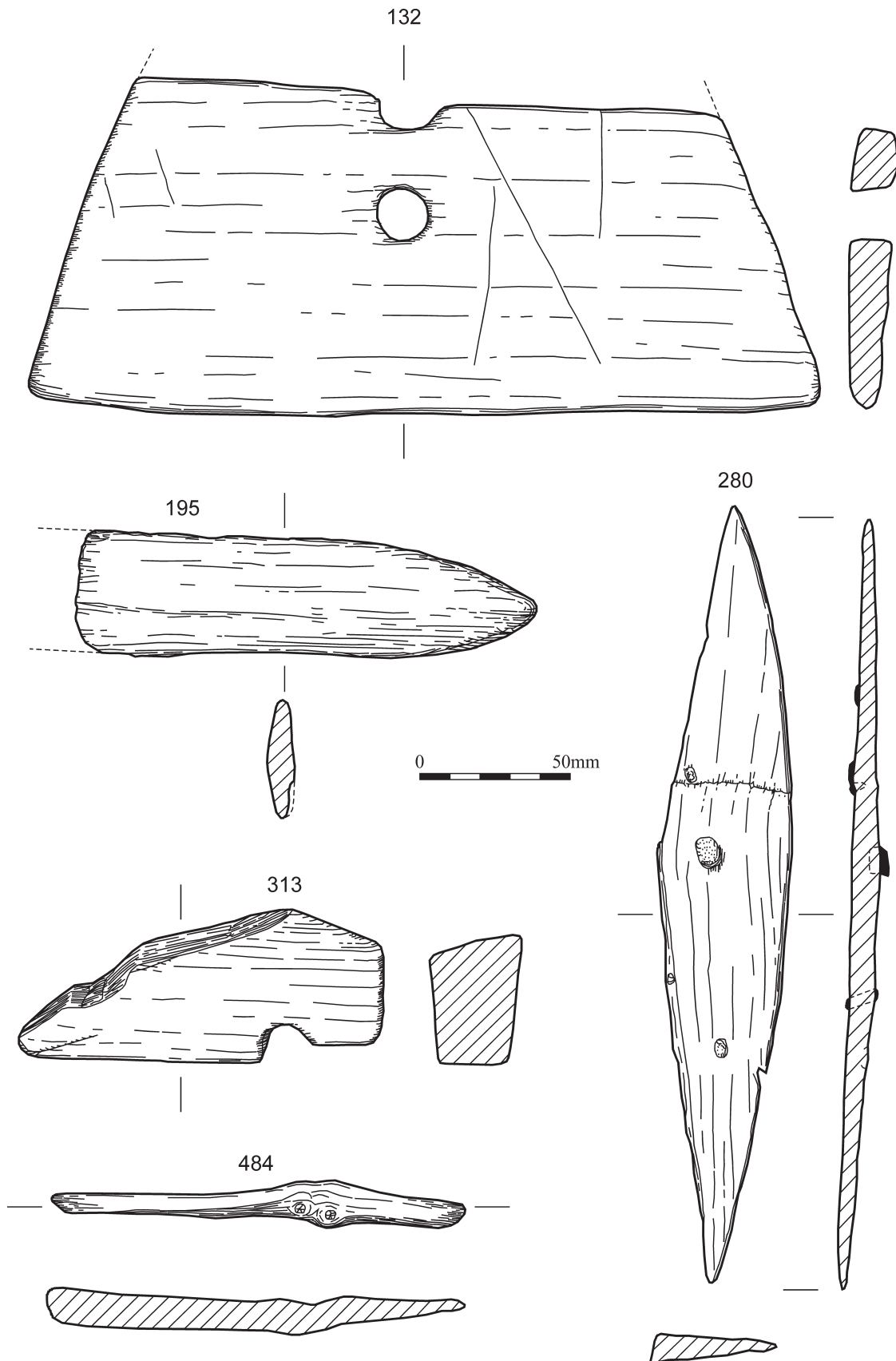
Illus 204 *Miscellaneous wood.*



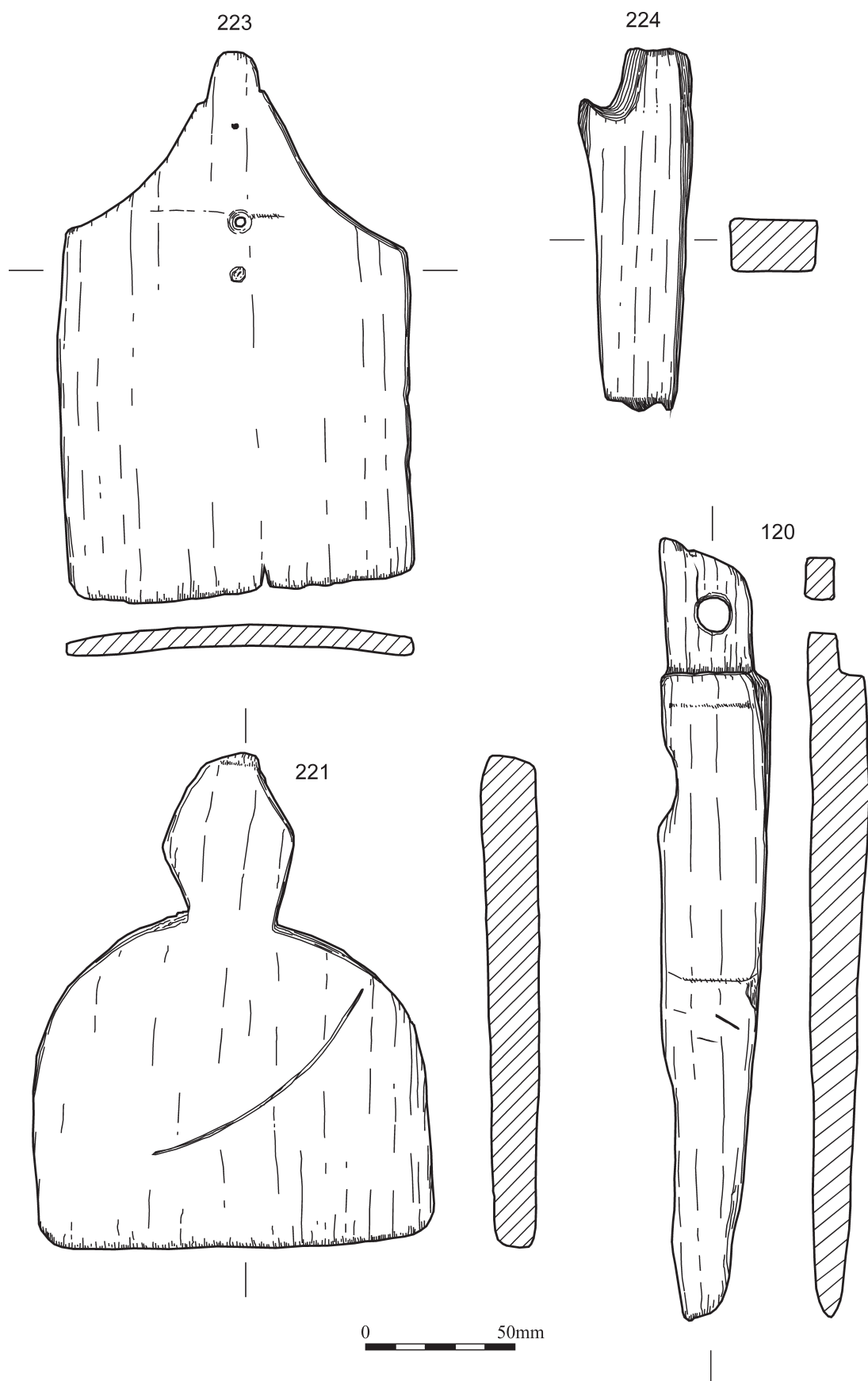
Illus 205 Miscellaneous wood.



Illus 206 *Miscellaneous wood, heckle board?*
Cat 219.

