

15. THE ROMAN GLASS

Sally Cottam and Jennifer Price

15.1 Introduction

Although over 120 fragments and chips of glass were found, the actual number of vessels represented is small. The colourless tablewares in particular (nos 1–5), were shattered into tiny pieces, many of which joined together. Most of the glass came from the *vicus* (Areas L and R), and only 10 fragments came from other areas of the excavation (C – the bypass road/pre-fort enclosure; D and H – the land divisions; Q – the fortlet). Nearly all the fragments came from drainage ditches or topsoil and their final place of deposition may, therefore, have been at some distance from the area where the vessels were used.

All the recognised forms are consistent with 2nd-century occupation. There were at least two colourless cups, three blue/green jugs or flasks and five bottles. Seventeen fragments of window glass came from at least three panes. Four objects were found: a fragment of bangle, two glass counters and a bead.

15.2 Vessel glass

Nos 1–3, all from the *vicus* (Area L), are very similar in colour, diameter and decoration and may come from the same vessel, though no cross-joins between the groups were found. No. 1 has a curved rim with a cracked-off edge that has been carefully ground. The vessel has at least four pairs of horizontal wheel-cut lines: one pair at the rim, two on the upper body and another pair on the lower body. The upper body is straight, and the full vessel could have been cylindrical with a flat base (Price & Cottam 1998: 94–5). The form is known from a number of 2nd-century sites, including Antonine-period forts in Scotland at Castlecary (Charlesworth 1959: fig 7, no. 6) and Camelon (Price & Cottam forthcoming). Among recent finds, a closely-dated cylindrical wheel-cut cup came from a cremation burial containing samian dated to *c.* AD 125–45 at Elms Farm, Heybridge in Cambridgeshire (Compton et al 2015: no. 14, figs 420 and 428). Alternatively, there may have been a change of angle on the body, which may have tapered into an

applied foot. This biconical form is generally well documented in mid-2nd-century assemblages (Price & Cottam 1998: 91–2, fig 32a), though it has not often been identified in Scotland. Fragments from the body and applied base of one or two cups from Inveresk may be of this biconical form (Allen 2004: 168, nos 6–7, fig 115).

No. 4 is another colourless cup with horizontal wheel cutting. The rim is missing, but it is likely to have been cracked off and ground like no. 1. It too has a cylindrical body, though the wall is thinner than nos 1–3. There is a rounded change of angle on the lower body, suggesting that this was a cylindrical cup, but no further information about the lower body and base. No. 5, a collection of very small shattered fragments, can be identified as coming from the flat base of a colourless vessel, very possibly a cylindrical wheel-cut cup. Other 2nd-century colourless vessels also have similar flat bases, such as cylindrical bottles (Price & Cottam 1998: 202–4).

Whatever the exact shape of nos 1–4, they belong to a group of colourless cups and beakers which are generally well made and carefully decorated with precise horizontal wheel cutting. They are among the most popular good-quality drinking vessels of the early–mid-2nd century and are widely found in Britain and elsewhere in the Empire.

Evidence for cylindrical necks on the three blue/green fragments (nos 6–8) shows that they are all from serving vessels or containers. The neck diameter of no. 6 suggests a relatively large vessel such as a jug or flask. No. 7, which has a conical body, and no. 8, which is more convex, might come from one of many varieties of small jug, flask or unguent bottle current in the 2nd century (see for example Price & Cottam 1998: 155–61, 175–7).

The majority of the vessel glass fragments come from blue/green bottles. There are at least five bottles, two of which are very thin-walled. All the body fragments are from mould-blown prismatic bottles. At least one bottle is certainly square and the other four are very likely to be a similar shape.

Glass bottles are frequently found on 1st- and 2nd-century sites, but are particularly common on military sites, sometimes forming, as here, 50% or more of the vessel glass assemblage. Square bottles were always the most common form and they were produced in a range of sizes (Price & Cottam 1998:

194–8). Hexagonal bottles are occasionally noted in Antonine contexts, as at Bearsden (Price 2016: 189–90, no. 6), Falkirk (Keppie & Breeze 1981: 236), Camelon (Price & Cottam forthcoming: no. 63a) and Strageath (Price 1989: 199–200, no. 23), and a rectangular bottle came from Bearsden (Price 2016: 190–1, no. 7).

