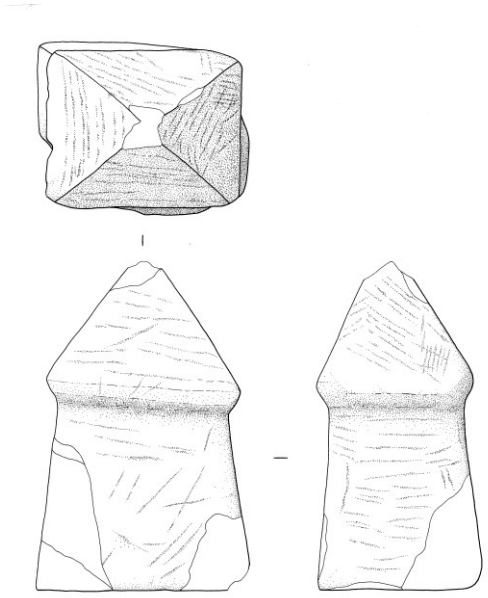
THE OTHER FINDS

ITEMS OF STONE

ROMAN ARCHITECTURAL FRAGMENTS

St 19 Finial. Red sandstone finial with a square section (Illus. 24). The base is square-sectioned and tapers inwards. The top is pyramidal.
L. 222 mm W.145 mm Th.105 mm, CAT G 281 Phase 1



Illus. 24. Finial St 19

St 22 Drain fragment. Large square fragment of red sandstone drain, almost complete apart from one chipped corner. The drain has a central deep channel with a flat bottom and near vertical sides, leaving a flat flange either side.
L. 580 mm W. 580 mm Th. 190 mm, CAT G 286 Phase 1d

St 23 Drain fragment (Illus.25). Long, roughly trapezoidal fragment of red sandstone. Part of the central channel survives, which is flat bottomed and has near vertical sides.
L. 570 mm W. 310 mm Th. 160 mm, CAT G 286 Phase 1d

Illus. 25. Drain fragment St 23

St 24 Drain fragment. Trapezoidal fragment of red sandstone drain, stepped, with part of the vertical sided, flat-bottomed central channel surviving, and a greater length of adjacent flange.
L. 700 mm W. 370 mm Th. 170 mm, CAT G 286 Phase 1d

St 25 Drain fragment. Roughly rectangular stepped fragment of red sandstone drain. Part of the central channel, with flat bottom and near vertical sides, survives.
L. 590 mm W. 340 mm Th. 165 mm, CAT G 286 Phase 1d

St 26 Drain fragment. Small triangular red sandstone drain fragment forming part of the flat, central channel, with one edge slightly raised.
L. 390 mm W. 160 mm Th. 70 mm, CAT G 286 Phase 1d

St 27 Drain fragment. Long rectangular fragment of red sandstone drain.
L. 700 mm W. 210 mm Th. 170 mm, CAT G 286 Phase 1d

St 20 Fragment. Roughly rectangular red sandstone fragment broken on two sides. A shallow rectangular groove runs parallel with the two unbroken edges.
L. 220 mm W. 105 mm Th. 58 mm, CAT G 281 Phase 1

Comment. Drain fragments are frequently found in Roman Carlisle, as well as other Roman towns, where they form roadside gutters. The finial (St 19) was securely stratified in the upper Roman levels and was probably deposited as part of road make-up. Part of an altar was also found (Hassall and Tomlin 1989, 331).

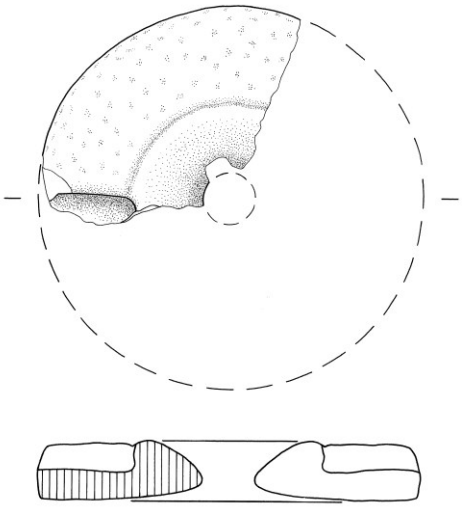
OTHER ROMAN STONE OBJECTS

St 15 Spindle whorl. A complete flat slate spindle whorl shaped into an irregular disc. The object has partially smoothed edges and a central round hole which has been polished smooth, probably by use.

Dia. 40mm Dia.(hole) 5 mm Th. 4 mm, CAT G 213 Phase 1i

St 16 Quern. (Illus. 16). Upper stone, No details available.

L. 320 mm W. 150 mm Th. 60 mm Dia. C.405 mm, CAT H 016 Phase 1



Illus 26. Quern St 16

Jet, shale, amber

Most of the jet and shale items here are stratigraphically or typologically Roman in date. It is useful to note Allason-Jones's comments that black jewellery, that is jet, shale, lignite and cannel coal, seem to have become very popular in the fourth century (Allason-Jones 2010, 83). Cool also makes the point that in five sites investigated, site finds of personal objects, beads, brooches, hairpins and bracelets, were overwhelmingly more prolific than many other categories of object (Cool 2010, 2-3). It is interesting to note that of the identifiable Roman objects at the Cathedral, such personal objects as the bangles and the multi-faceted jet hairpin (JS6) are a relatively important element. The amber beads, which are lost, could belong to the early medieval period.