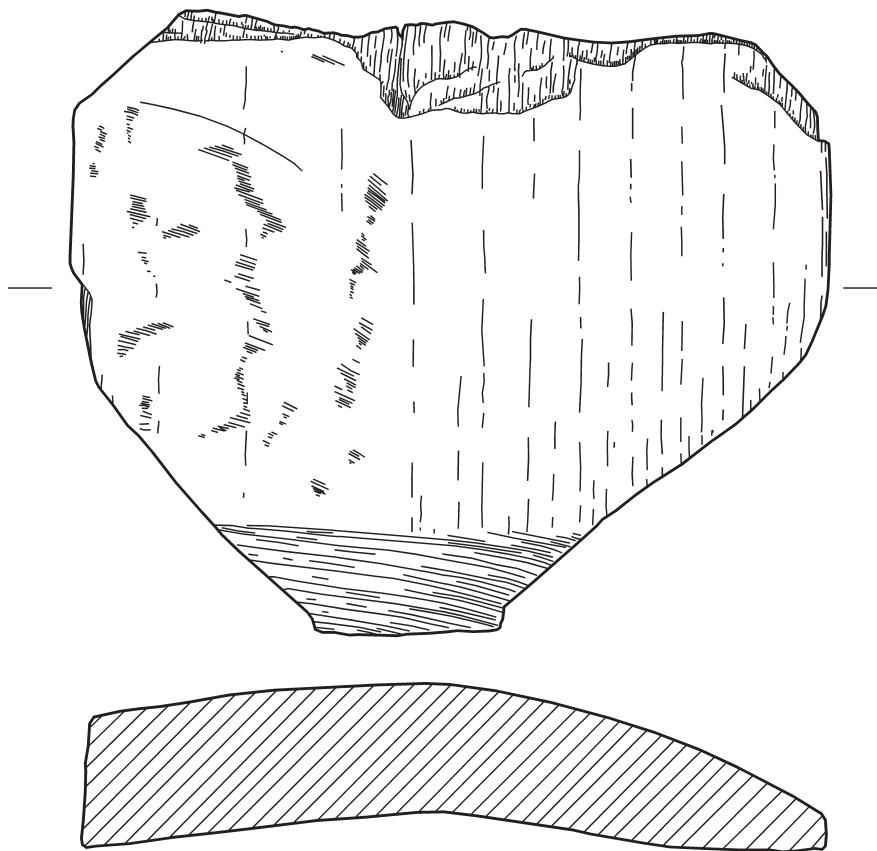


Illus 207 *Miscellaneous wood.*

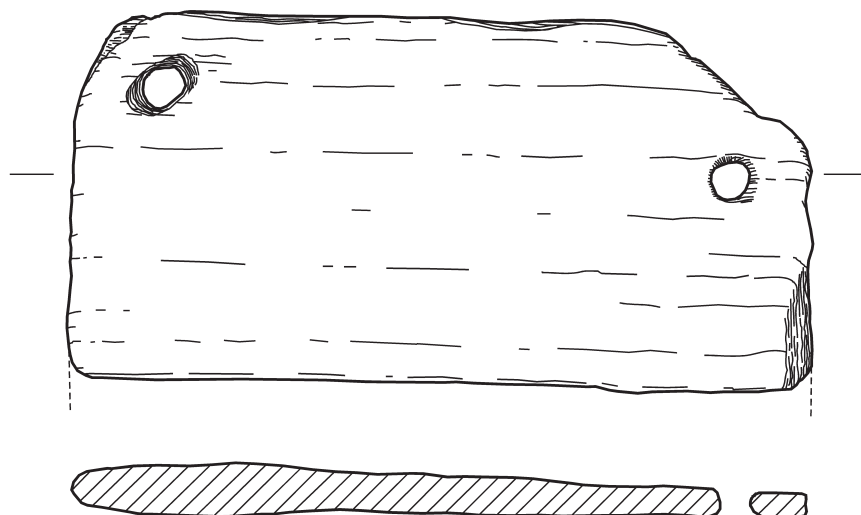


