

The Return of Ringing and the Restoration of Bells - St. Christopher's,  
Willingale, Essex  
An informal paper for the 2019 CCCBR Mini Roadshow  
by Peter Tottman



## 1. Introduction

This paper was written for the 2014 Ringing Roadshow held at Newbury race course. Please note the update notes section 23.

Between 2010 and 2012 we restored and augmented our ring of six bells using to a large extent volunteer labour and, amongst others, a Lottery grant of £50,000. We lowered and raised the bells ourselves, built a new oak frame and six wheels in a local workshop, and a new mezzanine floor in the tower. We spent £70,000, if volunteer labour were added then the project value is probably about £120,000. We now have a very active group of ringers, three practice evenings per week, arrange ringing tours and have entered a number of competitions.



The restoration of the bells was the start of a chain of improvement projects at the church totalling £350,000 and has resulted in heightened interest in the church and has contributed to church life. Using volunteers to the extent that we did might not be practicable for all towers but the overall process and lessons have much in common with using a contractor for the work.

The benefits of restoration extend beyond bell ringers; bells and the sound of ringing bells are part of the English heritage that is worthy of being maintained for the enjoyment of present and future generations. For example, St. Christopher's oddest bell is dated 1610.

This paper is based on our experience it is no substitute for the guidance material such as the Central Council's booklet Organising a Bell Restoration Project. It includes comments on some options that we did not adopt or were not applicable to us.

## 2. Willingale

Willingale is a small rural village in central Essex, our parish population is about 480, with 50 houses in the village per se, our school, shop and two pubs closed years ago, our bus service is a few each day. Unique in Essex we have two churches in the same churchyard - St. Christopher's in regular use, St. Andrew's in the care of Churches Conservation Trust. I guess typically for a rural church we have a small congregation with average of 25 at family service 15 at communion.



### 3. The Bells

The four bells of St. Christopher's had not been rung on wheels since before WWII, they were chimed by one person using an Ellacombe system of ropes. They were out of tune, attracted no interest and there was no recreational or social activity connected with bell ringing. In addition to the obvious state of dilapidation, we later learnt that the bell frame had not been designed by a bell hanger but was most likely the work of local craftsmen who did not understand the lateral forces exerted by a rotating bell - four times the dead weight. The frame was flimsy and swayed when the bells were rung.



### 4. Project Development and Credibility

We are fortunate in Willingale in having a very strong community spirit and an ethos of self help. We run our own social club in the village hall, there are regular village events and when we need to do something, like re-build an outbuilding at the village hall, we do it ourselves. The strength of our community spirit and our pride in our village is very difficult to put into words but it enabled us to use volunteers. This might not suit all projects.



In 2008 two of us had reason to go up the tower. Ian Kerwin is a builder and bell ringer, I enjoy cabinet making. Seeing the dilapidated state of the bells, wheels and frame we thought that we'd attempt a restoration. Coincidentally, at the same time Michael Royalton-Kisch who had led the restoration of Christ Church, Hampstead contacted our church warden wishing to visit. We carried out patch repairs and the four were rung on 7 December 2008 in the presence of David Sloman, DAC Bells Advisor. We were gradually learning about the limitation of four bells, the weakness of the frame and the fact that the bells were too high in the tower, such that a full restoration and augmentation project started to take shape.

The ringing of the four had stirred up interest amongst villagers; we started to put updates into the village magazine and teaching of non-ringers commenced at a nearby church so that we'd have a band, albeit with many learners, ready to ring our bells. With a talk to the local history society and visits to the bell foundry we built into the project different aspects to give it wide appeal to the community beyond those of us who wanted to make the frame and those who wanted to ring.

David Sloman the DAC bells advisor had given us much technical advice. Michael Royalton-Kisch has restoration experience. Ian is a very competent carpenter/builder. I was a project

manager during my working career and had previous experience of applying for a Lottery grant - we had the makings of a project team. As the project grows there is a need to build up the small team that will lead; strive to include a mix of skills. We would strongly suggest that not all PCC members are involved - it would be unwieldy. If the work is going to be done by volunteers there will be need for a larger pool of workers but not all workers need be the decision makers.