JS 9 Ring. Complete jet finger ring. The hoop is D-sectioned with an oval perforation, the cross section of which is also D-shaped. It expands from the rear of the hoop and terminates in an angular shoulder on each side. The undecorated oval bezel is separated from the shoulders of the hoop by a narrow D-sectioned neck on each side. The shoulders are decorated at the end with a single incised groove. The whole is highly-polished.

Dia. (Ext) 20 mm L. (Int) 14 mm W. (Ext) 16 mm W. (Int) 12 mm Th. 10 mm, CAT G 284 Phase 1f

JS 5 Bead. Complete, rectangular jet bead with two tubular holes passing from one end to the other. The upper surface is decorated with a pattern of shallow, incised diagonal lines. Both faces are highly polished but quite badly scratched.

L. 13 mm W. 10 mm Th. 9 mm, CAT G 165 Phase 4

JS 11 Bead. Turned, disc-shaped jet spacer bead. The upper surface is smooth with rounded edges. The reverse has a rougher, scratched surface and approximately a third of the area has been chipped off. Two parallel tubular holes run across the diameter through the thickness of the bead.

Dia. 21 mm Th. 4 mm, CAT G 026 Phase 3

JS 6 Shale pin. Complete shale pin with multi-faceted head and circular-sectioned shaft. The head is cuboid with chamfered corners. The shaft flares from a narrow neck towards the widest point at the centre, then tapers to a point.

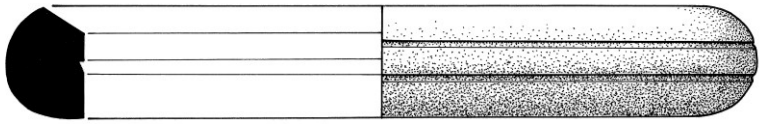
L. 79 mm W. 10 mm Th. 10 mm, CAT G 213 Phase 1i

JS 7 Shale bangle. Small fragment of a plain, circular shale bangle with a D-shaped section. Both ends and the bottom of the fragment are broken.

L. 25 mm W. 8 mm Th. 7 mm, CAT G 122 Phase 1f

JS 8 Shale bangle (Illus. 27). Fragment of a circular shale bangle with an oval section. The fragment has two parallel grooves which run horizontally round the outside of the bangle, and one central horizontal groove round the inside. The interior groove is much wider.

Dia. 62 mm W. 9 mm Th. 12 mm, CAT G 213 Phase 1i



Illus. 27. Shale bangle JS 8

JS 10 Jet/lignite/cannel coal arm-ring fragment. Bangle with D-shaped section and a slight internal bevel. Probably lathe-turned.
Reconstructed dia. (ext) 84 mm Dia. (int) 70 mm Th. 8.5 mm, CAT G 36, Phase 3

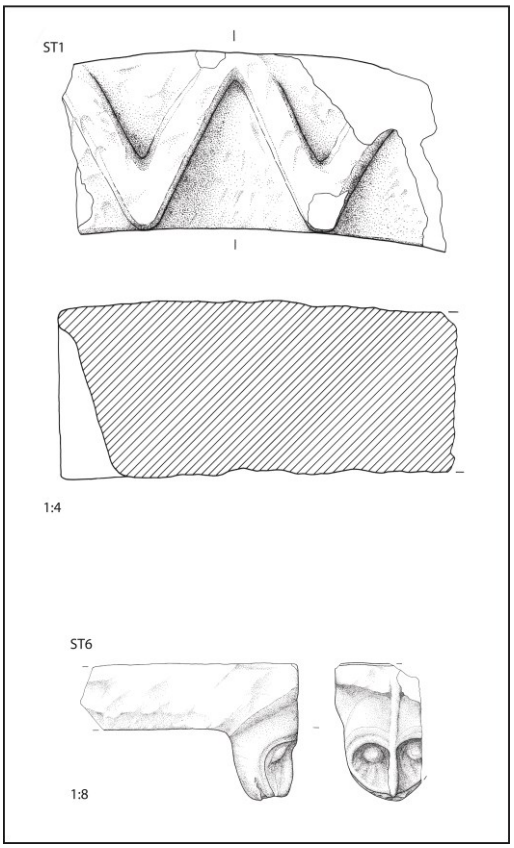
JS 2 Amber bead. Complete bead, large, annular with an oval profile.
Dia. (Ext) 28 mm D. (Int) 12 mm Th. 12 mm, CAT G 074 Phase 5

JS 4 Amber bead. Complete bead, small, annular with an oval profile and small central hole.
Dia. (Ext) 8 mm Dia. (Int) 2 mm Th. 5 mm, CAT G 128 Phase 4

MEDIEVAL OR PROBABLE MEDIEVAL ARCHITECTURAL FRAGMENTS

A small number of stone objects had clearly formed part of that section of the Cathedral, probably the nave and west end, demolished in the seventeenth century. They include a small cat-like corbel (St 6), and ten fragments (St 1-5, 7-11) of a chevron-decorated string course, part of which is straight but part was intended to go around a curved feature, perhaps a window. Fragments of voussoirs and some stones with distinct traces of red paint imitating masonry joints were also recovered, as well as other less diagnostic pieces that may be later medieval in date. Cumulatively, however, the structural stonework adds little to our knowledge of the twelfth-century priory church except to confirm that parts had mortar joints picked out in red paint, a feature widely attested in other places.

