

23^d November }
1864 }

Present the Dean and Canons aforesaid

It was ordered That permission be given to Mr Cattley to remove the Bells from the Tower of the Cathedral upon his providing sufficient security for their value and the re-erection of the same or a better Peal - Mr Cattley meanwhile undertaking to fix one Bell so that it can be rung before the services

That Mr Tulljarness Report as to the strength of the Tower being sufficient to bear ten new Bells with risk to its stability be entered in full in the minutes it being a considered satisfactory and confirmatory of the opinion of the Chapter Architect -

Proposed Clock and Bells for Worcester Cathedral

To the Committee.

Gentlemen

Having been requested by the Revd R. Cattley on your behalf and for the further consideration of The Very Reverend The Dean and Chapter of Worcester to examine and report upon the sufficiency of the Tower of this Cathedral to receive without injury the proposed Clock and Bells as designed for it, I have taken the earliest opportunity of making a very minute and careful inspection of the interior and exterior of the Tower as well as those portions of the fabric contiguous and auxiliary to it -

Mr Cattley having explained to me that the proposed peal consists of ten Bells of the weight $7^{\frac{1}{2}}$, $2^{\frac{1}{2}}$, $2^{\frac{1}{2}}$ in the aggregate - the tenor being 36 cwt whilst that at Exeter is 67 cwt - of one large hour Bell of from 14 to 5 tons in weight not intended to be rung up but to have a tolling lever only, and of machinery for the clock and chiming in addition -

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The Bells are proposed to be arranged on a properly constructed floor at the same level as the existing one, the framing, hanging and other appurtenances being such as to diffuse the weight as equally as possible on the floor and its supports and embodying the best mechanical arrangements and improvements of the day for insuring satisfactory and accurate working of the machinery used for the ringing and so as to produce the least amount of vibration -

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It is also proposed to construct another floor for the ringers about 19 feet above the level of the present first floor together with an intermediate floor which I am informed is quite indispensable to change ringing to keep the sound from the ringers

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In examining the Tower I was accompanied by Mr. John who has acted as Architect to the Chapter for the last 20 years and availed myself of his information and lengthened experience as to any perceptible change that had become evident during this period therein - I afterwards inspected the carefully prepared plan of the several stages of the Tower at his Office so as to ascertain the various thicknesses of the walls and to obtain a clear comprehension of its excellent construction and solidity

Owing to the comparatively soft nature of the sandstone which this Tower is composed (erected nearly five centuries) the external faces of the stonework are much perished and decayed and to superficial observers naturally conveys the impression of extensive decay and insecurity; but these defects are confined to the surface I have no doubt for had it been otherwise the walls which are 5 feet 6 inches in thickness lightened by open panelling and arcading with a space of 1 foot 6 inches between the inner and outer parts and yet well united and bonded together and strengthened by towers and pinnacles at the angles must have presented a want of truthfulness of general line both vertically and horizontally and any serious instability must have been manifested by strong indications of bulging and fracture in one or more of the walls between each angle at one or more

Stages of the Tower.

From my experiments I could only find a deflection outwards, and that an unimportant one of about one inch in a length of thirty two feet in the North wall, and two slight uneven settlements not of recent occurrence and of no moment, one in the North and the other in the West wall the former most probably originating from a heavy truss, which some years ago was introduced to give additional support to the Bell floor and which has thrown an unequal weight upon the wall at its point of bearing.

Reflecting on the nature of the soil, hard marl, in which the foundations of this Tower are placed, the unusually large base of the four central and unusually supporting piers, the additional and unusual mass of two solid walls on the East side of the Tower before the arcading of the Choir commences, the counteracting masses of the piers arches and buttresses of the Nave and walls of the Transepts, the strength and construction of the vaulting, their almost perfect condition, and freedom from settlements of any kind, and the small spans of the Tower Arches compared with the dimensions of the piers and height and area of the Tower, it is difficult to conceive a combination of forms and circumstances more calculated to produce a secure structure from the base upwards.

Such being the condition of the masonry I must now refer to the floors and their supporting pieces within the Tower.

These would require further examination than I have devoted to them did it not form part of the intention to reconstruct them in the course of the general Restorations and in connection with the introduction of the proposed Clock and Bells, if not simultaneously which appears most desirable. The importance of the framing being of the best and most skilful construction as bearing upon and

affecting all the walls of the Tower cannot be overestimated and obviously demand every care and attention.

Accordingly therefore that in restoring the tower above the adjoining roof all surface defects in the masonry will be repaired and made good, and be effected with the same vigilance and caution joined in the other portions of the Cathedral renovations; and that the construction of the framing of the different floors for sustaining the proposed Bells and Clock machinery will be either designed or approved by the Architect to the Dean and Chapter, I am of opinion that the difference in weight between those proposed and the existing Bells, of some two tons is quite unimportant and that when properly arranged and adjusted, are no likely to operate prejudicially on the security and permanency of this fine Tower.

I have the honor to remain,

Gentlemen

Your faithful servant

Thomas Fulljames

Gloucester 27th August
1864

24th November } Present
1864

The very Rev^d and Worshipful John Peel LL.D. Dean
The Rev^d John Ryle Wood M.A. - Receiver General.
The Gentle & Rev^d John Fortescue M.A. Treasurer

It was ordered

That The Reverend John Ryle Wood, The Reverend Henry James Hastings, The Reverend David Melville and The Reverend William Lea be appointed the substitutes to take the duty and residence as unprovided for in the Cathedral for the Months of August and September next.

The Reverend Christopher Benson was dected to the Office of Subdean, The Reverend John Ryle Wood to that of Receiver General and The Honorable and Reverend John Fortescue to that of Treasurer of this Cathedral Church for the ensuing year and the said John Ryle Wood and John Fortescue were admitted and sworn well and faithfully to perform the duties of their said Offices

Present

John Hill Clifton