YORK ARCHAEOLOGICAL TRUST

ST HELEN'S CHURCH SKIPWITH NORTH YORKSHIRE

Assessment Report on an Archaeological Investigation

by Toby Kendall

Part 2: Specialist Reports and Appendices

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ASSESSMENT REPORT ON AN ARCHAEOLOGICAL INVESTIGATION

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PART 2: SPECIALIST REPORTS

Cover Illustration:

Fragment of alabaster from a tomb or shrine

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7. ARCHITECTURAL FRAGMENTS

By Jane McComish

Twenty architectural fragments (AFs) were recovered from the site, most were insufficiently diagnostic to obtain a date.

The bulk of the fragments (AFs 2-5, 8 and 13-17) consisted of roughly squared rubble stone which was presumably from wall facing. Similar blocks were present in Contexts 1005, 6017, 9064, 17006, 23009, 28001 and 28013 but following discussions with the project manager it was decided not to record these as individual architectural fragments. The geology of these wall facing stones was varied consisting of sandstone, Magnesian limestone and Oolitic limestone.

A couple of the fragments had no worked surfaces at all and were probably wall core (AFs 6-7). These fragments could be of any date within the medieval period. A single fragment of Oolitic limestone (AF18) with an eroded upper surface may have been from a stone floor. Similar, smaller, fragments were present within the CBM collection. This implies the church had a stone floor at some stage. Again this fragment could be of any date within the medieval period.

There were two fragments: AF10, Magnesian limestone, and AF11, Oolitic limestone which probably originated from ashlar blocks, and three fragments of chamfered blocks (AF1, 9 and 19 all identified as limestone). Both ashlar masonry and chamfered blocks were in use from the Norman Conquest until the end of the medieval period, so are not always closely datable. In the case of AF9-10 and AF19 the presence of claw tooling suggests a date after 1200. It is possible that AF19 was part of a string course.

A single moulded fragment was recovered (AF20, limestone), but this was too small to suggest its original function within the church or the church fittings. There was also a curious, almost triangular block of Oolitic limestone (AF12) with deep striations on one surface. The precise function of this block is unknown.

Table 3 Summary of AFs (W=width, L=length & T=thickness)

AF	MATERIAL	CONTEXT	DATE	DETAILS	W	T	H
AF 1	Limestone	24004	Medieval	Tiny chip form a chamfered block, part of three faces surviving (f1-3) remaining faces broken off. Striated tooling on all three faces with striations 7mm wide. Too small a fragment to assess original function.	250	820	79
AF 2	Sandstone	10029	Medieval?	Three faces surviving, (F1-F3), forming a corner of a block. No tooling. Coarse grained sandstone Possibly wall facing stone	0	60	60
AF 3	Sandstone	10029	Medieval, 1200+?	Three faces surviving (F1-3) forming the corner of a block. Mortar on all three surfaces. Striated tooling, with striations 8mm wide and 1mm deep on all faces. Very abraded. Wall facing	60	60	130
AF 4	Sandstone	10022	Medieval?	Three faces surviving (F1-3) forming the corner of a block. Mortar adhering to one face. No tooling. Wall facing stone	90	65	100
AF 5	Sandstone	10022	Medieval?	One face surviving (F1). Surviving face 70x80mm in area. No tooling. Possibly wall facing			
AF 6	Oolitic Limestone	10022	Medieval	No worked faces. No tooling. Wall core	220	180	100
AF 7	Magnesian Limestone	10022		No worked faces. No tooling. Wall core	180	120	240
AF 8	Magnesian Limestone	7056	Medieval	One worked face (f1) but very eroded. No tooling. Possibly wall facing	180	30	180
AF 9	Limestone	7056	Medieval, 1200+	Three worked faces (F1-3) of which F3 was the chamfer. All three faces with claw tooling with 3.5 teeth per 10mm. Other faces broken off. Chamfered block	160	120	120
AF 10	Magnesian Limestone	17002	Medieval, 1200+	Tiny fragment with two worked faces (F1-2) at 90 degrees to one another. F1 eroded smooth. F2 with claw tooling, two teeth per 10mm. Possibly ashlar	31	42	12

AF 11	Oolitic Limestone	17002	Medieval	Small fragment with three worked faces (F1-3) forming the corner of a squared block. F1 eroded smooth, F2 with drag tooling, F3 with striated tooling in parallel lines, 0.5mm wide. Possibly ashlar	92	38	100
AF 12	Oolitic Limestone	17002	Medieval	In three fragments. An almost triangular block in cross section with 4 worked faces surviving (F1-4). F1-3 form the sides of the block and F4 the base or top. F1-3 have fine drag tooling lines, with F2-3 parallel to the base-line face and F4 diagonal to the base-line of the face. F4 covered with striated tooling in many directions, almost decorative in appearance. The function of this block is unknown.	63	170	130
AF 13	Magnesian Limestone	10029	Medieval	Roughly squared block with part of four worked faces surviving (F1-4). F4 (the top or base has three parallel tooling lines each 6x38mm in size, 4mm deep and spaced 10mm apart. As the surrounding surface was uneven it was impossible to take a rubbing of these marks. The other sides had no clear tooling lines and formed the sides of the block. This may represent a wall facing stone or even part of a foundation.	220	260	150
AF 14	Limestone	11050	Medieval	Roughly squared block with part of four worked faces surviving (F1-4) forming one end of the block. F1 was clearly an external face as it has eroded smooth. The other three faces were all originally within the thickness of the wall and are roughly dressed. Probably a wall facing stone.	210	130	140
AF 15	Magnesian limestone	0	Medieval	Two faces surviving (F1-2) at right angles to one another. No tooling. Possibly wall facing	115	93	187

AF 16	Magnesian limestone	0	medieval	Three faces surviving (F1-3) from a roughly squared block. Original external face was 100x60mm in size with very faint striated tooling lines (rubbing could not be obtained. F2 and F3 were the top and base of the block and were roughly dressed. Mortar adhering to F2. Possibly wall facing	100	160	133
AF 17	Oolitic Limestone	16020	Medieval	Small badly broken block roughly triangular in plan with two roughly dressed faces (F1-2) at right angles to one another. Possibly a wall facing stone.	180	260	85
AF 18	Oolitic Limestone	16020	Medieval	Roughly flat slab of stone. The upper surface has been totally worn smooth. Possibly a fragment of a stone floor slab.	80	43	150
AF 19	Limestone	16020	Medieval, 1200+	Badly broken block with part of three faces surviving (F1-3). F1 and F3 are chamfered surfaces; F2 is the frontal elevation of the block. Claw tooling on all faces with 4 teeth marks per 10mm. Possibly part of a string course.	90	140	146
AF 20	Limestone	16020	Medieval	Small badly broken block with three faces surviving (F1-F3). F1 and F3 represent the top and base of the fragment and F2 the elevation. F2 is moulded with a quirk and rebate. The fragment is too small to determine the origin of the block within a building design.	83	75	45

7.1 Conclusion

As the bulk of the collection consisted either of rubble stone or ashlar little further work is merited. It is recommended that AF12 and AF20 are seen by an architectural historian to clarify their function.

8. ALABASTER

By Jane McComish

There is an exceptionally interesting collection of alabaster fragments from the site (Sfs 38-41, 45-6 and 49). All are in a very poor state of preservation and have the consistency of damp sugar lumps. They are far too fragile to handle without conservation, and until conservation is complete they cannot be fully measured or recorded, as handling would cause irreparable damage. Despite the problems with the stability of the fragments, a preliminary examination (handling the fragments as little as possible) did reveal some interesting details. It is recommended that these fragments are fully conserved and that advice is sought from relevant art historians as to their interpretation. The find is clearly worthy of further research and publication.

Dr. P. Lankester of the Royal Armouries Museum, Leeds (who has specialist knowledge of medieval alabasters) viewed the fragments while visiting the YAT conservation laboratories. Following on from this Dr Lankester arranged for a visit to the Yorkshire Museum to view the collection of alabaster fragments/panels held there. The visit was made possible by Andrew Morrison of the Yorkshire Museum and was attended by Dr. Lankester, Dr R. Marks of the Centre of Medieval Studies (also a specialist in the study of medieval alabasters), J. McComish and J. Jones of YAT. The staff at YAT are very grateful to all the other parties involved for their time and enthusiasm concerning the fragments found at Skipwith; their comments are given in the text below.

8.1 Introduction to the use of alabaster in the medieval period

Alabaster was used in a variety of ways during the medieval period including for tombs, reredoses, devotional panels, figures of individual saints and for altarpieces. As the fragments from Skipwith are interpreted as being from an altarpiece (see Section 11.3 below) only this aspect of alabaster production is considered here.

Large numbers of English medieval altarpieces were produced, both for the home market and for a thriving export trade, from the mid 14th to mid 16th centuries (for a full account see Cheetham 1984, from which much of the following derives).

The alabaster seems to have been quarried in a relatively small area of South Derbyshire and parts of Staffordshire. There are documentary references to alabaster from Tutbury in 1362 and to a quarry at Chellaston in 1414, but there may have been other quarries that have left no documentary trace. Documentary sources indicate alabaster carving was centred on Nottingham, but there were other carving centres including York. In the case of York, eight 'alabasterers' and two 'marblers' (who may have worked alabaster) occur in the Register of Freemen of the City from 1456 to 1525. It is unclear if they were using a local source of alabaster (which is present at both Ledsham and Buttercrambe) or whether they were importing the alabaster from the midlands. It is possible that the craftsmen in York were carving both tombs and altar panels for churches in the vicinity. There are a number of alabaster tombs present in the York area (e.g. Harewood, Methley and Sheriff Hutton), and a series of unusually large panels from an altarpiece depicting the life of St William of York were found in York. There are also a number of alabaster figures and panels from the village of Thorganby (c. 3km from Skipwith) which were found outside St Helen's church in the 1930s and are now stored at The Yorkshire Museum, York.

Most of the surviving examples of altarpieces (retables) are of 15-16th date, and they were constructed as triptychs (a triptych being a central panel with a folding panel to either side) designed to stand on the altar. Altarpieces often had a thin rectangular panel at either side depicting a saint, between these were five broader rectangular panels showing narrative scenes. The central panel was often slightly taller than the others to balance the flanking saint panels. All of the panels were topped with architectural canopies. The alabaster panels were set into a wooden frame using copper alloy wire (latten). The wires were set into small holes drilled on the back of the panels and then plugged with lead.

The altarpieces were highly colourful being both painted and gilded. In the case of human figures the skin was usually left unpainted but the hair and beards were picked out with gilding or painted brown or black, and the eyes were painted on (ibid., 27). Robes and armour were often unpainted though the edges of clothes could be gilded and interior folds of drapery could be picked out with colour. Most objects depicted (such as weapons, palms and head coverings) were painted as were the background areas. The predominant colours used are red, green, black and brown with gold leaf (Cheetham 2003, 4).

From the end of 14th century onwards the rectangular panels were usually 40 x 26cm in size (ibid., 8) and from 1450-1540 the panels were often filled by groups of figures.

The two most popular themes for altarpieces were the Passion of Christ and Joys of the Virgin. The precise narrative scenes shown vary from altarpiece to altarpiece. In the case of Passion of Christ altarpieces, they can have any combination of the Last Supper, the Betrayal, Christ Bearing the Cross, the Flagellation, the Crucifixion, the Deposition of the Three Marys, the Resurrection, the Entombment and St Thomas touching Christ's wounds. In general the central panel will depict the Trinity. The Joys of the Virgin altarpieces generally consist of the Annunciation and the Adoration of the Magi in the two left hand panels, with the Trinity in the central panel and the Ascension and Assumption/Coronation of the Virgin in the panels to the right. Again there were variations such as panels depicting the Incarnation, the Death of the Virgin, and both the Nativity and Adoration of the Magi on a combined panel. In addition there were altarpieces that depicted the life of specific saints, such as the St William of York example mentioned above.

Most of the altarpieces were destroyed or sold for export at the time of the reformation. The iconoclasm was so severe that until the end of the 19th century any surviving alabaster images were thought to be of either Flemish or north Italian origin (Cheetham 2003, 5)

8.2 Description of the fragments from St. Helen's church

Sf38 consists of four fragments (A-D). The original design is unclear, though 38A may represent the border of a panel.

Sf39A-O is a series of fifteen badly preserved fragments, many of which represent architectural detailing. One of these fragments seems to represent a small head, this is facing forwards, with flowing hair and does not seem to be bearded or wearing any kind of hat, crown or helmet. The head seems slightly smaller than other heads present in the collection.

Sf40A is the part of an architectural canopy with two finial bases and traces of a mouchette. The finial caps are a slightly brown colour and it is unclear at this stage if this represents a base for gilding or is simply accumulated dirt. The

underside of the canopy is chamfered and painted red. Sf40B - D are also clearly architectural detailing, but are very badly preserved and the original design is unclear.

SF41 consists of four male heads, in two rows, all looking upwards to the left. Each head has a beard and medium length hair falling in waves to either side of the face, and there is a hint of gilding around the neck of at least one head, suggesting that the collars of their robes were originally gilded. The face details are almost entirely eroded away. To the immediate left of the lower two male heads is a raised area possibly painted red or brown. The area between the heads is currently obscured with earth.

SF45A is an architectural panel with two mouchettes and what may be the top of two finials. A lead plug and attachment wire adhere to the back of this fragment. This fragment may originally have been identical to SF40A. SF45C, D and R are also clearly architectural details, but these are too badly preserved to interpret clearly.

SF46 consists of 17 fragments again many of which may be architectural detailing. SF46A is of particular interest. It seems to consist of the edge of a panel. There is an object resembling an open book resting on a stand, covered with a draped cloth. The open book is placed on a diagonal line to the edge of the panel. The stand is painted red and gilded, but no paint survives on the drapery or book.

8.3 Interpretation and discussion of the fragments from St. Helen's church

As stated above there were many uses for carved alabaster, including devotional panels for use in private homes, tombs and altarpieces. Given that these fragments were recovered from a church they are most likely to have originated from a tomb or an altarpiece. The presence of latten wire and lead plugs on some of the fragments clearly shows they were from altarpiece panels.

Although it is impossible to determine the design of most of the fragments, two are of critical importance to interpreting this collection; these are Sf46A and Sf41. A search was made through Cheetham's catalogues of medieval alabaster (Cheetham 1984 and 2003) to see if any matches could be found.

As stated above Sf46A seems to show an open book resting on a stand covered with a cloth, there is a lily in front of the bookstand. The best matches for Sf46A were a number of panels depicting the Annunciation. Although no two panels of this type are exactly the same, they generally follow the same basic layout with the angel Gabriel in the top left corner, looking down to the right. The Virgin Mary is shown in the centre of the panel facing upwards to the left towards Gabriel. To the left of Mary, immediately adjacent to the right hand side of the panel is a book on a lectern, table, stand or even small bookcase. The lectern is usually, though not always, shown draped with a cloth. The book has a very distinctly diagonal line in relation to the edge of the panel. The bottom left hand portion of the panel varies in design often being either a lily in a pot (Cheetham 2003, figs 15-17). A variation on this theme has God in the top left corner with Gabriel below and to the left of the lily (Cheetham 1984, 169-71).

It must be noted that a panel showing the Incarnation and the Parliament of Heaven also depicts a book on a stand covered with drapery on the right hand side of the panel (Cheetham 1984, 175). Since, however there are 101 extant examples of Annunciation panels, but only a single example of the Incarnation and Parliament of heaven surviving (Cheetham 2003, 55) is it statistically far more likely that the Skipwith fragment is from an Annunciation scene.

It must be noted that the position of the lily in front of the bookstand on the Skipwith fragment is highly unusual; normally the lily is to one side of the bookstand (Dr. Lankester and Dr. Marks, pers. comm.).

Sf41 consists of a group of male heads. Groups of male heads are seen in many different panel types including the Death of the Virgin, the Betrayal of Christ, the Crucifixion, the Ascension and the Harrowing of Hell. There are however several details of Sf41 that help with its identification, the first is that the figures are looking upwards to the left, the second is that they lack headwear (hats, crowns or helmets). In addition the presence of the raised area to the left of the heads is significant, as is the fact that the figures are in two distinct rows, one behind the other.

These design features do not match Death of the Virgin panels where groups of bare-headed men are shown in the top left of the panel looking down and to the

right at the dying Virgin (Cheetham 1984, 198). They do not match either the groups of male figures in panels showing the Betrayal of Christ which tend to be arranged rather chaotically, facing either forwards or looking slightly downwards to the left. In addition, in these panels the men are shown as a mixture of bare-headed disciples and helmeted soldiers (Cheetham 1984, 225-30). Crucifixion panels also sometimes have groups of men at the right hand side of the panel looking forwards or downwards, but they are helmeted soldiers (ibid., 255, 257). In scenes showing the Harrowing of Hell there are groups of bare-headed men who look upwards to the left to a figure of Christ who is immediately to their left and leading them from the mouth of hell. Significantly there is no raised area to the immediate left of the group of male figures in Harrowing of Hell scenes as there is in the Skipwith material.

The best match for Sf41 is clearly to panels depicting the Ascension (Cheetham 1984, 292-4). In these panels bare-headed disciples and the Virgin are placed below and to either side of a rock/mound in the centre of the panel, from which Christ is ascending into heaven. The disciples to the right of the rock/mound are shown in distinct rows and look upwards to the left. The raised area on the Skipwith example could be the rock from which Christ is ascending.

The identification of the tiny fragments as part of an Annunciation scene and Ascension scene was confirmed by both Dr. Lankester and Dr. Marks. This suggests that the fragments must have originated from an altarpiece showing the Joys of the Virgin. Panels of this type date from the late15th or early 16th century.

There are examples of small figures facing forward at the edges of panels such as from Compiègne in France, (Cheetham 2003, 186). It is possible that the smaller head (SF39) may be an example of this type.

Additional comments

Dr. Marks commented that a number of other alabaster fragments have been found buried in or adjacent to parish churches across the country, such as at East Rudham, Norfolk, Blunham in Bedfordshire, Preston in the East Riding of Yorkshire and a collection found during 19th century restorations at Whittlesford, Cambridgeshire. The presence of such buried fragments probably relates to the Reformation. It is known from documentary sources that many church fixtures were sold or destroyed, but it also seems possible that in some cases that there

were deliberate attempts to hide church fixtures in the hopes of recovery at a later date. This process may have included the breaking up of altarpieces so that some portions could be saved, while other parts were discarded. The fragments at Skipwith were very small so would imply the altar panels had been broken up.

Dr. Marks commented that one of the canopy fragments found was at a slightly larger scale to the other canopy fragments, and had more depth of relief. There are two possible explanations for this, the larger canopy might be from the central panel of an altarpiece as this was often slightly bigger, however it is also possible that there are fragments from two separate altarpieces of differing sizes present. It is of interest that Skipwith church has aisles to either side or the nave, which means there was space for three altars (one in the chancel and one in each aisle). It is therefore possible that fragments of two altarpieces are present.

Dr. Marks and Dr. Lankester also contributed the following comments concerning the Skipwith fragments. The ownership of the church is of interest; in 1280 a prebend was established at Howden Church, which was endowed with Skipwith church. Prebendary churches often had richer fixtures and fittings, which may explain the presence of an elaborate altarpiece. It was also noted that the Skipwith fragments were unusually heavily gilded. Some of the fragments from Skipwith have naturally occurring pink veins within the stone. This unfortunately is of no help in dating the fragments as veined stone was at use throughout the medieval period.

It is of interest to note that a number of alabaster fragments were also found at the church of St Helen's, Thorganby, a village c. 3km from Skipwith (P.J. Lankester pers. comm.). The Thorganby fragments consist of three figures, which were possibly free standing, an altarpiece panel of similar size to those from Skipwith, and a larger altar panel depicting the Trinity. Clearly such altarpieces were popular in the area.

8.4 Recommendations

The presence of these fragments is significant as they add to the corpus of material known both from England and the Yorkshire region. It is possible they may even be products of a school of York alabaster carvers rather than being from Nottingham. It is also relatively rare to recover alabaster fragments from archaeological excavations, so these pieces offer a chance to determine both

how long-term burial affects alabaster and to assess the best methods of conservation possible.

The fragments clearly merit publication. With this in mind further research from an art historical point of view by an appropriate specialist will be necessary. This research should take place after full conservation of the fragments.

9. CERAMIC BUILDING MATERIALS

By Jane McComish

A total of 205.492kg of ceramic building material (CBM) was analysed from the site. The CBM was recorded following standard YAT procedures, which included developing a fabric series for the site.