Illus 208 *Miscellaneous wood.*

210

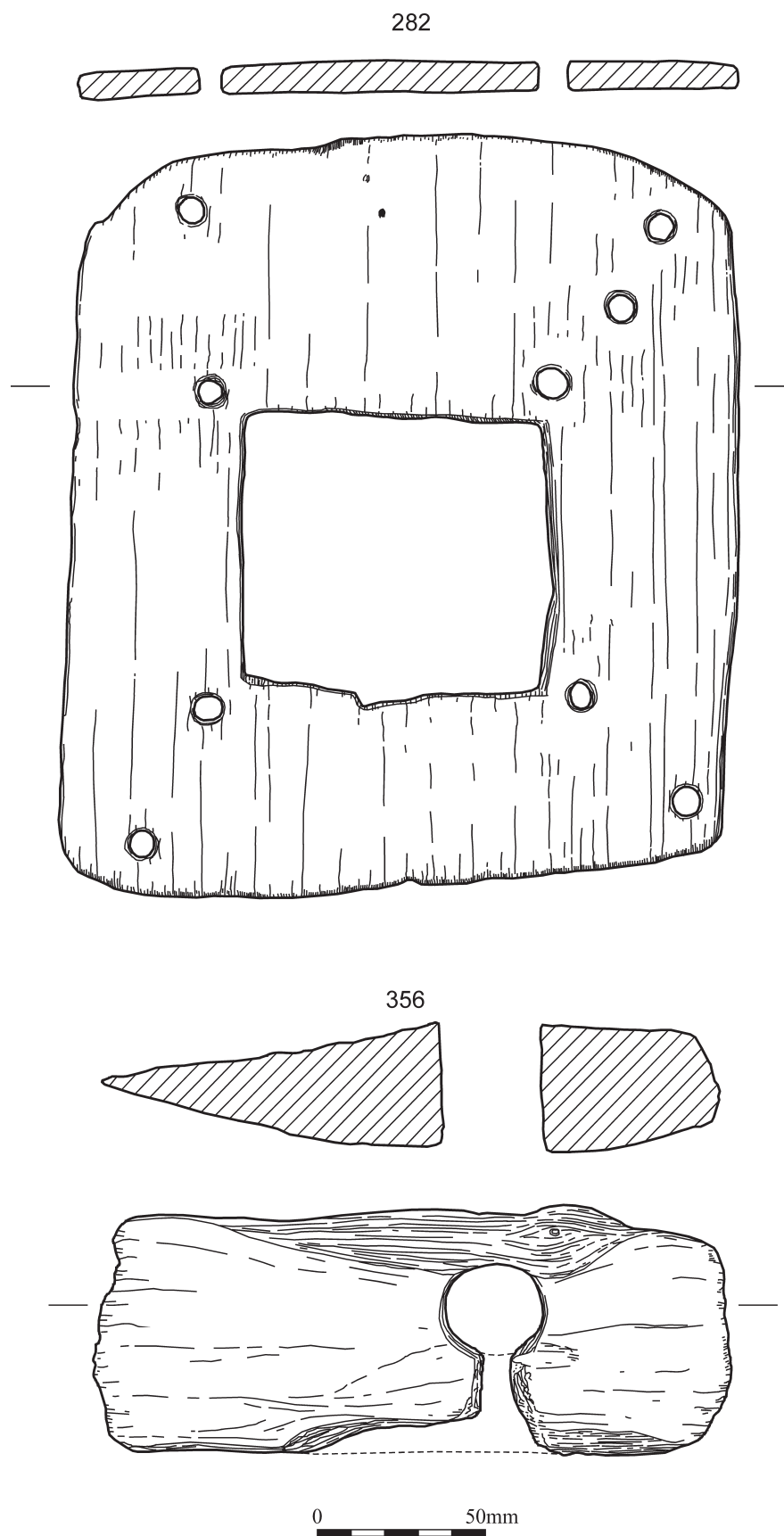


