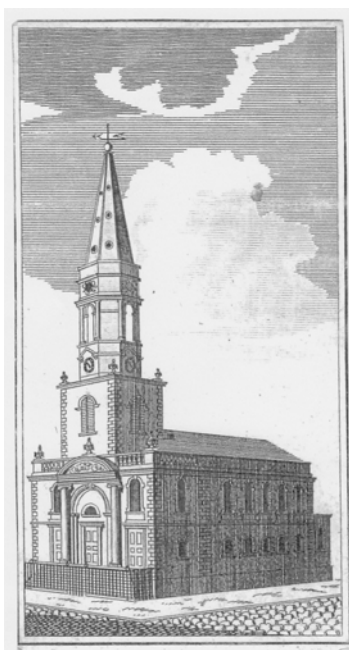


THE CHURCH OF ST. GEORGE THE MARTYR BOROUGH SOUTHWARK

A LEVEL 2 RECORD OF THE BELL FRAME



Compiled by Dr. John C. Eisel *FSA*.

December 2011

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Cover: Engraving of the church and spire of the church of St. George-the-Martyr, Southwark, published c.1776.

THE CHURCH OF ST. GEORGE THE MARTYR, BOROUGH, SOUTHWARK.

A Level 2 record of the bell frame

TEXT AND LAYOUT

Dr. J.C. Eisel *FSA*

SURVEY

Dr. J.C. Eisel

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December 2011

The Church of St. George the Martyr BOROUGH, SOUTHWARK

A LEVEL 2 RECORD OF THE BELL FRAME

1. Introduction

In this report is contained a Level 2 record of the bell frame at the church of St. George the Martyr, Borough, Southwark. It was compiled by Dr. J.C. Eisel, after site visits on 7 and 12 May 2010, when he was assisted by Mrs. M. Eisel. Information from the initial appraisal of the bell frame is integrated within this record.

2. Outline history of the church

It is known that a church had been erected on the site by 1122, a church which was rebuilt in the late fourteenth century. Little, if anything, survives of any building earlier than the present, except two inscribed stones in the clock room of the tower, one of which is dated 1438.

Although repairs to the fabric were carried out over the years, by 1732 it was in a poor state and an Act to rebuild the church was applied for in 1732, which received the Royal Assent in the following year. The design for the new church was by John Price, the foundation stone was laid on St. George's Day, 1734, and the main part of the structure was completed the following year. A grant of £6,000 was made from the funds of the Commissioners for the Building of Fifty New Churches towards rebuilding the church in brick, but was inadequate to furnish the church as well as build it, and so a church rate was levied to cover the extra cost. The new church was opened in 1736.

The position of the church makes it vulnerable to outside factors, and the building of the nearby Tube station, which was opened in 1890, and the increasing traffic on either side of the church, combined with poor foundations, caused structural problems, and in 1930 repairs were carried out to the tower, spire and crypt. The foundations of the south wall, which were giving cause for concern, were strengthened in 1938. After war damage, a full restoration was carried out in 1951-2, the church being rededicated on 16 October 1952.

In recent years the foundations of the main body of the church continued to give cause for concern, with further movement taking place. The nave was declared unsafe in 2000 and after a fund raising effort, aided by the National Lottery Fund, restoration began in September 2005 and was completed in March 2007, the first service in the refurbished church being held on Palm Sunday, 1 April 2007. During this work, which cost some £3.6m, the church was underpinned and now rests on a concrete raft, supported on piles. As part of the work the levels within the crypt were lowered and this is now used extensively for community work.

3. Known History of the Bells

Unfortunately no Edwardian inventories are known to survive for the parish (Daniel-Tyssen, 1869), and the first readily available information is taken from the present bells themselves. The inscriptions on these show that they were cast at the Rudhall foundry in 1718, the year in which Abraham Rudhall II took over from his father Abraham Rudhall I. (Bliss and Sharpe, 1986, 61). It is not surprising that, when the church was rebuilt in the 1730s the new bells were safely stored and after the main structure of the new church was completed they were hung in the new tower.

At some undetermined period in the early nineteenth century the bells received attention from John Wooding, a bellhanger 1 King's Arms Passage, Whitechapel Road, who succeeded to the bellhanging business of Edward Simmons sometime about the year 1808. Wooding subsequently issued a broadsheet listing churches where he had either rehung or repaired the bells, and 'St. George's Southwark' appeared in the list as one of the churches where he had worked.

The bells received major attention at the end of the nineteenth century and the rededication afterwards was reported in *Bell News* on 9 December 1899.

'ST. GEORGE-THE-MARTYR, SOUTHWARK. RESTORATION AND RE-DEDICATION OF BELLS.

For many years the necessity of restoring the ring of eight bells at the above-named church has been felt. A committee, consisting of the Rector (Rev. W.J. Sommerville, B.A.), the Churchwardens, and Messrs. W. Neville, T. Haynes, and R. Fulton, with the Church Council, was formed, and these gentlemen, after due deliberation, gave Messrs. Mears and Stainbank instructions to rehang them in entirely new fittings except the frame, which was found to be in excellent condition after being in use for 182 years. The bells were cast by Rudhall, of Gloucester, in 1717, the weight of the tenor being 18 cwt. 3 qr. 3lbs. Several of the bells have been quarter-turned; the go of them all is everything to be desired, and reflects great credit on the Whitechapel Foundry.

On Sunday morning, November 26th, before and after Divine Service, touches of Grandsire and Stedman Triples were rung by the local society and visitors. The Rev. the Rector of St. Mary, Lambeth, was very eloquent in his sermon upon such an important subject as bells and bell-ringing.