St 1 Curved limestone block with tool marks on all four sides (Illus. 28). The front contains part of a chevron moulding.
L. 315 mm W. 280 mm Th. 135 mm, CAT H, unstratified



Illus 28. Voussoir (St 1) and corbel table or hood mould fragment St 6 (CAT H)

St 2 Column fragment. Moulded column red sandstone fragment, basically semi-cylindrical in shape with a rectangular rib (keel) protruding from the curve.
L. 115 mm W. 72 mm Th. 40 mm, CAT G 001 Phase 6/Unstratified

St 3 Column fragment. Red sandstone column fragment in the shape of a trapezoidal prism. The fragment has two, possibly three faced surfaces, one of which is very rough and may have been used for keying in.
L. 163 mm W. 93 mm Th. 75 mm, CAT G 001 Phase 6/Unstratified

St 4 Moulding. Semi-cylindrical red sandstone moulding fragment with one end broken. The surviving end shows tooling marks.
L. 155 mm W. 80 mm Th. 55 mm, CAT G 002 Phase 5

St 5 Moulding. Red sandstone moulding, originally with two parallel semi-cylinders separated by a narrow flat strip. The whole of the profile of one semi-cylinder survives and part of the second, with both ends of the fragment broken.
L. 110 mm W. 120 mm Th.80 mm, CAT G 002 Phase 5

St 6 Column fragment. Almost cylindrical red sandstone moulding or column fragment with one end broken.
L. 140 mm W. 110 mm Th. 90 mm, CAT G 002 Phase 5

St 7 Possible moulding. Trapezoidal red sandstone fragment. One side is smooth and convex. The other is irregular but largely flat with incised grooves at right angles to each other.
L. 141 mm W. 107 mm Th. 55 mm, CAT G 001 Phase 6/Unstratified

St 8 Fragment. Small irregularly-shaped pink sandstone fragment with a thin black line of colouring around the edges of one end.
L. 77 mm W. 56 mm Th. 30 mm, CAT G 003 Phase 5

St 9 Fragment. Broken fragment of possible limestone, possibly the corner of an object or moulding. Two faces are smooth and painted with a thin red line.
L. 130 mm W. 95 mm Th. 65 mm, CAT G 003 Phase 5

St 10 Moulding fragment. Irregularly-shaped red sandstone fragment of curved moulding with a chamfered, top and mortar adhering to the back.
L. 158 mm W. 73 mm Th. 60 mm, CAT G 016 Phase 5

St 11 Possible column fragment. Semi-circular red sandstone fragment, with one straight part of the outer curve. Possibly part of a column.
L. 225 mm W. 105 mm Th. 80 mm, CAT G 016 Phase 5

St 28 Column fragment. Semi-cylindrical red sandstone column fragment. The outer curved surface is smooth and covered with a pale green/yellow layer, possibly paint or plaster. A capital 'N' is carved on to the centre of the fragment. One end is broken. Found in graveyard dividing wall, F4.
L. 102 mm W. 105 mm Th. 70 mm, CAT G 005 Phase 5

St 29 Fragment. Roughly pentagonal fragment of red sandstone, two sides of which are worked. The flat upper surface has an incised design, a trapezium with parallel lines scored inside it. From foundation of nave north wall.
L. 320 mm W. 280 mm Th. 105 mm, CAT G 42 Phase 5

St 31 Moulding. Trapezoidal red sandstone moulding fragment. One side has a bevelled, tooled edge and a second, smooth, edge.
L. 130 mm W. 85 mm Th. 37 mm, CAT G 074 Phase 5

St 2 Possible string-course fragment. Small irregularly-shaped limestone string-course fragment, with one face decorated with a raised V shape, from a chevron moulding.
L. 190 mm W. 125 mm Th. 130 mm, CAT H 001 Phase 6

St 3 Voussoir, probably from an arch. Rectangular block of limestone decorated with a chevron. Slightly concave soffit. Traces of painted limewash.
L. 125 mm W. 105 mm Th. 160 mm, CAT H unstratified

St 4 Possible string-course fragment. Possible limestone fragment with one face decorated with a chevron moulding.
L. 170 mm W. 130 mm Th. 190 mm, CAT H 001 Phase 6

St 6 Possible corbel-table or hood-mould fragment (Illus. 28). Large L-shaped fragment of limestone worked on four sides, one with a stylised face (Illus. 19). The face has engraved eyebrows, large sunken eyes with convex pupils, and a nose extending from the eyebrows down, widening to form a mouth. The left side of the face shows signs of re-working.
L. 330 mm W. 200 mm Th. 130 mm Ht. 210 mm, CAT Trench H unstratified

St 5 Moulding. Semi-cylindrical white limestone moulding or column fragment with slight longitudinal tooled lines.
L. 140 mm W. 113 mm Th. 78 mm, CAT H 001 Phase 6

St 7 Moulding. Rectangular limestone block with two parallel semi-cylindrical ribs protruding from one corner, and a raised, tooled L-shaped area around this.
L. 300 mm W. 275 mm Th. 190 mm, CAT H 001 Phase 6

