

Derby Diocesan Association of Church Bellringers Consultant's Report	Report No DDACB 11 /08
Visit to investigate the 'go' on the treble and the tenor bells at All Saints Church, Heath.	Issue Date 02/12/08

1.0 Introduction

A full inspection of the bell installation had been carried out in February 2003 (Report No DDACB 02/003) by Mike Banks to provide an independent opinion on the condition of the above compared with comments and proposals made by Fred Pembleton in his quotation dated 12th .May 2001. Since the inspection in February 2003 no cleaning or repair work has been carried out in the belfry. This visit (29/11/08) was arranged on behalf of the PCC through Mrs. Jackie Richards who was becoming concerned over the 'go' of the treble and tenor bell and the further build up of debris in the bell chamber.

At present the five bells are rung for weddings (14 in 2007 and 4 in 2008) and on special occasions. Jackie calls in ringers from other towers as and when required.

2.0 State of the Bell Chamber

No cleaning work has been undertaken since the last report and the 'sand level' from the natural 'weathering' of the stone walls is now at a height where it is in danger of contaminating the pulley bearings.

The wire netting covering the louvres on the south, west, and north walls at bell level is in good condition, as is the netting fitted to the louvres at the higher level in the tower but we still recommend that 'Galebreaker' is fitted to all these louvres.

Signs of the headstocks rubbing against the frames on Bells 2 & 3 are still evident.

The double pulley blocks on bells 1 & 4 now require attention due to the build up of the sand level.

Nothing untoward was found on the bells, clappers, headstocks, stays and sliders, and ropes. Delamination of the plywood sides on the wheels, especially on Bell 5, appeared to be no worse.

The spring holding the clock hammer off bell 2 is in need of adjusting, as does the clock hammer 'off' position in the ringing chamber (lengthening).

The clock hammer 'off' position for the tenor in the ringing chamber also requires attention (shortening).

The lighting in the chamber is not adequate for safe moving around the bells, which are tightly packed into the available space.

3.0 Investigation into the 'go' of bells 1 & 5

• bell 1 (treble)

The bell was raised and rung full circle. There appeared to be no snagging of the rope where it passed through the double pulley but it was discovered that although both sections of the wheel were firmly fixed together the through bolt holding the wheel onto the headstock was missing. The wheel was thus free to move up and down on the headstock creating in effect a differing rope length as the bell was being rung full circle.

- **bell 5 (tenor)**

The bell was raised and rung full circle. The wheel is not a perfect circle and is also running 'out of line'. This appears to have been the case since the bell was installed, as there was a large cut out in the wooden frame member over the top of the bell to accommodate this movement. The plywood wheel sides, although delaminating, are still in good enough condition to stop the rope falling off but tight rope ringing is required on this bell. Any slack rope ringing could create a problem when the bell is being rung full circle.

4.0 Recommendations

All the listed recommendations can be undertaken on DIY basis using basic health and safety rules.

1. Sweep the bell chamber clear of sand and set up an annual cleaning party. Use of a vacuum cleaner would be useful around the pulley areas.
2. Consider installation of 'Galebreaker' in the louvres (Rough sizes are as follows 1 off 1200mm x 1000mm, 2 off 1200mm x 2800mm, 4 off 400mm x 1600mm.) We can provide this at a cost of £15.65 per linear metre (width 1200mm). These should be fitted to tanalised timber frames and secured by stainless steel screws. The church architect should be informed of any intention to fit this material. It is widely recognised as ideal for belfries and we have fitted it several churches in the Derbyshire Diocese.
3. Improve the lighting in the bell chamber.
4. Frames – as a precaution check tighten all screwed fittings including the nuts/bolts holding the wheel-side bearing for the tenor and the wooden frame tie bars. Remove all rust from the metal frame sections and metal fittings with a wire brush and then paint with a coat of red oxide, a coat of primer and a top gloss coat of paint. Give the wooden frame sections a coat of Cuprinol wood preservative (or creosote)
5. Main wheels – derust metal fittings and give three coats of paint- red oxide, undercoat and gloss topcoat. Treat wood with Cuprinol or creosote.
6. Headstocks – remove material from the end of bell 2 headstock (by plane and/or chisel) to prevent rubbing on the frame. Ditto bell 3. Derust metal fittings and give three coats of paint – red oxide, undercoat and top gloss coat. Treat wood with Cuprinol or creosote.

All the above work is as listed in the original report. The following additional work is now required

7. Pulleys - after removing all the sand the pulleys should be tested for freedom of rotation – especially those on bells 1 & 4. If they do not rotate freely, or rub against the side walls of the box then the pulleys will need to be stripped down and bearings replaced. The profiles on bells 3 & 4 are worn and if the bearings are to be replaced then the pulleys should be reprofiled/renewed at the same time.
8. A new through bolt should be fitted to the wheel on bell 1. The length required is around 12 inches with a maximum diameter of half an inch. Flat washers should be fitted under the head at one end, and under the nyloc nut at the other end. The wheel will have to be lined up with the existing hole through the headstock.

9. Adjust the spring that is holding the clock hammer off the bell on bell 2.
10. Adjust the lengths of **both** wire ropes in the ringing chamber that are holding the clock hammers off the bells when being rung full circle. Serious damage can be caused to the wheel and the bell if the adjustment is incorrect.

5.0 Conclusions

In the Derby Diocese just over 93% of all the bells hung for full circle ringing are ringable (February 2008) and we would not like to see the five bells at All Saints Church Heath fall into the unringable state due to bad housekeeping.

The bells, although not the easiest to ring, are in a good state of repair and there is no reason why they should not be rung safely for several more decades if the above listed work is carried out.

Advice given in good faith but no liability is accepted.

Robin Lyon

Bell Consultant to the Derby Diocesan Association of Church Bellringers