For the re-dedication service, which took place in the evening, at which the Bishop of Southwark officiated, a quarter-peal of Grandsire Triples was rung by five

members of the St. George-the-Martyr society, assisted by three members of the Ancient Society of College Youths, Messrs. Springall, Dawe and Truss; conducted by T.H. Taffender.

At a point during the service the Bishop gave a signal for the bells to be rung, during which he was conducted by the Rector and Churchwardens to the pulpit. The ringers were: E. Clements, H. Green, W.H. Smith, T.H. Taffender, C. Deer, F. Clements, W. Humberstone, W. Cobbett. After the service touches were rung, in which Messrs. W. and H. Langdon, F. Perrin, T. Gwynn, G. Woodage, and G.E. Symonds took part.

It is to be regretted that not many peals can be attempted on account of the densely-populated neighbourhood, but Thurstans' one-part peal of Stedman Triples was rung by members of the Ancient Society of College Youths, on the second anniversary of the Rector's induction, on Thursday, November 30th.'

Less than 40 years later the bells were rehung again, this time by Messrs Taylors of Loughborough. The cost was borne by the Barron Bell Trust and the bells were tuned and rehung on ball bearings. They were reopened during evensong on 26 April 1936, when the opening touch was rung by a band from the Metropolitan Police Guild. A full report of the opening of the bells after restoration appeared in the *Ringings World* of 8 May 1936.

Although the church was damaged during the second world war, it seems that the bells escaped relatively unscathed and they are now essentially in the same condition as that in which Messrs Taylors left them in 1936.

4. The Tower

In 1983 Cherry and Pevsner described the church in the following terms.

'ST. GEORGE, BOROUGH High Street. 1734-6 by *John Price*, in replacement of a medieval church. A sound, sturdy church, uncommonly well-sited, so that from N as well as S its tower appears to advantage. Square white W tower, two octagonal upper stages, and octagonal spire, nothing too transparent, all massive and trustworthy. The body of the church red brick; two tiers of windows in composition derived from Wren's St James, Piccadilly. E window Venetian with cartouche and garlands above. Interior altered by William Hedger, 1807-8. The usual three galleries. Flat plaster ceiling with graceful cherubs designed by *Basil Champneys* (1897), restored by *T.F. Ford* after damage in the Second World War.'

The description then goes on to list the internal fittings.

The tower is placed at the west end of the church (Plate 1 & Fig. 1), and is clasped by both the north and south aisles, so that the ends of the aisles and the lower part of the tower form a single composition, with a pillared portico surrounding the west doorway and completed by a balustrade around the tops of the ends of the aisles. Externally the tower, which projects above the façade, is clad in Portland stone, but the core is made of

a soft brick, with internal stone dressings at the corners. The square belfry stage is surmounted by two octagonal stages, the lower designed for the clock faces which are visible on each of the four sides, with an octagonal stage above which contains the clock bell, and an octagonal spire above.

Internally the lowest stage of the tower forms an entrance vestibule to the church, through a pair of external doors in the west wall, with a pair of doors in the east wall leading into the main body of the church. There are blind arches in the north wall and the corners of the vestibule are angled off. Access to the upper stages of the tower is via a spiral staircase in the north-west corner of the vestibule, and there is also a spiral stair at the south-east corner, which leads to an upper room in the west end of the south aisle. The spiral in the north-west corner leads in turn to the ringing chamber, intermediate or sound chamber, and the belfry itself. Access to the clock room, which is in the base of the spire, is by means of a ladder from the belfry stage, which rests on the frame heads.

The ringing chamber is immediately above the vestibule, its floor being an estimated 4.6m above that of the vestibule, and the corners of the room are, like those of the vestibule, angled off. Against the south-west angle there is a manual for an Ellacombe chiming apparatus. There are also tall blind arches in the north and east walls, and the room is lighted by a semi-circular window in the west wall, forming part of the composition of the west front. In the centre of the floor is a removable trap for installing the bells and removing them from the tower. Around the walls there is a fine series of peal boards, the earliest of which record a peal of Grandsire Triples rung by the Westminster Youths on 6 September 1805, which was claimed as 'the greatest performance on these bells for a period of 20 years.'

There is a sound chamber immediately above the ringing chamber, again with the corners angled off, but with no blind arches in the walls. However, there is a small window in the south wall, and in the east wall there is a door which gives access to the space above the ceiling of the church. The floor of the sound chamber is about 5.77m above that of the ringing chamber and 3.14m below that of the belfry above, an ideal arrangement.

The spiral stair terminates at the belfry stage, and a short wooden flight of steps leads on to the frame heads. This is the only corner which is angled off, the angles in the other three corners terminating at the level of the foundation beams. Above the louvred windows there are arches built out from corbels in the corners, which support squinches for the octagonal stage above. (Plate 6)

Access to the clock room in the lower octagonal stage, is, as mentioned above, via a ladder which rests on the frame-heads just inside the entrance to the belfry. (Figs. 1 & 2) In the centre of the floor is a wooden clock case, which now houses only the electric motor which drives the motion work for the hands on the external dials. One clock weight lies on the floor.

Above the clock room is the floor of the octagonal stage beneath the spire, which is lead-lined but with a chute for the clock weights at the south-east corner. Access to the floor is via a wooden ladder, and on the level of the floor are arched openings on four sides of the spire, with only a thin wire mesh to prevent the entry of pigeons. The frame for the clock bell rests on this floor.

5. The Bells and Fittings

5.1 Bells

The tower contains a ring of eight bells, cast by Abraham Rudhall I in 1718, cast for the previous church and rehung in the new tower after the completion of the church, and a clock bell cast by Richard Phelps and Thomas Lester of Whitechapel in 1738.