The folded rim (no. 9) is common to all bottle forms. Square and other prismatic bottles were blown into a mould which almost always had a design on the base. This then appeared in relief on the underside of the vessel. No. 10 shows part of a raised circle on the base, circles being the most common base design on mould-blown bottles.

15.3 Window glass

The 17 fragments of window glass fall into three groups, based on thickness and colour, and might come from just three panes, although the blue/green fragments were spread across four widely separated areas (C, D, L and Q), suggesting that they have probably come from several panes. All the fragments had one matt and one glossy side, typical of 2nd-century panes, and three had rounded edges. This combination of features suggests that during manufacture, one side of the pane had contact with a flat surface while the edges were manipulated into a square or rectangle, a theory supported by modern experiments (Taylor 2003). Window glass has been found at several forts on the Antonine Wall. Small quantities came from the neighbouring forts of Westerwood (Keppie 1995: 95) and Bar Hill (Robertson et al 1975: 118, nos 1–3), and other Antonine-period finds are noted in connection with the window glass found at Bearsden (Price 2016: 188–9).

15.4 Objects of glass

No. 11 is part of a narrow bangle made in pale blue/green glass and decorated with at least one narrow opaque white trail across the outside surface. Glass bangles are found on 1st- and 2nd-century sites on both Roman and non-Roman sites in Britain, and are most common in Scotland and northern England (Kilbride-Jones 1938; Stevenson 1956; 1976; Price 1988). They are usually described as bangles, although the function of these objects

is puzzling, as the internal diameters (as on this example) are often small, such that the object could only have been worn as a bangle by adults with very small hands or by children. Their use as hair accessories or horse ornaments has sometimes been proposed (Ivleva 2018: 3–4). Only very rarely do complete bangles survive, and most are recorded as small fragments.

Glass bangles are usually divided into groups based on style, colour and decoration, following the system devised by Kilbride-Jones (1938). Under this classification, no. 11 falls into group 3F, a natural blue/green bangle with an opaque white curved trail. Its discovery in the *vicus* of an Antonine-period fort provides further evidence that some bangles continued in circulation into the mid-2nd century, whether under their initial function, or as broken pieces, perhaps used as counters. No. 11 is scratched and worn on the inside surface, suggesting it was still in use after breakage. Fragments of other 3F bangles have been found on the Antonine Wall at Rough Castle (Charlesworth 1980: 269, 277) and Castlecary (Kilbride-Jones 1938: 386, fig 8, no. 3)

Two small glass counters were found, one opaque white (no. 12) and one in a very dark glass (perhaps dark yellow/brown) that appears black (no. 13). Glass counters are usually either black or white, though sometimes other monochrome colours occur, and rarely polychrome examples. Glass counters are frequently found on 1st-century and 2nd-century sites, mostly in small numbers but occasionally in larger sets. They are common on 1st-century sites in Scotland, such as Newstead (Curle 1911: 338–9) and Elginhaugh (Price & Worrell 2007: nos 95–101), and, though less frequent on Antonine-period sites, have been found elsewhere on the Antonine Wall at Bar Hill (Robertson et al 1975: 120, nos 22–3). The playing of games seems to have been a regular pastime for soldiers, though these objects may also have been used for tallying accounts. A fragment of stone with part of an incised grid found at Bearsden and now in the Hunterian Museum, Glasgow, has been interpreted as a board perhaps for the game *ludus latrunculi* (Keppie 2016: 93–4). A fragment of a possible gaming board was also found at Croy Hill, recovered from topsoil above the southern rampart of the fort (9.1.1, S18, above).