303

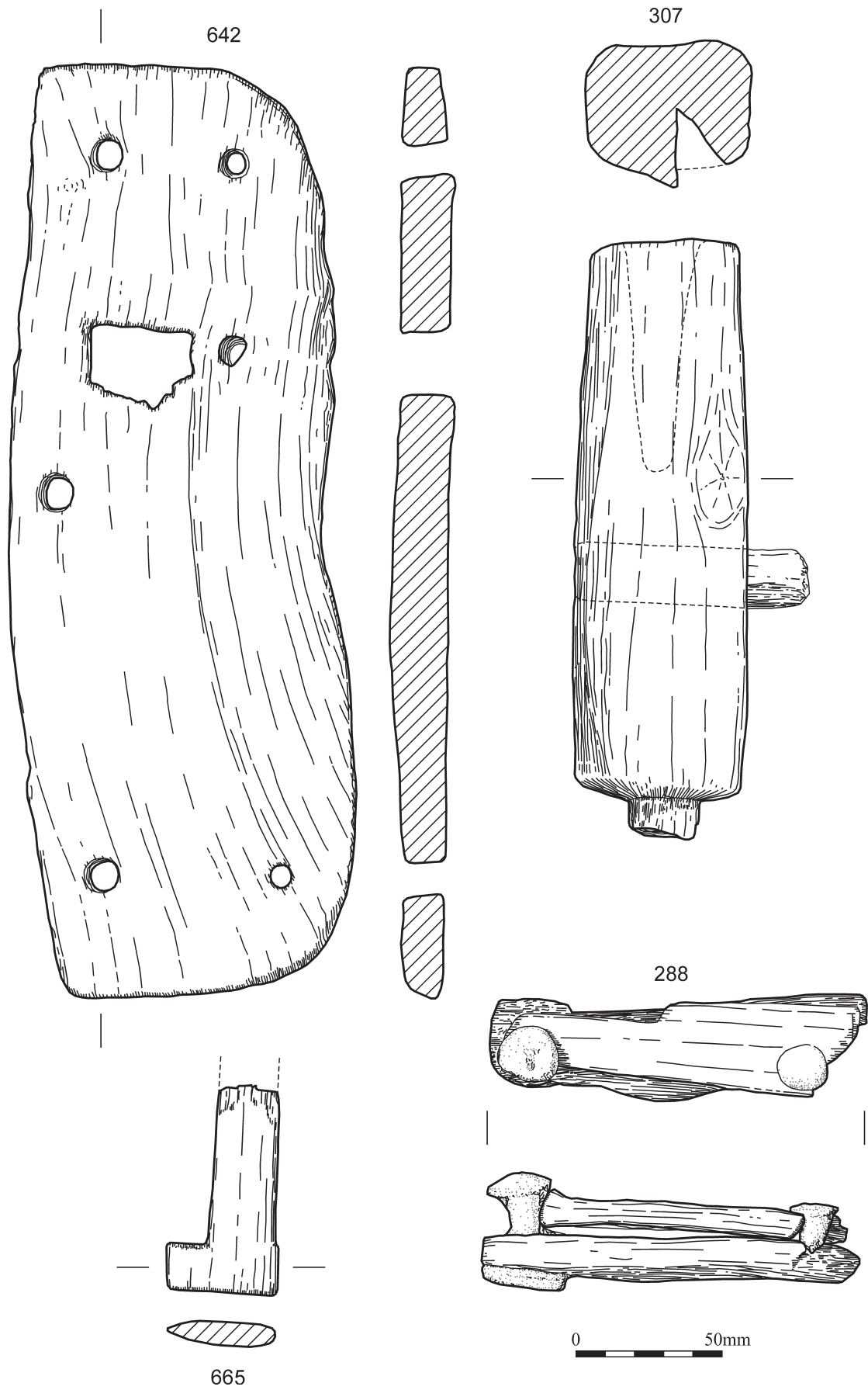


0 50mm

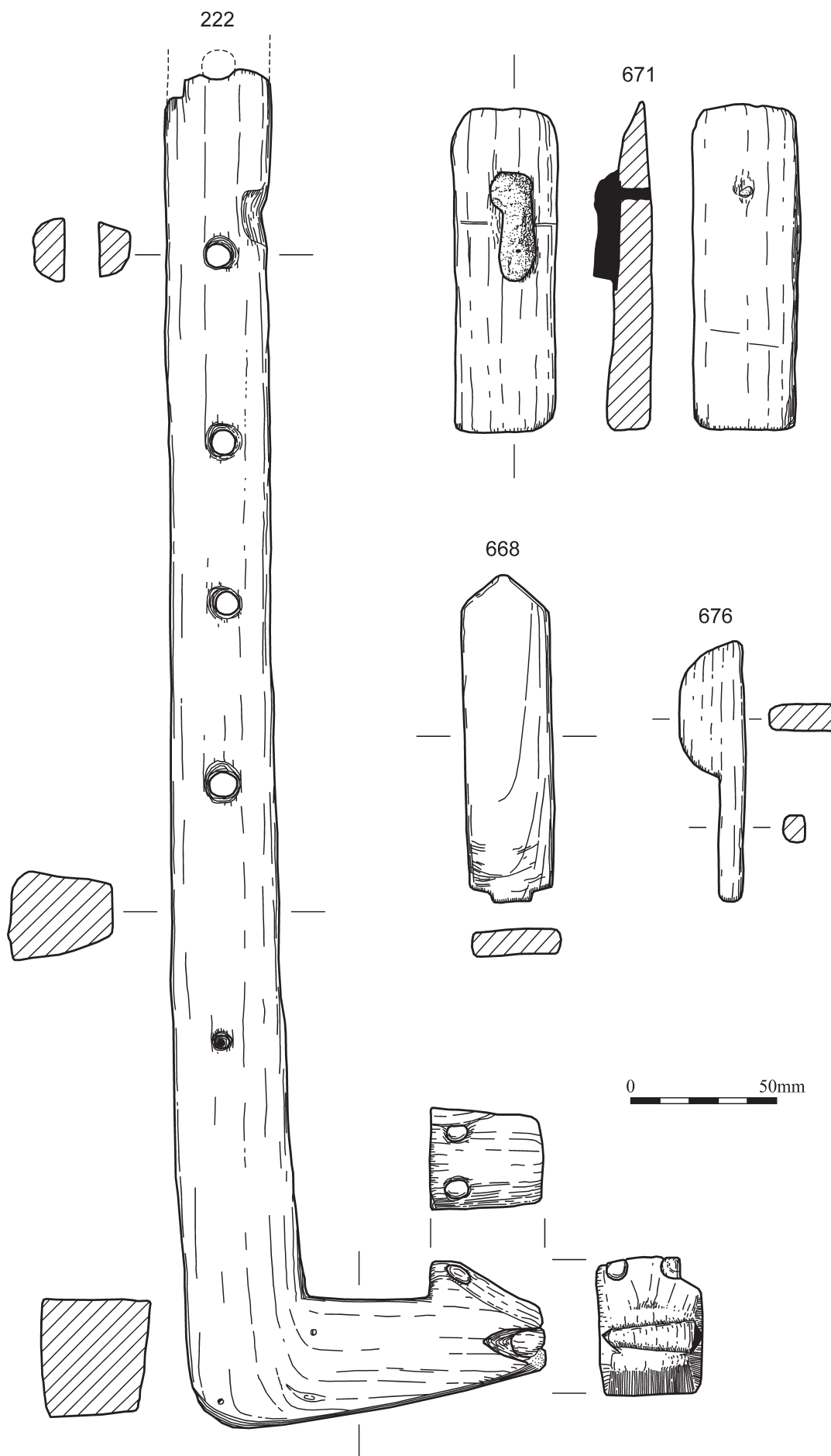