St 8 Moulding. Rectangular block of red sandstone moulding, with a shaped face. One end has mortar and stones attached, the other has a central square-sectioned slot in it.
L. 480 mm W. 370 mm Th. 215 mm, CAT H 001 Phase 6

St 9 Column base. Large chunk of red sandstone, moulded on both sides, with the base set in a mortar mix with bricks and sandstone fragments in it. The upper surface has a square-sectioned slot with traces of iron round it.
L. 490 mm W. 340 mm Th. 310 mm, CAT H 001 Phase 6

St 10 Moulding. Red sandstone comprising a roll- moulding above a double-chamfered rectangular block. The two chamfers are of different sizes, one being very narrow, giving the moulding a roughly trapezoidal section.
L. 330 mm W. 230 mm Th. 300 mm, CAT H 001 Phase 6

St 11 Moulding. Rectangular block of red sandstone moulding worked on both faces, and flat at each end. Each end has a central square-sectioned lewis-hole.
L. 370 mm W. 350 mm Th. 165 mm, CAT H 001 Phase 6

St 12 Moulding. Square block of red sandstone moulding with a shaped face and weathered outer surface. One end has a central square-sectioned slot (lewis-hole) with traces of iron round it.

L. 340 mm W. 330 mm Th. 115 mm, CAT H 001 Phase 6

St 13 Fragment. Irregularly-shaped red sandstone moulding fragment with a bevelled edge with a semi-cylindrical groove running parallel to it. The back of the fragment is slightly tooled, with attached mortar.

L. 125 mm W. 120 mm Th. 70 mm, CAT H 001 Phase 6

St 14 Fragment. Small, grooved red sandstone fragment with a roughly L-shaped. The piece is a narrow moulding, used as a decorative edging.

L.99mm W.79mm Th.55mm, CAT H 001 Phase VI

St 15 Moulding. Rectangular block of red sandstone moulding with a shaped front and mortar and small stones adhering to the reverse. The ends are flat and one has traces of iron on it.

L. 275 mm W. 250 mm Th. 170 mm, CAT H 001 Phase 6

MISCELLANEOUS STONE ITEMS

The arrowhead (St 21) is Neolithic in date, but the remaining items bear too few diagnostic features to enable them to be assigned a date.

St 14 Whetstone. Lithology unidentified.

L. 158 mm W. 10 mm Th. 9 mm, CAT G 252 Phase 4

St 13 Spindle whorl. Approximately half a slate object which has been shaped by turning to form a truncated cone. It has a central circular hole and a rough underside. The upper surface is smooth and slopes inwards and upwards from the circular base until it forms a rim. Between this rim and the central hole there is a concentric groove which slopes down towards the centre.

L. 28 mm Dia. (hole) 9 mm Th. 7 mm, CAT G 252 Phase 4

St 12 Bead. Complete annular chalk bead with an oval profile and D-shaped section. The bead has a central circular hole with smooth sides.

Dia. (Ext) 26 mm Dia. (Int) 9 mm Th. 12 mm, CAT G 098 Phase 5

St 30 Object. Incomplete object made from red sandstone, triangular in shape, though probably square originally, with a roughly-cut circular hole towards one corner. The object is broken diagonally, cutting the hole in half.

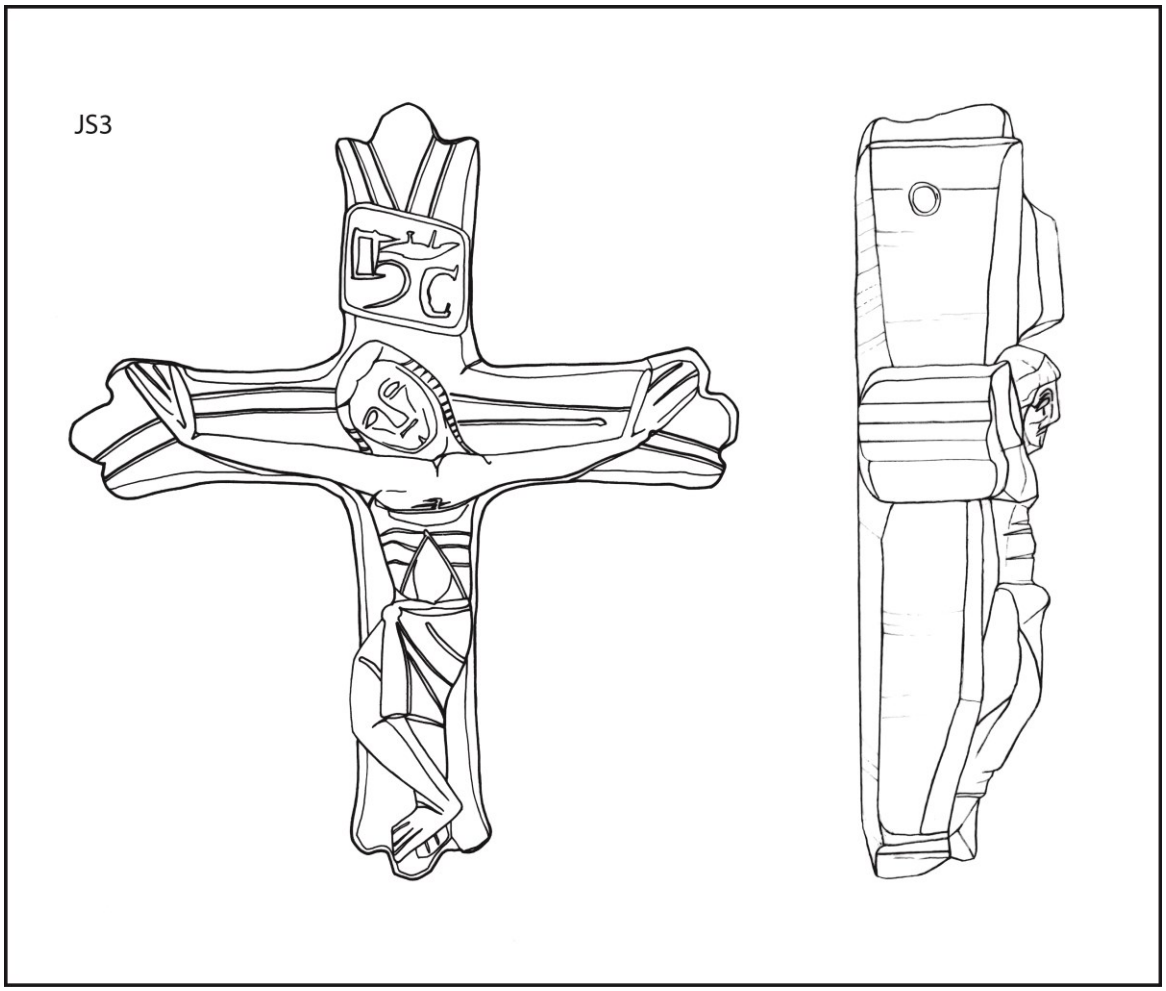
L. 85 mm W. 78 mm Th. 22 mm, CAT G 002 Phase 5