9.1 Fabrics

Fabric	*Weight*	*Weight as a % of total*	*Forms present*
Sk0	1299	0.63	Rbrick, plain, brick
Sk1	43785	21.30	Brick, medieval and post-medieval
Sk2	26485	12.89	Brick , medieval and post-medieval
Sk3	4515	2.20	Rbrick
Sk4	16340	7.95	Brick, medieval and post-medieval
Sk5	22625	11.01	Brick, medieval and post-medieval
Sk6	42191	20.53	Brick, medieval and post-medieval
Sk7	2905	1.43	Brick, post-medieval
Sk8	2830	1.37	Brick, medieval and post-medieval
Sk9	225	0.11	Floor
Sk10	630	0.31	Floor
Sk11	3500	1.70	Plain, peg, ridge
Sk12	3500	1.70	Plain
Sk13	7760	3.78	Plain, peg, ridge
Sk14	2575	1.25	Plain
Sk15	2725	1.33	Modern tile
Sk16	250	0.12	Floor
Sk17	1327	0.65	Plain, ridge
Sk18	205	0.10	Plain
Sk19	975	0.47	Plain
Sk20	5420	2.64	Brick, medieval and post-medieval
Sk21	10	0.01	Rbrick
Sk22	1135	0.55	Peg, plain
Sk23	850	0.41	Tegula
Sk24	150	0.07	
SO	10745	5.23	Slate, stone floor, stone tile?
PO	535	0.26	Pan

Table 4 Summary of CBM fabrics present

Twenty-six fabrics were identified which are described in Table 4 above. A small number of Roman fabrics were recovered (Sk3, Sk21 and Sk23). Fabrics Sk11-15, Sk17-19, Sk22 and Sk24 were medieval roof tile fabrics of 13-16th century date, while fabrics Sk9-10 and Sk16 were medieval floor tile of 14-16th century date. Fabrics Sk1-2, Sk4-8 and Sk20 were brick fabrics. Of these Sk7 was only

seen on post-medieval bricks, while the remainder of the brick fabrics were in use during both the medieval and post-medieval periods. The 17th century or later pan tiles were all classed as PO (post-medieval) and their fabrics were not analysed in detail. In addition there were a number of stone and slate roofing and floor tiles classed as SO.

9.2 Forms

A small quantity of Roman material (2.64% of the CBM) was recovered which consisted mainly of brick (Rbrick in the tables) with a single fragment of tegula.

The bulk of the material present was of medieval date. The medieval roofing material was of 13-16th century date and consisted of plain, peg, nib tile and ridge tiles; all of which was typical in form and thickness. The peg holes were circular, diamond or square shaped. Relatively few features of interest were noted on the tiles; there was a single example with finger smoothing on the upper surface to create a decorative effect, and a single example with a glaze mark on the upper surface implying it had been fired alongside pottery. There were also a number of flat stone fragments which may have originated from stone roof tiles.

There were a small number of glazed floor tiles of 14-16th century date. These had either dark green glaze or a cream slip with clear glaze above. One of the tiles was triangular in shape and had been made by splitting a square tile in two. These imply that the church may have had a tile floor at some stage. In addition to the ceramic floor tiles there were also a number of flat stone fragments all with very heavily worn upper surfaces. The erosion seen on these fragments implied they had been used in a stone floor.

Medieval bricks of 14-16th century date made up the largest single category of CBM recovered. These bricks ranged in thickness from 28-50mm, in breadth from 107-122mm and in length from 235-252mm. They were mainly made in sanded moulds but some were slop moulded.

The post-medieval material on the site largely consisted of bricks of 16th -18th century date, which ranged from 51-79mm in thickness, 106-129mm in breadth and 220-237mm in length. Most of these bricks were slop moulded, but a few were made in sanded moulds. None of the bricks was unusual in any way. There were also a few pan tile fragments of 17th century or later date.

Modern material on the site consisted of roofing slate fragments and a number of tiles in fabric Sk15 which were used for roofing and as wall tiles.

Form	*Total weight*	*Weight as a % of total*
Medieval brick	98090	47.74
Post-medieval brick	65449	31.85
Floor	1105	0.54
Nib	150	0.07
Pan	535	0.26
Peg	2335	1.14
Plain	18833	9.16
Rbrick	4590	2.23
Ridge	460	0.22
Slate	60	0.03
Stone floor tile	7760	3.78
Stone roof tile?	2925	1.42
Tegula	850	0.41
Modern tiles	2350	1.15

Table 5 Summary of CBM forms present

9.3 Conclusion

The CBM recovered ranged in date from the Roman to modern periods. All of the material was typical in terms of form. The presence of Roman material clearly implies a Roman structure in the area. The medieval floor tiles and possible stone floor tiles may imply that the church had both a ceramic and a stone floor at some stage in its development. Many of the bricks originated from post-medieval flues on the site. In terms of forms the material does not merit any further research.

As the fabric series is based upon a single site it is impossible to know how these fabrics were used either chronologically or spatially within the Skipwith area. They will however form a basis for any further research into CBM in the vicinity. It is recommended that detailed fabric descriptions are prepared for the site, in order to complete the site archive. This task would take a maximum of a day. Writing a contribution for a publication on the site would also take 1 day maximum.

Table 6 Summary of CBM dating evidence

CONTEXT	DATE	FORMS
1	13-16TH	Plain
1006	14-16TH	Brick
1007	16-18TH	Brick
1013	13-16TH	Plain
1014	17-19TH	Brick
2003	14-16TH	Brick
2005	14-16TH	Brick
2009	17-18TH	Brick
2027		Stone Floor?, Rbrick
2044	1-4TH	Rbrick
3005	17-18TH	Brick
3007	14-16TH	Brick
3027	14-16TH?	Brick
3032	14-16TH?	Brick
3033	14-16TH?	Brick
3034	13-16TH	Plain
4006	13-16TH?	Plain
4007	17-18TH	Brick
4008	17-18TH	Brick
4009	16-18TH	Brick
4010	14-16TH	Plain
4012	17-18TH	Brick
4148	16-18TH	Brick, plain
5008	14-16TH	Brick
5009	17-18TH	Brick
5012	14-16TH	Brick
5014	14-16TH	Brick, Plain
5015	13-16TH	Plain, Peg
6003	17-18TH	Brick
6007	17-18TH	Brick
6011	17-18TH	Brick
6015	14-16TH	Brick
6033	1-4TH?	Rbrick?
6035	14-16TH?	Brick
7003	17-18TH	Brick
7004	17-18TH	Brick
7006	14-16TH	Brick
7012	17-18TH	Brick
7018	17-18TH	Brick, Plain, Rbrick?
7021	14-16TH	Brick
7023	17-18TH	Brick
7028	17-18TH	Brick
7035	17-18TH	Brick
7058	16-18TH	Plain, Brick, Peg
7059	17-18TH	Brick, Floor
7060	17-18TH	Brick, Rbrick?
7060	14-16TH	Brick, Floor, Plain
Context	Date	Forms
7061	17-18TH	Brick, Plain, Rbrick
7062	14-16TH	Rbrick?, Floor
7093	13-16TH?	Stone Tile?
8008	17-18TH	Brick
8009	17-18TH	Brick
8013	14-16TH	Brick
8015	17-18TH	Brick, Rbrick?
8024	17-18TH	Brick
9011	13-16TH	Plain
9014	1850+	Slate, Brick
9019	16-18TH	Brick
9040	16-18TH	Brick, Plain
9042	14-16TH?	Brick
9043	16-18TH?	Brick, Plain, Rbrick
9044	16-18TH	Brick, plain, peg
9049	13-16TH	Plain
9064	14-16TH	Stone Tile?, brick, plain, floor
9065	14-16TH	Brick
9068	14-16TH	Floor?, Stone Tile?, Brick, Floor
9076	14-16TH	Brick
9079	14-16TH	Brick
9082	13-16TH	Plain
9089	13-16TH	Plain
10003	14-16TH	Brick
10006	14-16TH?	Brick
10012	14-16TH	Brick, Plain
10014	14-16TH	Brick
10015	17-18TH	Brick, Plain
11024	14-16TH	Brick
11025	17-18TH	Brick, Floor
11032	14-16TH	Brick
11050	13-16TH	Plain
11053	13-16TH?	Plain?
12007		Stone Floor?
12011	14-16TH	Plain, Brick, Stone Tile?
12030		Stone floor?
12034	14-16TH	Brick
13009	14-16TH	Brick, Plain
13011	13-16TH	Plain
13013	17-18TH	Brick
14006	17-18TH	Brick
14006	14-16TH	Brick
14009	13-16TH	Plain
14020	13-16TH	Plain
14021	13-16TH	Peg
15006	17-18TH	Brick
15008	14-16TH	Brick
15010	14-16TH	Brick, Rbrick?
15017	16-18TH	Brick, Stone Tile?
15032	13-16TH	Plain
16008	14-16TH	Brick
16010	14-16TH	Brick

16012	17-18TH	Brick
16013	17-18TH	Brick
16014	13-16TH	Plain
16016	14-16TH	Brick
16022	14-16TH	Brick
16028	14-16TH?	Brick?
17006	1850+	Wall Tile, Slate
18005	14-16TH?	Brick
18006	13-16TH	Plain
18007	13-16TH	Plain
18008	14-16TH	Plain, Brick
18012	17-18TH	Brick, Plain, Peg
18014	1-4TH?	Rbrick?
18017	13-16TH	Plain
19005	13-16TH	Brick, Rbrick, Plain
19008	13-16TH	Plain
19010	14-16TH?	Brick?
19012	13-16TH	Plain?
20005	14-16TH	Plain, Brick
21005	19TH+?	Plain
21005	16-18TH	Plain, Brick
21010	13-16TH	Plain
21011	13-16TH	Plain?
22015	14-16TH?	Brick
22044	16-18TH	Brick, Plain
23002	13-16TH	Plain
23006	17TH+	Plain, Pan, Brick
23008	14-16TH	Plain, Brick, Rbrick?
23009	13-16TH	Plain
23015	14-16TH	Peg, Rbrick?
23021	14-16TH	Brick
24008	13-16TH	Plain
24010	13-16TH	Plain
24012	17TH+	Pan, brick
24017	14-16TH?	Brick
24019	13-16th	Plain
24023	1-4TH?	Rbrick?
24026	1-4TH?	Rbrick?
25002	14-16TH	Brick
25008	13-16TH	Plain
25014	14-16TH?	Brick
25015	14-16TH	Brick
25019	14-16TH	Plain, Brick
25020	16-18TH	Brick, Plain
25035	1-4TH	Rbrick
25047	13-16TH	Plain?
26002	16-18TH	Plain, Ridge, Brick
26006	13-16TH	Peg
26007	13-16TH	Plain
26011	17-18TH	Brick
26012	13-16TH	Plain
26013	14-16TH?	Brick
26014	13-16TH	Plain

26020	14-16TH	Brick, Plain
26023	14-16TH	Plain, Brick
26023	13-16TH	Stone Tile?, Plain
26025	14-16TH	Brick, Plain, Peg, Brick
26029	13-16TH	Plain
26035	13-16TH	Plain
26037	14-16TH	Plain, Brick
26050	14-16TH	Brick, Plain
26072	14-16TH	Plain, Brick
26075	13-16TH	Plain
26078	13-16TH	Plain
26082	13-16TH	Plain
26086	14-16TH	Brick
26095	13-16TH	Plain
27001	17TH+	Brick, Plain, Pan
27002	14-16TH	Brick
27006	17TH+	Brick, Pan, Plain
27014	16-18TH	Brick
27017	14-16TH	Brick, plain
27019	14-16TH	Brick
27021	16-18TH	Brick, Plain, Peg
27023	14-16TH	Brick, Stone Tile?, plain
27026	17TH+	Pan, Brick, Plain, Peg
27027	14-16TH	Brick
27030	16-18TH?	Brick, Plain
27033	13-16TH	Plain
27033	16-18TH	Plain, Brick
27041	14-16TH?	Brick, Plain
27063	17-18TH	Brick, Plain
27064	14-16TH	Brick
27073	14-16TH	Brick, Plain
27075	14-16TH	Brick, Plain
27084	14-16TH	Brick, plain
28001	16-18TH	Plain, Stone, Brick
28002	13-16TH	Plain
28005	16-18TH	Brick, Peg, Plain
28006	13-16TH	Plain
28007	13-16TH	Plain
28008	13-16TH	Plain, Ridge
28009	13-16TH	Plain, stone tile
28013	13-16TH	Plain
28014	16-17TH	Brick, Floor, Plain
28017	14-16TH	Plain, Brick
28020	13-16TH	Plain
28021	14-16TH	Brick
28025	14-16TH	Brick, Plain
28025	14-16TH	Brick
28025	14-16TH	Plain, Brick
28029	1-4TH?	Rbrick
28035	13-16TH	Plain
28035	13-16TH	Plain
28045	13-16TH	Peg

29002	14-16TH	Brick, Plain, Ridge, pan
29004	17TH+	Pan, Plain, Brick
29006	14-16TH	Brick
29011	14-16TH	Brick, Plain
29013	13-16TH	Plain
29016	14-16TH	Brick
29019	13-16TH	Plain, Peg
29025	14-16TH	Plain, Brick
29034	13-16TH	Plain?
29035	1-4TH	Tegula
30001	14-16TH	Brick, Plain, Pan
30003	19TH+	Nib
30004	17TH+	Brick, Pan
30005	17-18TH	Brick, Plain
30006	14-16TH	Plain, brick
30007	14-16TH	Brick, Ridge, Plain, Rbrick
30008	17TH+	Brick, Plain, Pan
30013	14-16TH	Brick, Plain
30015	1-4TH?	Rbrick?
30018	17TH+	Pan, Brick
30023	14-16TH	Brick, Plain
30024	14-16TH	Brick
30030	16-18TH	Brick
30034	13-16TH	Plain
31005	19TH+	Brick, Plain, Slate
31005	13-16TH	Plain
31006	14-16TH	Rbrick?, brick
31008	13-16TH	Plain
31010	19TH+	Slate, Brick
31011	14-16TH	Brick
31012	14-16TH	Brick
31018	13-16TH	Plain
31022	14-16TH	Brick, Plain
31042	14-16TH	Brick

10. POTTERY

By Ailsa Mainman

The pottery recovered from the church covers a wide date range, resulting, perhaps, from different phases of construction, remodelling and burial disturbance. The assemblage is not large and few contexts produced more than 1-2 sherds of pottery. This limits the usefulness of the assemblage to providing some form of chronological structure and, to some extent, showing the range of sources for the pottery.

The earliest piece is a sherd from Context 26045, associated with the earlier building foundations, which is a fragment of shelly Maxey-type ware of middle Anglian date. Chronologically the next material, from a medieval lead working hearth (Context 11041), is of possible Anglo-Scandinavian date. It consisted of coarse, tempered grey wares sherds, from a single vessel, which could be late Anglian in date but are more likely to be Anglo-Scandinavian; further comparative work might elucidate their provenance and chronology more closely. Torksey-type wares from a late medieval mortar spread to the west of the tower (Context 25019) give further evidence of Anglo-Scandinavian activity. However in this case it was obviously residual and from an earlier date.

The next body of material comprises the gritty and splashed wares which fall into the later 11th and 12th centuries, possibly continuing into the 13th century. There is both Brandsby-type ware and Humber ware of the 14th century with the Humber ware continuing into the 15th century and beyond, as it develops into the Purple Glazed wares of the 16th century. A small number of German stonewares belong mainly to the early post-medieval period while a few Cistercian wares give further evidence of 16th century activity. Slipwares, black and brown glazed wares, English stonewares and post-medieval earthenwares of 17th and 18th century date are present. Their 19th century successors appear in a number of contexts together with tin-glazed earthenwares and more recent material.

It is recommended that the pottery assemblage, although relatively small, should be should undergo further analysis linked with the detailed site phasing.

Table 7 Pottery listed by context

CONTEXT	QUANTITY	DATE	DESCRIPTION
1013	1	14/15TH CENTURY	1 Humber ware handle
3005	1	16TH CENTURY	1 Cistercian ware
3027	1	MEDIEVAL?	1 scrap
5008	1	12TH CENTURY	1 gritty ware
5015	2	15TH CENTURY	1 York Glazed ware 1 Humber ware
7049	2	18/19TH CENTURY?	2 post-medieval earthenware scraps
7060	4	15TH CENTURY	3 Humber 1 scrap
8031	1	?	1 scrap
9011	1	17TH CENTURY	1 slipware scrap
9040	1	17TH CENTURY	1 Black ware mug fragment
9043	2	14TH CENTURY	1 lightly gritted ware ? Humber covered in mortar
9064	1	?15TH CENTURY	1 late Humber scrap
11041	3	ANGLIAN/ANGLO-SCAND?	3 coarse grey ware sherds possibly of Anglian or Anglo-Scandinavian date
12011	1	14TH CENTURY	1 Brandsby
12030	1	12TH CENTURY	1 splashed ware scrap
12046			1 gritty ware
12053	1	14/15TH CENTURY	1 Humber ware
12054	2	12TH CENTURY	2 gritty wares
13005	2	14TH CENTURY	1 gritty ware 1 Humber ware
13040	1	MEDIEVAL?	1 scrap
14021	1	?14TH CENTURY	1 ?Humber
14031	1	14/15TH CENTURY	1 Humber ware
16005	1	14/15TH CENTURY	1 Humber ware
16019	1	14TH CENTURY	1 York Glazed ware
18005	4	19TH CENTURY	1 post-medieval earthenware 3 scraps
18006	1	?	1 unidentified
18008	1	17TH CENTURY	1 Black ware
18012	7	17/18TH CENTURY	2 Cistercian wares 1 Black ware 1 later German stoneware 1 post-medieval earthenware 2 York Glazed wares
18014	1	14TH CENTURY	1 ?medieval oxidised ware
19004	3	18/19TH CENTURY	2 post-medieval earthenwares 1 Humber ware
19005	3	17TH CENTURY	1 Cistercian 1 slipware 1 Yorks red ware
19015	1	?	1 scrap
20005	1	14TH CENTURY	1 Brandsby ware
21002	1	14TH CENTURY	1 Humber ware
21012	1	?	1 scrap
22010	1	15TH CENTURY	1 German stoneware sherd ?Raeren
23002	2	LATE 19TH/E.20TH CENTURY	1 willow pattern 1 Black ware

23006	4	19TH CENTURY	1 Black wares 2 tin-glazed earthenwares 1 red earthenware
23008	4	14/15TH CENTURY	4 Humber wares
23009	4	12TH CENTURY	1 splashed wares 3 gritty wares
23015	1	12TH CENTURY	1 splashed ware
23027	1	12TH CENTURY	1 splashed ware rim in oxidised fabric
24001	1	15TH CENTURY	1 German stoneware? Raeren
24004	2	14TH CENTURY	1 Brandsby-type ware 1 unidentified 1 gritty ware
24007	2	14TH CENTURY	1 Brandsby ware 1 oxidized sherd
24008	7	14TH CENTURY?	2 gritty wares 1 Brandsby-type ware 4 oxidised sherds- Humber region?
24010	2	12TH CENTURY	2 splashed wares
24012	2	12TH CENTURY	2 splashed wares
25006	1	14/15TH CENTURY	1 Humber ware
25014	1	MEDIEVAL?	1 oxidised ware
25017	1	17TH CENTURY	1 slipware
25019	3	18TH CENTURY	1 post-medieval earthenware 2 Torksey wares
25020	4	17/18TH CENTURY	1 slipware 1 post-medieval earthenware 2 Brandsby
25027	1	17TH CENTURY	1 slipware scrap
25035	1	?	1 oxidised scrap
26002	2	18/19TH CENTURY	1 post-medieval earthenware 1 tin-glazed earthenware
26007	1	15TH CENTURY	1 Humber ware
26014	1	14TH CENTURY	1 Walmgate type ware
26023	8	18TH CENTURY	2 Humber 3 post-medieval red earthenwares 3 scraps
26025	5	18/19TH CENTURY	1 post-medieval earthenware 1 slipware 2 gritty ware 1 tin-glazed earthenware
26037	2	14/15TH CENTURY	1 German stoneware 1 Humber ware
26045	1	ANGLIAN	1 Maxey-type shell tempered ware
26072	3	18/19TH CENTURY	2 tin-glazed earthenwares 1 Walmgate ware
26075	1	16TH CENTURY	1 Purple Glazed ware
26086			1 Brandsby ware
26092	1	14TH CENTURY	1 Brandsby ware
26095	1	?	*scrap*
27001	14	L.19TH/E.20TH CENTURY	1 willow pattern 1 black basalt 2 Black wares 2 late English stonewares 2 tin-glazed plate sherds 6 post-medieval earthenwares

27006	5	18TH CENTURY	2 Black wares 3 post-medieval earthenwares
27017	3	17TH CENTURY	1 Brandsby ware 1 Black ware 1 ?medieval
27023	10	18TH CENTURY	1 stoneware plate fragment 2 gritty ware 2 Black ware 1 stonewares 1 tin-glazed earthenware 3 post-medieval earthenwares
27026	6	18TH/19TH CENTURY	2 slipwares 1 tin-glazed earthenwares 3 post-medieval earthenwares
27030	10	18TH /19THCENTURY	3 English stoneware 1 slipware 2 tin glazed earthenwares 4 scraps
27033	5	19TH CENTURY	3 Humber ware 1 tin-glazed earthenware 1 post-medieval earthenware
27048			1 post-medieval earthenware
27073	3	MEDIEVAL	3 scraps
28001	16	19TH CENTURY	13 post-medieval earthenwares 2 Black wares 1 tin-glazed earthenware
28005	5	17TH/18TH CENTURY	2 late German stonewares 1 Humber ware 2 post-medieval earthenware
28008	7	18TH CENTURY	7 post-medieval earthenware
28009	9	18TH CENTURY	1 Black ware 7 post-medieval earthenwares 1 Brandsby ware
28013	5	18TH CENTURY	2 scraps 2 Humber 1 slipware
28013	3	18TH CENTURY	2 Humber wares 1 slipware
28017	4	18TH CENTURY	2 post-medieval earthenwares 1 gritty ware 1 grey ware
28025	6	17/18TH CENTURY	1 Brandsby 1 Brown glazed 1 unidentified 2 gritty wares 1 post-medieval earthenwares
28029	1	?	1 scrap
28045	4	18/19TH CENTURY	1 post-medieval red earthenware 1 gritty ware 2 York Glazed ware
29002	10	18TH CENTURY	9 post-medieval earthenwares 1 Black ware
29004	2	14TH CENTURY	2 Brandsby wares
29005	1	14/15TH CENTURY	1 Raeren sherd
29011	7	18/19TH CENTURY	1 slip ware

			6 post-medieval earthenwares
29013	1	15TH CENTURY	1 ?Humber covered in mortar
29017	2	13/14TH CENTURY	2 York Glazed wares
29019	1	18TH CENTURY	1 post-medieval earthenware
30001	2	17TH CENTURY	1 Black ware 1 post-medieval red earthenware
30003	3	17TH CENTURY	2 slipwares 1 post-medieval earthenwares
30004	3	18TH CENTURY	2 Humber 1 English stoneware
30006	8	19TH CENTURY	2 Black wares 2 Yellow wares 2 post-medieval earthenware 2 tin-glazed earthenwares
30007	2	19TH CENTURY	1 Humber ware 1 late slipware
30008	4	19TH CENTURY	2 tin-glazed earthenwares 1 Brown glazed ware 1 Humber ware
30013	10	20TH CENTURY	2 willow pattern 1 Black ware 1 Yellow ware 1 Brandsby ware 5 post-medieval earthenwares
30018	1	19TH CENTURY	1 tin-glazed earthenware
30023	1	17TH CENTURY	1 slipware
30034	1	18TH CENTURY	1 Brown glazed ware
30071	1	13TH CENTURY	1 oxidised rim
31005	4	18TH CENTURY	1 gritty ware 1 late English stoneware 1 oxidised ware 1 slipware
31011	2	17TH CENTURY	1 Cistercian 1 slipware
31016	2	12TH CENTURY	2 splashed wares
31027	1	14TH/15TH CENTURY	1 Humber ware

11. SMALL FINDS

By Nicola Rogers

A total of 791 small finds were recovered from the excavations. All except the alabaster fragments (see Section 8) have been viewed for assessment. The bulk of the assemblage falls into one of three categories – burial furniture and fittings, finds associated with the structure of the church, and metalworking waste. A few other finds do not fall into any of these categories

11.1 Burial furniture and fittings

Of the 440 iron small finds recovered, the vast majority relate to post-medieval burials, comprising coffin fittings - particularly handles - as well as structural ironwork such as hinges, brackets, nails and screws. At least 45 finds comprise fragments of tin coffin plates. Non-ferrous tacks for the attachment of fabric to the interior of coffins were also found. More detailed descriptions of this post-medieval coffin furniture can be found in the Conservation Assessment (Section 12).

