JOHN TAYLOR & CO.,

BELLFOUNDERS, BELLHANGERS AND CARILLON BUILDERS

Our ref: SEA/sa/719/1

Mr W Ralph Berry
Greystones
East Lydford
Somerton
TA11 7HA

24th September 2024

Dear Mr Berry,

Church of St Peter, West Lydford - The Bells

In accordance with your request, we inspected the bell installation on Wednesday 26th June 2024. We would like to thank you for meeting me at the church, and for accompanying the inspection. We report on our findings as follows.

Bells
The tower houses a peal of six bells, the details of which are given below:

Bell	Diameter	Weight (cwt)	Note	Cast	Founder
Treble	30.25"	5 cwt	D	1911	John Warner & Sons
2nd	31.00"	5½ cwt	C	1911	John Warner & Sons
3rd	33.75"	6¾ cwt	Bb	1607	Richard Purdue
4th	36.75"	8 cwt	A	1587	Unknown
5th	39.25"	10 cwt	G	1605	Richard Purdue
Tenor	44.00"	13¾ cwt	F	1698	Thomas Purdue

The 3rd 4th and 5th bells are listed for preservation by the Church Buildings Council.

The weights of the bells are given in hundred weights and are approximated only, meaning that they were not accurately weighed when last restored.

Background

The bells were restored in 1911 by John Warner and Sons of Cripplegate, who provided them with all new cast iron headstocks and ringing fittings with a new bellframe. Prior to this restoration there were five bells in the tower, and Warners recast the old Treble and added another to make the peal to six.

At or before this restoration and augmentation, the canon heads of the old four bells were removed. The two newer bells were cast in the modern fashion with flat heads.

Recent works

In 1975 the headstocks were removed from the tower by Mr Robert Parker (Bellhanger) so that they could be fitted with new gudgeons and modern ball bearings; the works to the headstocks being undertaken by our Company and completed in October of that year.

It is understood that that the old bellframe was causing issues with tower movement and damage to the structure, and it was replaced with the present cast iron Lowside bellframe installed by Nicholson Engineering in 2000.

The bellframe and bell fittings have been very well repainted in recent times by local means, saving the PCC a great deal of costs.

Bell fittings

At the same time the clappers and crownstaples were replaced. We noted that the new SG iron clappers are rather heavy in section, with the five smallest clappers remaining in their “as-cast” state, whereas the Tenor clapper shaft has been machined slightly in order to improve its performance, and to help keep it on the “right” side of the bell when ringing up and down.

We were advised that some of the bells do go up with their clappers on the “wrong” side of the soundbow. We noted that the Treble, 2nd and Tenor clapper bushes are slightly worn, and the others are rather more worn, there being no efficient means of being able to lubricate them. The clapper bush of the 5th bell “graunches” when swung, and this “picking up” of the bush on the joint pin will do nothing to help the clapper swing efficiently.

The main bearing housings fitted to the headstocks are those provided by us in 1975. The gudgeons (pivots) of the smaller headstocks are “cross bolted” through their casting bodies to prevent them from rotating or working loose. We noted that the stay-side cross bolt of the Treble headstock has sheared off, leaving part of its body jammed into position. All cross bolts appear to be of old manufacture and may date from 1911.

In addition, the gudgeons of the two smallest bells are hot rivet fastened into position. The rivet heads from three of the four smallest gudgeons appear to be slightly loose, as they are marked with oily deposits, indicating movement.

(Post inspection) from photographs received after the inspection, we asked for a white or contrasting paint colour to be applied to the rivet heads, and on reviewing the images we can confirm that the painted surfaces have cracked, confirming some looseness of the gudgeons in the two smallest headstocks.

Recommendations

We suggest that long lengths of ringing (such as full peals) should not be allowed until the gudgeons have been dealt with.

In order to repair the loose gudgeons of the Treble and 2nd headstocks it will be necessary to remove them from the tower, so that they can be attended to under workshop conditions.