St 21 Neolithic arrowhead. Small trapezoidal flint fragment, broken at both ends, with a lentoid section. The object is made from finely-worked pale brown/grey flint, possibly retouched down one edge, and represents slightly less than half a leaf-shaped arrowhead.

L. 16 mm W. 18 mm Th. 2 mm, CAT G 036 Phase 3

THE JET CRUCIFIX *by* JOHN CHERRY

JS 3 Crucifix carved from a single piece of jet (Illus. 29a-b). The cross has trefoil ends and the head, arms and body of Christ occupy the middle, side and lower arms while the upper part of the cross has the titulus on which the letters IHC are engraved in Lombardic script. The back is plain and highly-polished. The crucifix was suspended from a small hole, about 1 mm in diameter, which had been drilled from both sides of the upper arm of the cross. Very similar holes are found drilled through the top of seals. It may have been worn from a chain around the neck.
H. 38 mm W. 34 mm Th. 10 mm, CAT G Phase unstratified



Illus. 29a. Jet crucifix JS3

Illus. 29b. Jet crucifix JS3

The body is carved with a certain stiffness. Except for Christ's knee, the body does not project outside the cross. Christ has his head to the left; the hair is bound with a cloth. His arms are stiff, the hands are raised, the legs are pushed out to the left, and the feet are set right above left.

It is difficult to date carving in jet, since the nature of the fossil stone leads to a rather

simple style. The general disposition of the body may be compared with the crucifixions on the Lindsey Psalter dated to around 1220 (Morgan 1982, 94 and cat. no. 47), and on the Amesbury Psalter dated to 1250-80 (Morgan 1982, 59 and cat. no. 101). The latter also provides a parallel for the rhomboid shape of the titulus. On this, IHC is the abbreviation for *IHC Nazarenus Rex Iudeorum*. The Carlisle crucifix probably dates from the mid thirteenth century.

Sculptural comparisons in other media include the crucifix with foliate ends to the cross on the tomb of Bishop Peter of Aigueblanche or Aquablanca (died 27 November 1268) in Hereford Cathedral, which was made around 1260 (Watkins 1930, 72, pl. 51).

The closest comparison is with a jet crucifix found at St. John's, Coventry (Cherry forthcoming). This is 44 mm wide by 30 mm high, with a maximum thickness of some 12 mm, and has a cross with trefoil ends. On the front Christ's body has a head inclined to the left, arms outstretched, and hands, with fingers indicated, slightly raised against the trefoil ends of the cross. The head is carved with rudimentary facial features and appears to have a crown indicated on the head. The cross and figure beneath the head have been broken off. Above the head is the titulus (or label) placed diagonally from left to right, and the letters engraved here appear to read IHC. There is a hole (2 mm wide) which has been drilled for suspension through the upper part of the cross.

A jet crucifix was found in the nineteenth century in a stone coffin at Old Malton, Yorkshire, with a chalice and paten of pewter, but there is no record of its size or style of carving (Hodgson 1902, 115). It suggests that the Carlisle example may have come from a burial.

Two other finds show the use of jet for larger crosses or crucifixes. Two jet pieces, forming part of a cross to which a crucifix of unknown material was attached, were found in a a pit on the site of John de Tytinge's house during the Brooks excavations, Winchester in 1988 (Morris et al. 1988). From the evidence of the socket holes, the larger of the two formed the crosspiece, which measured 130 mm x 30 mm x 17 mm. A torso of a jet crucifix from the Thames foreshore at Dowgate was acquired by the Museum of London (reg. no. 131/1). This measured 90 mm from the head to the broken legs and is much larger than either the Carlisle or Coventry crucifix; the socket holes in the shoulders suggest that the arms would have been separate pieces of jet. The head of the London figure has been obliterated and the best preserved detail is on the loincloth, knotted on both sides, with finely carved folds. Like the Carlisle figure, the knees are bent to the left. It probably dates to the thirteenth century, perhaps the first half.