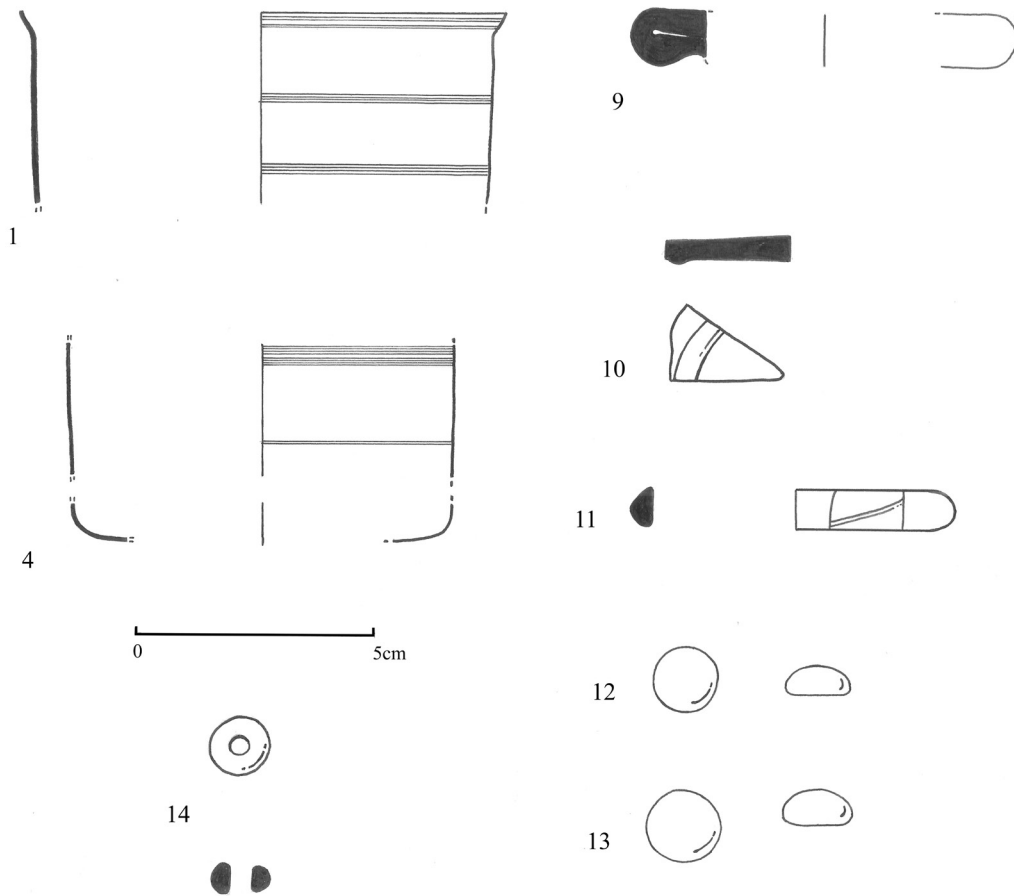
15.5 General comments

This collection shows that glass was being used for a variety of functions at Croy Hill, including drinking, serving, storage and recreation. Most of the items are small body fragments and there are no large pieces from the more substantial parts of the vessels, such as rims, handles and bases, suggesting perhaps that broken glass was collected for recycling. The surviving parts of the colourless cups are shattered into tiny pieces, a condition that sometimes affects good-quality colourless glasses post deposition (Huisman et al 2008).

With its small number of vessels and limited range of forms, the Croy Hill assemblage is close in character to that of other Antonine Wall sites. There are particularly striking similarities with the assemblage from Bearsden, which also had two colourless cups, three blue/green serving vessels

and several blue/green bottles. The lack of variety in the glass from the Antonine Wall contrasts markedly with assemblages from Flavian sites in Scotland, such as Newstead and Elginhaugh, where a much wider range of tableware occurs. Possible explanations, including difficulties of supply and changing preferences in drinking vessels, were suggested in connection with the Bearsden glass (Price 2016: 185–6).

In his description of the glass recovered during the 1931 excavation season in the north-east corner of the fort, Sir George Macdonald noted the occurrence of a melted bottle rim and concluded that glassmakers may have worked at Croy Hill (1932: 267). This interpretation of the fragment was disputed by Charlesworth (1959: 34), who believed the piece had simply been subjected to heat. This current assemblage provides no evidence for glassmaking at Croy Hill.