Illus 209 *Miscellaneous wood.*



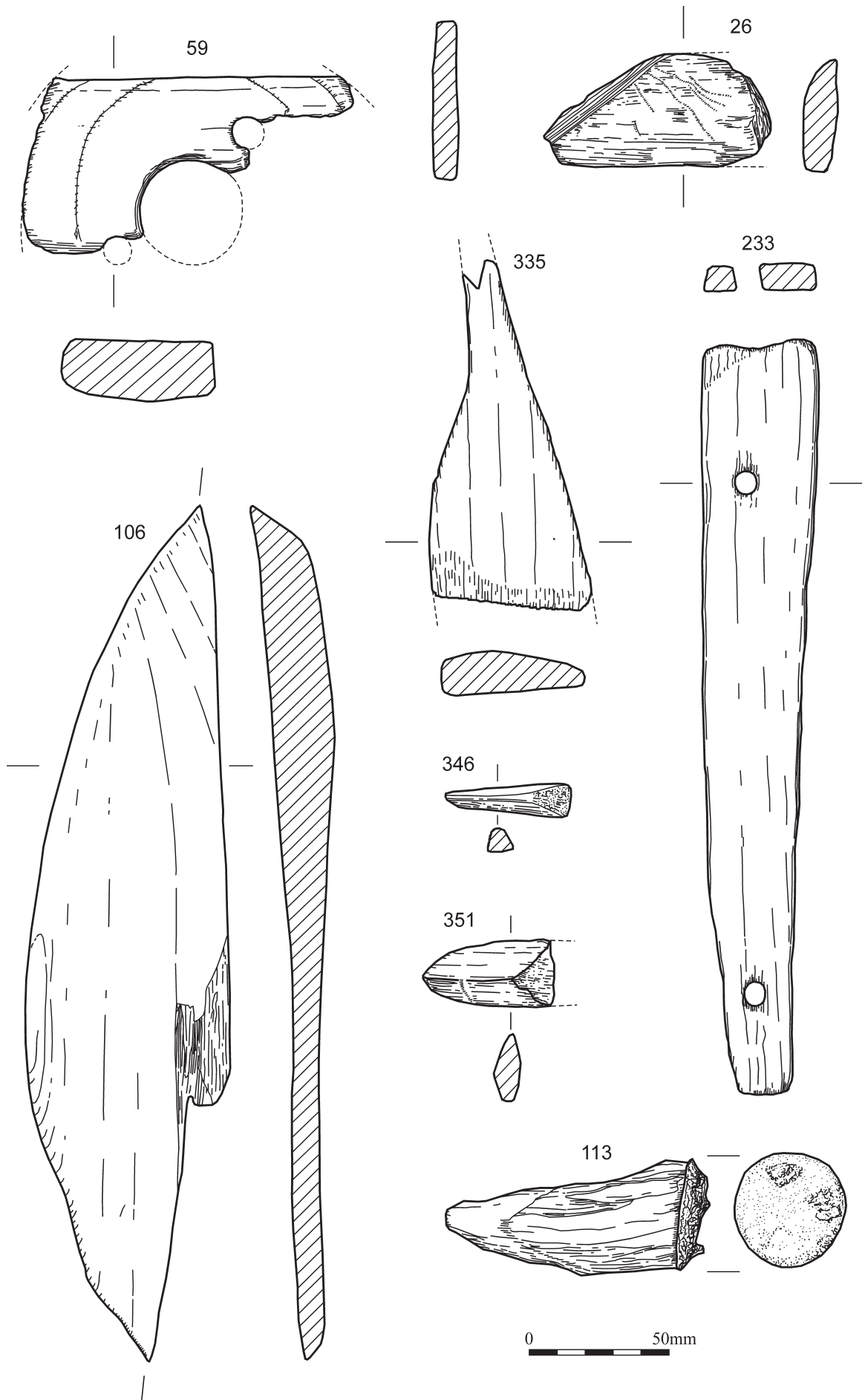
Illus 210 *Miscellaneous wood.