In addition to “your team” build a network of contacts that you can call upon for advice - you’ll be amazed at how helpful people can be.

We spent much of 2009 formulating the project, understanding the steps we’d have to go through and suffering a couple of false starts. By year end we were able to start drafting the first version of our Scope of Work.

There will be a phase during which the project appears to be all about paper, no action; this can frustrate the more practical people. But, it is worthwhile having a well thought through project with documentation - a Scope of Work, estimate, programme, quotations, technical reports and the various permissions. With this evolving package you will be able to demonstrate that your project is sound and credible and thereby give you a better chance of securing grants.

## 5. Briefing Yourself

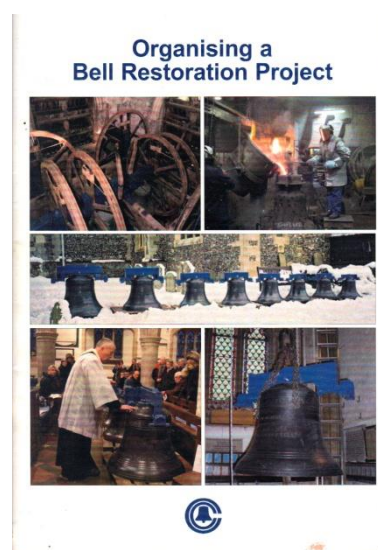
Do your home work on bells projects by obtaining the various information and guides that are available and reading same. Check for guidance notes issued by your DAC, visit web sites, etc. Keep the guides “at your side” for reference as you progress. Talk to those that have been before you.

### Reading List

Organising A Bell Restoration Project - Central Council of Church Bell Ringers - [CCCBR Bibliography](#)

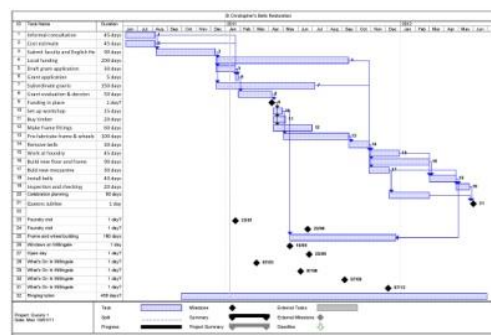
The Conservation and Repair of Bells and Bellframes, Code of Practice - Council for the Care of Churches - [Bell and Bell Frame Code of Practice](#)

Timber Bellframes, Technical Pamphlet - SPAB - [Timber Bell Frames](#)



## 6. Planning, Programme and Sequence

Spend some time looking ahead at what you think you might have to do. Think of the local issues, constraints and challenges. Think of how those constraints might be overcome and build a





programme. Do not worry too much about getting the timing right but get the sequence right. Thus, there is no point starting a grant application before you know what the project will cost. You can only estimate the cost when you know the scope. The scope will depend on the condition of existing bells, frame and tower so you'll need surveys. Of course you'll not bottom out all issues and there will be some iterations.

Monitor progress and carry out regular sanity checks on your project such as informing the PCC as details develop.

Try to set an important milestone for the completion date. We aimed for the Queen's Jubilee in 2012 and achieved that just about - the dedication service was the weekend before!

## 7. Consultees

Prepare a list of those bodies that you believe that you might need to consult with. The DAC secretary is likely to help with this. Make contact with the consultees and determine if they do wish to be consulted and at what stages. As the project progresses send the consultees the information that they agreed they would need. If you can accommodate the responses so well and good but remember they are consultees, the arbiter of whether or not your project will be approved is the DAC and, if need be, make your case if you do not intend to follow the advice of any consultee.

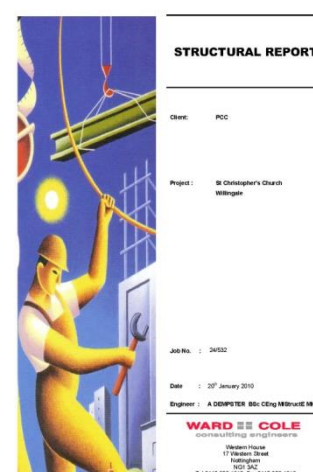
The consultations, the responses and the project's intentions can all be written into the Scope document, which is a living depository of the project's development.

