THE CHURCH OF ENGLAND

DIOCESE OF SALISBURY

Notes from the DAC site visit held on Friday 15th of September 2021 at St Peter's, Poulshot.

Attendance

Diocesan Advisory Committee (DAC): Robert Purnell, DAC Bells Advisor; Chris Bush DAC Bells Advisor designate; Church Warden, Dankay Cleverly

Purpose of the meeting:

This is a report of an inspection of the bells and fittings at St Peter's, Poulshot which was carried out on Friday 15th of September 2021 at the request of, and in company of, the Church Warden, Dankay Cleverly. The inspection was requested as the PCC are considering restoration of the church bells and improvements to tower access.

Background

Following a Quinquennial Inspection recommendation, the PCC has agreed to undertake basic conservation work to the three bells that are in poor condition, and restore the existing treble for stationary electric chiming. The access to tower is in unsafe condition and it is proposed to install a new access platform and a fixed ladder to ensure safe access. The scheme will be designed to be conservative in extent to respect the age and listed status of the installation.

Comments

St Peter's Church, Poulshot has a two-stage west end Tower approximately 2.34m x 2.44m square (7'8" west-east x 8'0" north-south). The Tower is situated conventionally at the west end and has a pyramid hip roof with diagonal buttresses on the corners reducing in size and disappearing as they approach the second stage. It is understood that the tower was built sometime after the nave in memory of the wife of a previous rector. There appear to be some cracks at the junction of the tower to the nave probably caused by differential settlement following initial construction. It is likely that these cracks are historic and not currently moving. There could also have been limited tying in to the existing structure. It may be that the tower was constructed in order to further strengthen the west wall which has been pushed out by the arches of the arcades and previously buttressed. It is not likely that these cracks have been caused by the movement of the bells ringing.

Access to the level below the foundation beams is by means of two ladders. The first ladder (which is a portable aluminium type) takes you to a triangular platform in the south east corner approximately 2.6m above ground floor level. From there you ascend by a fixed wooden ladder through the trap door in the floor above. It is not for the faint hearted, the transfer between the two ladders being the trickiest manoeuvre to perform. There is no guarding to the trap door so care is required negotiating this floor. Access to the frame and bells is via a short timber ladder which arrives in the north east corner of the tower. There is a piece of timber across this corner of the frame which serves to give access to the top of the frame.

The Tower contains a ring of three bells, the largest of which weighs about 8.5 cwt. The frame layout appears to have been modified at some point, as there are cut outs for bells and bearing blocks where it would not be possible to locate a bell. It seems highly likely, therefore, that the current frame layout is not original.

The Bells

Brief details of the three bells are: -

1) (Treble) cast by a Medieval Bristol foundry circa 1450. It is slightly flat of C# with the nominal being recorded as 1077Hz or 1070Hz. Approximate weight 5.5 cwt. The bell is listed by the Church Buildings Council as being of historic interest.

2) Cast by John Wallis of Salisbury in 1606. It is flat of B with a nominal recorded as 976Hz or 972.5Hz. Approximate weight 7 cwt.
3) Cast by John Wallis of Salisbury in 1606. It is flat of A with a nominal recorded as 873Hz or 872Hz. Approximate weight 8.5 cwt.

The bells are all maiden bells (never tuned). A full tonal analysis by Nicholson Engineering has been undertaken and indicates that the treble is the most unmusical of the three bells, having poorly matched partial tones. The remaining two bells are described as tonally very fair. It is very unlikely that tuning of the treble bell would be considered acceptable, however some conservative light tuning has occasionally been permitted in the past.

The tenor bell has been quarter turned. The remaining bells have not been turned. It was noted that the indentations from the clapper on the treble bell are approaching a sensible maximum indicating that the bell should be turned if re-hung for full circle ringing. The clapper is also striking the bell rather too low, which risks cracking the bell. All clapper suspension points are worn with significant sideways movement of the clappers possible. It would be prudent to drill out clown staples, if permitted, as this is a significant cause of bells cracking in the crown. There is no sign of cracking in the bell crowns at present.



The Bell-Frame

The current Frame was probably put into its current form in 1606 and is of the long framehead type with curved braces and kingposts. There is one jackbrace. The current layout was probably fabricated from a previous frame which was modified to accommodate the two 1606 bells. The south side of the treble frame, and the west side of the tenor frame terminate before reaching the outer frame and repairs and additional braces have been inserted, at a later date, to overcome likely frame movement caused by the unusual frame in this position. This space also accommodates the access stairs.