Copper alloy pins with wire wound heads make up half the copper alloy assemblage, and of these, more than 50% were found in burial deposits. They have been termed 'shroud pins' by some researchers, presumably as a result of being recovered from similar burial contexts, but they are also thought to have been used to fasten clothing, particularly headwear, and they appear equally frequently in non-burial related contexts. One pin from the site was found attached to possible human hair in a juvenile post-medieval burial in the nave (SF639, Context 9051). This correlated with the evidence during excavation, with many of the skulls showing green staining from the corrosion products of such pins. These pins first appear in use in the 13th century, but continue almost unchanged in form until the 19th century, and it is likely that those recovered from burials date to the post-medieval period. In some instances, no fittings from coffins survive, but non-ferrous pins do: these can provide provisional dates for the burials if other dating evidence is lacking.

Some coffin furniture comes from earlier phases of burial, however. Two examples of hinge straps resembling those found on some Anglo-Saxon coffins were found – these are SFs434 (Context 19017; Area S), and 465 (Context 6007; Area F). A shackle barrel padlock (SFs165-166, Context 1019; Area A) of a type designed to restrain either animals or

humans, was found in a burial – this could date to the medieval or post-medieval periods. Its presence in a burial seems unusual.

11.2 Finds associated with the structure of the church

Of 118 glass small finds, the majority are fragments of window glass. A total of 31 finds, some comprising several fragments, are painted, and there are many more which appear to be medieval window glass, some of which may have lost their original paint. The painted glass that does survive appears to be mainly of late 13th to 14th century date, largely comprising elements of window borders or backgrounds. No figural elements have been identified. Approximately two-thirds of the finds of painted window glass were recovered from the trenches to the south of the tower, namely areas Z, AA, BB, CC, DD and EE. The remaining fragments were scattered across the site.

Eighteen finds of lead alloy window cames were also recovered, and approximately half were found in the same trenches south of the tower as the majority of the window glass. Much of the cames appears to be post-medieval, however, and probably derives from an episode of alterations to a window/windows which occurred later than that relating to the painted glass.

Fifteen finds appear to be fragments of lead alloy roofing or other lead structural elements – these were found in areas all around the north, west and south of the tower, a third coming from areas AA and BB. As with the glass and cames, these presumably represent remains from alterations to the church structure in the past.

11.3 Metalworking debris

Quantities of slag (48 finds) and other metalworking debris (30 finds) were recovered: this material has not been seen by an archaeometallurgist, but has been viewed by both conservators and the finds researcher. Most of the working debris appears to represent lead working waste, taking the form of slag and molten spillages. Also recovered were six finds of possible casting mould fragments and seven finds of copper alloy working waste. Some iron working slag was also identified. These finds reveal a different pattern of distribution to the other material so far discussed. Although a few finds of lead alloy slag and molten spillages were recovered from the trenches around the exterior of the tower, the bulk of the non-ferrous working debris was recovered from Areas B, F, G, J and K. Most of this presumably represents the debris associated with the lead-working hearths noted in the excavations. Five of the six possible mould fragments and half of the finds of copper alloy waste were

found in Area G: it seems possible these could derive from bell-casting. The iron slag was scattered across the site.

11.4 Other finds

A silver cut halfpenny of Henry III (1247-79) (SF42, Context 14026; Area N) was found within the tower, and a 16th century Nuremburg token (SF82, Context 8012; Area H) was also identified.

Of interest amongst the iron finds is SF5 (Context 2025; Area B) which is a medieval multi-purpose arrowhead, used for military or hunting purposes. The remaining iron objects are largely structural, including several wall hooks (e.g. SF474, Context 29011; Area CC; SF751, Context 7061; Area G), a looped staple (SF227, Context 22028; Area V), and a hinge pivot (SF588, Context 25006; Area Y), none of which are particularly datable.

Medieval copper alloy dress accessories which were found comprise a strap-guide (SF130) and a bar mount (SF485), both used on belts, and both from Context 7062, and a medieval lace tag (SF124, Context 7058), all from Area G. An unusual lead alloy object is SF19 (Context 13013; Area M) which appears to be an openwork frame of uncertain function.

Metal objects made up by far the majority of this assemblage, but some finds of other materials were made. Two lava stone quern fragments were retrieved (SF789, Context 26057, Area Z; SF790, Context 18014; Area R) – these probably date from 8th – 12th century. The other two stone finds comprise a probably modern vessel fragment (SF788, Context 10003; Area J), and an unidentified fragment (SF99, Context 6015; Area F). A bone bead (SF106, Context 15006; Area O) may have been part of a medieval rosary. Objects of more recent date include a button, possibly of mother-of-pearl, from a burial (SF351, Context 26028; Area Z), and a 19th – 20th century tobacco pipe bowl (SF670, Context 17007; Area Q). Twenty-one other finds of post-medieval tobacco pipes were made, most of which came from the areas to the west and south of the tower.

11.5 Statement of potential

Despite the size of this assemblage, there is little here that is unusual. The coffin fittings are many, but are generally not in good condition. Many similar and better preserved examples were found at Beverley Minster (Johnson 2004), for example. Although the fragments of painted window glass are of interest, none contains figural decoration, and the background and border motifs are not rare - they may, however, add some useful information about

changes to the building in the medieval period. The main area of potential of all this material must lie in what it tells us of the church and its function since the medieval, and possibly earlier periods, on through to the post-medieval phase. Any further analysis should be conducted with this in mind.

Specific recommendations:

- Further analysis of the finds in relation to the detailed site phasing, particularly the Saxon and Medieval periods.
- The window glass analysed by a specialist in medieval window glass.
- The metal working debris should be analysed and reported on by an archaeometallurgist.

Table 8 Small finds listed by small find number

FIND	*CONTEXT*	*NAME*	*MATERIAL*
SF00001	2021	Nail	Iron
SF00002	13019	Nail	Iron
SF00003	13020	Fragment	Iron
SF00004	5016	Nail	Iron
SF00005	2025	Socketed Arrowhead	Iron
SF00006	13034	Nail	Iron
SF00007	13036	Slag	Slag
SF00008	2042	Nail	Iron
SF00009	13029	Bar Fragment	Iron
SF00010	13029	Nail	Iron
SF00011	5015	Fragments Metal-working dross	Lead Alloy
SF00012	5015	Nail	Iron
SF00013	5008	Off-cut	Lead Alloy
SF00014	5008	Hook	Iron
SF00015	2009	fragments	Lead Alloy
SF00016	13005	Nails	Iron
SF00017	13013	Hinge	Iron
SF00018	13013	Hinge Fragment	Iron
SF00019	13013	Object	Lead Alloy
SF00020	2005	Window Came	Lead Alloy
SF00021	2005	Spillage	Lead Alloy
SF00022	2005	Slag	Slag Lead alloy
SF00023	2005	offcut	Lead Alloy
SF00024	2007	Slag	Slag Lead alloy
SF00025	2003	fragment	Lead Alloy
SF00026	2003	Slag Fragment	Slag Lead Alloy Iron
SF00027	2003	Manufacturing debris	Lead Alloy
SF00028	2003	Fragments	Lead Alloy
SF00029	2003	Nail	Iron
SF00030	13012	Nail	Iron
SF00031	13039	Nail	Iron
SF00032	16023	Nail	Iron
SF00033	16014	Nail	Iron

SF00034	16016	Nail	Iron
SF00035	16016	Window Glass Fragment Painted	Glass
SF00036	2031	Window Glass Fragment Green	Glass
SF00037	13013	Window Glass Fragment Painted	Glass
SF00038	13005	Fragments	Alabaster
SF00039	13013	Object Fragments	Alabaster
SF00040	13013	Object Fragments	Alabaster
SF00041	13013	Object	Alabaster
SF00042	14026	Coin Half Penny	Silver
SF00043	14012	Window Glass Fragment	Glass
SF00044	14009	Window Glass Fragments painted	Glass
SF00045	14007	Object Fragments Plug Wire	Alabaster Lead Copper Alloy
SF00046	14015	Object Fragments	Alabaster
SF00047	2044	Slag	Slag
SF00048	10004	window glass Fragment	Glass
SF00049	10010	Object Fragments	Alabaster
SF00050	14006	Slag	Slag Lead alloy
SF00051	14017	Sheet Fragment	Iron
SF00052	14007	Nail	Iron
SF00053	14010	Strap	Iron
SF00054	14015	Slag	Slag Lead alloy
SF00055	14021	Nail fragments	Iron
SF00056	4007	Fragment	Glass
SF00057	14007	Nail fragments	Iron
SF00058	14023	Strip Fragment	Iron
SF00059	14023	Nail	Iron
SF00060	14017	Pinned Hinge Fragment	Iron
SF00061	14017	Hinge Fragment	Iron Wood
SF00062	14017	Nails	Iron Wood
SF00063	6019	Nail	Iron
SF00064	14015	Nails	Iron
SF00065	14006	Nails	Iron
SF00066	14006	strap Fragment	Iron
SF00067	30007	Pin	Copper Alloy
SF00068	7025	Fragments	Alabaster
SF00069	15008	Fragment	Alabaster
SF00070	30008	window glass Fragment	Glass
SF00071	30008	Window glass Fragments	Glass
SF00072	30007	Window Glass Fragments painted	Glass
SF00073	30007	window glass Fragment painted	Glass
SF00074	30007	window glass Fragments	Glass
SF00075	7063	Fragments	Alabaster
SF00076	7060	window glass Fragment painted	Glass
SF00077	1006	window glass Fragment	Glass
SF00078	30018	window glass Fragment	Glass
SF00079	30006	Window Glass Fragments	Glass
SF00080	30006	window glass Fragments painted	Glass
SF00081	15010	Nail	Iron
SF00082	8012	Token	Copper Alloy

SF00083	8023	Nail	Iron
SF00084	6015	Slag spillage	Slag Lead alloy
SF00085	6015	Fragments	Lead Alloy
SF00086	6015	Spillage	Lead Alloy
SF00087	8024	Manufacturing Debris	Copper Alloy
SF00088	8024	Waste	Copper Alloy
SF00089	10006	window glass Fragment	Glass
SF00090	11026	Slag	Slag
SF00091	7003	Slag	Slag
SF00092	7003	Nail	Iron
SF00093	3005	Nails	Iron
SF00094	10015	Slag	Slag Lead alloy
SF00095	14034	Nail	Iron
SF00096	7044	Nail	Iron
SF00097	15020	Nail	Iron
SF00098	7036	Nail	Iron
SF00099	6015	fragment	Stone
SF00100	7023	Window Came	Lead Alloy
SF00101	7033	Fragment	Lead Alloy
SF00102	7046	Fragment Spillage	Lead Alloy
SF00103	7016	Fragment	Lead Alloy
SF00104	15011	window glass Fragment	Glass
SF00105	15017	Window Glass Fragment Painted	Glass
SF00106	15006	Bead	Bone
SF00107	6007	Window Glass Fragments	Glass
SF00108	7018	window glass Fragment	Glass
SF00109	7028	window glass Fragments painted	Glass
SF00110	7054	Spillage	Lead Alloy
SF00111	7054	Slag	Slag Lead Alloy
SF00112	8021	Waste	Copper Alloy
SF00113	11026	window glass Fragments	Glass
SF00114	11026	Fragments	Lead Alloy
SF00115	11026	Pin	Copper Alloy
SF00116	3033	fragment	Iron
SF00117	1011	Nail	Iron
SF00118	6003	Slag	Slag
SF00119	11050	fragment	Lead Alloy
SF00120	7014	fragment	Lead Alloy
SF00121	7014	Nail	Iron
SF00122	7036	Spillage	Lead Alloy
SF00123	7036	Slag	Slag Lead alloy
SF00124	7058	Lace Tag	Copper Alloy
SF00125	7058	Slag	Slag
SF00126	7058	Fragments Waste	Copper Alloy Fired Clay
SF00127	6017	Sheet Fragments	Lead Alloy Slag
SF00128	6016	Slag	Slag Lead Alloy
SF00129	6016	Sheet	Lead Alloy
SF00130	7062	Strap-guide	Copper Alloy
SF00131	30006	Discs	Copper Alloy
SF00132	10019	Slag	Slag Lead alloy
SF00133	10016	Slag	Slag Lead Alloy
SF00134	11040	Slag	Slag Fired Clay

SF00135	10017	Slag	Slag Lead Alloy
SF00136	10017	Spillage	Lead Alloy
SF00137	11040	Spillage	Lead Alloy
SF00138	10016	Object	Lead Alloy
SF00139	10016	Spillage	Lead Alloy
SF00140	10016	Nail	Iron
SF00141	10019	Spillages	Lead Alloy
SF00142	28005	Window Glass Fragments Painted	Glass
SF00143	19004	window glass Fragment painted	Glass
SF00144	1006	window glass Fragments	Glass
SF00145	28007	Window Glass Fragments Painted	Glass
SF00146	30023	window glass Fragments	Glass
SF00147	28001	Fragments	Glass
SF00148	28001	window glass Fragments painted	Glass
SF00149	28013	Window Glass Fragments Painted	Glass
SF00150	28017	Window Glass Fragments Painted	Glass
SF00151	28005	Window Glass Fragments	Glass
SF00152	28005	Window Glass Fragments	Glass
SF00153	28008	Window Glass Fragments Painted	Glass
SF00154	28006	Window Glass Fragments Painted	Glass
SF00155	28009	Window glass Fragments Painted	Glass
SF00156	28014	Window glass Fragments	Glass
SF00157	28014	Window glass Fragment Painted	Glass
SF00158	28014	Window Glass Fragment Painted	Glass
SF00159	28020	Window glass Fragment	Glass
SF00160	28025	Window glass Fragments Painted	Glass
SF00161	28045	Window glass Fragment Painted	Glass
SF00162	28107	Object	Lead Alloy
SF00163	28021	Fragment	Glass
SF00164	28107	Nail	Iron
SF00165	1019	Shackle Barrel Padlock	Iron
SF00166	1019	Shackle Barrel Padlock Case	Iron
SF00167	1019	Object Hook	Iron
SF00168	1019	fragment	Iron
SF00169	1019	Object	Iron
SF00170	1019	Vessel Fragment	Glass
SF00171	24008	Nails	Iron
SF00172	19010	Nail	Iron
SF00173	24019	nail	Iron
SF00174	28013	Fragment	Glass
SF00175	28013	Slag	Slag
SF00176	28013	Nail	Iron
SF00177	28013	Nail	Iron Wood

SF00178	24010	Nail	Iron
SF00179	24010	Nail	Iron
SF00180	1019	Nail	Iron
SF00181	30028	Nail	Iron Lead Alloy
SF00182	30033	Coffin plate fragments	Iron
SF00183	24002	Vessel Window Fragments	Glass
SF00184	24007	Coffin Plate	Iron Tin
SF00185	24007	Coffin Plate Fragments Nails	Iron Tin Lead Alloy
SF00186	24007	Nails	Iron
SF00187	28016	Nails	Iron Wood
SF00188	28016	Fragment	Lead Alloy
SF00189	28016	Pins	Copper Alloy
SF00190	24004	Vessel Fragments	Glass
SF00191	24004	Object	Iron
SF00192	24004	Nails	Iron Lead Alloy
SF00193	24004	strip	Lead Alloy
SF00194	24004	Nails Ferrule	Iron
SF00195	24004	Nail	Iron
SF00196	24004	Nail	Iron
SF00197	24004	nail	Iron
SF00198	22020	Fitting	Iron
SF00199	22020	fitting	Iron
SF00200	22020	fragment	Iron
SF00201	22020	Sheet fragment	Iron
SF00202	31005	Nails	Iron
SF00203	24024	Nail	Iron
SF00204	31011	Window Glass Fragment	Glass
SF00205	31008	Screw	Iron
SF00206	24019	sheet Fragment	Lead Alloy
SF00207	26002	Nails	Iron
SF00208	26013	nail	Iron
SF00209	18014	Fragment	Iron
SF00210	22004	Wedge	Iron
SF00211	26020	Nail	Iron
SF00212	26020	Slag	Slag
SF00213	31037	Nails	Iron
SF00214	28027	Fragment	Lead Alloy
SF00215	28027	Pin	Copper Alloy
SF00216	28045	Nail	Iron
SF00217	28045	Fragment	Iron
SF00218	26023	strip	Iron
SF00219	26023	spillage	Lead Alloy
SF00220	26023	Vessel Fragment	Glass
SF00221	30033	Coffin Plate Fragments	Iron Tin
SF00222	18012	Window Glass Fragments Painted	Glass
SF00223	26014	Window Glass Fragment Painted	Glass
SF00224	18002	Window Came	Lead Alloy
SF00225	31019	Coffin Grip Handle	Iron
SF00226	1020	Fragments Spillage	Lead Alloy
SF00227	22028	Looped staple	Iron
SF00228	22028	Nail	Iron
SF00229	18031	Bracket	Iron Wood

SF00230	18031	Fragment	Iron Wood
SF00231	18031	Concretion	Iron
SF00232	26023	Nails	Iron
SF00233	1020	Nail Fragment	Iron
SF00234	1020	Fragment	Lead Alloy
SF00235	30023	fragment	Iron
SF00236	11020	Spillage	Lead Alloy
SF00237	30060	Nail	Iron
SF00238	30067	Nail Fragment	Iron
SF00239	30058	Fragment	Glass
SF00240	19023	Bracket	Iron
SF00241	29017	Window Glass Fragment Painted	Glass
SF00242	1019	Slag	Slag
SF00243	7080	Slag	Slag
SF00244	28025	Window Glass Fragment Painted	Glass
SF00245	28035	Nails screw	Iron
SF00246	7078	slag	slag
SF00247	28025	Nails	Iron
SF00248	24007	Tobacco Pipe Fragment	Fired Clay
SF00249	31036	Nail Sheet	Iron Lead
SF00250	31022	Nails	Iron Wood
SF00251	31022	Window Glass Fragments	Glass
SF00252	18012	Nails	Iron
SF00253	18012	bar	Iron
SF00254	18012	Tobacco Pipe Fragment	Fired Clay
SF00255	18012	Slag	Slag
SF00256	18012	Slag	Slag
SF00257	7058	Mould Fragments	Fired Clay
SF00258	30065	Fragments	charcoal stone
SF00259	1017	Fragment	Lead Alloy
SF00260	28031	Fragment	Iron
SF00261	22015	Nail	Iron
SF00262	22021	Nail	Iron
SF00263	22021	Nail Fragment	Iron
SF00264	1023	Window Came	Lead Alloy
SF00265	28027	fragment	Iron
SF00266	28027	Nails Screw Coffin plate fragment	Iron Wood
SF00267	28027	Coffin Handle Grip	Iron
SF00268	28027	Coffin Plate Fragments	Iron Tin
SF00269	26002	Tobacco Pipe Fragment	Fired Clay
SF00270	18002	Tobacco Pipe Fragment	Fired Clay
SF00271	7060	Nails	Iron
SF00272	26034	Coffin Plate Handle	Iron Tin Wood
SF00273	26025	Nails	Iron
SF00274	26025	Vessel Fragment	Glass
SF00275	26028	Coffin plate Fragments	Iron
SF00276	28026	Nail	Iron Wood
SF00277	28026	Fragment	Iron
SF00278	28026	nail	Iron
SF00279	26028	Coffin Plate Fragments	Iron Tin Wood
SF00280	9014	Pin	Metal

