



DAC Guidance

Parish Church Organs

The majority of parish churches in this Diocese still have pipe organs, most often dating from the latter half of the 19th century. These instruments were robustly constructed. Raw materials such as English oak, straight grained deal, leather, tin and lead were readily available at low prices before the First World War, so that churches could acquire long-lasting instruments created by craftsmen at easily affordable prices.

After 120 years or more many of these stalwart instruments are in need of renovation to their keyboards, action and bellows – but seldom to the pipes themselves. The tone of most of these organs is still beautiful, but they are often not heard to their best advantage because of their position in the church. An organ placed in a chamber to one side of the chancel can never make so much impact as a free-standing instrument, preferably raised on a gallery in the main axis of the building.

The organs which survive best from this period are those with mechanical action, where there is little to go wrong. Pneumatic and electric actions are prone to more frequent faults and a shorter life-span, especially the latter. A particular disaster to befall pipe organs has been the electrification of previous mechanical actions in the latter part of the last century, often with sub-stand materials – in particular the new plastics of that era failed to deliver their potential and most organ-builders have now returned to traditional materials. In nearly every case this has led to expensive maintenance needs, and sometimes to the eventual loss of the instrument.

As a general rule existing pipe organs with mechanical action should be preserved whenever possible as they are very reliable. They can be moved to alternative sites for better musical effect, but their integrity should be preserved. Like a vintage car, there is nothing in the traditional materials used in an organ which cannot be replaced when necessary; and the life-expectancy of the instrument can be measured in three figures.

Electronic organs have replaced pipe organs in a relatively small number of churches in the Bristol Diocese and are unlikely to be recommended in Grade 1 listed churches. Although

they present an attractive alternative in terms of compactness and relatively low price, they have a poor record in terms of length of life. Some, especially in damp churches, are by no means as free of maintenance problems as their manufacturers would have the potential purchaser believe. They are strongly marketed by advertisements in several reputable publications. Manufacturers encourage temporary loans for special events such as weddings, and also arrange impressive demonstrations for parishes. The average life-expectancy of a digital instrument in the UK is 14.6 years. Surprisingly, this figure has hardly changed in the last three decades.

What should be the first action when contemplating restoration, alteration, or replacement of an organ?

Through its consultants, the DAC will be able to provide advice free of charge on the following matters:

- The value of the existing organ, whether it should be restored unchanged, restored with alteration, moved, or replaced.
- Whether the organ is of sufficient merit to attract external funding for restoration. Apart from the several long-standing sources of grants, there have been several grants from the Heritage Lottery Fund in recent years for restoration of surprisingly modest instruments. The most likely organs to attract HLF grants are those which have had little or no alteration in the past. The British Institute of Organ Studies (BIOS) has created a scheme of certification for organs of historic importance (Historic Organs Certificate Scheme). Instruments with a HOCS certificate stand an excellent chance of attracting grants for restoration.
- The names of organ builders who are known to be reliable and expert. Many run small-scale businesses, and their charges are often lower than PCC's expect. Some do not charge VAT because of the small scale of their business.
- The process of obtaining quotations and the selection of the right builder for the job. Obviously the nature and size of the work will dictate to a certain extent the most suitable builder.
- The current VAT regulations in regard to church organs.
- The preparation of a Faculty application, likely to be recommended by the DAC without further query.

When an organ needs to be replaced (or where there is no organ)

This is happily a rare situation, because, in most cases, something creative can be done with the existing instrument. However, when replacement is required and agreed by all interested parties (including the DAC), there are four options:

1. A new pipe organ

Most PCCs feel unable even to contemplate this option because of the high capital cost. A one manual organ (which can be surprisingly versatile and perfectly adequate for a small building) will cost upwards of £25,000, whilst a larger two-manual and pedal instrument will be over £150,000. Small box organs, such as the instruments frequently used in the Chancels of cathedrals, can be made for less than £20,000. They offer long lasting musical and visual beauty at a cost little more than a medium priced electronic simulation. These prices may seem impossible, but it is a fact that new organs are being built every year for parishes up and down the country, with funding from private donors and/or grants. The value

of a beautifully designed new pipe organ to the life of a church extends far beyond simple musical considerations. The DAC can identify churches within reasonable distance where recently built organs can be seen and heard by PCCs interested in buying a new instrument.