*



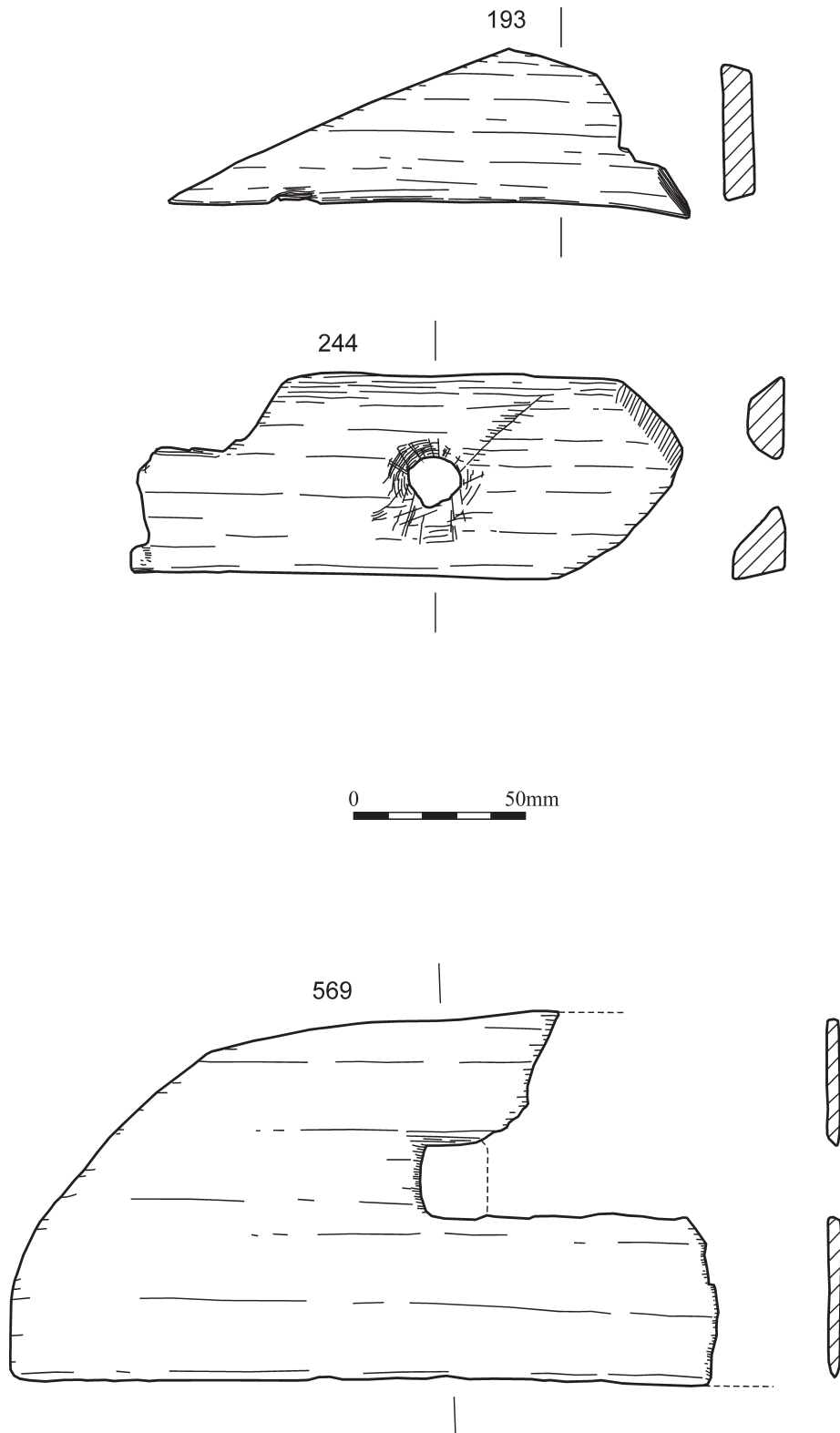
Illus 211 Miscellaneous wood.



Illus 212 *Miscellaneous wood.*



Illus 213 *Miscellaneous wood.*



Illus 214 *Miscellaneous wood.*