At the same time, we recommend that the clappers are overhauled and rebushed, and that their timings relative to the bells are improved, as to increase the ease with which the bells can be rung up and down with their clappers “right” sided.

We quote below for the works we recommend.

Our ref: SEA/sa/719/1 24th September 2024

Church of St Peter, West Lydford
Diocese of Bath and Wells

Specification and Quotation No.1.0 To replacing the loose gudgeons of the Treble and 2nd headstocks

Bellhangers to travel to the church with tools, tackle and stout timbers. Set up lifting gear from the fixed lifting beams placed over the bellframe. Prior to any dismantling, record the swing times of the bells and their clappers (to aid specification and quotation No.2.0).

The ringing fittings of the Treble and 2nd bells to be removed and set aside.

The Treble and 2nd bells to be lifted slightly and placed upon strong timber bearers placed across the base of their framesides. The headstocks to be systematically removed and carefully lowered to the ground floor and transported to our Works in Loughborough.

At the works, the headstocks to be sandblasted clean and the old gudgeons to be cut out. The headstock bosses to be coned out to receive new gudgeons and their bellpad clapper slots to be elongated slightly to allow for increased clapper adjustment and centration. Drill and tap the headstock bodies and fit clapper adjusting screws.

Hot rivet fasten new turned steel gudgeons to the headstocks. Clean and rinse the main bearings and check them for signs of wear and pitting. Refit the bearings, sleeves and housings to the new gudgeons, charge with fresh lubricant and fit the backing caps. Remove the grease nipples from the bearing caps and fit blanking plugs to prevent over-greasing.

Provide new rot-free fibre bellpads for the Treble, 2nd, 4th and 5th bells. Provide new insulation washers for the existing bell bolts. Clean down and repaint the bell bolts.

Repaint the headstocks with two coats of durable grade enamel paint.

Bellhangers to travel to the church with tools, tackle, and the refurbished headstocks. Hoist the headstocks into the belfry.

Fit the headstocks to the bells and carefully set them true and level. Lift each bell in turn, removing the temporary timbers, and rehang the bells in their pits. Attach the ringing fittings, clappers, wheels, stays, ropes and sliders, and adjust the clappers for even striking.

On completion of the work the bells to be tried out by a competent band of bellringers to ensure that all is well with the installation.

QUOTATION No.1.0

The present-day cost of undertaking the work described above would be **£6,748.00 plus VAT**. This price can be considered fixed for orders placed by April 2025 with the exception of rising cost of materials and changes to inflation that are beyond our control.

A contingency allowance of **£184.00 plus VAT** should be added to the above quotation to cover the cost of replacing all of the bearings from the removed headstocks.

Cost reducing items

Appended Item. No.1.1 – Local labour help
If two fit and able-bodied assistants could be provided locally, free of charge to us, so that we need only send one bellhanger to undertake all of the work on the bearings, our quotation above would be reduced by the sum of **£614.00**. We should point out that it is essential, especially for insurance and Health & Safety purposes, that our bellhanger has assistance in the tower at all times.

Our ref: SEA/sa/719/1 24th September 2024

Church of St Peter, West Lydford
Diocese of Bath and Wells

Specification and Quotation No.2.0
To overhauling and rebushing the clappers

In conjunction with the works specified above the six clappers to be removed from the bells, lowered to the ground, and delivered to our Works.

At the works

Set the clappers and crownstaples up on a bench testing jig to determine their actual and required optimum swing times.

The clappers and crownstaples to be stripped down into component parts; Each clapper to be cleaned back to bare metal, checked for cracks; the balls of the clappers to be lightly sanded to remove any flat spots.

The worn out bushes to be removed from their barrel tops, and replaced with a resiliently mounted lubricant impregnated phosphor bronze bushes. Each clapper joint pin to be replaced with mild steel equivalents, fitted with an angular hydraulic greaser, to allow periodical lubrication.