Small silver crucifixes are also known. One was found at the church of St. Peter, Barton-on-Humber, in burial 449 (Cherry 2011, 632-4) and others have been reported to the Portable Antiquities Service such as those found at Nettlestead, Suffolk, or Spurstow, Cheshire (Treasure Annual Report 2002, nos. 146, 147) or one from Lancashire (Portable Antiquities and Treasure Annual Report 2007, no. 317).These may have been worn from a simple cord around the neck or on a rosary.

In addition to the Old Malton, stone coffin find, four medieval burials are known with simple jet crosses without the figure of Christ (Gilchrist and Sloane 2005, 88). At Guisborough Priory, Yorkshire, a cross was placed on the breast of an infant, buried between 1120 and *c.*1200, in the nave of the Priory church (Heslop 1995, 93-4). At St James's Priory, Bristol, a man some 30-40 years old was buried in the eastern cemetery wearing a pendant of jet around his neck (Jackson 2006, 142). Here the jet was re-used from a larger object, originally decorated with ring and dot motifs, and a crude Maltese cross had been engraved centrally. In the re-use of this pendant, the top had been cut to accommodate a suspension cord, rather than being drilled. Perhaps only those working in jet workshops attempted drilling. A third was found near the mouth of a child in the church of the Cluniac Priory at Pontefract (Bellamy 1965, 93). The final example was found in a fourteenth- or fifteenth-century grave outside Winchester Cathedral (Hinton 1990, 645-6). None of these examples had crucifix figures, but they certainly indicate that in the medieval period jet had funereal associations, long before the Victorian period. The Carlisle crucifix, which may well come from a burial, fits into this picture.

Jet was found in England near Whitby, and was often obtained from the beach or from surface workings on the cliffs. It was exploited in Roman, Saxon and the medieval periods to make a variety of small objects (Allason-Jones 1996; Mann 1982). A Roman jet-working site was found at York in the nineteenth century when excavating the foundations for the railway station (RCHM 1962, 141-4). Britain was praised as the chief source of jet by Bede and the thirteenth-century writer, Bartholomew the Englishman. The nature of jet and other black materials used in Scotland in the Viking period has been discussed by Hunter (Hunter 2008). The earliest reference to an English jet worker, possibly of Whitby, is in 1394 when Whitby Abbey paid Robert Carr for making jet rings. Paternosters and rosaries are often made of jet or amber beads, one paternoster of jet being owned by Humphrey de Bohun in 1322.

Jet was used in the medieval period for a variety of religious objects such as croziers, seals, pendant crosses, crucifixes and beads. Croziers are uncommon. One with simple leaf motifs was found in 1829 in a grave at Chichester Cathedral, dating to the last quarter of the

twelfth century (Zarnecki 1984, 259). No jet seals are known of monastic or other ecclesiastical officials. However, personalised seals occasionally occur in jet, such as that of Osbert de Hilton found near Whitby Abbey, and of William de Wald found near Shipton, Yorkshire and reported in the Gentleman's Magazine for 1857 (p. 714). A jet seal with the inscription S Ricardi Regis is recorded. The example is the jet equestrian seal of William Fitzhamon (Cherry 1980, 31-3). The most recent find is that of Richard Dovedal in Gloucester. These are all personal seals, but the most frequent type is that bearing simple, banal religious inscriptions such as AVE MARIA GRACIA PLENA (Hail Mary, full of grace). There are four jet seals in the British Museum, all with religious inscriptions (Tonnochy 1952, cat. 708, 746, 911, 921). It is noticeable that many jet seals have been found in the north of England, and that their owners bear northern names. The Carlisle find fits this pattern.

Crosses and beads, possibly from rosaries, are known in jet; there is a cross in Whitby Museum, whilst beads are known from Fast Abbey, Berwickshire. It is possible that many jet objects may have been made for the monks at Whitby, or sold at the Abbey.

The jet crucifix from Carlisle was probably placed in a grave originally, but when it was deposited must remain uncertain. It was probably carved in the mid-thirteenth century, and the use of jet for such an object indicates that the material had some protective or amuletic associations.

ITEMS OF BONE

Bn 3 Terminal. Circular terminal with an upper surface decorated with a pattern of concentric grooves and ridged with a central boss. The interior has a clockwise screw-thread ringed by an angled rim with a deeply-turned neck.
Dia. 17 mm Th. 9 mm, CAT G 134 Phase 4

Bn 1 Button. Round button with five holes through it, one central, and the remaining four as the points of the compass. One side is flat. The other is slightly concave and has a bevelled edge.
Dia. 7 mm Th. 3 mm, CAT G 036 Phase 3

Bn 4 Round, flat button with a central circular hole. There are striations on both sides, and the upper surface has a bevelled edge.
Dia. 17 mm Th. 1 mm, CAT G 001 Phase 6/Unstratified