## 8. Reports and Estimates

We obtained a technical report and our first quotation from Whitechapel in mid 2009.

We were aware from the church's quinquennial report of cracks in the tower and if we were to augment to six we realised that we'd need a structural survey to check if the tower would be strong enough, but that would be at a cost for which we did not have funds. The Church Buildings Council gave us a grant in December 2009 for Ward Cole, structural engineers of Nottingham, - [Ward Cole Consulting Engineers](#) - to carry out the structural survey and provide an outline design of layout and beams to support a new bell frame. The survey report was available by January 2010; the cracks were found to be superficial and the tower assessed as suitable for six bells.

With the quotation from Whitechapel as the main cost we gradually built up a list of the other materials and work and



obtained costs to give an estimate of the costs. During the execution phase we entered actual costs against the estimate and were thereby able to regularly forecast the final cost to ensure that we had adequate funding. We completed at 101% of the budget.

By April 2010 we had the first version of our Scope of Work prepared setting out all that we intended and how it would be done. The Scope was revised as the project proceeded and was supported by an estimate of cost and a time programme. We used the Scope to support grant applications and to explain the project to people.

## 9. Quality

Building into the project quality assurance arrangements. In other words make sure that people with the right skills or expertise do appropriate jobs. For St. Christopher's we did not have the ability to design the new mezzanine floor nor the bell frame so we bought in these designs. The floor was designed by Ward Cole and the bell frame by Whitechapel. Additionally, for quality control we set up that Ward Cole would inspect the completed floor to ensure that the build quality was satisfactory and likewise Whitechapel inspected the completed bell frame.

## 10. Source of Bells

If you need a new bell or will have bells becoming surplus to your requirements be sure to contact the Keltek Trust - [Keltek Trust](#). In addition to giving informal technical advice on suitability of bells Dave Kelly works to source second-hand bells that might suit your project and equally finds "homes" for bells that are surplus to requirements. For our augmentation Keltek supplied a new second which had previously hung in St. Mary's, Prittlewell the home tower of David Sloman - [St Mary's Prittlewell](#). We are delighted that the Prittlewell bell was not melted and today continues to ring out over the Essex countryside but not over the sea as per the inscription on the bell.



A ROYAL PEAL ARE WE  
WE RING O'VER LAND AND SEA  
FROM PRITTLEWELL BELFRY

## 11. Sound Control

Consider the neighbours, if your bells have not been rung for some years then the people living near the church will be unaccustomed to hearing bells and might find ringing an irritation, particularly if when you get ringing you are mainly learners clanking about. Sound control can take various forms - insulation placed behind louvers - upon which your local association or guild are likely to be able to give advice or CCCBR - [Sound Control Notes](#).

At St. Christopher's it was the ringing on three evenings per week that became an issue for neighbours, probably quite reasonably. To address this we installed a ringing simulator that gives us a learning tool as well as ability to ring silently. The simulator cost us £550, we opted for the Abel software - [Abel](#) - and David Bagley's sensors, etc. - [David Bagley's Home Page](#). We had a laptop computer and speakers donated. The installation we did ourselves - quite straight forward.

## 12. The PCC and the Faculty Process

We of course had the PCC's permission to do the patch repairs and the PCC had obtained on our behalf the Church Buildings Council grant. We formally sought the PCC's permission to proceed with the project and reported regularly.

We submitted a package of documents to the DAC and arranged an informal discussion at the church in July 2010. We followed that with a formal submission for DAC advice and received the DAC's recommendation in November 2010. Some might be put off by the faculty process but follow the instructions and seek the help of the DAC secretary; it is straightforward. There is guidance available from your diocese - read it.

By mid 2010 we had progressed to fairly detailed matters and had identified that the means of access to the proposed new mezzanine ringing floor would be by means of the existing ladder. This would not be compliant with Building Regulations so we commissioned a risk assessment by a third party consultant and made an application to the local authority for Building Regulations approval in late 2010. Approval was received in early 2011. By this time we were running a parallel project to build a kitchen and toilet below the new mezzanine floor.