2. A redundant pipe organ

The Institute of British Organ Building (IBO) is now responsible for keeping a register of redundant instruments in the UK. The register is constantly updated and can be accessed at www.ibo.co.uk. The costs can be remarkably low. The purchase price is usually much less than £1,000, and indeed may be free, and the costs of removal and re-erection seldom exceed £8,000 for a modest instrument but could be up to £20,000 for a larger instrument. The DAC encourages these schemes and the organ consultants will be happy to assist in finding suitable instruments. One of the problems associated with redundant organs is that they tend to have the rather large footprint typical of Victorian instruments. A floor area of roughly three metres square is often needed for a two-manual and pedal organ.

3. Digital keyboards

Keyboards instruments such as the Yamaha Clavinova or the Roland Piano are relatively cheap and fully portable. They can be taken in and out of churches without a Faculty, and can be useful for accompanying when use of the pipe organ is not possible. They take up a great deal less room than an electronic organ and do not need the same extensive range of speakers. They can produce a high quality sound, including realistic harpsichord tone, and give versatility to musical accompaniment. In terms of cost an acceptable instrument can be found for around £1,000, and a good one for around £2,000. For all these reasons an instrument of this sort might be a better option than an electronic organ.

4. An electronic organ

Digital technology in the mid 80's produced a considerable improvement in the ability of these instruments to reproduce organ tone. However, there are several factors which make the DAC reluctant to recommend their purchase as the main permanent organ in a church, whether the building is large or small. In terms of longevity, reliability and sheer musicality, electronic simulations fall well behind a good mechanical pipe organ. The profit margin on electronic organs is very much higher than the 5% typically made by builders of pipe organs – yet despite these high profits, electronic instruments are often cheaply finished with materials such as plastic and veneered wood.

Furthermore the placing of their necessarily large speakers often raises aesthetic difficulties. A case can also be made that suggests that congregations generally do not enjoy the sound of an electronic organ and that organists themselves soon tire of the drab tonal colours. Please note that no replacement of an organ or major changes can take place without a Faculty to authorise this.

Digital Organs

Electronic organs are now advanced enough to accurately store digitised pipe organ sounds. When reproducing them their effect is limited by the fact that, however accurate the stored or generated sound, it has to be radiated through loudspeakers. A pipe organ of modest size – say 20 stops – will have around 1,200 pipes, each of which is an individual and unique

radiator of sound, making one sound only, at one pitch and at one amplitude, placed in its unique space within the area of the organ and blown naturally by air. This great multiplicity of sound sources, each with the slight imperfection of being a hand-made, hand-voiced, air-blown pipe cannot be reproduced through loudspeakers, for each speaker cone has to reproduce hundreds of pipes combined into just one electrical impulse. This helps to explain why the listener at first is almost always impressed by the realism of the individual sounds generated by a digital organ, yet after a period of time becomes wearied by the manner in which that sound is transmitted.

In very large buildings with a resonant acoustic and many reflective surfaces, sound from multiple loudspeakers is broken up more and begins to sound more natural and slightly out of phase. However, in a smaller less resonant church, the less convincing the digital organ becomes, and the harder to sing to – even musically uneducated congregations get bored with the sound.

Part of the reason for this is that, for over 800 years in the UK and Europe, the pipe organ has been universally found to be the best instrument for the accompaniment of massed voices. This is partly because the sound is not only heard aurally, but also experienced viscerally through the vibrations of the lower pitched sounds.

Even with a solid console, the hardware and software of digital organs is typically in need of upgrading every few years, and every so often the loudspeaker cones fail and need replacing. We should remember that any computer is considered due for replacement every few years – their designed reliable lifespan is very modest – and these organs are essentially computers with loudspeakers. Of course, the software driving the transmission of a pipe organ is very similar to the same element of a digital organ, but that aspect of it – the note switching – seems to last reliably for much longer, decades in fact. Because digital organs do need attention, the maintenance cost is not as minimal as is often claimed, and, when they do go wrong, they are often unplayable until repaired, whereas a couple of silent pipes on a pipe organ are scarcely noticed.

In making a choice between pipe and electronic organs, you will need to address questions of use, space available, aesthetics, budget and life-span. These matters have to be set alongside the needs and objectives of the church, its life and its mission.

Many of the aesthetic questions are comparable with decisions about materials, suitability and quality of the rest of the church – synthetic fabrics versus natural, cement blocks versus stone. Whereas PVC windows might be suitable at the back of a modern church hall, for a 12C Grade 1 listed church different aesthetics apply.

Consider whether you regard the organ as a sacred instrument of the liturgy, or as a functional sound-maker to give the pitch to the congregation and play the bridal marches at weddings?