Illus 15.1 Glass. Drawn by Sally Cottam

15.6 Catalogue

Abbreviations

Dims: Dimensions; PH: Present height; RD: Rim diameter

15.6.1 Tablewares

15.6.1.1 Colourless

► 1. LBD 6: LBL 1: drainage ditches on both sides of trackway, *vicus* (Illus 15.1)

17 small fragments + 7 chips, 12 joining in two groups, rim and body, cylindrical cup/beaker. Rim edge cracked off and ground. Straight side. Two close-set horizontal wheel-cut lines at rim. Two pairs of horizontal wheel-cut lines on upper body. Further pair of horizontal wheel-cut lines on lower body fragment (not illustrated).

PH: 40mm, RD: *c* 100mm, Th: 1mm

► 2. LCQ 4: recut drainage ditch, west side of trackway, *vicus*

10 fragments, 9 joining in two groups, body, ?cup/beaker. Straight side. Two close-set horizontal wheel-cut lines, at least one further horizontal wheel-cut line.

Dims: 29 × 16mm, Th: 1mm, Diam: *c* 100mm

► 3. LCQ 3: recut drainage ditch, west side of trackway, *vicus*

Body fragment, ?cup/beaker. Straight side. At least two close-set horizontal wheel-cut lines.

Dims: 20.5mm × 10.5mm, Th: 1mm, Diam: 100mm

► 4. LBB 1: drainage ditch, east side of trackway, *vicus* (Illus 15.1)

10 fragments, body, cup/beaker, straight-sided, thin-walled body, rounded change of angle to horizontal lower body/base. Narrow horizontal wheel-cut line on lower body, four close-set wheel-cut lines above.

PH: 27mm, Diam: *c* 80mm, Th: 0.5mm

► 5. LBF 1: drainage ditch, east side of trackway, *vicus*

30+ small fragments and chips, 4 joining in two groups, body and base, ?cylindrical vessel. Straight side. Flat base.

Dims (largest base fragments): 17mm × 12.5mm, Th: 1.5mm (body), 2.5mm (base)

15.6.1.2 Blue/green

► 6. LBK 1: recut drainage ditch, west side of trackway, *vicus*

Cylindrical neck fragment, jug/flask. Trace of change of angle to upper body.

PH: 9mm, Diam: 30mm, Th: 3mm

► 7. LBL 3: drainage ditch, east side of trackway, *vicus*

Upper body fragment, jug/flask/unguent bottle. Trace of neck, conical body expanding out.

PH: *c* 10mm, Th: 1.5mm

► 8. QAT 1: fortlet rampart

Upper body fragment, thin-walled jug/flask/unguent bottle. Trace of neck, slightly convex expanding out. Bubbly.

Dims: 30mm × 18mm, Th: 0.5mm

Colourless and blue/green chips are listed in Table 15.1

15.6.1.3 Blue/green bottles

► 9. LDB 1: drainage ditch, west side of trackway, *vicus* (Illus 15.1)

Rim fragment, bottle. Rim edge bent out, up, in and flattened. Trace of neck.

PH: 11mm, RD: 80mm

► 10. LAK 1: drainage ditch, east side of trackway, *vicus* (Illus 15.1)

Base fragment, prismatic bottle. Flat base. Part of raised base design of circle. Outer edge of moulded circle slightly irregular.

Dims: 27mm × 15mm, Diam of circle: *c* 70mm, Th: 3.5–5.5mm

Other body and base fragments are listed in Table 15.2. There were a minimum of 5 bottles represented in the assemblage.

15.6.2 Glass objects

► 11. RAC: gully/fence line, *vicus* (Illus 15.1)

Fragment, pale blue/green bangle. Plano-convex section. Narrow opaque white trail flush with upper surface, crossing apex diagonally. Narrow elongated bubbles. Inside surface scratched and worn.