## 13. Raising the Money

We raised £68,600 from grants, donations and fund raising events.

We started by identifying all possible sources of grants - list available from CCCBR and ChurchCare - [Fund-raising advice](#) - [Funding and Grants](#). We set up a spreadsheet with contact information, status of application and a system of colour coding - yellow possible/in progress, green approved, and red dead. We researched the sources to look for the grant giving criteria and historical size of grants. From that information we set up our priorities and structure of primary grant, secondary grants and self funding. We used the spreadsheet to plan to meet the total estimated cost and we varied the applications, events, etc. so that the planned forecast total of income matched the estimate of costs. We started obtaining application forms and writing applications. ALWAYS READ THE GRANT GIVING CRITERIA: doing so will save you time and get you closer to success. For example the Barron Bell Trust

only supports churches that have "low church" services, they declined us. Our primary grant source was Heritage Lottery of which more below.

We planned various fund raising events and a pledges scheme whereby people would pledge to give a donation if the Lottery grant was successful. These people were approached on a personal basis by the one person who ran the pledges scheme.



For fund raising events look to see what special resources might be available in your community. For example, if there is a good quiz master in the community ask him/her to run a quiz night. If there are ladies with a penchant for fashion get them to run a fashion show. Be sure to be the "front man" at events and issue lots of "thank you's". Give recognition to supporters in newsletters and publicity, see end of our DVD and our recognition board.

When donations are made be sure that the donors' wishes are respected, e.g. if money was given for bells then only use it on bells and liaise with the PCC treasurer to ensure same.

As events took place and grants were given or declined we updated the spreadsheet to see that the amount promised and the amount needed was on target and we adjusted our applications accordingly.

Our final income was as follows:

£8,000 local events and pledges

£50,000 Heritage Lottery

£10,850 secondary grants

£3,000 Keltek Trust

£1,000 Alan Evans Memorial Trust

£350 The Sharpe Trust

£500 All Churches Trust

£6,000 Essex Association of Change Ringers



## 14. VAT and the Listed Places of Worship Grant Scheme

At 20% VAT could be a significant cost to the project so check out with potential contractors whether they will be able to invoice without VAT. VAT advice is available from the Whitechapel web site including a useful note by Steve Colman - [VAT ADVICE](#), from HMRC and the Central Council - [Guidance Note 1](#).

If you do expect to be charged VAT and if your church is listed - [The National Heritage List for England](#) - then more homework - read up on the LPWGS - [Listed Places of Worship](#) - that is a scheme for the recovery of VAT. Heritage Lottery will expect you to recover VAT, show that recovery in your funding plan and will look at that as match funding.

Note that VAT on materials purchased by the church can be recovered only if those materials are installed by a VAT registered contractor.

## 15. Project Account

For the reason of recovery of VAT, claiming gift aid and many other reasons it is most likely best to put all the project expenditure and income through the PCC's bank account with you maintaining a day to day record and reconciling that with the PCC treasurer from time to time. The PCC should be able to set up within their various accounts a restricted fund for the bells project.

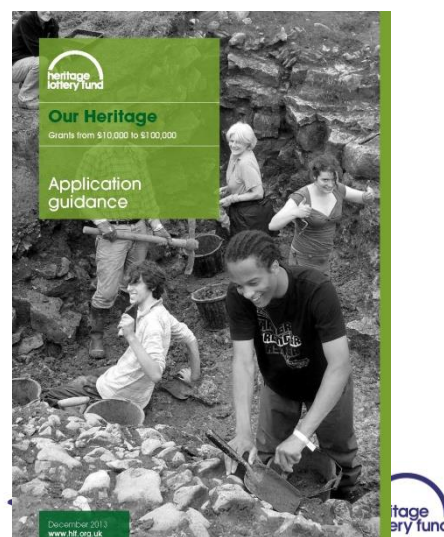
Other projects, for example, Prittlewell, Essex have set themselves up as a charity so that they run their own accounts and can claim gift aid. But, they would not be able to recover VAT and there is some administrative work associated with being a registered charity.