<i>Bell</i>	<i>Inscription</i>	<i>Weight</i>	<i>Diam. (ins)</i>
		<i>Cwt. qr. lb.</i>	
<i>Treble</i>	<i>(Scroll border) (Stop) A R (Bell) 1718</i>	4 3 26	27 ¹ / ₂
2	PEACE & GOOD NEIGHBOVRHOOD 1718 <i>(Scroll border) : A R (Bell) (Scroll border) : (Stop)</i>	5 0 9	28 ³ / ₈
3	<i>(Scroll border) (Crown border) PROSPRITY [sic]</i> TO ALL OUR BENEFACTORS <i>(Scroll border) A</i> R	5 2 26	30 ³ / ₈
4	<i>(Scroll border) (Stop) GOD PRESERVE THIS</i> CHVRCH <i>(Scroll border) A(Bell) R 1718</i>	6 3 10	32 ¹ / ₂
5	<i>(Scroll border) PROSPERITY TO THIS PLACE</i> <i>(Scroll border) A (Bell) R 1718</i>	7 3 14	35 ³ / ₈
6	<i>(Crown border) M^R WILLIAM BRIDGER</i> CHVRCHWARDEN 1718 <i>(Crown border) A (Bell)</i> R	9 2 0	36 ⁷ / ₈
7	<i>(Two rows vine leaf border) (Stop) ABR.:</i> RUDHALL OF GLOVCESTER BELLFOVNDER 1718	11 1 1	40 ³ / ₈
<i>Tenor</i>	<i>(Stop) THE LIVEING I TO CHVRCH DO CALL &</i> TO THE GRAVE DO SUMON ALL	14 2 24	44 ⁵ / ₈

[Diameters and weights are taken from the on-line version of Dove's Guide.]

Each of the bells retains its canons, and the tenor and sixth bells have plain canons. The three smallest bells have cabled canons, while the canons of the fourth, fifth and seventh bells have plait decoration. All of the bells have been quarter-turned, and the fifth, sixth and tenor bells have then been one-eighth turned. (Plate 2)

The clock bell is 28⁷/₈ inches in diameter and is inscribed:

THE REV^D J COOKSEY RECTOR W^M HILL CH WARDEN APRIL 1738
RICHARD PHELPS T LESTER FECIT
MY VOICE AT PROPER TIMES I'LE RAISE AND SOUND TO MY SUBSCRIBERS PRAISE

The information about the clock bell has been taken from Stahlschmidt's account and has not been verified.

5.2 Fittings

The fittings consist of elm stocks, evidently those supplied in 1899, with plate gudgeons and ball bearings. The latter were supplied in 1936, and the hexagonal nuts indicate that the plate gudgeons were replaced at the same time. The bells are generally secured to the stocks with conventional ironwork, but the three bells that have been one-eighth turned are each supported by four bolts through the crown which were fitted in 1936, the marks where the former hanging irons were being carefully filled in. (Plate 2) Independent crown-staples have been fitted, again in 1936, and the stays and sliders are of traditional form, as are the wheels. A set of Ellacombe hammers was fitted by Messers Taylors, chimed from a manual in the ringing chamber.

6. The Bell Frame

6.1 Description of the Frame

This was installed in 1735-6, after the completion of the church, and is of conventional layout (Pickford Type 8.3). Approximately square, because of the angle at the north-west corner where the spiral stair gives access to the belfry, at this corner the frame is also angled. On the west side the treble and second bells swing north-south, mouth to mouth, while on the east side the fifth and sixth bells swing north-south, mouth to mouth. These are separated by four parallel pits, with the bells swinging east-west, containing, in order from the north, the third, fourth, tenor and seventh bells. The rope circle is clockwise. (Fig. 2) In order to improve the rope circle in the ringing chamber there has been a slight amount of drawing of the ropes both in the belfry and in the intermediate chamber, in the ringing chamber, but despite this the rope circle is still not as good as it might be.

For the four parallel pits, each bell hangs at the centre of a truss which is formed by two substantial braces, inclined to the centre, each of which is double jack-braced. (Fig. 4) In the frame each main brace has double jack braces. The north-south trusses are of three different types. That on the east side has two pairs of braces, with a bell hung more or less in the centre of each. (Fig. 5) The two trusses that close the four east-west parallel pits have a pair of braces at the south end, but at the north end only a single brace inclined towards the centre of the frame. (Fig. 3) Thus on the west side, bells five and six do not hang at the centre of a pair of braces. On the west side of the frame there is a third

type of truss, with only two inclined braces, rather more widely apart. Thus neither the treble nor the second bell hangs at the centre of a pair of braces.

At sill level the frame was formerly closed by a diagonal timber at the north-west corner, which is now missing. (Plate 3) How this was secured at either end is not obvious. It was lapped over the west sill, but no evidence was found to indicate how the lap joint was secured.

There are a series of carpenter's marks on the frame, which were cut with a one-inch chisel. The full series was not identified as the frame is covered with a thick layer of London grime and it was felt that to brush this layer away to uncover other of the marks was inadvisable.

From the jointing of the lower sills the sequence of installing the frame can be deduced. (Fig. 3) First the sill against the east wall was placed in position, then the sills against the north and south walls were engaged at the east end at an angle, and then swung into position. From the lap joint at the south end of the inner truss for the fifth and sixth bells it is clear that this sill was engaged at the north end and then the south end lowered into position, the cross-piece in the middle being engaged first. Next, the internal east-west sills of the four parallel pits were installed, and were closed at the west end by engaging the closing timber at the south end at an angle, and then swinging this into position at the north end, the mortice being open at the west end to enable it to be engaged. Then the sill on the west side of the frame was engaged at the south end, with the north end raised, and the small cross piece between the two pits engaged and the sill lowered into position. This would only be possible if the tenons in the cross piece were short.