The Frame is set on three oak foundation beams running N/S across the tower, these beams appear to be in fair condition although they exhibit signs of worm and rot. As is to be expected the worst condition beams are those closest to the walls, and beam ends where built into walls. Fortunately, external beam ends bear on corbels in the corners of the tower. The central beam does not have corbels but is in fair condition although the worm damage at some points has caused the surface of the timber to become detached. The foundation beams sit on a ledge formed by a reduction in the thickness of the tower walls. Some of the floor boards above these beams are showing signs of advanced decay.

Fittings

1) Headstocks and Bearings

All bells have Elm Headstocks and are mounted on plain bearings with strap gugeons. None of the bells are loose on their headstocks, but the headstocks are in poor condition, especially the treble, which is exposed to the driving rain from the north louvre, which is close by.

2) Clappers and Crown-staples

All the clappers hang from cast-in crown-staples.

3) Wheels

The wheels are traditionally made but are currently falling apart, with much of the shrouding lying on the belfry floor.

4) Stays sliders and running boards

Straight timber stays have been fitted to the side of the headstocks but sliders and pins are not in evidence. The treble bell seems to have been fitted with a stay on the opposite side to the wheel at some point, but currently has the stay immediately adjacent to the wheel, which is an unusual arrangement.

5) Pulley Blocks

Are of the archaic “bobbin” type.

6) Ropes and guides

The ropes are decayed and are not currently hanging down to the ground floor.

7) Access/stairs

The means of access is treacherous and should be improved.

8) Louvres

The louvers which let out the sound of the bells, appear to be well protected against birds and other wildlife, however small birds were able to enter the tower during my visit. A close inspection of the netting should be made to seal up any small holes as birds can get through a surprisingly small opening.

Conclusion

The current state of the fittings does not allow the bells to be rung full circle. Even swing chiming would not be advisable as this may cause the wheels to collapse. It seems likely that the configuration of the frame is unlikely to be satisfactory for full circle ringing given the “incomplete” nature of the layout in the north-east corner. Whether this could be remedied is debatable. It would be better to abandon any hope of ringing bells full circle in the existing frame as this is likely to be less than satisfactory and of limited interest to any ringers that might come forward.

It may be that a light grillage could be installed below the existing bells, but this would not use the existing bells and so may not be a favoured option. Moving the listed frame higher up the tower and squeezing in a frame into the current location and augmenting could be possible, but is a difficult and expensive option to pursue. For now, the option of hanging dead with upgraded fittings for stationary chiming seems the best way forward.

We are happy with the PCC intention to have the bells re-hung as a chime and with their chosen supplier Nicholson Engineering who has done work in the Diocese for many years.