SF00281	26073	Coffin Handle Grip	Iron
SF00282	26073	Coffin plate Nails	Iron Wood Tin
SF00283	26073	Fragments Coffin Plate	Lead Alloy Tin
SF00284	7044	Slag	Slag Lead Alloy
SF00285	10013	Slag	Slag Lead Alloy
SF00286	7038	Slag	Slag Lead Alloy
SF00287	6020	Slag	Slag Lead Alloy
SF00288	18014	Nails	Iron
SF00289	18031	Bracket	Iron Wood
SF00290	18008	nail	Iron
SF00291	18008	Object	Iron
SF00292	31018	looped staple	Iron Wood
SF00293	31018	Window Glass Fragments Painted	Glass
SF00294	18007	Object	Iron
SF00295	18007	Nail	Iron
SF00296	18007	Nail	Iron
SF00297	18007	Strip	Lead Alloy
SF00298	28013	Object	Iron
SF00299	22010	Object	Lead Alloy Iron
SF00300	22010	Window Glass Fragment	Glass
SF00301	31006	strips	Lead Alloy
SF00302	31006	Nail	Iron Stone
SF00303	31006	Window glass Fragment	Glass
SF00304	28038	sheet Fragment	Lead Alloy
SF00305	28029	Nails	Iron Wood
SF00306	30027	Nails	Iron
SF00307	18006	Nail	Iron
SF00308	18006	Disc fragments	Lead Alloy
SF00309	18006	Strip fragments	Iron
SF00310	18006	offcut	Lead Alloy
SF00311	22018	nail Fragment	Iron
SF00312	18008	Tobacco Pipe Fragment	Fired Clay
SF00313	18008	strip	Lead Alloy
SF00314	18008	Nail Fragment	Iron
SF00315	18008	Vessel Fragment	Glass
SF00316	26025	Nails	Iron
SF00317	26019	Nail	Iron
SF00318	24026	Nail	Iron
SF00319	26014	Nails	Iron
SF00320	26023	Nail	Iron
SF00321	26006	Nail	Iron
SF00322	28025	Screw	Iron Wood
SF00323	28025	Window Came	Lead Alloy
SF00324	29013	Window Glass Fragment	Glass
SF00325	29013	Fragment	Iron
SF00326	29002	Nail	Iron
SF00327	29002	Coffin Handle Grip Fragment	Iron
SF00328	29002	strap	Iron
SF00329	29002	Fitting	Iron
SF00330	29002	Window glass Fragments	Glass
SF00331	29002	Window glass Fragments	Glass
SF00332	18001	Nails	Iron

SF00333	18001	Sheet Fragments, Manufacturing Debris	Iron And Slag
SF00334	18001	Vessel Fragment	Glass
SF00335	18001	Slag	Slag
SF00336	28025	Nails	Iron Wood
SF00337	28025	Fragments Coffin plate	Iron
SF00338	28014	sheet	Lead Alloy
SF00339	28014	Slag	Slag
SF00340	28014	Vessel Fragment	Glass
SF00341	28014	Fragment	Glass
SF00342	31005	Window glass Fragments	Glass
SF00343	31005	Sheet Offcut	Lead Tin Or Zinc Alloy
SF00344	31005	Nail	Iron
SF00345	31005	Fitting	Copper Alloy
SF00346	31023	Coffin Handle Grip	Iron
SF00347	31023	Nails	Iron Wood
SF00348	31023	Coffin Handle Grip Fragment	Iron Tin
SF00349	31023	Coffin Plate fragments	Iron Tin
SF00350	18012	Mould Fragment	Fired Clay
SF00351	26028	Button	Mother Of Pearl
SF00352	20004	sheet	Lead Alloy
SF00353	20003	sheet Fragment	Lead Alloy
SF00354	20014	Nails	Iron
SF00355	26037	Nails screw	Iron
SF00356	31027	Nail Fragment	Iron
SF00357	7061	Fragments	Copper Alloy
SF00358	30008	Coffin Handle Grip	Iron
SF00359	30003	Fragment	Glass
SF00360	30003	Fragments	Glass
SF00361	30003	Sheet	Copper Alloy Iron
SF00362	30003	Nails	Iron
SF00363	30003	Fragments	Iron
SF00364	1013	Fragments	Glass
SF00365	1013	Fragments	Glass
SF00366	1013	Window Came And Off-cuts	Lead Alloy
SF00367	1013	Nails	Iron
SF00368	20006	Nails	Iron
SF00369	26022	Tobacco Pipe Fragment	Fired Clay
SF00370	26022	Nail	Iron
SF00371	28001	Nails	Iron
SF00372	28001	sheet	Lead Alloy
SF00373	28001	Fragment	Lead Alloy
SF00374	28001	Object	Iron
SF00375	28001	sheet Fragments	Iron
SF00376	1005	Window glass Fragment	Glass
SF00377	1005	Fragment	Glass
SF00378	1005	Window Came Fragment	Lead Alloy
SF00379	1005	Concretion	Stone
SF00380	29004	Nail	Iron
SF00381	29004	Sheet Fragment	Iron
SF00382	29004	Fragment	Glass
SF00383	26025	Vessel Fragment	Glass
SF00384	26025	Pin	Copper Alloy
SF00385	26025	Nails	Iron Lead Alloy

SF00386	20005	sheet	Lead Alloy
SF00387	20005	Fragment	Glass
SF00388	26029	Screw	Iron Wood
SF00389	27006	Window glass Fragment	Glass
SF00390	27026	Window Glass Fragments Painted	Glass
SF00391	9019	Window Glass Fragment Painted	Glass
SF00392	9019	Pin	Copper Alloy
SF00393	26057	Nail	Iron
SF00394	21005	Object	Iron
SF00395	26029	Nails	Iron
SF00396	23008	Nail	Iron
SF00397	23009	Nails	Iron
SF00398	23009	Fragment	Iron
SF00399	23008	Nail	Iron
SF00400	23008	nail	Iron
SF00401	23006	Nails	Iron
SF00402	23006	fragment	Iron
SF00403	23021	Nail	Iron
SF00404	23021	Fragment	Iron
SF00405	23006	Vessel Fragments	Glass
SF00406	21002	Fragments	Glass
SF00407	21002	Nails	Iron
SF00408	21002	Pins	Copper Alloy
SF00409	21002	Strip Nail	Lead Alloy Iron
SF00410	21002	offcuts	Lead Alloy
SF00411	26026	Coffin Handle Grip Plate	Iron
SF00412	26026	Coffin Plates And Handle Grips	Iron Tin
SF00413	26026	Coffin Plate And Grip Fragment	Iron
SF00414	26026	Nails Coffin plate fragments	Iron Wood
SF00415	26026	coffin plate Fragments	Iron
SF00416	26047	Nail	Iron
SF00417	23002	Nail	Iron
SF00418	30012	Nails	Iron Wood
SF00419	26035	Nails	Iron Wood
SF00420	30012	Nails	Iron
SF00421	30012	Coffin Plate fragments	Iron
SF00422	7094	Slag	Slag
SF00423	30015	Fragments	Glass
SF00424	30032	Coffin Handle Grip	Iron
SF00425	30032	Nails	Iron
SF00426	30032	Coffin Plate Fragments	Iron
SF00427	30032	Coffin Plate Fragments And Nail	Iron
SF00428	30032	Window Came Fragment	Lead Alloy
SF00429	30032	Fragment	Glass
SF00430	30032	Upholstery Nails	Copper Alloy
SF00431	23006	Tobacco Pipe Fragment	Fired Clay
SF00432	30008	Tobacco Pipe Fragment	Fired Clay
SF00433	26029	Fragment	Iron
SF00434	19017	Hinge strap Fragments	Iron Wood
SF00435	21005	offcut	Lead Alloy
SF00436	29025	Nail	Iron
SF00437	29002	Nail	Iron Wood

SF00438	30018	Fragments	Glass
SF00439	26038	Coffin Handle Grip	Iron Wood Tin
SF00440	26038	Nails	Iron Wood
SF00441	26038	Nails	Iron Wood
SF00442	26038	Coffin Plate Fragments Nail	Iron Tin
SF00443	30015	Nails	Iron
SF00444	30015	Nail	Copper Alloy
SF00445	30015	Stud Upholstery nail	Copper Alloy
SF00446	30015	Plate Fragments	Iron Tin
SF00447	26098	Nail	Iron
SF00448	26029	Nail	Iron Wood
SF00449	30015	Pin	Copper Alloy
SF00450	30015	Nails	Iron
SF00451	30015	Coffin Plate Fragments	Iron
SF00452	25022	Nail	Iron Wood
SF00453	25022	Nails	Iron Wood
SF00454	25022	coffin Plate Fragments	Iron
SF00455	30016	Coffin Handles Grips	Iron
SF00456	30016	Coffin Handle Plate	Iron Tin wood
SF00457	30016	Coffin Handle Fragment	Iron
SF00458	30016	Coffin Plate Fragments	Iron Tin Wood
SF00459	30016	Nails	Iron Wood
SF00460	30016	Pinned Hinges Screws	Copper Alloy Iron Wood
SF00461	30001	Fragment	Glass
SF00462	30018	Fragment	Glass
SF00463	30018	Nails	Iron
SF00464	7060	Waste Fragment	Copper Alloy
SF00465	6007	Hinge Fragments	Iron Wood
SF00466	7062	Mould Fragments	Fired Clay
SF00467	27074	Slag	Slag Iron
SF00468	27074	Nail	Iron
SF00469	26103	Nail	Iron
SF00470	6007	Slag	Slag
SF00471	30004	Tobacco Pipe Fragment	Fired Clay
SF00472	9040	Pins	Copper Alloy
SF00473	27019	Pin Fragments	Copper Alloy
SF00474	29011	wall hook	Iron
SF00475	29011	Fragment	Iron
SF00476	29011	Nails	Iron
SF00477	29011	sheet	Lead Alloy
SF00478	29011	Window came Fragment	Lead Alloy
SF00479	9051	Pins	Copper Alloy
SF00480	30004	Hinge	Iron
SF00481	30015	Coffin Plate Fragments	Iron
SF00482	30004	Fragment	Glass
SF00483	7062	Spillages	Lead Alloy
SF00484	7062	Slag	Slag Fired Clay Copper Alloy Lead alloy
SF00485	7062	Belt Mount	Copper Alloy
SF00486	7062	Sheet Fragment	Copper Alloy
SF00487	7062	Nails	Iron
SF00488	19007	Nail	Iron
SF00489	9045	Coffin Fragments	Wood Copper Alloy
SF00490	19007	Nail	Iron

SF00491	30001	Sheet fragment	Iron
SF00492	30001	Sheet Fragment	Iron
SF00493	30001	Nail	Iron
SF00494	27063	Nails	Iron
SF00495	25029	Coffin Plate Fragment	Iron Tin
SF00496	27064	Nails	Iron
SF00497	27064	Object	Iron
SF00498	27064	Slag	Slag
SF00499	27030	Nails	Iron
SF00500	27006	Sheet Fragment	Iron
SF00501	27006	nail	Iron
SF00502	27006	Fragment	Glass
SF00503	27027	Nail Fragment	Iron Wood
SF00504	25022	Nail Fragment	Iron Wood
SF00505	27030	Fragments	Glass
SF00506	31024	Nails Tacks	Iron Wood
SF00507	31024	Nail	Copper Alloy
SF00508	28021	Slag	Slag
SF00509	30013	Window glass Fragments	Glass
SF00510	30013	Vessel Fragments	Glass
SF00511	30013	Fragments	Glass
SF00512	30013	Window Fragments Painted	Glass
SF00513	29021	Coffin Plate Fragments	Iron
SF00514	30013	Tobacco Pipe Fragment	Fired Clay
SF00515	30013	Pins	Copper Alloy
SF00516	30013	Window Came Fragment	Lead Alloy
SF00517	30013	Spillage	Lead Alloy
SF00518	30013	Nail Fragments Screw	Iron
SF00519	30013	Nail Fragment	Iron Wood
SF00520	30013	Coffin Plate and nail Fragments	Iron Wood Textile
SF00521	26050	Nails	Iron
SF00522	29021	Pin	Copper Alloy
SF00523	9046	Nail Fragments	Iron Wood
SF00524	27024	Coffin Plate Fragments	Iron
SF00525	27024	Coffin Plate Fragments	Iron
SF00526	29021	Nail Fragments	Iron Wood
SF00527	26105	Nail Fragments	Iron Wood
SF00528	27038	Beads	Glass
SF00529	25022	Nails	Iron Wood
SF00530	29017	Pins	Copper Alloy
SF00531	29021	Pins	Copper Alloy
SF00532	23014	Nail Screw Fragments	Iron Wood
SF00533	1004	Fragment	Iron
SF00534	1004	Fragments	Iron
SF00535	19005	Window Came Fragment	Lead Alloy
SF00536	30007	hook	Iron
SF00537	29017	Nails	Iron
SF00538	29020	Nails Screw	Iron Wood
SF00539	29020	Coffin Handle Grip	Iron
SF00540	29020	Coffin Plate Fragments	Iron
SF00541	27033	Nails	Iron Wood
SF00542	27033	Nail	Iron Wood
SF00543	12007	Nail	Iron Wood
SF00544	12007	Coffin Plate Fragments	Iron

SF00545	9064	Nail Fragment	Iron
SF00546	9064	Nail	Iron
SF00547	27017	Tobacco Pipe Fragment	Fired Clay
SF00548	27026	Nail	Iron Wood
SF00549	27026	Pin	Copper Alloy
SF00550	9043	Tobacco Pipe Fragment	Fired Clay
SF00551	27017	Nail	Iron
SF00552	26102	Nail	Iron
SF00553	9089	Nail	Iron Wood
SF00554	12031	Nail	Iron Wood
SF00555	17002	Tobacco Pipe Fragment	Fired Clay
SF00556	17002	Offcut	Lead Alloy
SF00557	9064	manufacturing debris	Lead Alloy
SF00558	9064	Window Came Fragment	Lead Alloy
SF00559	9064	Offcut	Lead Alloy
SF00560	9070	Nail	Wood Iron
SF00561	9043	Pin	Copper Alloy
SF00562	9043	Nails	Iron Wood
SF00563	9043	Fragment	Glass
SF00564	9043	Nails	Iron Wood
SF00565	9043	Nail fragments	Iron
SF00566	27036	Coffin Plate Fragment	Iron Wood
SF00567	27036	Coffin Plate Fragment	Iron Tin Wood
SF00568	27036	Coffin Plate Fragment	Iron Wood Tin
SF00569	27036	Coffin Plate Fragment	Iron Wood Tin
SF00570	27036	Coffin Plate Handle Grip	Iron Wood Tin
SF00571	27036	Coffin Plate Fragment	Iron Tin Wood
SF00572	27036	Nails Screws	Iron Wood
SF00573	27036	Coffin Handle Grip	Iron
SF00574	27036	Coffin Handle Grip plate fragments	Iron Tin wood
SF00575	27036	Coffin Handle Grip	Iron Tin Wood
SF00576	27036	Coffin Plate Fragments	Tin
SF00577	27036	Coffin Plate Nail	Tin Iron
SF00578	27036	Coffin plate Nail	Tin And Iron
SF00579	27036	Coffin Plate Fragment Nail	Iron Wood
SF00580	27036	Coffin plate	Tin And Iron
SF00581	27036	Coffin Plate Fragments	Tin And Iron
SF00582	27036	Coffin plate and nail Fragments	Iron Wood
SF00583	25006	Coffin Handle Grip	Iron
SF00584	25006	Coffin Handle	Iron
SF00585	25006	Coffin Handle Grip Plate	Iron
SF00586	25006	Nail Fragment	Wood Iron
SF00587	25006	Nails Coffin plate	Iron Wood
SF00588	25006	hinge pivot	Iron
SF00589	9065	Coffin Handle Grip Plate Fragments	Iron
SF00590	9065	Coffin Handle Grip	Iron
SF00591	9065	Coffin Handle grip plate fragments	Iron
SF00592	9065	Coffin Handle Grip fragment	Iron
SF00593	24011	Coffin Fitting	Tin And Iron
SF00594	24011	Coffin Fitting	Tin And Iron
SF00595	24011	Coffin Fitting	Tin And Iron

SF00596	24011	Coffin Fitting	Tin And Iron
SF00597	24011	Coffin Fitting	Tin And Iron
SF00598	24011	Coffin Fitting	Tin And Iron
SF00599	24011	Nails Tack	Iron Wood
SF00600	24011	Coffin plate Fragments	Tin And Iron
SF00601	24011	Fragments concretion	Iron
SF00602	24011	Fragment	Wood
SF00603	24011	Nail fragment	Iron Wood
SF00604	29025	Pins	Copper Alloy
SF00605	26105	Nail	Iron Wood
SF00606	9064	Window Glass Fragments	Glass
SF00607	9040	Window glass Fragment	Glass
SF00608	9040	Nail	Iron
SF00609	9040	strip Fragment	Iron
SF00610	27023	Window glass Fragment	Glass
SF00611	27023	Tobacco Pipe Fragment	Fired Clay
SF00612	27023	Nails	Iron
SF00613	27023	Object	Iron
SF00614	27023	Nail	Iron
SF00615	27023	Strip Nails	Lead Alloy Iron
SF00616	27023	Slag	Slag
SF00617	9044	Fragments	Glass
SF00618	9044	Pin	Copper Alloy
SF00619	9069	Nails	Iron
SF00620	9069	Nails	Iron Wood
SF00621	9069	Nail	Iron Wood
SF00622	9069	Nail	Iron Wood
SF00623	9050	Nails	Iron Wood
SF00624	9050	nail	Iron Wood
SF00625	9050	Nail	Iron And Wood
SF00626	9050	Nail	Iron Wood
SF00627	9050	Nail	Iron Wood
SF00628	9050	Nail	Iron
SF00629	9065	Coffin Handle Grip Plate fragments	Iron Wood
SF00630	9068	Offcut	Lead Alloy
SF00631	9068	Nail	Iron
SF00632	9068	Nail	Iron And Wood
SF00633	9068	Fragments Nail	Iron And Wood
SF00634	9051	Nail Fragments	Iron And Wood
SF00635	9051	Pin, Nail	Copper Alloy Iron Wood
SF00636	9051	Nail	Iron wood
SF00637	9051	Fragment	Glass
SF00638	9051	Fragments Nails	Iron Wood
SF00639	9051	Pin	Copper Alloy And Human Hair
SF00640	9070	Nails	Wood Iron
SF00641	9070	Nail	Iron And Wood
SF00642	26028	Coffin Motif Fragment	Metal Tin Lead Alloy
SF00643	9068	Nail	Iron And Wood
SF00644	27033	Nail	Iron And Wood
SF00645	28008	offcut	Lead Alloy
SF00646	28008	Pins	Copper Alloy
SF00647	28008	Nail Fragment	Iron And Wood

SF00648	28008	Nail	Iron
SF00649	12037	Pin Fragment	Copper Alloy
SF00650	11042	Slag	Slag Lead Alloy
SF00651	9082	Nail	Iron Wood
SF00652	9082	Nail	Iron Wood
SF00653	25008	Fragments	Glass
SF00654	25027	Nail	Iron
SF00655	25027	Pin	Copper Alloy
SF00656	30006	Tobacco Pipe Fragments	Fired Clay
SF00657	30006	Nails	Iron
SF00658	30006	fragment	Iron
SF00659	30006	Vessel Fragments	Glass
SF00660	30006	Nail Fragment	Iron
SF00661	28009	Sheet	Lead Alloy
SF00662	28009	Nail Tool	Iron
SF00663	26035	Nail	Iron
SF00664	28013	Nail	Iron
SF00665	28013	Window Came	Lead Alloy
SF00666	28013	Window Came Fragment	Lead Alloy
SF00667	28005	Nails	Iron
SF00668	26078	Fragment	Glass
SF00669	26078	Nail	Iron
SF00670	17006	Tobacco Pipe Fragment	Fired Clay
SF00671	17006	Fragments	Glass
SF00672	9072	Nail	Iron Wood
SF00673	28005	Tobacco Pipe Fragment	Fired Clay
SF00674	19004	Tobacco Pipe	Fired Clay
SF00675	26025	Sheet	Lead Alloy
SF00676	26025	Nails	Iron
SF00677	26025	Fragments	Glass
SF00678	26025	Nail Strip	Iron And Lead
SF00679	27026	Window came fragment	Lead Alloy
SF00680	27026	Nails	Iron
SF00681	25020	Nails	Iron
SF00682	25020	Fragments	Glass
SF00683	25020	Pin	Copper Alloy
SF00684	23037	Nails Slag	Iron And Slag
SF00685	25014	Nails	Iron
SF00686	25014	sheet fragment	Iron
SF00687	28006	Window Came Fragments	Lead Alloy
SF00688	26082	Nail	Iron
SF00689	9027	Nail	Iron
SF00690	24017	Offcut	Lead Alloy
SF00691	9011	Fragments	Glass
SF00692	9011	Nails	Iron
SF00693	7062	Manufacturing Debris	Fired Clay
SF00694	27026	Nail Head	Iron
SF00695	19004	Off-cuts	Lead Alloy
SF00696	19004	Nails	Iron
SF00697	28005	Pins	Copper Alloy
SF00698	28005	Spillage	Lead Alloy
SF00699	28005	Spillage	Lead Alloy
SF00700	28005	Nails	Iron
SF00701	7093	Slag Spillage	Slag Lead alloy