Because there is more space between the frame heads and the walls, these would be much easier to install, with the final closure being at the north-west corner.

There is also the likelihood that a mistake was made in the construction of the frame. To the north of the cross-piece that separates the pits for the treble and second bells at frame-head level there are two corresponding tenons in the frame heads, which have been cut off flush on the inside of the frame heads. (Plate 4 & Fig. 2) These would have been for a timber which was immediately above the cross-piece in the sills of the frame, which would have been a more usual position. However, because the frame was reduced at the north-west corner, this would not leave enough length in the pit for the second bell to hang, and so the tenons were cut flush and another timber installed slightly further to the south, to give the pit enough length. It could be argued that the frame was reused from the previous church, and that this modification was a result, the previous tower not having an angled corner. This would require the bell to have been hung slightly further to the north than at present, leaving evidence in the frame heads of redundant bearing indents. However, there were no such indents, and there is no evidence to suggest that the bell was ever hung in a position other than where it is now. (Plate 4)

6.2 Later alterations

There have been few alterations to the frame since it was made. Above is noted the alteration in the cross piece in the frame heads between the treble and second pits, which was made as the frame was being installed and so is really part of the primary phase. Subsequently the closing timber in the sills at the north-west corner was removed – if, indeed, this was ever present. (Plate 3) For each bell, where the bearings are secured to the frame heads, a block of timber has been let into the frame head, removing the former bearing indents, although for most cases there is evidence below of where the stock hoops formerly swung close to the frame heads.

Also, in 1936 five tie rods were installed, one at either end of the trusses supporting the tenor bell, and another at the east end of the truss between the third and fourth bells. These tie rods not only tie the trusses together at these points, but were extended so that they go through the supporting timbers and tie the frame to those timbers. Prior to that the frame just rested on the floor laid on the supporting timbers. At the same time, cast iron angle brackets were placed in all internal angles of the frame heads, except for those at the east end of the timber separating the pits for the fifth and sixth bells. These brackets were mostly secured by coach screws, with a limited use of through bolts.

6.3 Use of Secondhand Timber

The frame was constructed using a mixture of new and secondhand timber. Certainly the north and south sills were reused from previous uses. The north sill has a redundant mortice near to its east end, and there may have been another mortice which was reused and hence concealed, as there are four pegs at the bottom of the east brace of the truss supporting the north side of the third bell. Similarly, the south timber has two redundant mortices near to its west end, and there is a notch on the underside beneath the western brace. The layout of these features from previous use make it unlikely that these timbers came from a former bell frame. The sill of the south truss of the tenor pit was also reused, with two blind notches on the underside, but again it is impossible to explain these in bell-frame terms.

The braces in the east truss are clearly reused, with redundant mortices, some of which still contain the relevant tenon cut flush. (Plate 5) Three out of the four have redundant mortices on both sides. In view of the width of the braces, and the relative positions of the redundant mortices, these can only be explained as being reused braces from a former frame, as it is most unlikely that timbers from another structure would have this particular form of jointing. The identification as being former braces reused is reinforced by the west brace of the truss between the third and fourth bells, which has a score mark not related to present use, and the brace across the west end of the seventh bell pit, which has an inverted score mark. (Plate 5) The conclusion is that most of the braces used were second hand, and that some came from a frame with double jack braces. In view of the relative position of the redundant mortices, the frame from which these

braces came was rather higher than the present frame, and hence less efficient in resisting the stresses of bells being rung full circle. The frame in which these braces were used is unlikely to have been made before the middle of the seventeenth century. There are two braces which do not conform to this pattern, having been cut from a timber through the centre of a mortice, and these are the west brace in the south truss, and the west brace of the north truss.

The jack braces themselves are of very variable size, and several exhibit signs of reuse, although the limited size makes it impossible to say where they had been previously used. One at least is of considerable age, this being the upper jack brace at the west end of truss between the seventh and tenor bells, which has scratch marks about three inches long, perhaps dating from the sixteenth century. (Plate 3 & Fig. 4) Apart from these scratch marks, there are no other signs of reuse in this particular timber.

As far as could be determined, the frame heads were made of new, clean, timber.

6.4 Frame of the clock bell

The clock bell is accessible from a ladder in the clock room. In view of the relatively exposed position, and open arches to the side of this space, the writer did not venture into the chamber, but from the top of the ladder it could be seen that the single-pit frame in which it hangs is of double jack-braced form, but somewhat slighter in construction than the main bell frame.

7. The Supporting Timbers

The sills of the frame are all jointed together on the level and as such are designed to sit on a floor. Initially there was no mechanical connection with the floor, and it was not until 1936 that the frame and floor were tied together with tie rods. The floor is integral with the tower and consists of two large north-south timbers, about 30 cm wide by 35 cm deep, dividing the area into uneven thirds, resting on wall plates built into the north and south walls. On the east and west sides there are 11 timbers, each about 15 cm wide by 22 cm deep, spanning from the main timbers to the tower walls, equally spaced, but the outer ones of uneven length because of the angling of the walls in the corners at this level. The outer ends of these timbers also rest on wall plates built into the walls, and the inner ends are double tenoned to the primary timbers, and probably pegged from the top, although this is hidden. Centrally, the middle three corresponding timbers were not installed, the space under the tenor bell being used for a bell hole to raise the bells into the belfry. (Plate 6) In this central space two softwood timbers have been slotted, the rest of the structure being of oak, with a trap above. Outside the central area the timbers are covered with boards laid north-south, tying the whole structure together and effectively making it a diaphragm.