## 16. Gift Aid

The PCC treasurer should be conversant with the operation of the gift aid scheme and you can treat the gift aid as income. Gift Aid is a way for charities to increase the value of monetary gifts from UK taxpayers by claiming back the basic rate tax paid by the donor on the donation. It can increase the value of donations by a quarter at no extra cost to the donor. [HMRC: Gift Aid: the basics](#) Make sure that donations given by UK tax payers are accompanied by a gift aid consent form, it is very simple. Central Council - [Guidance Note 4](#)

## 17. Heritage Lottery

If one of the National Lottery grant programs suits your project then be sure to read the guidance, attend a pre-application meeting, and tailor your application to suit the grant giving criteria. [Heritage Lottery Fund](#) Understand the process from start to end before starting to fill out an application. Our application was to return bell ringing to St. Christopher's, teach bell ringing, learn about bells and bell





ringing. The Learning Programme was as important as the Scope.

Be prepared to give time to the application, fill in the whole form, make sure you have all the supporting documents.

It should be noted that Heritage Lottery and all other Lottery grant giving organisations consider themselves to be processing public money and, therefore, they are very careful about value-for-money and competitive bidding for work. The requirements are set out in the guidance but do not assume that you can use your preferred contractor without that contractor having been selected by a competitive tendering process.

## 18. Volunteer Work

More than any other reason, we did much of the work ourselves because we wanted to. It enabled us to build an oak frame and solid wood wheels. We thoroughly enjoyed ourselves; people learnt new skills and gained in personal confidence and self esteem. I suggest that you watch the DVD of the project. We logged 1,254 hours of volunteer time which if valued at £30 per hour would be worth £37,620. But this approach will not suit all projects and there is a risk that good intentions by volunteers will not materialise when you get started. We worked long and hard in a cold barn giving up all our time for a winter, be sure that you have the commitment of volunteers.



In addition to volunteers working in the workshop and the church we had volunteers support through people doing various jobs for the project - transporting parts, machining steel and timber, printing flyers, etc. etc.

The time given by volunteers can count towards the matching funds that you will be required to find if working with a Heritage Lottery grant. The grant guidance will explain the percentage of the grant that will have to be matched and daily rates at which volunteer time can be valued.

You must ensure that the church's insurance company are informed of volunteer work and are providing insurance cover.

## 19. Records

We were very fortunate to have a good photographer amongst our volunteers, he took photos at all stages and we were tracked by an amateur film maker who produced the DVD of the project. This is a fabulous record.

## 20. Community Engagement, Communication and Dedication Service

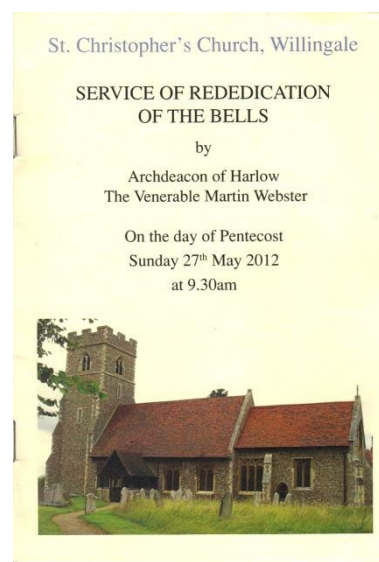
During the project we communicated via a monthly newsletter sent out by e-mail, we placed a regular article in the parish magazine, we invited everybody and anybody to visit the local workshop.



We arranged two group visits to Whitechapel Foundry whilst work was in progress so that people could see and understand the process of bell founding. People visited the foundry on a Saturday morning and then called into the workshop in the village on Saturday afternoon - the community owned the project. We set up a web site to show progress and photos.

We gave a talk to our local historical society that informed many local people of the aims and aspirations before we started actual work. The DVD was shown to a society's meeting after the project. We have shown the DVD at various times and give talks to various organisations.

We celebrated at a dedication service - see the DVD - that was truly uplifting and engaged with the local community and the bell ringing community. The poem "The Bells First Ring" written by a local person who is not a bell ringer and read in our DVD sums up our feelings perfectly.



## 21. What it Means for the Community

The restoration has contributed to our village life, reinforced our attitude of self-help and added to our community pride, and given our community a new social group.