SF00702	27001	Tobacco Pipe Fragment	Fired Clay
SF00703	9065	Nails	Iron Wood
SF00704	9065	Nail	Iron Wood
SF00705	9065	Coffin Plate Fragments	Iron
SF00706	9065	Nails	Iron Wood
SF00707	27001	Nails	Iron
SF00708	27001	sheet	Lead Alloy
SF00709	27001	Vessel Fragment	Glass
SF00710	9050	concretion	iron
SF00711	25021	Coffin Handle Grips Plate Fragments	Iron Wood Tin
SF00712	25021	Coffin Handle Grips Plate Fragments	Iron Wood
SF00713	26075	Coffin Plate Fragment	Iron Tin
SF00714	26075	Nails	Iron Wood
SF00715	12007	Bracket Fragment	Iron Wood
SF00716	9062	Waste	Lead Alloy Fired Clay Slag
SF00717	25020	Tobacco Pipe Fragment	Fired Clay
SF00718	9070	Nail fragments	Iron Wood
SF00719	9082	Nail Fragments	Iron Wood
SF00720	29019	Nails	Iron Wood
SF00721	9019	Nail	Iron
SF00722	9019	Fragments	Glass
SF00723	9019	fragment	Lead Alloy
SF00724	26095	Window Glass Fragment Painted	Glass
SF00725	26072	Nails	Iron Bone
SF00726	26072	Window glass Fragment	Glass
SF00727	9072	Nail Fragments	Iron
SF00728	8031	Spillage	Lead Alloy
SF00729	3007	Nail Fragment	Iron
SF00730	3007	Pins	Copper Alloy
SF00731	3007	spillage Fragment	Lead Alloy
SF00732	7025	Fragments	Iron
SF00733	14029	Fragment	Iron
SF00734	1022	Nail Tacks	Copper Alloy Iron Wood
SF00735	1006	Window Came Fragments Offcuts	Lead Alloy
SF00736	0	Nail	Iron
SF00737	9043	Fragment	Glass
SF00738	9043	Nails Fitting	Iron
SF00739	27057	Nails	Iron
SF00740	27057	Strip Nail	Lead Alloy Iron
SF00741	12030	window glass Fragment	Glass
SF00742	10014	Fragment	Iron
SF00743	11050	Nail Fragment	Iron
SF00744	7023	Fragments	Glass
SF00745	7023	Nails	Iron
SF00746	7023	Slag	Slag
SF00747	7023	tobacco pipe fragment	fired clay
SF00748	6011	Spillage	Lead Alloy
SF00749	6011	Nail Came	Iron Lead Alloy
SF00750	7061	Mould Fragment	Fired Clay
SF00751	7061	Nails Hook Fragment	Iron Wood Fired Clay

SF00752	7061	Object Spillage	Copper Alloy
SF00753	7061	Fragments	Copper Alloy
SF00754	26026	Coffin Plate Grips Pinned Hinge Screws Nails	Iron Tin Copper Alloy
SF00755	24001	Vessel Fragments	Glass
SF00756	24001	Nails	Iron
SF00757	24001	Strip Nail Sheet	Lead Alloy Iron
SF00758	10003	Fragments	Glass
SF00759	10003	tobacco pipe fragment	fired clay
SF00760	10003	Nail	Iron
SF00761	28002	Fragment	Iron
SF00762	26034	Nails	Iron Wood
SF00763	9045	Nails	Iron Wood
SF00764	9045	Coffin Nails Upholstery Tacks	Copper Alloy Wood
SF00765	10029	fragment	Iron
SF00766	4025	Fragment	Lead Alloy
SF00767	12034	Nail	Iron
SF00768	7059	Fragment	Fired Clay
SF00769	7059	Nails	Iron
SF00770	7059	manufacturing debris	Copper Alloy
SF00771	9014	Nails	Iron
SF00772	25020	Strip	Lead Alloy
SF00773	23026	Nail And Sheet	Iron Lead Alloy
SF00774	23038	Slag	Slag
SF00775	23027	fragment	Iron
SF00776	27032	Nails Coffin Fitting Grip Plate fragments	Iron Tin Wood
SF00777	25021	Nails Coffin plate fragments	Iron Tin Wood
SF00778	11042	Fragments Spillage	Lead Alloy
SF00779	25006	Nails Coffin Plate Fragments	Iron Tin Wood
SF00780	26101	Coffin Handle plate	Iron Tin Wood
SF00781	26101	Nails	Iron Wood
SF00782	27018	Coffin Handles plate fragments	Wood Iron
SF00783	26101	Nails	Iron Wood
SF00784	27029	Coffin Handle plate fragments	Iron Wood
SF00785	27029	Nails Screws	Iron Wood
SF00786	25028	Coffin Handles Plate Fragments Tacks	Iron Wood
SF00787	25025	Nails	Iron Wood
SF00788	10003	Vessel	Stone
SF00789	26057	Rotary Quern Fragment	Stone
SF00790	18014	Rotary Quern Fragments	Stone
SF00791	12033	Nails	Iron Wood

12. CONSERVATION ASSESSMENT

By Julie Jones with contributions on the glass by Erica Paterson

12.1 Aims and Objectives

This report aims to meet the requirements of *Management of Archaeological Projects*, Phase 2 (MAP2; English Heritage 1991) to produce a stable site archive. This has involved X-radiography and an assessment of the condition, stability and packaging of the finds. Urgent first-aid treatments have been undertaken as required, to enable handling and safe storage of the material for the long term.

The potential of the assemblage for further analysis and research is also discussed (MAP2 Phase 3: Assessment). The condition of the various classes of material is summarised and indicators of unusual preservation are noted. There are recommendations for investigative conservation, for additional specialist support, and topics for further research are raised.

12.2 Procedures

The wet-packed finds were examined under binocular microscope, assessed, and brought to dry storage. A literature and internet search on the treatment of alabaster was undertaken before any work was carried out; no references could be found for treatment of damp excavated alabaster. Preliminary experiment with a range of resin solutions was carried out. (See YAT internal laboratory report for discussion of the alabaster conservation plan and IADB conservation work records for details of all treatments and for digital photographs of the finds before and after drying).

All copper alloy, iron, silver and tin finds were X-rayed using standard YAT procedures and equipment.

Finds were examined under a binocular microscope at X20 magnification. The material identification was checked and observations made on the condition and stability of the finds. Images of the painted medieval glass were examined briefly by Dr R. Marks of the Centre of Medieval Studies, York during a visit to study the alabaster. Remedial conservation treatments were carried out where appropriate in order to stabilise the material for long term storage. Assessment and treatment details were recorded in the Conservation Work Record area on the YAT Integrated Archaeological Database (IADB).

12.3 Quantification

766 of the 791 small finds were assessed and 62 X-ray plates produced. The number of objects in each material category can be found on IADB (note, some objects are composite, and listed under more than one material heading):

Other classes of finds (not seen)	1299
Architectural fragments (AF)	20
Skeletons (SK)	117
Bulk Finds (BF)	1162

12.4 Assessment of Condition

12.4.1 Metals

Iron

The iron was in fair to poor condition, heavily corroded and from well-aerated deposits. Active corrosion was noted on SF546, 588, 608, 609, 721, and 738, but this should not continue if dry storage is maintained. The coffin plates were more fragmentary than those from Beverley Minster, primarily because of poor preservation, but also due to later disturbance. Many of the funerary fittings may have surface coatings which are not visible (black paint, and tin, silver or gold plating). The iron corrosion has mineralised adjacent organic materials, wood in particular, although there were fewer textile remains than found at Beverley.

Copper Alloy

Copper alloy was in fair condition, with about 15% showing active corrosion and another 15% potentially active. Good dry storage should keep problems at bay.

Silver

SF42, a half penny, was in good condition, covered with black sulphide tarnish and some purple-grey halide corrosion, which should remain stable if it remains in dry storage away from sources of sulphur.

Tin and Lead

The stamped decorative soft white metal coffin plates are tin and many of the stamped iron plates are tin plated. Coffin plates are fragile, the iron is totally corroded and brittle, the pure

tin soft and easily bent and damaged, even by the weight of the iron handles; store flat and well-supported.

The Lead alloy was in fairly good condition, although 21% showed active corrosion. It is important to store this dry and away from paper or card. The surface of the gilt fragment SF19 is very fragile.

Thin sheet metal offcuts from SF343 and 757 are probably modern metal, certainly not lead alloy.

Slag

The slag was sent in desiccated storage boxes and bagged by SF number. There were a few fragments of possible iron slag (Sfs26, 47, 90, 91, 242, 243, 467, and 508) and some molten copper alloy casting debris (Sf484). But the majority of the assemblage was made up of irregularly-shaped lumps of once-molten lead alloy with white powdery corrosion and charcoal inclusions, or pale greenish-yellow glassy slag with red-lead trails and globules. The exterior surface of many fragments has areas of sand and brick-red lead corrosion or furnace lining. Avoid dust inhalation when examining these finds, since there is probably a high lead content.

12.4.2 Organic Materials

(The organic materials are discussed in a separate wood report (section 13) below)

12.4.3 Inorganic non-metals

Alabaster

Most of the 84 alabaster fragments (sent as 10 small finds from 8 contexts) were sent damp from site, and all had been stored in plastic bags in black airtight polythene Stewart boxes. The bags contained multiple fragments. One fragment (u/s) had previously been air-dried as a test piece. It became very white and powdery with a considerable deposit of dust and loose crystals in the container. When examined under the microscope this fragment appeared to be loosely aggregated crystals; it granulated when handled. The alabaster was all in very poor condition, granular and flaking; it required consolidation to allow further study. Each small find number was photographed as a group before any further drying or treatment was carried out. The finds which had been sent dry were markedly whiter and more powdery than those sent damp.

See the separate lab report for details of the development of the conservation plan and first aid treatment of the alabaster finds. Records and photographs for the treatment of each individual find are recorded on IADB.

Roughly a third of the fragments, when cleaned and examined under the microscope, were found to retain traces of red pigment. There were traces of additional colours: SFs40 and 46 had green, SFs39, 41 and 46 black, SF39 beige and SF40 white pigment. Sixteen fragments from SFs39, 40, 41, 46, and 49 were gilt, 3 of these with raised gesso dots. Seven fragments from SF39, 40 and 45 exhibited tool marks: SFs39J, 40A, and 46C had an incised circular shape, possibly from a drill. SFs39F and M, SFs40A and E, and SF45A had diagonal lines, possibly saw marks. SF45R is a lead plug with copper alloy (latten) wire for attaching the panel to a wooden framework as described in Cheetham (1984, 24) and it fit exactly the holes drilled in SFs45B and C. Three additional finds had similar holes (SFs39F and J, and 68C), but no further plugs were found.

Glass

A total of 118 glass small finds were assessed, several of them having multiple fragments under one small find number. The glass arrived in four separate batches; the first two batches in May and June 2004 and the remaining two in November 2004. The majority of glass from the first two batches (totalling 44 small finds) was sent wet, double-bagged with water in the inner bag. The bags smelled musty. Each fragment was rinsed in tap water, examined under binocular microscope, and assessed. SF48 and SF56 were small fragments, sent dry; these did not require any treatment. The glass from the second two batches, (totalling 74 small finds) arrived in November 2004) and was a mixture of wet-packed and dry glass, with approximately 80% being dry or slightly damp. In most cases they were double-bagged, even when dry. Depending on their condition each fragment was either swabbed with a cotton wool swab or a soft brush soaked in reverse-osmosis water, or dry-brushed if completely dry. The condition of the dry glass from the second two batches was assessed during soil removal. If it appeared to be robust and showed no signs of cracking or flaking it was re-bagged with no further treatment. If it was unstable and cracking or flaking was visible, consolidation treatment was carried there and then using Paraloid B72 solution in acetone, either by immersion or applied directly to the surface by brush for severely flaking fragments.

The condition of the glass varies from good to very poor, depending upon its composition. A small proportion either uncorroded is only lightly corroded, with very thin flaky iridescent surface layers having formed. A larger proportion of fragments have corroded more extensively, with thicker yellowish gold to brown altered surfaces having formed, obscuring

more of the original glass core. A significant proportion of the glass is heavily degraded medieval window glass with significant alteration of the glass to form dark brown to black surfaces. In most cases the original colour of the glass cannot be seen when the fragments are placed on a light box. The corrosion has entered well into the body of the glass in some cases, leaving only thin, eroded glass cores surviving if any. In some cases, freshly broken cross-sections allow one to examine the core and gauge the original colour of the glass, for example SF222.

Apart from a few modern uncorroded glass fragments, all the wet-packed glass was consolidated. A digital photograph was taken to record the glass under water on a 5mm grid before treatment. SFs35-44 were photographed individually and subsequent groups were photographed in batches. Most of the medieval window glass was heavily pitted on the exterior, indicating weathering when in situ in the window, before burial. An unusual white mineral network was noted on heavily pitted painted fragments, for example SFs72-3, probably relating to the composition of the glass. The veins could be seen when the fragments were wet, but was exaggerated on drying. The medieval painted glass fragments from the first batch although dark opaque and degraded, were in comparatively good condition and robust enough to test air-drying. SF35 and the painted fragment from SF44 exhibited micro-cracks and required consolidation. The remaining fragments from SF44 and SF36 were in poor condition and required solvent drying and consolidation. Treatment was carried out by immersion in increasingly higher concentrations of acetone/water mixtures using acetone to replace the water followed by consolidation in a solution of 10% Paraloid B72 in acetone. Some of the thin transparent window glass from SF71 showed feather-type corrosion along previous cracks. This thin glass was difficult to treat. The glass was photographed after treatment in the same batches as before treatment. See conservation records on IADB for full treatment details. In some cases of fragments were re-joined using HMG cellulose nitrate adhesives, where joins were obvious during assessment. This was especially helpful were painted designs could be reconstructed. After treatment, all glass was repacked in fresh, perforated and foam-filled bags and will now be stable for the long term.

Other

The remaining small-finds were pre-assessed by Nicky Rogers and selected fired clay mould and stone quern fragments were sent for conservation assessment. These were all well-packed, and although the mould fragments were worn and a bit friable, they should remain stable for the long term. 25 Tobacco pipe and modern finds were not seen.

12.5 Statement of Potential

The following observations were produced in isolation, purely based on the finds themselves, without consideration for the context which they came from.

12.5.1 The alabaster

The alabaster is without doubt an important and rare find, although in very poor condition. The fragments of this altarpiece include highly decorated architectural canopy and figural detail which suggest the subject is life of the Virgin (see Cheetham, 2003): SF41 is a painted and gilt fragment of four bearded bare-headed busts looking upwards to the viewer's left (probably a fragment from an Ascension panel) and SF 46, a painted draped lectern with open book and lily (from an Annunciation).

Some preliminary technical observations were made during cleaning and first aid treatment: see above for note of finds with pigment, gilding, fittings and tool marks. These have potential for further study and analysis. The assemblage would benefit from iconographic and stylistic study by an art historian.

12.5.2 The glass

The glass merits further study by a specialist in medieval window glass. The coloured and painted fragments and those with other technological details should be datable given further study. Several fragments of coloured glass were noted: Blue glass was recorded in the case of SF56, an oblong fragment from SF72 and one fragment from SF691. SF36 is green glass (translucent only when wet). SF528 is a group of tiny pink and blue glass beads. One fragment from SF222 has a red glass core visible at the broken cross-section. Two fragments from SF72, SF73, and one fragment from SF80 appeared red when the fibre-optic light was directed through them (back-lit); but this could result from the colour of the altered surface rather than true red glass or multi-layered ruby glass. Further analysis is recommended. Red-painted decoration was noted in approximately 24% of glass small finds. In all cases the paint is opaque red or reddish brown enamel. From the first batch, (SF35-78) linear decoration was noted on SF35, 37, one fragment from SF44, two fragments from SF72, and a leaf on SF73 and SF76. In subsequent batches the decoration appears to be mainly 'grisaille' style of a late 13th or 14th Century date, (Dr R. Marks, pers. comm.) A trefoil motif on a crosshatched background is visible in many cases, for example SF142, SF149, and SF150. In some cases a border design with a pattern of large circles on a solid painted background was noted, for example SF153, SF155 and SF390. Some fragments are very

large for example SF157 and SF158, the former with a double trefoil design on it. Grozing was noted on many fragments. In the first batch (SF35-78) the grozing is all from the exterior face, so that the interior face is largest. Further examination of subsequent batches would have to be carried out to see if this is the case in all the glass from this site. 'Thumb edges', indicating manufacture of glass using the cylinder process were noted on several fragments, for example SF72 (Newton and Davison 1989).

12.5.3 Indicators of preservation

Although the burial conditions were well aerated and resulted in heavy corrosion of the iron coffin fittings, adjacent organic material was often mineralised, and remains of coffin planks and a few textiles were preserved. The coffin fittings were more fragmentary than those seen previously from Beverley Minster (Johnson 2004). The fragmentary nature of the finds was compounded by the level of disturbance over the site.

12.5.4 Industrial activity

Non-ferrous metal globules could be seen in the corrosion of finds on many X-ray plates. This indicates a high temperature event, such as fire, or debris from continual repair and re-leading of windows, or from the lead-working on site. Non-ferrous globules were noted in finds from the following contexts: 1020, 2021, 3033, 5015, 6019, 7023, 7036, 9050, 9051, 9065, 9068, 9069, 9070, 10016, 13019, 14006, 14007, 16016, 16023, 18008, 18014, 19004, 19007, 21002, 23006, 23008, 24004, 24024, 24026, 25006, 26019, 26025, 26026, 26035, 26082, 27029, 30003, 30033, and 31037.

Much of the lead alloy assemblage was scrap (bent window came and offcuts) and spillage. Further evidence for Lead-working is found in the 'slag' from this site, much of which is pale-buff coloured and very heavy. This does not look like the lead smelting slag or lead melting dross pictured in EH, 2001, p18-19, and I am not familiar with lead-working processes and procedures. As there were at least 4 lead-working hearths recorded it would be helpful to refer this material to an archaeometallurgist. The composition of the slag might throw light on the processes carried out.

Many of the Copper alloy fragments appear to be scrap or industrial waste, e.g. SF88, 112, 126, 357, 464, 484, 486, 752, 753, and 770. SF753 contained an incised burnt sheet fragment which might be worth further study.

Some of the mould fragments were examined: SF257, 466 and 693 have traces of copper alloy, green staining, on the mould face; the body of the fragments was black and highly tempered with plant material, perhaps straw, which had carbonised in the firing. An article discussing the bell-mould and bell-pit from Norton Priory (Johnson 1981) notes that the core of a bell mould was clay and chopped straw, and the outer cope mould fragments consisted of clay sand, horse dung and horsehair. This is further evidence to support the suggestion of bell-casting pit in the centre of the tower at Skipwith.

12.5.5 Coffin fittings

This assemblage might be of interest to researchers of 18th-19th century burial practice. But the poor condition of the coffin plates means that there is little information to be gained by further conservation. The coffin fittings can provide useful dating evidence. This assemblage includes:

Coffin Plates

Eighty-one small finds contained fragments of coffin plates and/or grips.
The overwhelming majority was stamped iron plates with white metal coating. These 'tin-dipped' iron plates first appeared at the end of the17th century (Litten 1991).

Pewter and pure tin coffin plates were introduced at the end of the 18th (Litten 1991). Six small, tin coffin plates with stamped cherub motifs and remains of black paint, perhaps an infant burial, were found in Context 24011 (SF593-598) and another in context 24007, SF184 with fragments in SF185. SF283 contains fragments of perhaps pewter, painted with black paint.

Inscriptions

SF268 from Context 28027 produced two fragments of stamped letters MO and PE which were visible only on X-ray. This probably represents the full inscription MORIOR IN SPE, pictured in a trade catalogue from 1783 (see Litten 1991).

SF642 was found adhering to the skull of SK55. The metal contained the letters RG. Dr Julian Litten confirmed that the fragments are part of the decorative coffin furniture which have fallen onto the skull as the coffin decayed. The letters 'RG' are from a scroll inscription which would have read SURGE AD JUDICUM ('Arise and be Judged'). The 'Angel and Flowers' designs containing this inscription appear to date from the late 1700s and early 1800s. This fragment is most likely to be stamped tin or lead alloy rather than plated iron.