Generally the floor is as it was laid, except that a board has been removed beneath the treble bell, and a similar slot cut along the pit of the third bell. This slot, which is comparatively recent, cuts across the boards which are laid north-south and thus reduces the efficiency of the floor.

Immediately below the supporting timbers four tie bars have been installed, more or less parallel to the four walls and close to them, and these are designed to tie the corners of the tower together. These were probably installed as part of the work carried out in 1930.

8. Dating of the Bell Frame

Because there are no corresponding bearing indents, no bell hung in the pit of the second bell until after the dividing timber between the treble and second bell pits was moved. Thus the second bell is in its primary position in the frame, and the alteration was made before the bells were hung. Unless the previous tower had a staircase in the same position, then this must imply that the frame was made for the present tower, that a frame of a standard rectangular shape was made, without allowance for the angle in the north-west corner, and that on installation the frame had to be modified. The minimal clearance between the sills of the frame and the walls of the tower support the view that the frame was made for this particular tower. However, only primary documentary research can confirm this deduction.

Even though some second-hand timber has been used in the frame, it is perfectly suitable for the use to which it has been put, and indicates prudence on the part of the churchwardens. The frame is typical of the eighteenth century, is very competently made, and exhibits no unusual features. It was clearly made by a professional bell hanger such as Robert Catlin and John Williams, both of whom were working in London at this period.

9. Illustrations

- | | |
|---------|---|
| Plate 1 | (Left) A view of St. George the Martyr, taken from the south east on a sunny day.
(Below) A massive brace at the east end of the seventh bell pit, with the upper jack brace being clearly seen. The pegs visible on the right secure a halving joint. |
| Plate 2 | (Left) The high crown on the second bell is clearly seen, as is the traditional ironwork securing the bell to its stock.
((Below) Hexagonal nuts indicate the work done in 1936, when the tenor bell was eighth turned on the stock. |

- Plate 3 (Left) Long scratch carpenter's marks indicate that this piece of timber was first used c.1600.
 (Below) The slot in which the tenon engages to close the sills of the four-bell unit is visible in the centre, behind the conduit.
- Plate 4 (Above) Just visible in the frame head arte the cut-off tenons where a mistake was made in setting out the frame.
 (Below) Below the present bearing can be seen a clearance mark where, prior to 1899, the stock hoop of the bell cleared the frame head.
- Plate 5 (Above) The mark where a bell formerly swung on this brace at the west end of the seventh bell pit indicates that this brace was reused from a former frame.
 (Below) Reuse is also indicated on the northernmost brace of the east truss supporting the sixth bell. The tenon from the former use was left in situ.
- Plate 6 (Left) To support the octagonal stage above the belfry, squinches are built out at the four corners.
 (Below) Looking at the timbers supporting the frame towards the south east. In the centre is the end of one of the tie rods that secure the frame to the floor.
- Figure 1. Diagrammatic section through the tower showing position of bellframe.
- Figure 2. Plan of the bell frame at frame-head level, showing relation to the tower walls.
- Figure 3. Plan of the sills of the bell frame.
- Figure 4. Section A – A, south elevation.
- Figure 5. Section B – B, west elevation.
- Figure 6. Sketch plan of the timbers of the supporting floor

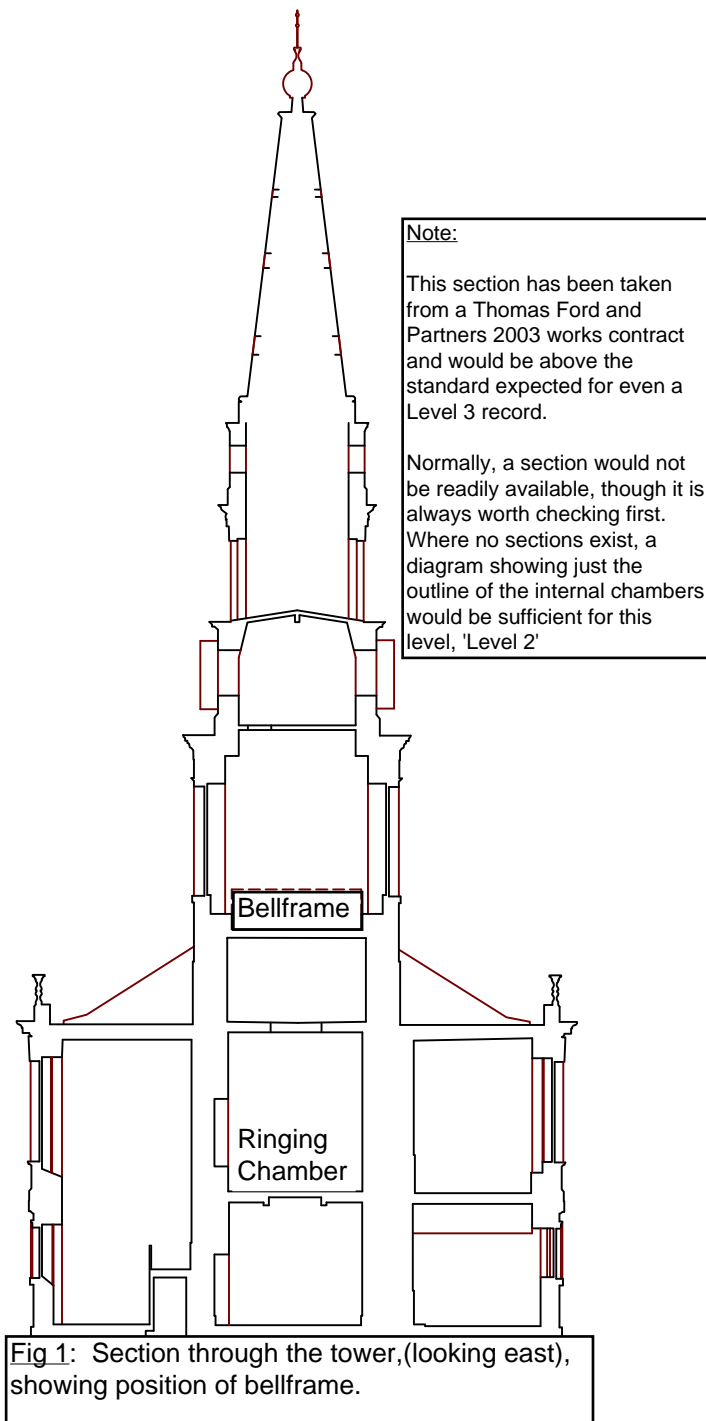
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The Church of St. George the Martyr, Borough, Southwark.