Although digital electronic organs are generally less expensive than pipe organs, the prices, size and quality vary considerably. Many can be bought off the peg from firms who operate internationally; others may be custom-made to meet your needs and specifications. If you are selecting an electronic organ, be clear to separate technical and musical quality from the 'cosmetic' features of a glamorous console. Remember also that a good speaker system will cost about the same as the organ itself.

Looking after an organ

Whether you have a pipe organ or an electronic organ, the instrument needs maintenance, though not too often if it is well made. A general clean and overhaul of pipe-organs is usually needed about every 25 years.

Temperature and humidity

The care of an organ begins with its environment. Both pipe and electronic organs contain substantial quantities of wood and metal that respond to changes in temperature and humidity.

A pipe organ is likely to be comfortable at a steady temperature of about 15-20 degrees Celsius, and at a humidity level of about 60%. Local heat from radiators or radiant heaters may have an adverse effect. Some churches only heat the building at weekends, or during the day. Where a church is used most days, it may be worth comparing the costs of sustaining constant heating at around 15 degrees for 24 hours a day with the costs of raising the temperature 10 or more degrees when it is used. The stone may retain the heat sufficiently to make relatively small demands on fuel. At least one church in our diocese found that its heating bills were actually reduced by keeping the temperature controlled for 365 days a year at 13 degrees Celsius, with boosts for services.

Tuning and routine maintenance

The number of times in a year that a pipe organ needs maintenance will depend on the conditions, its level of use, and on its size and complexity. Tuning and maintenance may be quarterly, every six months, or even annually. Separate servicing arrangements may be necessary for the blower, which rarely needs attention and most last over 50 years.

Whilst mentioning the level of use, it should be noted that pipe organs benefit from regular playing. In particular, the leather components are more likely to dry and crack if the organ is only used once (or less) a week. It is worth inviting pianists (and especially young people) to play, just for enjoyment, to keep the instrument in use. Many of today's older organists became 'hooked' on the organ by playing at an early age, and anything we can do to increase the pool of organists is worthwhile.

Note that the firm that builds an organ may not need to be the same as the firm that maintains it. When negotiating a contract for a new organ or a major rebuild, explore arrangements (and costs) for tuning and maintenance, as well as implications for guarantee. If the organist is properly trained by the organ tuner, then he or she may be able to take on minor tuning (e.g. of reeds which go out of tune faster). Please note that an organist who nips into the inside of the organ to tweak this pipe or that as an uninformed-amateur may do far more harm than good.

Routine maintenance may not be necessary for an electronic organ on so regular a basis, but it is wise to ensure that there is proper provision for after-sales service and repair when buying an instrument. If there is a failure it may require substantial replacement of circuit boards or other electrical components.

Routine tuning and maintenance of organs can be done without seeking formal permission, so long as the work does not involve tonal alteration, changes to the action or major dismantling of the instrument in which case, a Faculty must be obtained prior to any work being done. Contact the DAC secretary for further information about this.

The Organ Case

It is easy to forget the organ case, which is not only an integral part of the instrument, but is often a significant aesthetic feature of the church architecture. Maintenance of the case and any proposed changes to it need careful consideration and may be eligible for a grant from ChurchCare.

Conclusion

Whenever and wherever possible, investing in a pipe organ with its finer sound and longevity should be the norm, even if it has fewer stops than a digital organ. Buying a digital organ is certainly not an investment, but a short-term financial manoeuvre.

Useful Addresses

The Institute of British Organ Building

13 Ryefields, Thurston, Bury St Edmunds, Suffolk IP31 3TD

Phone: +44 1359 233 433 / Email: administrator@ibo.co.uk

The IBO maintain a list of redundant organs and accredited organ builders.

The British Institute of Organ Studies

Email: membership@bios.org.uk

A guide to grant giving bodies can be downloaded from the BIOS website under 'Guidance'.

ChurchCare

ChurchCare is a Church of England national resource. Information about grants can be found following the links: Churches – Funding and Grants – Organs.

AIOA – Association of Independent Organ Advisors

The AIOA is a small group of acknowledged experts who may be employed to give impartial advice on the condition of organs and, if required, supervise any work done.

What can the PCC do when agreement cannot be reached?

Occasionally a situation arises when there is disagreement about a proposal relating to an organ. Rather than a PCC submitting a Faculty which the DAC does not recommend, it is always preferable to seek a solution through independent advice. The Church Buildings Council has a specialist organ committee which can supply consultants to visit, especially when the matter involves an instrument of historic importance.

If you have further questions about this subject, please contact DAC secretary in the first

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