We have followed with a chain of improvements projects at the church totalling £350,000 - addition of toilet and kitchen, sound system, new lighting, interior repairs and redecoration, new heating, and exterior masonry repairs.

We have a group of about 30 ringers of all ages. The ringers have a constitution and bank account and individuals are all members of the Essex Association. We practice on three nights with Thursdays dedicated



to young ringers. We have ringing tours and have entered a number of competitions. The ringers are recognised as a community club in the village. As a group we socialise and support each other. During a recent stressful period one person in our group had the benefit of the support of fellow ringers by having a reason for “getting out of the house” and had people concerned and caring for his welfare.

Three of our adults are participating in the Association of Ringing Teachers course - Integrated Teacher Training Scheme so that we'll be able to deliver structured teaching to all but especially to youngsters.

We have received one complaint about excessive ringing and responded by buying a simulator.

## 22. Conclusions

With some thinking ahead a restoration project is within the reach of local communities.

The execution of the project and the resulting functional ring of bells contributes greatly to church life.

Make sure that you enjoy yourselves.

## 23. 2019 Update

Since this paper was written in 2014 the following have changed:

Willingale village now has a web site of which bell ringing is a section where there are links to a video of the restoration, etc - [Bell Ringers – Willingale Village](#)

Since the restoration the fourth bell has been replaced because we were unable to correct its oddstruckness, see appendix 1. It is recommended that in a restoration project the bell hanger is required to measure and make adjustment to correct oddstruckness.

The Whitechapel Bell Foundry has closed.

The Willingale ringers are as enthusiastic as ever and a band from Willingale has competed at county level, but we now have two practice evenings per week.

Heritage Lottery have changed their grant programmes.

The DVD mentioned above is now available on YouTube, link on Willingale village web site.

Since the restoration and return of ringing to Willingale two other churches in the benefice are now self-sufficient with regard to a ringing band.

The programme of other restoration work at St Christopher's has continued with the roofs having been replaced and footpath lighting installed.

### Acknowledgements

We acknowledge the great assistance and support from:

Michael Royalton-Kisch

John Barnes 01689 853666

CCCBR [C C C B R](#)

EACR [The Essex Association of Change Ringers](#)

The Essex Northwest District [The Northwest District](#)

Keltek Trust [Keltek Trust](#)

Heritage Lottery [Heritage Lottery Fund](#)

Church Building Council [ChurchCare](#)

David Sloman [Prittlewell Ringing Centre](#)

The Sharpe Trust [The Sharpe Trustees](#) –

Alan Padgett



## Appendix 1

### After the Restoration - An Experience of Oddstruckness

The bells of St. Christopher's, Willingale, Essex were restored and augmented to a ring of six in 2012, see Ringing World No. 5310, 30 November 2012. Prior to the restoration the bells had been unringable, therefore, there was not an experienced band in the village. The community work to restore the bells had stirred much interest locally such that following the restoration there were many novices enthusiastically getting to grips with ringing rounds.

As this group started to develop basic bell control and struggled with the concept of rope sight it became apparent that all was not well with the fourth. Visiting experienced ringers had uttered words like "oddstruck". Gradually it was realised that to achieve good striking the fourth had to be rung, when looking at the ropes, on top of the bell in front and the bell following had to leave a large gap. To experienced ringers this might not have been a problem as their ears told them how to ring the fourth but for a band consisting mainly of novices it can be frustrating. As progress was made to plain bob doubles the oddstruckness of the fourth became more of a cause of problems. During the restoration the fourth was not tuned, it is a tall bell and sounds "dead".

Attempts were made to correct the oddstruckness but this was very hit and miss and yielded little improvement. The restoration had adopted traditional materials and techniques, e.g. timber headstocks that do not have twiddle pins that enable the position of the clapper bearing to be moved and fixed relative to the bell and thereby correct oddstruckness.

By early 2014 it was decided to replace the fourth. Also, the three practice evenings per week had caused some rumblings amongst villagers, not unreasonably so because the ringing was often not melodious. So that ringing could be "silent" a simulator was installed using David Bagley's hardware.