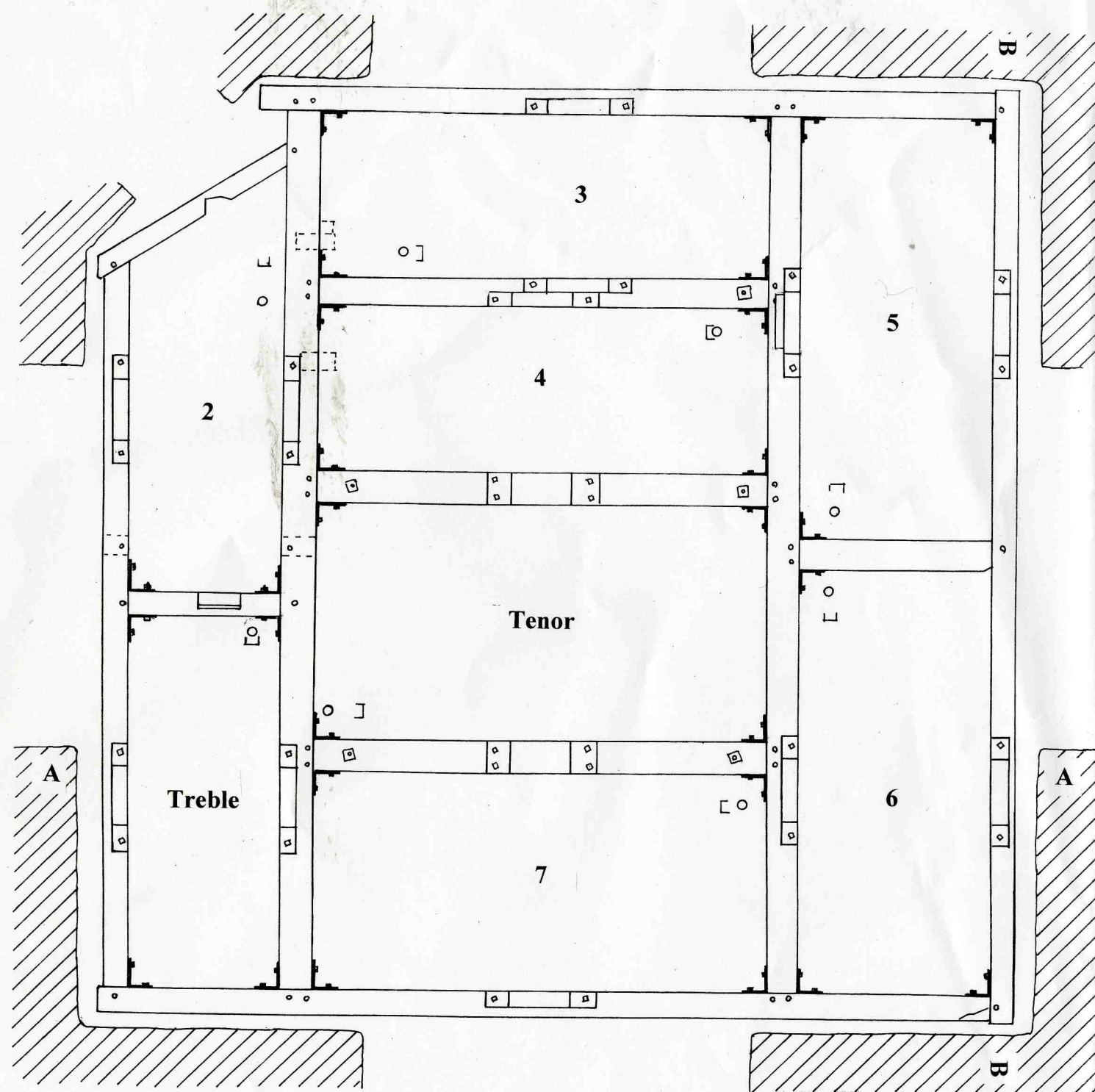


Figure 2. Plan of the bell frame at frame-head level, showing relation to the tower walls.