Coffin Grips

Forty-five small finds included one or more grips. There are three main styles:

1. Heavy moulded cast iron grips with cherubs: SF346, 439, SF455 - which had six of them, SF456, SF583-585, and SF711 and 712 had 2 each. There is a mention of this style of handles in a catalogue of 1838 (Litten 1991),

2. Thin plated plain curved grips: SF225, 272, 281, 358, 411 (x3), 413, 424, 629, or with expanded centres: SF 267 and 539. Small plain handles: SF184, SF570, and SF573-5 from Context 27036 were from the post-medieval burial of a juvenile. This was confirmed by the results of the osteological study.

3. Angular or geometric grips with squared corners, thickened at the centre: SF589-92, and SF629.

Coffin Lace

A thin decorative trim in stamped tin, some areas painted black, survives in SF576-578 and SF600. This was an alternative to upholstery nails (see Litten 1991). The acanthus and boss fragments in SF185 are also coffin lace, but other fragments from this find probably relate to the coffin plate SF184.

Upholstery nails

The 24 domed copper alloy nails from this site are all corroded but areas of bright metal are visible on many, perhaps suggesting gilt surfaces. They were found in Contexts 1022, 9045, 30015 and 30032. These nails indicate velvet–covered coffins. Black-headed nails were used in the 17th century (Litten 1991), and white-headed and gilt-headed nails in the 18th century (Litten 1991).

Screws

Seventeen screws were found, from contexts 23014, 26026, 26029, 26034, 26037, 27029, 27036, 28025, 28027, 28035, 30013, 30016 and 31008. They provide some dating evidence. The lathe cutting machine was developed by Clement in 1818 and standard UK screw fittings developed by Whitworth in 1841. An advertisement for a studded coffin with patent screw fittings dated 1810 (see Litten 1991), shows that screws were used not only for strength of construction but also to prevent anatomists from grave robbing.

Hinges and brackets

Heavy hinges (SF 17, 465, 480, and 754) and corner brackets (SF229, 240, 289, 434, and 715) were found.

12.5.6 Pins

44 Pins with wound wire heads were revealed by X-radiography. Most were made from drawn wire and had a white metal coating.

12.5.7 Coins

Two coins were provisionally dated by features observed on X-ray and at x20:
SF42 from context 14026 is one half of a silver long cross penny, probably Henry III, 1247-72. Its reverse legend is WILLEM (moneyer), but this name appears at several mints during this period.

SF82 from context 8012 is a German token (Nuremberg) 16th-17th century, (Pirie 1986).

Both coins have been sent to the numismatist Craig Barclay for confirmation.

12.5.8 Other finds

There were also a few iron finds which were not coffin fittings or nails. These included: wall hooks (SFs474, 497, and 536), folded and bent lead strips perforated by iron nails (SFs192, 249, 299, 385, 409, 615, 678, 708, 740, 757, 772 and 773), a barrel padlock with shackle (SFs165-6), and an arrowhead (SF5).

A copper alloy mount (SF485) and gilt lead alloy tracery fragment (SF19) might also have some research potential and would benefit from further cleaning and consolidation.

Finds thought to be fairly modern include many fragments of c.4mm thick iron plate slightly curved: SF280, 363, 367, 371, 314, 375, 380, 381, 491, 533, 534, 686, and 692. Thin sheet metal off-cuts from SF343 and 757 are probably modern metal, certainly not lead alloy.

12.6 Recommendations

12.6.1 Further Investigative Conservation

Further work has been recommended for the following metal small finds: SF5 arrowhead, SF19 gilt lead alloy tracery, and the shackle with barrel padlock SF165-6; and, if there is sufficient research interest: SF194, 294, 357, 475, 485, 492, 500, 662, 753, and 754.

Joins were observed between SF17 and 18, SF60 and 61, SF346 and 348, and SF455 and 457. These finds could be packed in one bag with the lower small find number, and the higher number deleted; if required, the fragments could be stuck together.

Further cosmetic work or physical support may be required if any finds are selected for photography, illustration or display.

12.6.2 Analysis and Specialist Support

Suggestions for further analysis and specialist support have been made. If required for research, this should be arranged after the investigative conservation has been completed. Analysis is not included in the resource requirements in Section 12.7.

Alabaster

A programme of research should be initiated involving appropriate specialists. Tasks as follows:

1. Refer alabaster to a polychrome sculpture specialist for study, reconstruction and specification of further restoration and analysis, e.g. pigment analysis. Pigment samples (red, green, black and gold) could be studied through thin section or analysed through X-Ray diffraction or SEM, although this would involve removal of small samples.

2. XRF: Non-destructive analysis of the copper alloy wire from lead plug SF45R would allow comparison with the latten wire analysed (Cheetham 1984, 24).

3. Source of stone: alabaster samples could be referred to Bradford University for characterisation through XRF, neutron activation (NA) or atomic absorption analysis (Warren 1979), although Jane McComish, Richard Marks and P. Lankester have said that recent analytical work on alabaster has not produced very good results. It is therefore felt that this is probably not an avenue to follow up at present.

Wood

Remains were noted on 184 iron small finds (coffin nails, fittings or screws), but preservation is not extensive, and unless species ids are required for these 18th and 19th century coffins they do not need to be referred to a specialist. Many of the nails had evidence of two planks running at right angles, so it would be possible to measure the thickness of planks used.

Textiles

Remains (fragmentary) were found on only six finds: SF250, 349, 481, 492, 520 and 526. There were three layers of two different textiles on SF520 (2 fine and 1 coarse, all tabby). A layer of thicker weave which resembled fine basketry, perhaps, was noted on SF492. Textile (coarse tabby) was also found on the humerus of SK88, see photo on IADB.

Bone

There was bone noted on 10 finds: SF30, 267, 268, 415, 421, 441, 513, 525, 720, and 725. These were usually only small fragments, and perhaps do not need to be referred to the human bone specialist.

Environmental evidence

Insect remains were noted on SF777 (Context 25021), SF779 (Context 25006), and SF791 (Context 12033). Some very small shells (perhaps mollusc) were seen on SF569, 581 (both Context 27036), and SF596 from Context 24011. Plant remains were found on SF5 from Context 2025, and SF96 from Context 7044. If these contexts are important for further study of the site refer the finds to an appropriate environmental specialist.

Chemical Analysis

XRF could be carried out if it is important to know the exact composition of the non-ferrous coffin plates or finishes on coffin plates, handles, tacks and copper alloy pins (Litten 1991).

Black paint was noted, and could be analysed if required, on coffin plates SF184, 268, 283, 446, 576-578, and 593-600.

Window Glass

The medieval window glass would merit further study by a glass specialist. The coloured and painted fragments and those with other technological details should be datable given further study.

12.6.3 Storage

Packaging

The finds have been packaged appropriately for long term storage. All materials used are archive stable and acid-free. Plastic bags have been pierced to allow airflow within microclimates, reducing the risk of condensation and mould growth. 'Jiffy', (polythene) foam inserts have been added to the bags to provide additional support and protect against mechanical damage during transit. Any replacement of packaging materials should be carried out in consultation with a conservator. Avoid paper or card labels in association with

metals, especially lead and lead alloys. Acid vapours will cause active corrosion, (Cronyn 1990, 207).

Storage Environment

Metals and slag are packed in polythene 'Stewart' boxes with silica gel to provide a dry microclimates of less than 15% relative humidity (RH) which will halt any further corrosion, (Knight 1990). Each standard oblong box should contain at least 6 x100g bags of silica gel and a humidity indicator strip. It is necessary to monitor the indicator strips regularly; if any part of the strip turns pink the gel will need to be regenerated.

The glass is currently undergoing stabilisation and will be re-packed in foam-filled grip-top bags and cardboard boxes once treatment is completed. Stable temperatures and Relative humidity between 50 and 55% RH are recommended for long term storage.

13. WOOD

By Steve Allen

13.1 Objectives

This report aims to meet the requirements of *Management of Archaeological Projects*, Phase 3, Assessment of Potential for Analysis (MAP2; English Heritage 1991). The work carried out has been the cleaning and examination of the samples submitted. This report is an identification of the samples where possible and an assessment of their condition. An evaluation of their potential for further investigation is included. No analysis of the assemblage has yet been undertaken.

13.2 Procedures

Most of the objects were delivered to the Wet Wood Laboratory wet packed. Each was double bagged in self seal plastic bags and placed in a black Stewart box. Each sample was in turn removed from its packaging, cleaned under cold running water, a section cut from each for examination where possible and then returned to its packaging. The exception was the wood classed as Sf489, coffin fragments with copper alloy studs. This had been delivered to the Wet Wood Laboratory in a single unsealed open plastic bag containing multiple fragments of wood in a sandy soil matrix.

13.3 Condition

One piece of wood (BF904) had been partially preserved by waterlogging and the solution from the associated copper alloy studs, prohibiting degradation of the timber. The remaining wood (BF903, 905-908), had been dried out in the ground and was in the process of disintegration. The coffin fragments (Sf 489) had been preserved by waterlogging but had subsequently disintegrated. Some of the larger pieces with copper alloy studs retained some cohesion, but the microscopic wood structure has collapsed, making species identification impossible.

13.4 Recommendations

The material is listed in CIFR, where all species identifications follow Schweingruber (1982). None of the pieces have any important features which would merit their retention. No further recording is required and it is recommended that all the BF wood is discarded. The SF coffin fragments need the removal of the soil matrix, cleaning,

consolidation and stabilisation to recover any information about the spacing, location and any patterning of the studs. It should be recognised however that the wood is practically beyond saving.

The research potential of the wood is very limited, merely allowing an identification of what species occurred in a particular context. More information may be gained from the small find Sf489 but this requires remedial treatment before any significant study can be undertaken.

14. OSTEOLOGICAL ANALYSIS OF HUMAN BONE

By Katie Tucker

14.1 Introduction

The remains of 102 articulated individuals and a large amount of disarticulated bone (including some charnel deposits that had been allocated skeleton numbers) were analysed. Thirty-two of the articulated individuals came from Trench 1 (internal to the tower), and 70 were from Trench 2 (external to the tower). For the purposes of this report, the burials are divided into three broad dating groups: post-medieval; medieval; and Saxon, although this is subject to change pending further research.

14.2 Preservation

As the trenches only investigated a relatively small area of the cemetery, few complete individuals were recovered. The majority of the burials encountered extended beyond the limits of the trenches and could not be completely exposed, while in other cases burials were truncated by later internments and other features. In the majority of cases, the preservation of the bone was good to excellent, although there were some recent post-mortem breaks, and the collection of the small bones of the skeleton was generally good.

14.3 Methodology

As the human bone was to be re-interred soon after analysis, all the articulated individuals were examined in detail after lifting and cleaning by YAT. An inventory of skeletal elements was compiled, and age and sex were attributed to each where possible. Metrical and non-metric data were collected, and pathological changes were recorded and photographed where appropriate. The disarticulated material was rapidly scanned, an inventory of skeletal elements was made and any instances of unusual pathology were described and photographed.

An assessment of age for the adult individuals was determined from, where possible, the changes to the pubic symphysis (Brooks and Suchey 1990), and the auricular surface of the ilium (Buikstra and Ubelaker 1994). Immature skeletons were aged from dental development and long bone length and epiphyseal fusion (Scheuer and Black 2000). The age of immature skeletons can be determined with a much greater degree of accuracy than that of adults, due to the fact that the growth of the bones and development of the teeth follow a relatively

predictable course, up to the time when the final epiphyseal fusion takes place, around the age of 25. However, the degeneration of the pelvis of the adult skeleton depends on the sex, health and lifestyle of each individual, and tends to vary to a greater extent with increasing age. Therefore, the age of adult skeletons can only be assessed to within five to ten years, and cannot be reliably determined beyond 46+ years.

The age of the individuals was divided into a number of categories, starting with foetus (up to 40 weeks *in utero*), neonate (around the time of birth), infant (newborn to one year), juvenile (1-12 years), adolescent (13-18 years), young adult (19-25 years), young middle adult (26-35 years), old middle adult (36-45 years) and mature adult (46+ years). There may be overlaps between categories, or a broad category, such as adult, may be used where insufficient evidence was present to age an individual more accurately.

The sex of the adult individuals was determined from, where possible, the assessment of several sexually dimorphic features of the pelvis and skull (as given in Buikstra and Ubelaker 1994). A five sexes classification (female, ?female, undeterminable, ?male, male) was used. Sex cannot easily be determined for immature individuals, as the skeleton only becomes truly sexually dimorphic during puberty. There have been several methods devised to try and sex the immature skeleton (for example, Weaver 1980; Schutkowski 1993; Molleson et al. 1998), but, during this analysis, no attempt was made to sex immature individuals.

The statures of the adult individuals were calculated, where possible, from long bone lengths, which were placed into the regression formulae developed by Trotter (1970). The cranial index, which records the shape of the head, was also calculated, where possible, as given in Brothwell (1981).

The dentition, where it could be analysed, is recorded as follows (permanent and deciduous dentition respectively):

Upper right	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	upper left
Lower right	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	lower left

Upper right	51	52	53	54	55	56	57	58	59	60	upper left
Lower right	70	69	68	67	66	65	64	63	62	61	lower left

/	tooth lost post-mortem
X	tooth lost ante-mortem
---	jaw and teeth not present
np	tooth not present
c	caries in tooth
a	abscess
e	tooth erupting
u	tooth unerupted

14.4 Catalogue of burials

The preservation, completeness, age, sex, stature and cranial index of each individual analysed, as well as any non-metric traits and pathologies observed, are catalogued in a separate document archived with the site information. The information is summarised below.

Table 9 Summary table of all skeletons

SK NO.	CONTEXT NO.	AGE	SEX	NON-METRIC TRAITS	PATHOLOGY	DENTITION	STATURE (M)	CRANIAL INDEX
1	13039, 14043	young middle adult	m	parietal foramen, mastoid foramen exsutural (left)	eh, 6 lumbar vertebrae, sacralisation, transitional vertebrae, lytic foci, muscle markings, sharp force cranial trauma	yes	1.79	-
2	5030	neonate	-	-	-	no	-	-
3	5027, 8045	infant	-	-	scurvy or extensive nspi, cranial cysts?	yes	-	-
4	13046, 14040	old middle adult	f	parietal foramen (left), mastoid foramen exsutural (left), shovel shaped incisors	calculus, caries, periodontal disease, eh, dental crowding, djd, sinusitis, lytic foci	yes	1.55	-
5	16029	young adult	m	transverse foramen bipartite (left)	calculus, eh, early dish?, sn, 6 lumbar and 11 thoracic vertebrae, transitional vertebrae, muscle markings	yes	1.75	73.8
6	6008, 7019	old middle adult	m	coronal wormians, lambdoid wormians (right), parietal foramen, parietal notch bones, mastoid foramen exsutural, posterior atlas bridge (left), transverse foramen bipartite (left)	calculus, caries, periodontal disease, oa, djd, sn, vertebral osteochondrosis, vertebral wedging, 6 lumbar vertebrae, transitional vertebrae, os acromiale, lytic foci, nspi, bowing of lower limbs, fusion of foot phalanges, muscle markings	yes	1.64	77.4

7	6039	old middle adult	?	distal septal aperture (right)	muscle markings	no	1.76	-
8	8042, 11021	adult	-	-	oa, djd, lytic foci	no	1.72	-
9	7065, 14037	old middle adult	m	lambdoid wormians, parietal foramen (left), mastoid foramen exsutural (left)	calculus, caries, abscesses, periodontal disease, djd, sn, lytic foci, clavicular trauma, perforation in sternal body, muscle markings	yes	1.76	-
10	30015, 31024	old middle adult	?	ossicle at lambda, lambdoid wormians (right), parietal foramen	calculus, caries, abscesses, periodontal disease, eh, oa, djd, nspi	yes	1.53	73.8
11	30021	juvenile	-	-	-	no	-	-
12	30012, 31020	juvenile	-	-	exostosis	no	-	-
13	1016	adult	-	-	oa, djd, lytic foci, muscle markings	no	-	-
14	1017	juvenile	-	-	abnormal porosity	no	-	-
15	1018	adult	? m	lambdoid wormians, parietal foramen (right)	calculus, caries, abscess, periodontal disease, cranial porosity	yes	-	-
16	1019	young adult	m	-	-	no	1.64	-
17	1020	adult	-	-	djd	no	-	-
18	1021	adult	-	-	rickets?	no	1.68	-
19	30026	foetal	-	-	-	no	-	-
20	30028	juvenile	-	-	nspi, abnormal porosity	no	-	-
21	30033	adult	m	parietal foramen (right), transverse foramen bipartite	calculus, caries, impacted third molar, djd, sn, scheuermann's disease?, transitional vertebrae, sternal fracture, nspi, muscle markings	yes	1.76	73.5
23	29026, 30039	mature adult	f	tibial squatting facet	oa, pulmonary tb	no	1.63	-
26	30048	juvenile	-	-	abnormal porosity	no	-	-
28	30055	middle/mature adult	f	-	oa, djd, transitional vertebrae, flattened tibia, nspi, muscle markings	no	1.60	-
29	30058, 31046	old middle adult	m	ossicle at lambda, lambdoid wormians, parietal foramen, double	calculus, periodontal disease, eh, antemortem tooth chipping, toothpick use?, oa, djd, sn, vertebral compression fracture?, cribra orbitalia, sinusitis, bent tibia,	yes	1.66	-

				superior atlas facets (right), posterior atlas bridge (left)	exostosis, nspi, perforation of sternal body, os acromiale, hamate fracture?, lytic foci, muscle markings			
30	30059	adult	-	-	djd, muscle markings	no	1.72	-
31	28016	neonate	-	-	nspi?	yes	-	-
32	30065, 31037	old middle adult	f	transverse foramen bipartite	calculus, caries, abscess with sinusitis, periodontal disease, antemortem tooth chipping, oa, djd, 6 lumbar and 11 thoracic vertebrae, sacralisation, unfused neural arch, button osteoma, ankylosis of manubrium and sternum, muscle markings	yes	1.63	-
33	30061	mature adult	m	-	djd, as?	no	-	-
34	18032, 19022	adult	m	-	calculus, periodontal disease, eh, oa, healed cranial trauma?	yes	-	73.0
35	24014	juvenile	-	-	-	no	-	-
36	24019	adult	-	tibial squatting facet	muscle markings	no	1.69	-
37	24022	adult	-	-	lytic foci, nspi, muscle markings	no	-	-
38	24024	young adult	f	distal septal aperture (left)	spina bifida, flexion of finger?, pressure erosion	no	1.61	-
39	28021	foetal	-	-	-	no	-	-
40	28026	young middle adult	? m	ossicle at lambda, lambdoid wormians, parietal foramen (right), mastoid foramen exsutural (right)	calculus, caries, periodontal disease, eh, oa, djd, 6 lumbar and 11 thoracic vertebrae, sacralisation, fusion of c2 and 3, lytic foci, cranial and sternal asymmetry, clavicular fracture, muscle markings	yes	1.67	71.4
41	28031, 29029	young adult	? m	lambdoid wormians (left), mastoid foramen exsutural (left), double superior atlas facets	calculus, djd, sn, spina bifida, cranial porosity, cranial cyst/benign tumour?, muscle markings	yes	1.76	-
42	28034	adult	-	-	rickets?, muscle markings	no	1.75	-
43	28037, 29021	old middle adult	f	lambdoid wormians (left), parietal foramen, tibial	oa, djd, sn, osgood-schlatter's disease?, muscle markings	no	1.67	-

				squatting facet (left)				
44	28041	juvenile	-	-	muscle markings	no	-	-
45	28044	juvenile	-	-	-	no	-	-
46	22025	juvenile	-	-	cranial porosity	yes	-	-
47	22020	infant	-	-	abnormal porosity	no	-	-
49	28049	old middle adult	? m	-	djd, muscle markings	no	1.71	-
50	26018	juvenile	-	-	new bone growth	no	-	-
51	31035	young middle adult	?	parietal foramen, fronto-temporal articulation	calculus, periodontal disease, abscesses, eh, antemortem tooth chipping, djd	yes	-	72.8
52	31031	adult	m	infra-orbital foramen (left), mastoid foramen exsutural, transverse foramen bipartite (right)	calculus, caries, abscesses, periodontal disease, antemortem tooth chipping, oa, djd, lytic foci, muscle markings	yes	1.73	-
53	18019	young middle adult	f	tibial squatting facet	chronic subluxation of the hip, exostosis	no	1.61	-
54	20015	neonate	-	-	-	no	-	-
55	26028, 27019	old middle/mature adult	m	ossicle at lambda, lambdoid wormians, infra-orbital foramen (left), parietal foramen (right), shovel shaped incisors	calculus, abscesses, periodontal disease, eh, broken tooth, tooth fusion?, oa, djd, sn, 6 lumbar vertebrae, sacrum with 3 segments, fusion of c2 and 3, fusion of foot phalanges, bent femorae, lytic foci, muscle trauma?, spinous process and rib fracture, pulmonary tb, nspi, muscle markings	yes	1.75	71.4
56	26031	juvenile	-	-	-	yes	-	-
57	25022, 26039	young middle adult	m	vastus notch	djd, sn, transitional vertebrae, pulmonary tb, muscle markings	no	1.82	-
59	26044, 26103	old middle adult	f	metopism, sagittal wormians, ossicle at lambda, lambdoid wormians, parietal foramen (left), parietal notch bones (right), transverse	calculus, caries, periodontal disease, eh, hyperplastic band, antemortem tooth chipping, djd	yes	1.59	79.8