A chance meeting with David Bagley and Matthew Higby at the 2014 Newbury Ringing Roadshow made us aware of the Bagley oddstruckness meter and Matthew's use of the meter to correct oddstruckness. The meter uses an optical sensor to detect the bottom dead centre of the swing of the bell, and a microphone to detect the moment at which the clapper strikes. It also measures the swing time of a bell. The measurements can be plotted on a graph and show any bells that are oddstruck or have an incorrect swing time. Ideally the hand stroke and tail stroke times will be identical within a tolerance of 20ms and, along with the swing times, will follow a rising curve treble to tenor like the weights of the bells when plotted on a graph.

Matthew Higby measured the swing times and the hand stroke and tail stroke times, see figure 1, and concluded that the fourth, with a difference of 245ms, was the most oddstruck bell he had ever encountered and, additionally, that the second, third and tenor were outside of the 20ms tolerance. Funds were raised and a replacement fourth was purchased from Keltek. That bell, the original fourth with headstock and wheel, and all the clappers

were delivered to Matthew's workshop where he tuned the new fourth, fitted it to the headstock and, most importantly, used his rig with the oddstruckness meter to measure the times and make adjustments. To the clappers Matthew fitted adjustable crown staples. We volunteers put everything back together and Matthew visited to do the final setting up and take measurements. On paper the results are very impressive, all striking times are equal within 8ms and the swing times across the peal follow a straight rising line on a graph, see fig 1

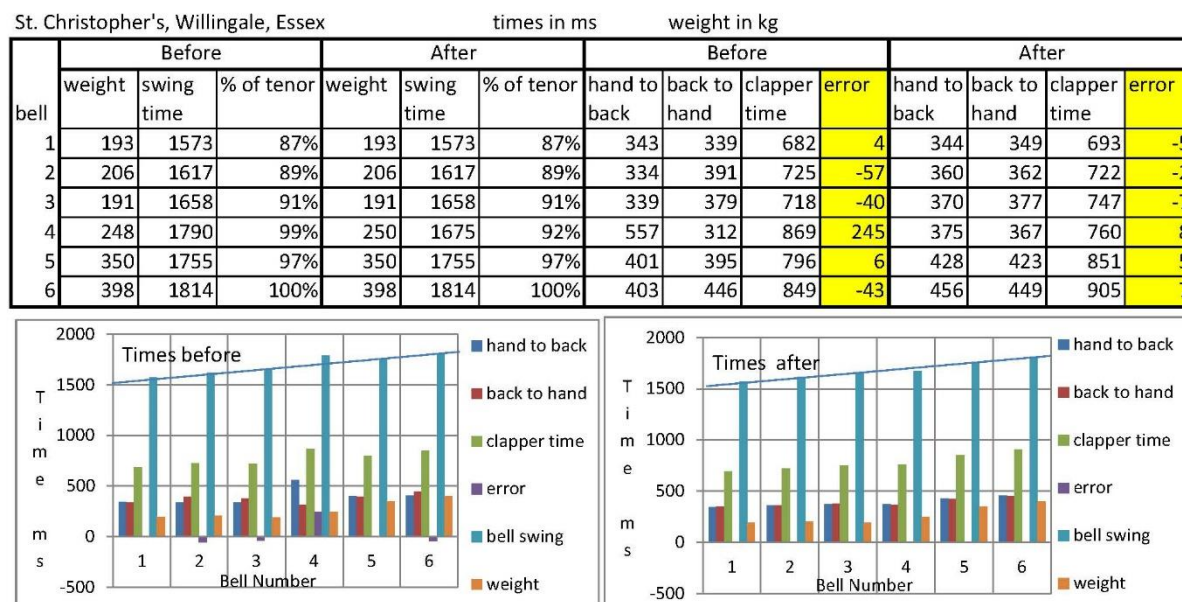


Figure 1

The Willingale bells are now a delight to ring, sound much better and our "up and coming" ringers are now able to make better progress to ringing methods. There are many towers where oddstruckness has been eliminated using the meter and the resulting improvement in striking has been very noticeable for ringers of all abilities. Bell casting and hanging might have been around for hundreds of years but these cases show how the application of modern technology can improve greatly the traditional craftsmanship.