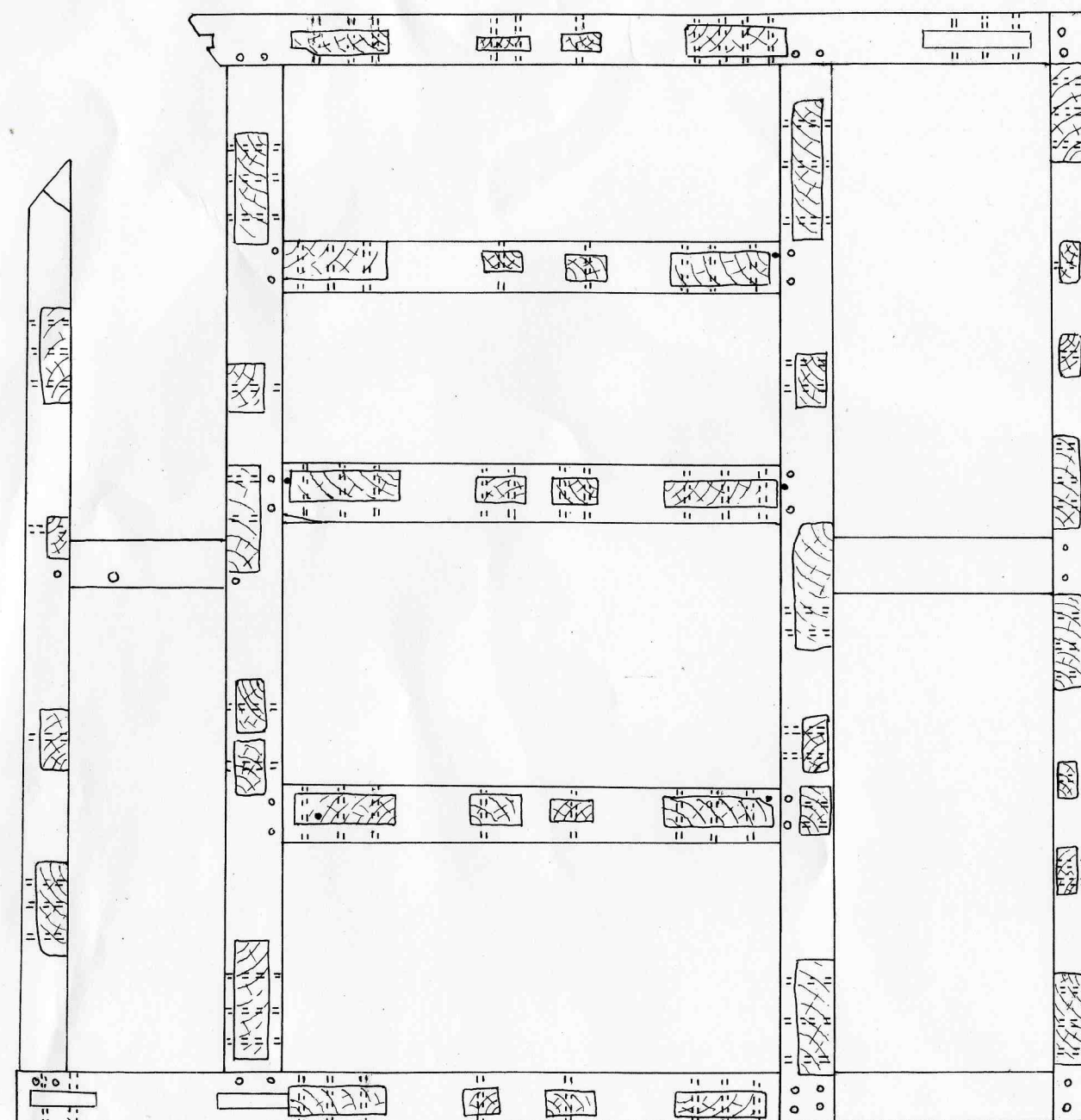


Figure 3. Plan of the sills of the bell frame.



The Church of St. George the Martyr, Borough, Southwark.

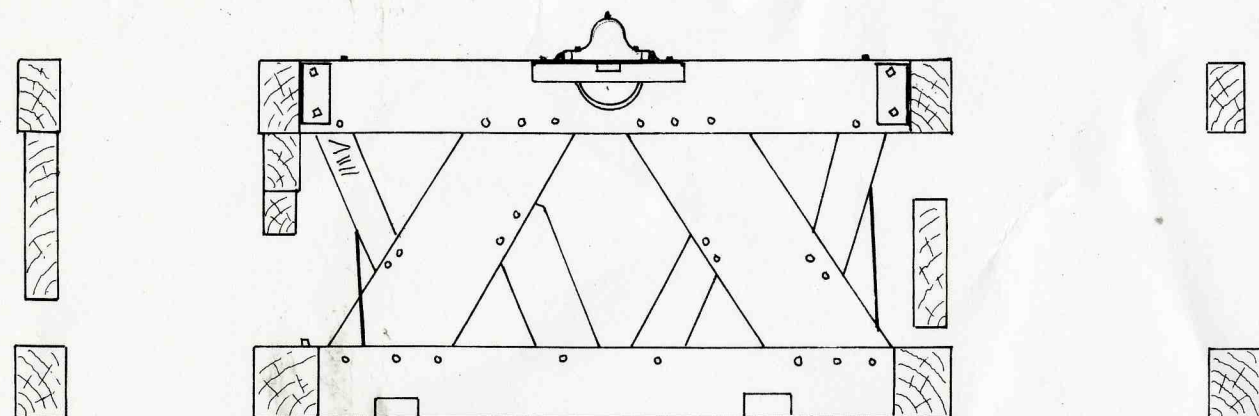


Figure 4. Section A – A, south elevation.