				foramen bipartite, shovel shaped incisors				
60	23020	adult	-	tibial squatting facet	djd, flattened tibia, muscle markings	no	1.77	-
61	21011	neonate	-	-	nspi?	yes	-	-
64	29032	adult	-	tibial squatting facet (right), vastus notch	oa, finger flexion, djd, exostosis, bent fibula, muscle markings	no	1.59	-
65	26048	adult	-	-	rickets?, muscle markings	no	1.65	-
66	26051, 26079	adolescent	-	-	lytic foci, sn, abnormal porosity	no	1.56	-
67	26054	adult	-	-	muscle markings	no	-	-
68	26058, 26087, 27075	adult	-	-	djd, nspi, lytic foci, anomalous articulations, muscle markings	no	1.73	-
69	25047, 26060	juvenile	-	-	calculus, antemortem tooth chipping, dental crowding, abnormal porosity, muscle markings	yes	-	-
70	25029, 26077	adult	-	tibial squatting facet	djd, nspi, muscle markings	no	1.72	-
72	26081	adult	-	-	oa, osteoporosis?	no	-	-
73	26083	adult	-	-	djd, lytic foci, muscle markings	no	-	-
74	26093	adult	-	-	muscle markings	no	-	-
75	26096	adolescent	-	-	nspi	no	1.69	-
76	23024	juvenile	-	-	scurvy?	yes	-	-
79	25025	juvenile	-	-	-	no	-	-
80	25037	adult	-	-	-	no	-	-
81	25041	adult	-	-	-	no	1.80	-
84	26099	juvenile	-	-	rickets/scurvy?, sinusitis	yes	-	-
86	26105	adolescent	-	-	fusion of foot phalanges	no	-	-
88	27027	adolescent	?m	lambdoid wormians (right), parietal foramen (right), mastoid foramen exsutural, fronto-temporal articulation (left), transverse foramen	calculus, caries, abscess with infection and periodontal disease, sn, muscle markings	yes	1.71	74.6

				bipartite, shovel shaped incisors				
89	27024	young adult	m	lambdoid wormians (left), parietal notch bones (left), posterior atlas bridge (right), transverse foramen bipartite, shovel shaped incisors	calculus, caries, periodontal disease, eh, sn, 6 lumbar vertebrae, transitional vertebrae, pulmonary and spinal tb, muscle markings	yes	1.82	71.9
91	27034	juvenile	-	-	-	no	-	-
92	27038	infant	-	-	scurvy, rickets?	yes	-	-
93	27043	adult	-	tibial squatting facet	nspi	no	1.64	-
94	27046	adult	-	tibial squatting facet (right)	flattened fibula, muscle markings	no	1.68	-
95	27051	adult	-	-	rib fracture and associated infection	no	-	-
96	27054	neonate	-	-	-	no	-	-
97	27058	juvenile	-	-	rickets	no	-	-
98	27060	adult	-	-	oa, lytic foci, fusion of foot phalanges	no	-	-
99	27067	old middle/mature adult	m	-	djd, sn	no	-	-
100	27070	adolescent	-	-	lytic foci	no	-	-
101	9084	adult	f	mastoid foramen exsutural (right)	calculus, caries, periodontal disease, toothpick use?, djd, rib fracture	yes	-	-
102	9080	adult	-	-	lytic foci	no	1.83	-
103	9077	adult	-	-	oa	no	-	-
104	9073	mature adult	m	sagittal wormians, lambdoid wormians, parietal foramen, epiteric bones, double superior atlas facets (right), transverse foramen	caries, abscesses, periodontal disease, oa, djd, vertebral compression fracture?, kyphosis, nspi, osteomylitis, rib fractures, os acromiale, short humerus and femur, thickened mandible and palate, muscle markings	yes	1.63 (humerus), 1.70 (radius)	73.7

				bipartite				
105	9070	old middle adult	f	ossicle at lambda, lambdoid wormians, epiteric bones, parietal notch bones (right), tibial squatting facet (right)	periodontal disease, oa, djd, sn, herniation of intervertebral disc?, fusion of capitate and hamate, nspi, bent humeri, unusual facial appearance	yes	1.56	73.2
106	9066	young middle adult	? m	lambdoid wormians (left), mastoid foramen exsutural (left), distal septal aperture, transverse foramen bipartite	calculus, caries, periodontal disease, eh, oa, djd, sn, scoliosis, 6 lumbar and 11 thoracic vertebrae, transitional vertebrae, lytic foci, exostosis, cranial porosity, angulated sacrum, hip dislocation, atrophy, rickets?, nspi	yes	1.89	77.8
107	9051	juvenile	-	-	scurvy and rickets?, hydrocephalus?	yes	-	-
108	9046	old middle/mature adult	? m	infra-orbital foramen, parietal foramen (left), double superior atlas facets (left)	calculus, caries, abscess, periodontal disease, pipe smoking?, djd, sn, button osteoma, nspi, rickets?, spinous process and rib fracture, angulated mc4, muscle markings	yes	1.79	75.0
109	27081	adult	-	tibial squatting facet (left)	-	no	-	-
110	12038	old middle/mature adult	m	vastus notch	calculus, caries, supernumerary tooth, periodontal disease, dental crowding, antemortem tooth chipping, oa, djd, periostitis, muscle markings	yes	1.63	-
111	12041	adolescent	-	-	calculus, eh, abnormal porosity, muscle markings	yes	-	-
112	12031	adult	m	mastoid foramen exsutural	calculus, caries, antemortem tooth chipping, djd, bent humerus, fusion of hand phalanges	yes	1.75	-
113	12056	juvenile	-	shovel shaped incisors	calculus, caries, periodontal disease, scurvy, sinusitis	yes	-	-
114	12047	mature adult	f	-	oa, os acromiale	no	1.53	-
115	1025	old	f	-	djd, fusion of 2 thoracic	no	1.66	-

		middle adult			vertebrae, lytic foci, muscle markings			
116	1026	adult	-	-	lytic foci	no	-	-
117	1027	neonate	-	-	-	no	-	-
118	1028	juvenile	-	-	pulmonary tb	no	-	-

DJD = degenerative joint disease OA = osteoarthritis TB = tuberculosis SN = Schmorl's Nodes NSPI = non specific infection

EH = enamel hypoplasia

14.5 Discussion

Although the individuals examined in this report are only a small sample of the total cemetery population, and the intercut and overlying of burials means that there are many different phases of burial, they can be divided into three broad categories (post-medieval; medieval; and Saxon) and some general observations concerning these three groups of burials can be made.

The observations are based on the initial phasing of the site, not the more detailed phasing incorporated into Section 5 (above).

Of the 102 articulated individuals, 33 belong to the post-medieval period, 49 to the medieval period, and 16 to the Saxon period. In addition, there are three individuals who could belong to either the medieval or Saxon period, and one who is either medieval or post-medieval in date. For the purposes of this report, these four individuals will be placed into the medieval group, bringing the number of individuals in that group to 53. This will not affect the conclusions of the discussion, which is only intended as a preliminary report on the human remains, and is subject to changes in dating and interpretation pending further research and analysis.

The age distribution of the individuals from the three groups are given in Table 10, below. More specific ages have been given in the text of the catalogue of burials and in the summary table, but they have been simplified for this table.

Table 10 Age distribution of burials

	POST-MEDIEVAL	MEDIEVAL	SAXON
foetal	1	1	
neonate	2	4	
infant		3	
juvenile	7	11	2
adolescent	1	5	
Young adult	2	2	1
middle adult	8	3	7
middle/mature adult	3	2	
mature adult		3	1
adult	9	19	5
total	33	53	16

In a normal cemetery population, one would expect a higher mortality rate, and therefore a higher number of burials, in infancy and among the elderly. It can be seen that there are both immature and older adult individuals present in both the medieval and post-medieval groups, although the peak in deaths seems to occur in the juvenile age group rather than earlier in life. There are also two juveniles present in the Saxon group but no younger individuals. In the medieval and later periods, this may reflect a rite which did not accord burial to very young individuals in close proximity to the church, although there are some individuals who are being buried in this area. As the area excavated only represents a small proportion of the total area of the cemetery, young individuals were presumably being buried in other areas of the cemetery, and the presence of some young individuals from these periods certainly indicate that all ages were being accorded burial in the cemetery. The lack of very young individuals from the Saxon period may also just be a result of the small area that was excavated, and heavy truncation by later burial activity potentially removing these burials, rather than indicating that these individuals were not being accorded burial in the cemetery. In addition, two of the skeletons that could not be dated better than Saxon/medieval represented very young individuals, and if these were placed into the Saxon rather than medieval group, this would change the age distribution of the burials and very young individuals would be represented in all three groups. For the older adults, it can be seen that more individuals were dying in the middle adult age range rather than as mature adults in the post-medieval and Saxon periods, with a more even distribution of age at death in the medieval period. This may suggest a longer life expectancy during the medieval period, compared to the other two groups, although this result is also likely to be affected by the small area of excavation and the large number of individuals who could only be aged as "adult".

Of the 39 individuals for whom an assessment of sex could be made, both males and females were identified. The details of the age and sex of the individuals within the three groups are given in Table 11, below.

Table 11 Sex composition of burials

	POST-MEDIEVAL					MEDIEVAL					SAXON				
	f	?f	?	?m	m	F	?f	?	?m	m	f	?f	?	?m	m
Adolescent				1											
Young adult					2	1			1						1
Middle adult	2		1	2	4	2		1			3		1	1	1
middle/mature adult				1	2	1				1					
mature adult						2				1					1
Adult				1	2					1	1				1
Total	2		1	5	10	6		1	1	3	4		1	1	4

It can be seen from this table that there are both male and female individuals represented in all three groups. There are equal numbers of definite males and females in the earlier group, while females outnumber males in the medieval group, with the reverse being the case in the post-medieval group. This is likely to be an result of the nature of the excavation, rather than representing differing burial rites according to sex.

The stature of individuals can be calculated from long bone lengths and these were sufficiently well preserved to calculate the stature of 49 individuals. The stature ranges and averages for males, females and unsexed adults from the three groups are given in Table 12, below.

Table 12 Stature calculations for burials

	POST-MEDIEVAL			MEDIEVAL			SAXON		
	n	range (m)	mean (m)	n	range (m)	mean (m)	n	range (m)	mean (m)
males	13	1.63-1.89	1.74	2	1.73-1.76	1.75	4	1.66-1.79	1.73
females	2	1.66-1.67	1.67	6	1.53-1.63	1.59	3	1.55-1.63	1.59
unsexed	3	1.53-1.72	1.64	11	1.56-1.83	1.69	4	1.72-1.80	1.76

This table does not include the stature calculated for SK104 (9073) from the Saxon group, who displayed shortening of the humeri and femorae relative to the bones of the lower arm and leg. The stature calculated from the humerus for this individual was 1.63m, while the stature calculated from the radius was 1.70m. The average male stature is very similar for the three groups, while the female stature is the same for the medieval and Saxon groups. The greater female stature for the post-medieval group is probably a result of there only being two females from this group for whom a stature could be calculated.

The cranial index, which records the shape of the head, could be calculated for fifteen individuals. The range and mean of this index for male, female and unsexed individuals from the three groups is given in Table 13, below.

Table 13 Cranial index for the burials

	POST-MEDIEVAL			MEDIEVAL			SAXON		
	n	range	mean	n	range	mean	n	range	mean
male	8	71.4-77.8	74.1	0			3	73.0-73.8	73.5
female	0			1	73.2	73.2	1	79.8	79.8
unsexed	1	73.8	73.8	1	72.8	72.8	0		

The cranial indices for the individuals from all groups place them into the dolichocephalic (narrow headed) or mesocephalic (average) categories, with no great differences in the shape of the head between the three groups of burials.

It would be expected that a large amount of disarticulated human bone would be recovered from a church graveyard that was in use for centuries, as earlier graves are disturbed by later activity. At Skipwith, disarticulated bones were recovered from grave fills, specially dug charnel pits and a number of other features, and this material was submitted for assessment. Estimating minimum numbers of individuals and other demographic data from disarticulated bone in cemetery soils is problematic and of little use, but the material was quickly scanned to determine ages and sexes of the elements, where possible, and in order to identify any unusual pathological conditions that were not identified in the articulated individuals. Adults of both sexes and all ages, and immature individuals, including foetal and neonate material, were recognised in the disarticulated material. Pathological conditions noted in the disarticulated bone included examples of button osteomas (benign bone tumours), a possible case of metastatic carcinoma of the cranium (a malignant form of tumour), ankylosis of the fourth and fifth metacarpals, several examples of spondylolysis (the separation of the neural arch from the vertebral body), an ununited fracture of the ulna, malformation of a tooth crown possibly caused by rickets, and two possible examples of achondroplasia (a form of dwarfism with disproportionate shortening of the limbs). An inventory of the disarticulated material, as well as photographs of any interesting specimens, was compiled and is held in the archive.

A number of pathologies were observed on the articulated skeletons, and have been described in the catalogue of burials, above. Although the bone preservation, and the collection of small bones was generally good, the majority of the burials were not represented by a complete skeleton. Only eighteen out of the 102 articulated skeletons were

more than 80 per cent complete. The rest were either lying partially outside the area of excavation, or were truncated by later burials and other features. This obviously restricts the number of pathologies that can be observed, and makes the differential diagnosis of some conditions more difficult as important skeletal elements are missing. However, some general observations can be made about the pathologies observed in the three groups.

Dental disease is one of the most common pathologies encountered in archaeological skeletal populations. Of the 102 individuals, only 38 had any surviving dentition. Of these, fifteen were from the post-medieval group (thirteen adults and two immature individuals), twelve were from the medieval group (five adults and seven immature individuals), and eleven were from the Saxon group (nine adults and two immature individuals). With such small numbers, the prevalence of dental disease in the three groups has not been calculated, but some general observations can be made. Slight to heavy deposits of calculus were found on some or all of the teeth of nearly all of the individuals from the post-medieval and Saxon groups (including on the deciduous teeth of both immature individuals from this group who had surviving dentition), and half of the medieval group. Caries (cavities) and periodontal disease were very common in the post-medieval and Saxon groups, with lower numbers of affected individuals in the medieval group, while abscesses were more common in the post-medieval group than in the other two. The calculus and periodontal disease suggests that all groups had relatively poor dental hygiene throughout their lives, although the medieval group seem to show a slightly better quality of dental hygiene than the other two groups. The caries and abscesses from caries found in the post-medieval group probably reflect a diet that included sugary foods, although the number of caries found in the Saxon group seems unusual as refined sugar was not available until the 17th Century. However, there is the potential that these skeletons represent more important members of society buried close to the church who had access to sugar not available to the ordinary population.

Enamel hypoplastic lines (defects in the tooth enamel) were found on the teeth of individuals from all three groups, with a higher number in the Saxon group than in the other two. These reflect periods of illness during childhood when the tooth enamel was forming, and the higher number found in the Saxon group suggests that they were more likely to suffer from periods of childhood illness than the individuals in the later groups.

Interestingly, there were also two individuals from the Saxon group who had evidence for abnormal tooth wear, which may reflect use of a toothpick, and one individual from the post-medieval group displayed wear that could indicate that they were a habitual pipe smoker.

Joint disease is one of the most common post-cranial pathologies recorded in both archaeological and modern populations, and a few individuals from all three groups exhibited changes to the bones characteristic of osteoarthritis. The most commonly affected area of the body was the spine, although the shoulders, wrists, hands, hips and feet were also affected. Osteoarthritis is a condition caused by damage to the joint cartilage and is more frequent in older individuals. In this sample, both middle and mature adults were affected.

Schmorl's Nodes, which probably reflect herniation of material from the intervertebral discs into the vertebral body, and which reflect pressure being put onto the back, were found in a number of individuals from adolescents to mature adults in all three groups. A number of individuals from the post-medieval and Saxon groups had extra lumbar vertebrae and transitional vertebrae (vertebrae showing characteristics of more than one type). There is a strong genetic tendency for such developmental defects of the spine, which suggests that there may be family relationships between the affected individuals in both groups.

Fractures were identified in eight individuals, four from the post-medieval group (a healing sternal fracture, a healed clavicular fracture, and two individuals with both healed vertebral spinous processes and rib fractures), one from the medieval group (a healing rib fracture with associated infection), and three from the Saxon group (a healed rib fracture, one individual with a healed vertebral compression fracture and an ununited fracture of the hook of hamate, and one individual with a healed vertebral compression fracture and healed rib fractures). In addition, two individuals from the Saxon group display evidence for cranial trauma. One has depressions on the frontal that may represent some form of healed trauma, and one has a circular hole in the left parietal with bevelling on the internal surface. The bone surface is degraded making it difficult to determine whether it is an ante-, peri- or post-mortem injury, but it appears to be consistent with sharp force trauma, such as that caused by a poleaxe. One individual from the post-medieval group appears to show trauma to the clavicle before the fusion of the sternal epiphysis. One individual from the post-medieval group shows a long standing hip dislocation with associated disuse atrophy of the limb and osteoarthritis that may be congenital or traumatic in origin.

Other pathologies which seem to be congenital in nature are to be found in an individual from the post-medieval group with cranial and sternal asymmetry, a female from the medieval group with chronic subluxation of the hip, an individual from the medieval group with a fused capitate and hamate and an unusual facial appearance, and an individual from the Saxon group with disproportionately short humeri and femorae.

New bone formation, indicative of non-specific infection, was recorded in a number of individuals from all three groups, though less so in the Saxon group. There are instances of both porous, woven bone, indicating infections still active at the time of death, and striated or smooth compact bone formations, which indicate that the infections had healed and the bone was remodelling. A few cases of specific infections were also recorded. Sinusitis of the maxillary antrum was recorded in four individuals from the Saxon group and one from the medieval group. Sinusitis can be caused by dental abscesses penetrating into the antra or from prolonged exposure to smoky environments, which irritates the sinuses and causes infection. It is interesting that four of the five cases are found in the Saxon group, which suggests that they were living in smokier conditions than the individuals from the later periods. Lesions on the ribs indicative of pulmonary TB were found in four individuals from the post-medieval group and one from the medieval group. This infection is caused by exposure to one of the species of *Mycobacterium* (*M. bovis* is linked to tuberculosis transmitted to humans by contaminated products from cattle, and *M. tuberculosis* is responsible for direct transmission between humans). The tuberculosis seen in this individuals cannot be assigned to one or other of these agents, but it is probable that it was disseminated between individuals living in poor and crowded conditions.

Three individuals (one from each group) exhibited benign bone tumours. One individual from the post-medieval, and one from the Saxon group had button osteoma on their crania, and one medieval individual displayed an unusual large smooth bone growth on the left parietal that is probably some form of benign tumour or cyst.

There were a number of conditions observed in individuals from all three groups which suggested periods of environmental and nutritional stress during childhood. Six individuals (one from the Saxon, two from the medieval, and three from the post-medieval group) exhibited changes to their long bones indicative of rickets, which is caused by a lack of vitamin D, usually due to crowded living conditions devoid of sunlight. Four individuals (two from the medieval, and two from the post-medieval group) exhibited porosity of the cranial vault, while one individual from the Saxon group had lesions in the orbits, known as cribra orbitalia. Both of these are probably related to iron deficiency anaemia, whether through inadequate diet, malabsorption of dietary iron, or parasitic infection. In addition, six immature individuals (one from the Saxon, four from the medieval, and one from the post-medieval group) exhibited patterns of new bone growth indicative of scurvy, a condition caused by lack of vitamin C through inadequate diet. The enamel hypoplasia recognised on the teeth of a number of individuals adds to this evidence for childhood stress.

In conclusion, the skeletal population from Skipwith represented individuals of all ages from foetal material to mature adults, and both males and females were represented. The dental disease found in many of the individuals suggested poor dental hygiene throughout life and access to a sugary diet, particularly in the Saxon and post-medieval groups. There was also evidence for joint disease, fractures and trauma, including a possible sharp force trauma to the cranium, congenital conditions, infectious disease, including sinusitis and tuberculosis and benign tumours. There are a number of pathologies present which indicate environmental and nutritional stress during childhood in all three groups, and in addition, there is possible evidence for family relationships between individuals in the Saxon and post-medieval groups.

Further details 1: metal staining on the articulated individuals

The following is a list of the articulated individuals who had skeletal elements with evidence of green staining from contact with metal objects, and which elements were affected. This data could be used to infer the presence of metal objects in the burials that have not otherwise survived.

SK21 (30033)

Staining on the right zygomatic arch and ascending ramus of the mandible, on the right parietal, and extensive staining on the left side of the cranial vault and mandible. Staining on the external surface of one left rib.

SK40 (28026)

Staining on the superior of the frontal, on the left parietal, on the right ascending ramus of the mandible, and on the left gonion of the mandible. Staining on the posterior of the right ilium, and the medial midshaft of the left femur.

SK43 (28037) and (29021)

Staining on the right temporal and on the anterior of the frontal. Staining on the anterior and distal shaft of the right tibia.

SK55 (26028) and (27019)

Staining on the anterior of the frontal, on the posterior of the parietals, and on the right temporal. Staining on the right side of the body of L1, on the exterior surface of one left rib, on the anterior surface of both scapulae, on the anterior and distal, and posterior and distal shaft of the left femur, on the anterior and distal, and anterior and proximal shaft of the left tibia, and on the bones of the left foot.

SK57 (25022) and (26039)

Staining on the medial midshaft of the right femur, and on the anterior and proximal, and medial and distal shaft of the right tibia.