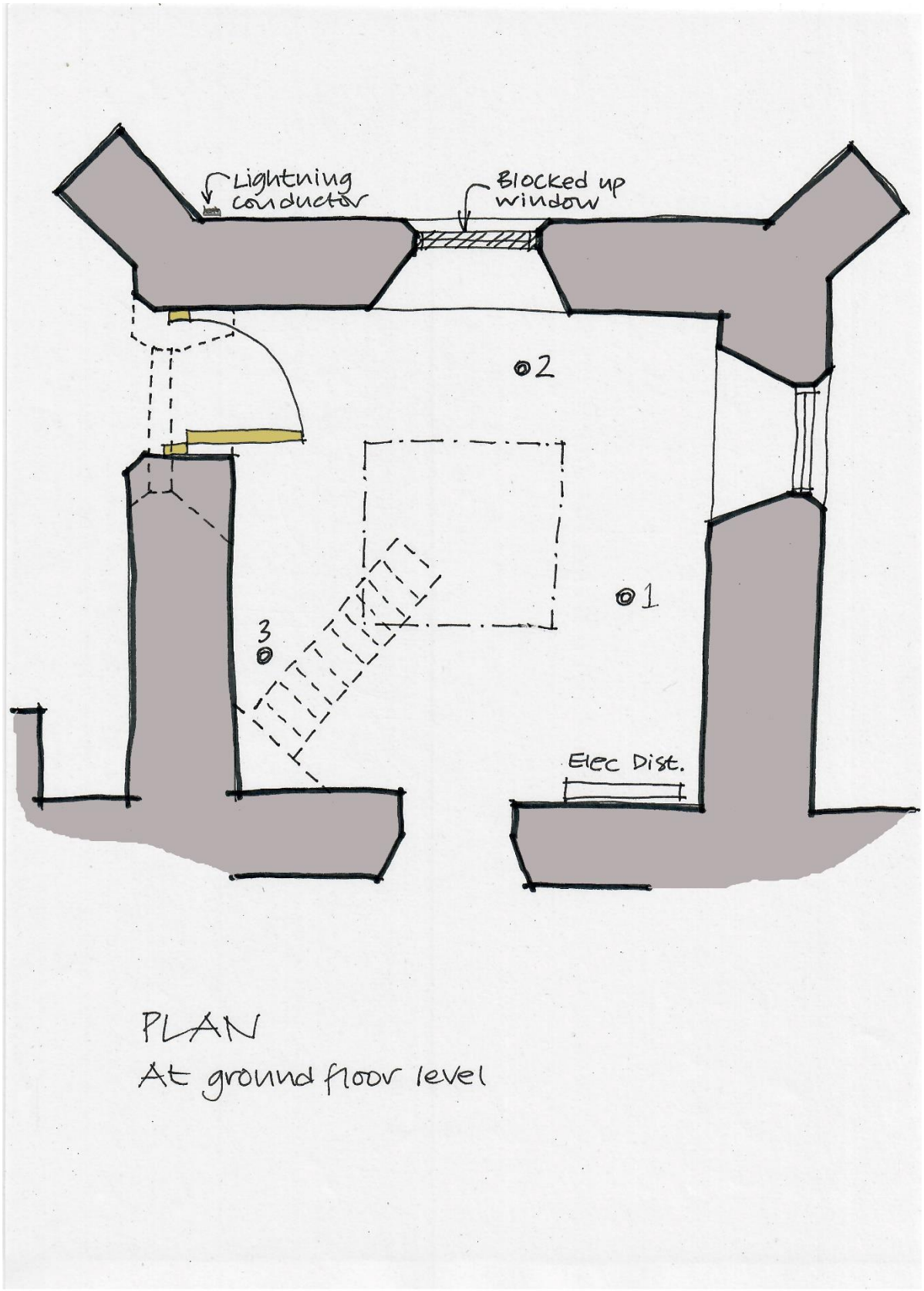
Our concern is that that the work to the bells should be preserve them for future generations, and to this end would like to ensure that the work includes the 'Cast in' crown-staples being removed from all three bells our other main concern is that the bell-hanger ensures the bell-frame is strong enough to support the bells for the foreseeable future and that they are re-hung on new dead-stocks.

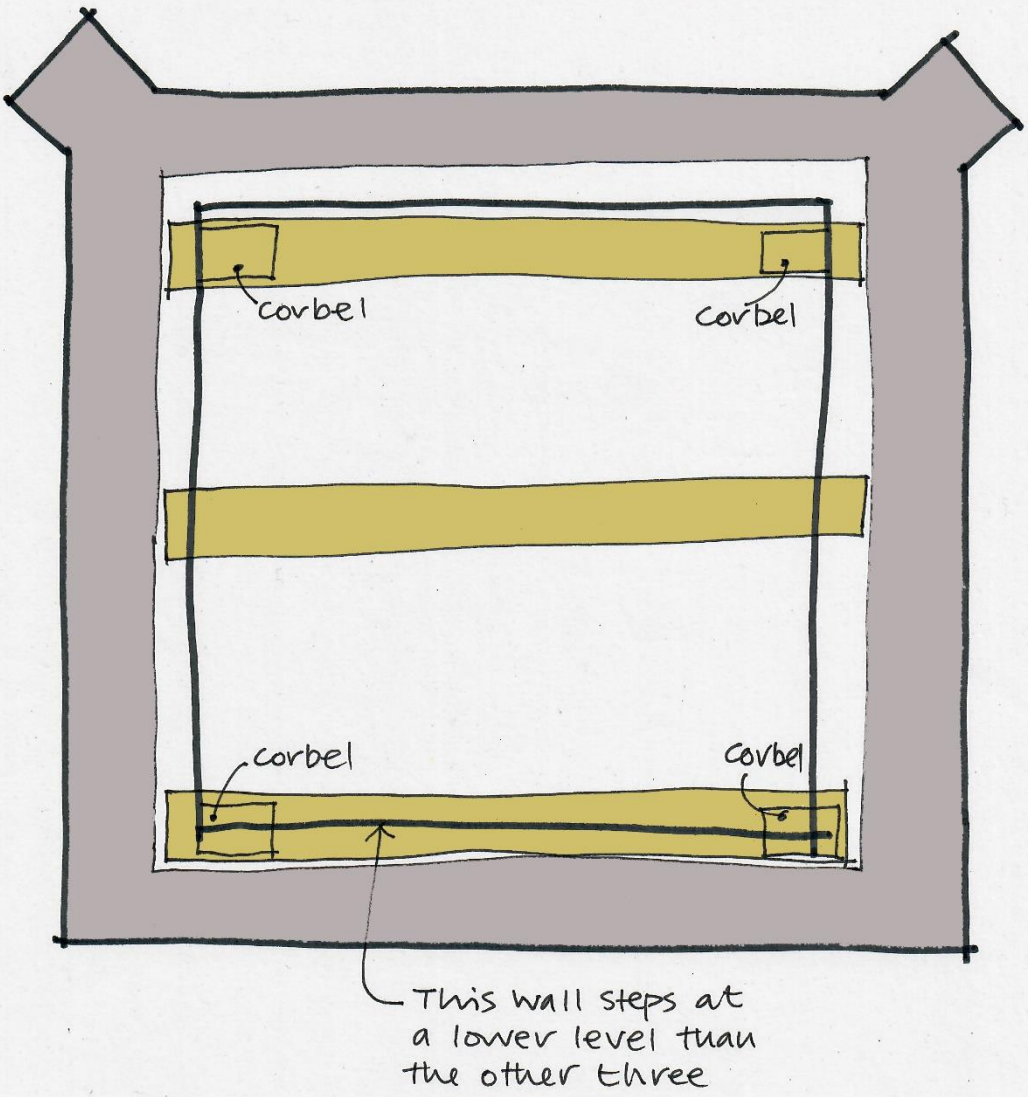
We understand that it is the wish of the PCC that the bells are fitted with electric solenoid chiming and although we have no objection to this, we think that unless the installation is maintained more frequently than in the past it might be more advisable to consider chiming by a mechanical Ellacome style apparatus which is in our opinion altogether more durable when neglected.