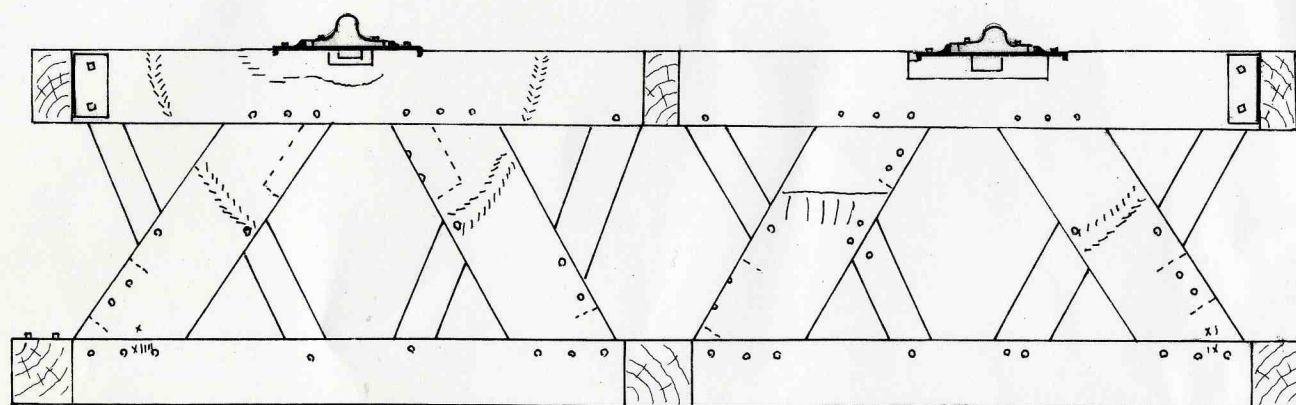


Figure 5. Section B – B, west elevation.

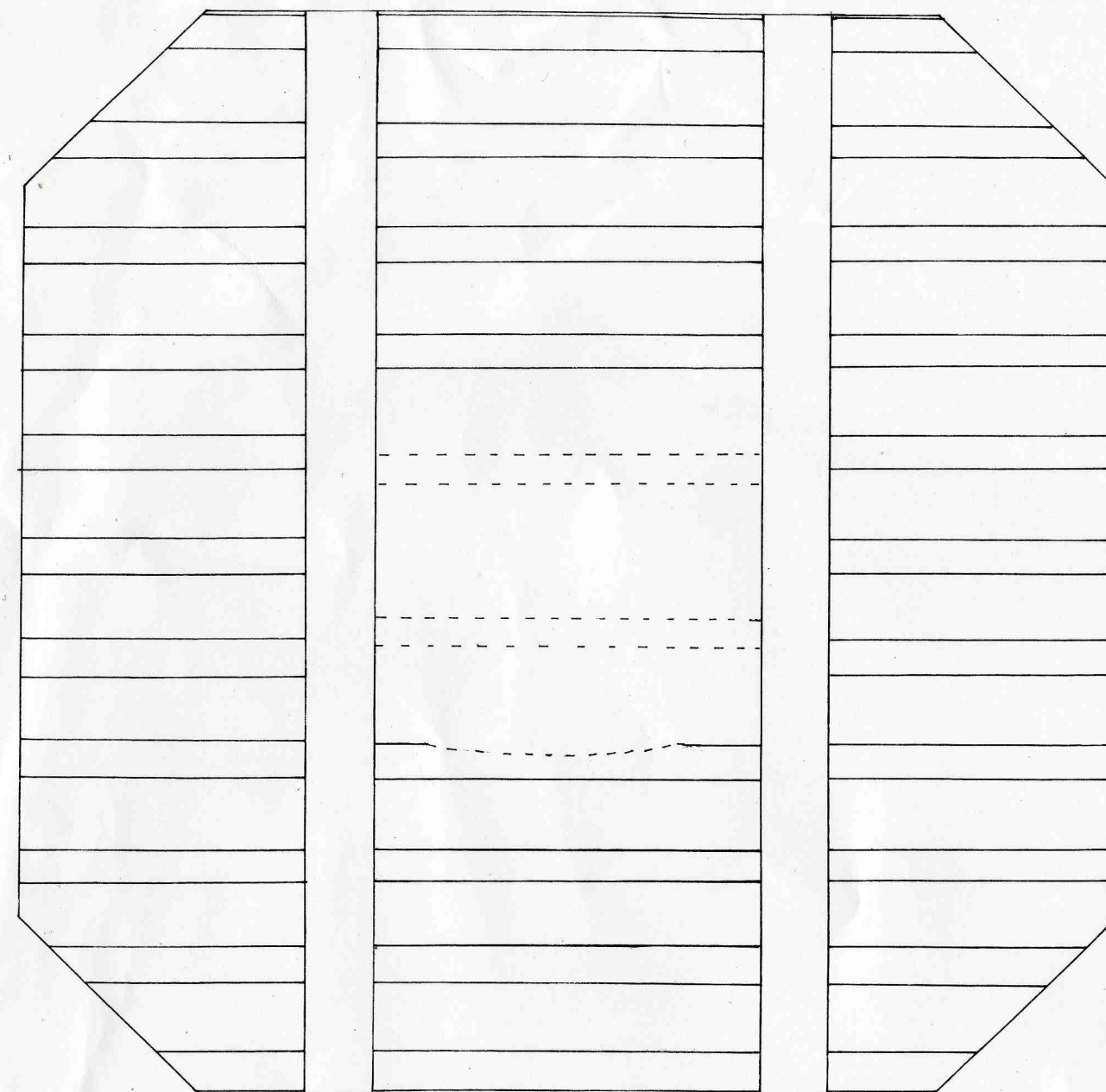


Figure 6. Sketch plan of the timbers of the supporting floor