Bn 5 Point. Incomplete bone point, tapering slightly from the broken end. The stem of the object has been cut at an oblique angle to form the point.
L. 36 mm Dia. 3 mm, CAT G 170 Phase 3

Bn 8 Token or counter. Circular turned token. The upper surface is flat with a central circular concave area which has a lightly scratched pattern of concentric circles within it, and a small dimple in the middle. The reverse is flat.
Dia. 20 mm Th. 4 mm, G 281 Phase 1

Bn 9 Possible pin beater. Long tapering object with a circular section, broken at both ends.
L. 97 mm Dia. 4 mm, CAT G 285 Phase 1e

THE ROMAN POTTERY

This section aims to draw attention to the essential characteristics of the Roman ceramic assemblage. It is not a full pottery report but is based on a detailed context-by-context quantification prepared by Louise Hird in consultation with Kay Hartley, Brenda Dickinson and the late Vivien Swan, and which is available for consultation in the site archive. The pottery was quantified by sherd count and by weight.

The fabric classification is that used by Hird elsewhere in Carlisle (Hird 2000; 2010; forthcoming). Fabrics present included local oxidised and grey wares as well as Black Burnished Ware 1, Black Burnished Ware 2, Severn Valley ware, Nene Valley colour-coated wares, Dales wares, Oxford colour-coated wares, Grey Crambeck wares, Calcite-gritted wares, Rhenish wares including some from Cologne, possible Mayen ware, Lyon ware, and North African forms. Gallo-Belgic, Mancetter-Hartshill, and locally made mortaria were recovered as well as North and South Spanish amphorae, Central and East Gaulish samian wares. No attempt is made here to attempt a detailed assessment of the Roman pottery from the Cathedral largely because much is unstratified in later contexts, but the reader is referred to the following items about Roman pottery in Carlisle in the bibliography, Taylor 1990; 1991; Hird 2000; 2010; forthcoming; Swan et al. 2009).

Table 6. Distribution of Roman pottery at the Cathedral by phase

Phase	Numbers Roman sherds	%age of Roman sherds
6	1206	19.41
5	570	9.17
4	382	6.14
3	827	13.3
2	71	1.14
1	3157	50.82
Totals	6213	99.98

Over 6,200 sherds of Roman pottery were recovered of which approximately 50% was stratified in Roman deposits (phase 1: Table 5). Some 48% of the pottery was found in phases 3-6. If the phase 3 soils, the ‘dark earth’, has been imported to the site, as suggested in the print report, there must be doubt as to the precise origin of the artefacts and pottery contained within it, although it is unlikely to have come from outside the city centre. The pottery is undoubtedly of interest to Carlisle generally, as is apparent in the presence in phase

1 deposits of cooking vessels with strong North African affinities dating to the early third century (Swan 1992, 23-4; 2008, 69-71; Swan et al. 2009, 604). Otherwise, the range of wares present is very similar to those recovered from many other northern sites. The exception to this is the four sherds tentatively identified as a late Roman import, Mayen ware (*Eifelkeramik*), although this has yet to be confirmed by thin-section analysis.

The relative paucity of Flavian to early Antonine types, and the absence of any South Gaulish samian, is probably due to the fact that the excavation did not extend into those deposits. The pottery types in phase 1 indicate activity extending from the late Antonine period onwards, but for the purpose of this report the later sub-phases greatest interest attaches to 'Calcite-gritted (Huntcliff) ware' (Fabric 22) and 'Grey-' and 'Crambeck Parchment wares' (Fabric 27), because they are classic late Roman types.

Calcite-gritted or Huntcliff Ware is grey to black, handmade but with a wheel-thrown rim, soapy textured, and with a filler of calcite, the grits of which are often leached out leaving a pitted surface. The commonest form is the lid-seated jar or cooking pot. No kiln sites are known, but it is thought that they could have been made in several places in the Derwent valley, East Yorkshire, including Norton and Knapton (Swan 1984, 109-111).

Crambeck Ware by contrast, was entirely wheel-thrown, hard, pale- to lead-grey surfaces and with some sand or crushed flint as a filler, and was made from the local Oxford clays. Red Crambeck wares were made from local boulder clays. Both clays outcrop close to Crambeck. Forms include table wares including bowls, dishes, jars, beakers, lids, flagons and mortaria (Evans 1989). Table 6 sets out the quantities of the two types present in each sub-phase, together with coins. The predominant type at the Cathedral was grey Crambeck ware, but a small number of Parchment Crambeck wares were also noted as residual components of later phases.

Table 7. Late Roman coins and pottery in phase 1

Phase	*Contexts*	*Emperor*	*Date of coin and wear*	*Nos coins*	*4th century pottery*	*Nos sherds*
1e	284	Julia Domna	201	1		
	285				Calcite-gritted ware	1
1f	82	Severus Alexander	228	1	Crambeck ware	2
	86				Calcite-gritted ware	10
					Crambeck ware	16
	107	Claudius II	268-70 MW	1		
	122	Claudius II	268-70	2	Calcite-gritted ware	27
					Crambeck ware	4
	197				Calcite-gritted ware	1
	263	Claudius II	268-70 MW			
	265	Victorinus	269-71 LW			
	107, 109 263, 265	Tetricus I	271-3	5		
	263	Tetricus II	271-3	1		
	193	Maximian	303			
	122	Constantine I	323-4 LW			
	265	Constantine I	313			
	107	Constantine II	330-5			
	193	Constantius II	352-4 MW			
1h	84	Carausius	287-93 LW		Crambeck ware	2
1i	85	Claudius II	268-70			
		Tetricus I	271-3			
	89				Crambeck ware	1
	213	Constantine II	330-5		Calcite-gritted ware	1
					Crambeck ware	4