15 October 2021

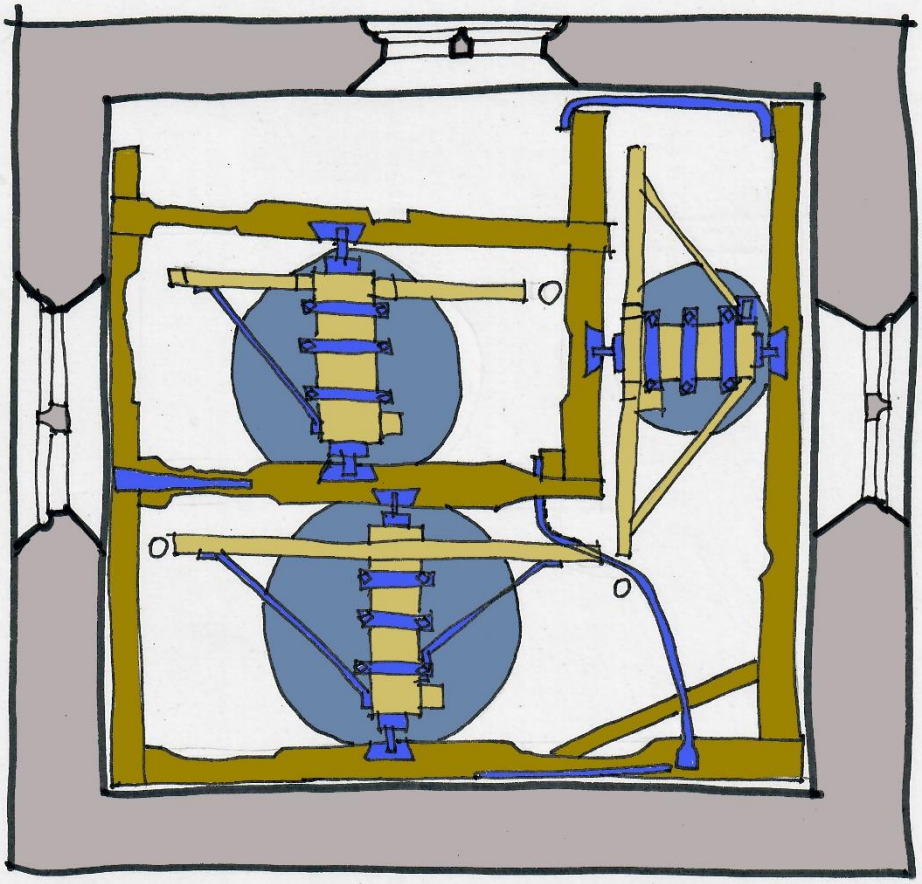
Disclaimer
These are notes of the site meeting. There is no intention to grant any permissions for the work discussed. The usual faculty process needs to be undertaken.

APPENDIX A – SKETCH PLANS





PLAN
At foundation beam level



PLAN
At frame Level