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A to Z of Church Maintenance

Heating

HEATING YOUR CHURCH

Each church building needs to be considered as a special case of its own - there is no blueprint answer on the best form of heating.

Parishes considering heating of their church should consult their DAC at the earliest possible time. They will be pleased to help and assist through their heating adviser.

It is usually the case that the best form of heating for a church is a traditional 'wet' system of radiators and pipework operated by a modern gas-fired boiler and controlled by modern timing and thermostatic/humidistatic equipment. Oil can be used as an alternative fuel where a gas supply is not available.

Electrical heating may be appropriate in small churches and where the building is seldom used during the course of the week. It is not likely to be appropriate for larger churches or for those where there are several Sunday services or frequent services during the week.

How to set about installing a new heating system

The following checklist may be helpful.

- Write down a list of your needs.
 - prepare a schedule of church services and meetings or events that are held in your church;
 - prepare information on numbers of people who use the building and the areas that need heating.
- Make contact with the DAC and ask to be put in touch with its heating adviser. When you have a proposal, ask the DAC for informal advice.
- Tell your inspecting architect of your wishes and requirements and seek his advice.
- Discuss with your architect and the DAC adviser the names of suitable and good heating design engineers. Meet with them and make a decision to appoint one of them.
- Visit other churches that have a similar heating system as that which you think you would like: talk with some of the congregation who are the users!

- Ask your selected heating engineer to design the scheme and cost it. Ensure he works closely with your architect - heating systems have a considerable impact upon a church building, and often have important implications for the fabric of the church building and its contents.
- Submit a formal application to the DAC for approval of your scheme. This should be accompanied by:-
 - A technical specification of what is proposed, supported where appropriate by heat loss or heat requirement calculations.
 - The proposed system of operation and the method of control
 - A brief description of what exists at present and the reasons for the proposed new works.
 - A plan drawing of the church suitably marked up by the heating design engineer or architect to show the size and position of pipes, radiators, heaters, etc.
 - Technical literature illustrating the form of radiators or heaters proposed.

If your church is a listed building, then it may be wise to consult English Heritage at an early stage. Discuss the matter with your inspecting architect or seek advice from the DAC office at Diocesan Church House.

Electric heating

Parishes may consider electrical heating either because of the non-availability of other kinds of fuel, or the absence of a water supply; often, however, they are encouraged by the fact that such heating is comparatively cheap to install, and they are led to believe that it will be economical to run. While electric heating may be appropriate in small churches and in those that are used comparatively seldom during the course of the week, or even during the course of a month, it is not likely to be so for larger churches or for those where there are many Sunday services, or frequent services during the week. It may help, nonetheless, to give some consideration to the different methods available, with their respective advantages and disadvantages:

- Off-Peak Storage Heating

It should be said at once that such heaters have proved unsatisfactory in buildings used only once a week, or intermittently, and in buildings with high heat loss, which churches are likely to be. They are also, because of their bulk and design, likely to be obtrusive and ugly.

- Under-Pew Heating

This form of electric heating is likely to be the least undesirable, though it is obviously only suitable in churches where there are pews rather than chairs. Tubular heaters are mounted under the seats where they are out of sight; the congregation is immediately conscious of the source of warmth even though the heater will not warm the whole building. Such heaters should be protected by wire guards. Not all pews are suitable to accommodate tubular heaters.

- Wall-Mounted Convector Heaters

These are not usually satisfactory in churches, where the wall-space is often obstructed; furthermore to warm the volume of air in a tall building with an open roof is very expensive.

- Fan-assisted Heating

Fan heaters are undoubtedly an effective method of space-heating but are likely to be unsightly and noisy in churches. In practice, where they are used they are often turned on for some hours before the service, and turned off when it begins.

- Infra-red or Radiant Overhead Heaters

These were frequently installed in churches some forty years ago as a cheap method of heating. They are almost always unsightly, and the effect of heating is not altogether satisfactory, as it warms the head, particularly the top of the head, and not the feet. A new problem is that most manufacturers have discontinued their ranges, and spares may no longer be available, leading to demands for replacing the heaters with others even less desirable.

- Quartz-halogen Heaters

These have been recently developed and are the only practicable replacement for the older radiant heaters. Parishes should be warned that they are being heavily promoted in the trade, and by electricity boards, in conjunction with HEAT (Heat Electric Advisory Team) and should beware the "hard sell". Quartz-halogen heating is effective in its own way but, unless installed at an angle is likely to prove uncomfortable. The design of the heaters themselves is so far very poor, and the effect on the appearance of the church is likely to be detrimental.

It is the opinion of the Wall Paintings Conservation Department of the Courtauld Institute that Quartz-ray heaters are the least damaging form of heating to be installed in churches where there are ancient wall paintings; this opinion should be borne in mind.

Further Sources of Help

- Your DAC Secretary - a list of DAC Secretaries can be found [here](#).
- More detailed information about this subject is contained in the Council for the Care of Churches publication *Heating Your Church*.
- The [Chartered Institution of Building Services Engineers](#) maintains a register of consultants working in the heating industry.