Calcite-gritted wares have long been regarded as spanning the period AD 360-400 (Gillam 1957, 17-18). Despite recent work at Birdoswald suggesting that the commencement date for the industry may have begun earlier (Hird 1997, 247-8), there is no evidence so far for large-scale production before 360. At York, which must have been one of the key local markets, detailed analysis of deposits at Wellington Row, the Minster and other sites in East Yorkshire shows that Huntcliff ware was present from the 360s but substantial quantities associated with Theodosian coins accumulated after 388, suggesting a late boom in production. Furthermore, careful analysis of fabrics and forms also points to variations in the fabric, some of which seem likely to have been introduced in the fifth century (Whyman 2001).

Crambeck grey ware began production in the very late third century, perhaps around AD 280, but it seems to have been very small-scale and localized in its distribution until the mid-fourth century, by which time it had become one of the principal suppliers to York. It went on to occupy a substantial place in the northern pottery markets, exporting its products all over the north. Thus, the expansion of the Crambeck ware and Calcite-gritted ware industries were pretty well contemporaneous, a point that opens up the possibility that military contracts may have had a critical role to play (Evans 1989; Monaghan 1997).

There are also some nineteen miscellaneous sherds in fabrics that could also be relevant, including BBI (Gillam 1957, 329), Dales wares, Mayen ware, Nene Valley, Oxford colour coats and Severn Valley ware. In most of these cases the date ranges span the third and fourth centuries, but their terminal dates are not known.

The implications of the pottery for understanding the late- to sub-Roman chronology at the Cathedral is difficult to assess, given the very small quantities of material present. Even if all the Huntcliff, Crambeck and the miscellaneous late Roman sherds were deposited in the fourth century, the overall number (92) still only represents 2.9% of the pottery found in phase 1.

THE MEDIEVAL POTTERY *by* C. M. BROOKS

This section aims to draw attention to the characteristics of the medieval ceramic assemblage. It is not a full pottery report but it is based on a detailed context-by-context quantification prepared by the writer, and which is available for consultation in the site archive. The pottery was quantified context-by-context basis by sherd count and by weight.

No attempt is made here to attempt a detailed assessment of the medieval pottery from the Cathedral largely because it is all unstratified in later contexts, but the reader is referred to the following items in the bibliography - McCarthy and Brooks, 1992; Brooks, 2000, Hird and Brooks 2010.

Medieval pottery occurs throughout the stratigraphic sequence as can be seen in Table 8, a feature thought to be largely due to repeated grave digging, as well as demolition and construction work in the seventeenth and nineteenth centuries. Late medieval and partially reduced grey wares, as well as eighteenth and nineteenth century wares are found in contexts assigned to phases 1, 3 and 4, as well as cross-joins between sherds in phases 3, 5 and 6.

Apart from a single sherd of Torksey-type ware, the earliest pottery recovered comprised red gritty wares assigned to the twelfth century. However, these formed a very small proportion of the total (<4%), the bulk of the material being fourteenth to fifteenth century or sixteenth century in date (c.72%) and including late-medieval and partially reduced grey wares.

The almost total absence of pre-twelfth century wares confirms the picture found repeatedly throughout Carlisle that local pottery production and use commenced in the twelfth century. There were no sherds representing particularly fine or unusual vessels and no foreign imports. Otherwise, it is difficult to draw any more detailed conclusions about the medieval pottery. It should be recalled that the excavation was located inside the north aisle of the medieval priory church and that this is not a location that would normally lend itself to the deposition of detritus such as broken pottery vessels.

Table 8. Numbers of medieval pottery sherds by phase

Phase	*Numbers medieval sherds*	*%age of medieval Sherds*
Uncertain	5	1.5
6	98	30.6
5	135	42.3
4	22	7.0
3	41	13.0
2	-	-
1	18	5.6
Totals	319	

THE ROMAN AND MEDIEVAL GLASS

The glass (Table 9) has not been examined by specialists and, as with the Roman pottery, no attempt is made here to attempt a detailed assessment of the Roman pottery largely because just under half is residual in later contexts. Nearly 40% of the glass found in phase 1 occurred in three contexts (122, 213, 285), of which one (285), also yielded over 800 sherds of pottery including a number of African forms. Vessel types represented include colourless glass jars, beakers and bottles.

Table 9. Overall quantities of glass

Item	*Number fragments*	*Comments*
objects	4	bead, counters, rod
decorated window glass	9	medieval stained glass; red lines on all fragments but no recognizable features
plain window glass	39	
vessel glass	101	Roman

Table 10 below shows the distribution of vessel glass between phases. Given that most, if not all of the vessel glass is Roman in date, it shows a considerable degree of mixing and stratigraphic disturbance, a feature also noted with the Roman and medieval pottery (Tables 6-8 above).

Table 10. Quantities of Roman vessel glass by phase

Phase	*Numbers vessel fragments*
6	12
5	25
4	3
3	7
2	2
1	52
Totals	101

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