SK70 (25029) and (26077)

Staining on the anterior and proximal shaft, and the lateral midshaft of the right tibia.

SK88 (27027)

Staining on the gonion of the left mandible and on the anterior and right of the frontal. Staining on the anterior of the lumbar vertebrae, on the sternum and on the bones of the hands.

SK89 (27024)

Staining on the left temporal, the right ascending ramus of the mandible, and the posterior of the left parietal. Staining on the external surface of one right rib, on the inferior shafts of both clavicles, on the inferior and posterior of the right scapula, on the spine of the left scapula, on the head, and the lateral and distal shaft of the left humerus, and on the posterior and proximal shaft of the left ulna.

SK105 (9070)

Staining on the right side of the occipital, and on the right side of the bodies of the upper thoracic vertebrae, the head of the right first rib and on the anterior of the sternal end of the right clavicle.

SK106 (9066)

Staining on the anterior and proximal shaft of the right humerus.

SK107 (9051)

Staining on the right, left and superior of the frontal, on the right ascending ramus of the mandible and on the left side of the occipital. Staining on some of the right ribs.

SK108 (9046)

Staining on the left side of the cranial vault.

Further details 2: **preserved hair on the articulated individuals.**

The following is a list of the articulated individuals that had hair preserved on the cranial vault.

SK88 (27027)

There is a patch of preserved hair on the superior of the frontal. The hair is dark blonde/light brown, fine and approximately 10mm long.

SK89 (27024)

There is a small patch of preserved hair on the posterior of the left parietal. The hair is blonde/light brown in colour, fine and short.

SK107 (9051)

There are two patches of hair on the superior, and right side of the frontal. The hair is short, thick and very light blonde in colour.

15. ANIMAL BONE

By Charlotte Dean

Summary

Two boxes of animal bones, recovered from deposits encountered during excavation at St Helen's Church Skipwith were submitted for an assessment of their zooarchaeological potential.

A moderate assemblage of heavily root etched but generally well preserved animal bone was recovered. Cattle remains dominated the assemblage where identifiable, although pig and sheep/goat were also common. Bird remains and small mammals were also present.

There was evidence of butchery, in the form of chop and cut marks, knife marks and sagital splitting of the long bones.

15.1 Introduction

Two boxes of hand collected animal bone were recovered during the excavations and were submitted for analysis. The bones derive from deposits dated from the 9th century to the modern era. Those from deposits outside the church were from the grave fills. Those from inside the church came from a number of different types of deposits including burials, floors, structural changes and industrial activity.

15.2 Method

The hand collected vertebrate remains data were directly entered into an Access database. Subjective records were made of the state of preservation of fragments, as well as evidence of dog gnawing, burning, butchery, fresh breaks and root etching where applicable.

Fragments were identified to species using the University of York modern comparative reference collection. The bones which could not be identified to species were described as unidentified. Within this category distinctions were made between fragments belonging to large mammals (cattle, horse, large cervid), medium mammal 1 (caprovid, pig, small cervid),

medium mammal 2 (cat, dog, hare), small mammals and totally unidentifiable. Birds were identified to species where possible, but otherwise were categorised according to size. Chicken-sized bones were categorised as medium bird, anything smaller was small bird and anything larger was large bird.

15.3 Results

Two boxes from 239 contexts were submitted for analysis, amounting to 1126 fragments.

The results table is kept with the project archive at YAT.

Preservation

Preservation of the remains was generally good. There was little variability in the colour of the fragments within contexts, but some contexts contained very both badly abraded bone and fresher looking pieces, suggesting mixing of material (e.g. Contexts 4039, 13044, 18012, and 24008). The majority of the bones were either small fragments of larger bones or were small bones in themselves, i.e., amphibian and small mammal bones.

Butchery marks

Ninety-two specimens showed evidence of butchery. The majority were knife marks, with an occasional chop mark. Fourteen fragments had been chopped right through the bone. One bone showed evidence of having been sawn, whilst fifteen fragments seemed to have been split sagitally.

Horn and antler

Five horn cores were present, one from a sheep/goat, the remaining four from cattle. No antler was found despite the presence of deer on site.

Taphonomy

Over 60% of the fragments examined showed some evidence of taphonomic processes in the form of gnawing, root etching, pitting, staining or abrasion. By far the most common process present was root etching which was present in over half the fragments examined. Gnawing was fairly common and seems to have been carried out mainly by canids, although some bones exhibit the puncture marks diagnostic of cat gnawing. No burning or calcining was noted suggesting that the bones were not exposed to high temperatures.

Species identified

The identifiable assemblage was dominated by the domestic ungulates cattle, sheep and pig.

Twelve horse fragments were noted, and were mainly foot bones. Two limb bones, a radius and a femur fragment were also present.

Seven fragments of dog were identified and two fragments of cat, which is not surprising given the degree of gnawing on some of the fragments.

One chicken was noted, represented by a tibiotarsus with a spur, showing that it was male. Ten medium bird fragments were noted, eight large bird fragments and thirteen small bird fragments. Twelve fragments of bird bone were completely unidentifiable.

Wild taxa

Five deer fragments were positively identified, with a further four probable deer fragments recognised. A further fragment was definitely *Cervus* sp. And given the general size and proportions, was probably fallow deer.

One hare metatarsal was identified, and given its large size, it is probable that it came from a female.

Two rodent bones were identified, and it's possible that many of the thirty small mammal bones identified are also rodents.

One amphibian and one possible amphibian bone were also discovered.

Five hundred and twenty four fragments were completely unidentifiable. A further one hundred and fifty were identifiable to large mammal and no further, whilst one hundred and nine were identifiable to medium mammal and no further. Thirty small mammal fragments were also noted, as mentioned above.

Pathology

There were a few instances of periosteal remodelling on some of the bones, suggesting bleeding onto the bone at some point. One sheep metatarsal showed evidence of a large swelling to the bone, possibly osteomylitus but with no sinus hole, at the proximal end. One

unidentified phalange was also swollen. One large mammal rib showed some evidence of damage, in the form of a slight nick in one of the edges. A medium mammal 1 tibia showed evidence of a nick in the bone and subsequent remodelling.

Most of the teeth that were present either in mandibles or loose were fairly worn suggesting the presence of older animals.

Metrical analysis

Sixty two bones the potential for further metrical analysis, whilst three mandible fragments had evidence of measurable tooth wear.

15.4 Discussion and statement of potential

This site has yielded a moderate sized assemblage of bone. However, the bones come from a large number of contexts, with a very small amount of bone in each. The differentially abraded fragments, already noted, suggest that there is some degree of mixing and residuality in these contexts. This is further supported by the finds of several rodent bones in the material and the excavation teams observations of burrowing activity whilst digging.

The identifiable remains are dominated by domestic ungulates, i.e., cattle, sheep/goat and pig. As would be expected with the small size of some of the fragments, unidentified large mammal and medium mammal 1 are also present.

This material does not seem to have been deliberately deposited. The small amount and small size of the fragments in each context might suggest that this material became incorporated into the back fill of the graves etc accidentally. If so, there would be little value in a detailed study of the material in terms of human exploitation. A study of the smaller wild taxa would be interesting in terms of what the material present says about the environment, but this is still subject to the same caveat as the larger bones.

Given the obvious disturbance in some contexts and the size of the fragments, little information would be gained from further study, unless the disturbed and undisturbed contexts could be separated. The numbers of bird elements are interesting and further work may be warranted here, but this would only be purposeful providing their contextual integrity was assured.

The bird and rodent bones from around the tower could be the result of natural deposition from owls or other birds of prey. The tower still plays host to a small family of owls, and thus to their associated 'pellets' and other waste.

15.5 Recommendations

The material from St Helen's Church does not warrant further study unless the conditions outlined above are met and there is an important reason for doing so, e.g. if all the bird remains come from the Saxon phases. Any further study of the remains should include butchery, biometrical and age-at-death data for all the tightly dated material.

16. DEPOSIT SAMPLES

By John Carrott, Örni Akeret, Deborah Jaques and Stewart Gardner

Summary

Eight sediment samples were submitted for an evaluation of their bioarchaeological potential. Ancient biological remains recovered from the samples were restricted to small quantities of charred plant fragments (largely consisting of fine wood charcoal). Most of the other biological remains recovered were either clearly of modern origin or could have been introduced into the deposits (directly or indirectly) by recent biological activity. Given the very small quantities of remains recovered, and the possibility that many were of modern origin, the assemblages were of no interpretative value.

Very small numbers of charred grains were recovered from two of the subsamples (from Contexts 15032 and 25049). These would provide suitable material for radiocarbon dating of the deposits to be attempted if required, though the possibility that the grains have been moved by more recent bioturbation must be considered.

No further study of the biological remains from these deposits is warranted. If remains are required for AMS dating then the cereal grains from Contexts 15032 and 25049 would be suitable for this purpose.

16.1 Introduction

Eight bulk sediment samples ('GBA'/'BS' *sensu* Dobney *et al*. 1992), were submitted to Palaeoecology Research Services Limited (PRS), County Durham, for an evaluation of their bioarchaeological potential.

16.2 Methods

Seven of the sediment samples were inspected and their lithologies were recorded, using a standard *pro forma*. Subsamples were processed, broadly following the techniques of Kenward *et al*. (1980; 1986), for the recovery of plant and invertebrate macrofossils. The subsamples were disaggregated in water for 24 hours or more before processing and their volumes recorded in a waterlogged state.

The eighth sample (Context 10021, Sample 25) was largely composed of mortar with what appeared to be embedded organic remains. This sample was treated as a 'SPOT' (*sensu* Dobney *et al*. *op*. *cit*.) sample.

Plant, invertebrate and vertebrate remains (and the general nature of the washovers) were recorded briefly by 'scanning', identifiable taxa and other components being listed on paper. Notes on the quantity and quality of preservation were made for each fraction. The residues were primarily mineral in nature and were dried, weighed and their components recorded in brief. Nomenclature for plant taxa follows Stace (1997), snails follow Kerney and Cameron (1979).

16.3 Results

The results are presented in context number order. Archaeological information, provided by the excavator, is given in square brackets. A brief summary of the processing method and an estimate of the remaining volume of unprocessed sediment follows (in round brackets) after the sample numbers.

Context 3034 [build-up/trampled layer over very early floor deposit; 10th century (or perhaps 13th to 16th century – possibly disturbed)]
Sample 24/T (3 kg/2.5 litres sieved to 300 microns with washover; approximately 6 litres of unprocessed sediment remain)

Just moist, light to mid brown to light to mid grey-brown, unconsolidated, silty sand, with some rotted ?mortar and charcoal and some large stones (over 60 mm) present.

The small washover (~20 ml) was mostly small charcoal fragments (to 15 mm), with many uncharred elder (*Sambucus nigra* L.) seeds. There were also two small mammal bones (a long bone and a vertebra) and two land snails – one *Vallonia* ?*costata* (Müller) and an apex fragment of ?*Discus rotundatus* (Müller).

There was a fairly small residue (dry weight 0.6 kg) of sand and stones (to 30 mm), with a little brick/tile (four fragments to 14 mm, 1 g), charcoal (to 9 mm, 1 g), a little unidentified shell (to 6 mm, <1 g) and a ?iron-rich concretion (to 30 mm, 4 g). Bone in the residue amounted to 12 small fragments, three were of fish, the rest were unidentified.

Context 7105 [possible floor/trampled deposit disturbed by root action and worm and other animal burrowing; 8th to 10th century]
Sample 18/T (3.2 kg/2 litres sieved to 300 microns with washover; no unprocessed sediment remains)

Just moist, light to mid brown, unconsolidated, sand. Stones (6 to 20 mm) were common.

The small washover (~15 ml) was mostly fine charcoal (to 7 mm), with a little sand and many uncharred elder seeds. There were some land snail shell fragments which were in the main unidentified, but included a single *Carychium* ?*tridentatum* (Risso) and one ?*Oxychilus* sp. Approximately twenty small amphibian bones were also noted probably representing a single individual.

The rather small residue (dry weight 0.7 kg) was mostly stones (to 35 mm), with some sand and a further seven fragments of bone. The last were identified as the remains of amphibian and small mammal. These, and the amphibian bones from the washover, were almost white in colour and almost certainly of modern origin.

Context 10021 [mortar floor/trampled layers; 13th to 16th century]
Sample 25/SPOT (visual examination/description only)

The sample consisted of pieces of mortar (to 170 mm) and the disintegrated remains of mortar. Visible within some of the larger pieces were areas that appeared to have significant organic content. However on closer (microscopic) examination, these areas were seen to be impressions within the inorganic matrix where fragments of wood and other plant material had clearly once been present but had subsequently rotted away.

Context 11039 [thin occupation/floor layers disturbed by worm and root action and larger animal burrowing; 13th to 16th century]
Sample 23/T (3 kg/2.8 litres sieved to 300 microns with washover; approximately 6 litres of unprocessed sediment remain)

Just moist, light to mid orange-brown to mid to dark grey-brown (in shades of brown and grey-brown), unconsolidated, very ashy, sandy silt (to silty sand). There were also some crumbly lumps of layered sand and sandy silt, with ash and black layers of charred material and some stones (20 to 60 mm) present.

The small washover (~15 ml) was of fine unidentified charcoal (to 5 mm), with a few uncharred modern rootlet fragments and elder seeds, and a little sand.

The very small residue (dry weight 0.37 kg) was of sand and stones (to 46 mm but most to 15 mm), with a trace of charcoal (to 7 mm, <1 g). Of the three fragments of bone recovered from this sample, two were identified as small mammal and one was unidentified.

Context 12065 [early feature disturbed by animal burrowing; 8th to 10th century]
Sample 32/T (3 kg/2 litres sieved to 300 microns with washover; approximately 8 litres of unprocessed sediment remain)

Just moist, light orange-brown to light to mid grey-brown, unconsolidated, sand, with some oyster (*Ostrea edulis* L.) shell present.

The tiny washover (~5 ml) was mostly fine unidentified charcoal (to 6 mm, most to 3 mm), with a few fragments of modern plant detritus and a little sand. There were also traces of, mostly unidentified, snail shell, including two more complete shells one of which was tentatively identified as *Vitrea crystallina* (Müller).

The very small residue (dry weight 0.16 kg) was mostly sand, with some stones (to 10 mm), brick/tile (two fragments to 11 mm, <1 g), a little shell (including one very poorly preserved oyster valve fragment, ~3 g) and mortar (one fragment to 10 mm, <1 g).

Context 13044 [backfill of grave 13045 with coffin stain; 10th century]
Sample 10/T (2.5 kg/1.8 litres sieved to 300 microns with washover; no unprocessed sediment remains)

Just moist, mid brown to mid grey-brown, unconsolidated, sand, with some stones (20 to 60 mm) present.

The tiny washover (~5 ml) was almost all of rather rounded unidentified charcoal (to 5 mm), with a little mortar (2-3 mm pieces). A single *Vallonia* ?*excentrica* Sterki and two other unidentified land snail fragments were also noted.

The very small residue (dry weight 0.17 kg) was mostly sand and stones (to 32 mm, most to 12 mm), with a little cinder (one fragment to 11 mm, <1 g), a little unidentified shell (to 7 mm,

<1 g) and charcoal (to 13 mm, 1 g). Four well preserved fragments of bone were recovered from this sample, including a small mammal incisor and shaft fragment.

Context 15032 [build-up over early building floor; 10th century (or perhaps 13th to 16th century – possibly disturbed)]
Sample 28/T (3 kg/2.5 litres sieved to 300 microns with washover; approximately 5 litres of unprocessed sediment remain)

Just moist, light to mid brown to mid grey-brown, unconsolidated, somewhat stony (stones 6 to over 60 mm were present), sand, with a little ?rotted mortar present.

The small washover (~10 ml) was mostly fine angular unidentified charcoal (to 10 mm), with very many whole and fragmentary uncharred elder seeds and a little mortar. A single charred ?barley (cf. *Hordeum*) grain and one unidentified charred 'seed' fragment were noted and there was also a single small bird (?passerine) wing bone.

The small residue (dry weight 0.53 kg) was mostly stones (to 70 mm), with sand and traces of slag (one fragment to 14 mm, 1 g), a little unidentified shell (to 10 mm, <1 g) and charcoal (to 9 mm, <1 g). Twenty-six fragments of well preserved bone were recovered present in the residue. These included the remains of mole (*Talpa europaea* L.), amphibian, small mammal and a few fragments of bird bone (consistent in size with that in the washover). There were also a few medium-sized mammal fragments. The bones ranged in colour from fawn to white and it is highly likely that at least some of them were modern in origin.

Context 25049 [possible backfill of emptied grave; 12th to 14th century]
Sample 30/T (3 kg/2 litres sieved to 300 microns with washover; approximately 6 litres of unprocessed sediment remain)

Just moist, light orange-brown to light to mid grey-brown, unconsolidated to crumbly, slightly clay sand, with stones (20 to 60 mm) and flecks of charcoal present.

The small washover (~10 ml) was mostly small fragments of unidentified charcoal (to 12 mm), with a little mortar, a few other charred plant remains and some land snails. One and a half charred grains of oat (*Avena*) and a single charred dock (*Rumex*) seed were noted. All but a few of the land snails were *Cecilioides acicula* (Müller), a burrowing species and almost certainly intrusive to the deposit. The other snail remains seen were two *Cochlicopa lubrica*

(Müller) (one of which was a juvenile); there was also another fragment of shell that might represent another individual of this species.

The small residue (0.3 kg) was of sand and stones (to 40 mm, most to 10 mm), with traces of brick/tile (one fragment to 12 mm, 1 g) and pot (one sherd to 20 mm, 1 g). This sample also produced 11 fragments of bone, all of which were well preserved. Three of them were identified as human bone, and were probably part of the same skeletal element (all showed evidence of fresh breakage damage). There were also two field vole (*Microtus agrestis* (L.)) teeth and a shrew (*Sorex araneus* L.) mandible. Four other small fragments could not be identified.

16.4 Discussion and statement of potential

Ancient biological remains recovered from the samples were restricted to small quantities of charred plant fragments (largely consisting of fine wood charcoal). Most of the other biological remains recovered were either clearly of modern origin (e.g. rootlets) or could have been introduced into the deposits (directly or indirectly) by recent biological activity (e.g. root penetration and burrowing by worms, snails and other animals). Given the very small quantities of remains recovered, and the possibility that many were of modern origin, the assemblages were of no interpretative value.

Small numbers of charred grains were recovered from two of the subsamples (from Contexts 15032 and 25049). These would provide suitable material for radiocarbon dating (via accelerator mass spectrometry – AMS) of the deposits to be attempted if required, though the possibility that the grains have been moved by more recent bioturbation must be considered.

On the basis of the current evidence, the potential for further works to recover interpretatively valuable assemblages of biological remains from deposits at this site is very low.

16.5 Recommendations

No further study of the biological remains from these deposits is warranted.

If remains are required for AMS dating then the cereal grains from Contexts 15032 and 25049 would be suitable for this purpose. Processing of all of the remaining sediment from these deposits would be advisable to maximise the material available for submission.

16.6 Retention and disposal

Unless required for purposes other than the study of biological remains (e.g. for the recovery of material for AMS dating), all of the remaining sediment samples may be discarded.

The biological remains recovered from the processed subsamples should be retained for the present.

16.7 Archive

All material is currently stored by Palaeoecology Research Services (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham), along with paper and electronic records pertaining to the work described here.

17. SCIENTIFIC DATING

Five samples were submitted for C14 (radiocarbon) dating to Beta Analytic, Florida, USA. The samples were chosen to allow, firstly, interpretation of the earlier burials and their place in the stratigraphic sequence and, secondly, to assist in dating the construction of the earlier (pre-tower) building and the standing tower itself.

The samples taken were all from human teeth, material which provides the best balance between accurate results and minimal destruction of the skeletal material. AMS dating involves complete destruction of the samples and since the inhumation were to be reburied this was agreed to be the best option.

A full report on the radiocarbon dating can be seen in Appendix 5 at the end of this report.

Table 14 Summary of data from the scientific dating

Sample Data	***Measured Radiocarbon Age***	***13C/12C Ratio***	***Conventional Radiocarbon Age(*)***
Beta – 202746 SAMPLE : Y20041812056 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (tooth): collagen extraction: with alkali **Context: 12056**	600 +/- 40 BP Cal AD 1270 to 1320 and Cal AD 1350 to 1390	-19.7 o/oo	690 +/- 40 BP
Beta – 202747 SAMPLE : Y20041813046 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (tooth): collagen extraction: with alkali **Context: 13046**	1070 +/- 40 BP Cal AD 790 to 990	-20.5 o/oo	1140 +/- 40 BP
Beta – 202748 SAMPLE : Y20041816029 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (tooth): collagen extraction: with alkali **Context: 16029**	1080 +/- 40 BP Cal AD 770 to 980	-19.8 o/oo	1170 +/- 40 BP
Beta – 202749 SAMPLE : Y20041826103 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (tooth): collagen extraction: with alkali **Context: 26103**	870 +/- 40 BP Cal AD 1020 to 1200	-21.1 o/oo	930 +/- 40 BP
Beta – 202750 SAMPLE : Y20041830058 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (tooth): collagen extraction: with alkali **Context: 30058**	1180 +/- 40 BP Cal AD 680 to 880	-20.5 o/oo	1250 +/- 40 BP