Internal diam: *c* 60mm, Height: 4mm, W: 8mm

Table 15.1 Colourless and blue/green chips by context

Context	Context descriptor	Colour	No. of chips	Comment
LAK 4	drainage ditch, east side of trackway, <i>vicus</i>	colourless	1	
LBB 1	drainage ditch, east side of trackway, <i>vicus</i>	colourless	1	tiny body fragment, change of angle
LBD 1	drainage ditch, west side of trackway, <i>vicus</i>	colourless	many	including fragment with change of angle
LBK 1	recut drainage ditch, west side of trackway, <i>vicus</i>	colourless	4	
LBK 4	recut drainage ditch, west side of trackway, <i>vicus</i>	colourless	1	
LBL 1	drainage ditch, east side of trackway, <i>vicus</i>	colourless	1	
LCT 1	drainage ditch, west side of trackway, <i>vicus</i>	colourless	many	
LAK 1	drainage ditch, east side of trackway, <i>vicus</i>	blue/green	1	

Table 15.2 Body and base fragments of blue/green bottles

Context	Context descriptor	No. of fragments	Colour	Comment
DBL	spread of occupation/midden material north of land divisions, Area D	1	blue/green	square bottle, trace of corner
CCT 1	bypass road ditch east of pre-fort enclosure	2	pale blue/green	shoulder and edge of upper body
LCQ 6	recut drainage ditch, west side of trackway, <i>vicus</i>	1	blue/green	flat
HAR 12	lower fill of large pit within land divisions, Area H	1	blue/green	flat
LBD 1	drainage ditch, west side of trackway, <i>vicus</i>	1+ chip	blue/green	flat
LAK 1	drainage ditch, east side of trackway, <i>vicus</i>	1	blue/green	flat, thin-walled
LAK 3	drainage ditch, east side of trackway, <i>vicus</i>	1	blue/green	flat, thin-walled
LBB 1	drainage ditch, east side of trackway, <i>vicus</i>	2	blue/green	flat, thin-walled
RBT	northern bypass road drainage ditch	4	blue/green	flat, thin-walled
LBL 1	drainage ditch, east side of trackway, <i>vicus</i>	1	blue/green	base, prismatic bottle, trace of edge of raised design

► **12. DBL: spread of occupation/midden material north of land divisions, Area D (Illus 15.1)**

Complete almost circular plano-convex counter. Opaque white. Smooth upper surface. Flat, uneven lower surface.

Diam: 13.5–14mm, Height: 6mm

► **13. LBN 1: recut drainage ditch, west side of trackway, vicus (Illus 15.1)**

Complete almost circular plano-convex counter. Dark (?yellow/brown), appearing black. Pitted

upper surface. Flat, uneven lower surface, slightly worn.

Diam: 15–16mm, Height: 7.5mm

► **14: LAA topsoil, vicus (Illus 15.1)**

Small, globular bead of translucent yellow glass. This is not a type which appears in Guido's catalogue (1978) and may be of later date.

Diam: 12mm, Th: 7mm, Diam of hole: 3mm

15.6.3 Window glass

See Table 15.3.

Table 15.3 Window glass by colour and context

Context	Context descriptor	No. of fragments	Colour	Comments
CAC 1	drainage ditch, north side of bypass road	1	blue/green	
DDM	post hole W of the main land division	1	blue/green	
LAA	topsoil, Area L, <i>vicus</i>	2	blue/green	
LBD 1	drainage ditch, west side of trackway, <i>vicus</i>	1	blue/green	
LBD 6	drainage ditch, west side of trackway, <i>vicus</i>	1	blue/green	
LBK 1	recut drainage ditch, west side of trackway, <i>vicus</i>	1	blue/green	
LBO 1	drainage ditch, west side of trackway, <i>vicus</i>	1	blue/green	
LBT	drainage ditch, east side of trackway, <i>vicus</i>	1	blue/green	
LCQ 1	drainage ditch, west side of trackway, <i>vicus</i>	1	blue/green	
LCQ 3	drainage ditch, west side of trackway, <i>vicus</i>	1	blue/green	
QAO	topsoil, fortlet	1	blue/green	
LBS 1	drainage ditch, west side of trackway, <i>vicus</i>	1	pale blue/ green	edge
LBS 1	drainage ditch, west side of trackway, <i>vicus</i>	3	pale green	including edge
LBN 1	recut drainage ditch, west side of trackway, <i>vicus</i>	1	pale green	