The clapper shanks to be lathe profiled turned to remove excess material as to improve their swing times. The clappers to be tested on the bench jig and their swing times carefully observed.

Each clapper to be re-assembled to its crownstaple, and repainted. New leather washers, castle-nuts and split pins to be provided.

Leave ready for collection by our bellhangers.

The clappers to be delivered to site with the restored headstocks and refitted. The clappers to be correctly centered to their bells and the bells to be test rung to ensure that the clappers work correctly and go up on the “right” side of their bells.

On completion of the work the bells to be tried out by a competent band of bellringers to ensure that all is well with the installation.

QUOTATION No.2.0

The present-day cost of undertaking the work described above would be **£1,845.00 plus VAT**. This price can be considered fixed for orders placed by April 2025 with the exception of rising cost of materials and changes to inflation that are beyond our control.

Additional cost items

Appended Item. No.2.2 – Replacement clappers
If it was found that some of the clappers were not able to be machined to achieve the desired swing times to make them work properly, the cost of their replacements in SG iron would be from **£311.00 plus VAT** to **£384.00 plus VAT** depending on size, and for the heavier bells in the peal where it would be more beneficial to install timber shafted clappers to obtain the correct swing times and ease with which the bells could be chimed and raised correctly, the alternative cost would be **£596.00 plus VAT.**

We recommend that a contingency allowance of **£980.00 plus VAT** should be added to the above quotation to cover the cost of providing one new SG iron clapper and a timber shafted version.

VAT
VAT is chargeable at the rate of 20%. All VAT paid is currently reclaimable by the PCC in the form of a grant that can be applied for from the Listed Places of Worship. See lpwscheme.org.uk.

Faculty
A faculty from the 'B' listing (needing an Archdeacon's letter of consent) is required to remove headstocks from the tower for the fitting of new gudgeons and for the provision of a timber shafted clapper to replace an existing one. The works to rebush and overhaul the clappers comes under list 'A' of the new faculty ruling and is non-notifiable by way of any need for DAC consultation or a public notice.

Terms
A copy of our terms is enclosed. These are usually: 30% deposit; 30% stage payment at the start of works; and 40% payable after completion. Variations to deposit amounts can be negotiated to suit local needs.

Exclusions.
No item we consider necessary for the satisfactory restoration of the bells is excluded from our quotation.

Insurance cover.
Our employers' liability cover limit is £10million, and our Public and products liability cover is £10million. RAMS, CPP and lifting plans will be provided prior to the start of works on site.

Funding.
Given the historic nature of the church, we recommend that the following grant giving bodies are approached for assistance:

Garfield Weston Foundation
Sainsbury's Charitable Foundation
Co-operative Community Fund
Landfill Operators (SITA, VIRIDOR CREDITS, etc)
WREN via National Historic Churches Trust
Quarry Operators (TARMAC, LAFAGRE, etc)

Waitrose - Green Token Community Fund
The Arts Council
Our Heritage (HLF) / Sharing Heritage Fund
Church Building Council and Pilgrim Trust
CCCBR Bell Restoration Fund
Barron Bell Trust
Bath and Wells Association of Church Bell Ringers - Bell Repair Fund
The Hobson Charity (London)
All Churches / Benefact Trust
Church of England Fundraising website
https://www.parishresources.org.uk/wp-content/uploads/Charitable-Grants-for-Churches-July-2023.pdf

We trust that you will find our report helpful and our quotation to be of interest, and we look forward to hearing further from you when the PCC and the bellringers have considered our recommendations.

We are happy to consider variations to our proposals. In the meantime, please do not hesitate to contact us if there are any questions that you would like to ask with regards to the bell installation or our proposals.

Yours sincerely,

Simon Adams
JOHN TAYLOR & Co.,

Photo: SG iron clappers with their shafts lathe machined to improve their timing