POLICY

1. To create an environment in which worship and fellowship can take place without compromising the fabric of the building.

2. To ensure that installed systems are energy efficient and that the future maintenance costs have been budgeted for and can be met by the congregation.

3. The DAC will not expect any proposed scheme to significantly affect the fabric, character or appearance of the building.

This is one of a series of DAC Guidance Notes obtainable from the DAC Secretary (Tel: 0151 705 2122).

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CHURCH HEATING

GUIDELINES TO ASSIST PARISHES

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CHURCH HEATING

INTRODUCTION

1.1 Church heating has been a perennial topic between clergy, PCCs and parishioners for many years as the perfect solution is sought. This discussion seems destined to continue well into the new millennium, as there is very rarely a perfect solution to meet the diverse needs of the congregation and the building.

1.2 Responsible PCCs will wish to consider the costs over the expected life of the system taking into account the capital cost, running costs and the regular servicing and maintenance required. When considering replacement or modified systems an assessment should be undertaken to determine if any elements of the existing installation are suitable for further use.

1.3 `Experts' are always available but care must be taken when assessing information received as there are many vested interests in the market place. It is always wise to seek the advice of an independent specialist and your church architect. The DAC will expect the name(s) of professionals consulted to be shown when an application is made for a DAC Certificate.

1.4 Before committing the parish to what might seem the right solution, the PCC should undertake an assessment of the regular patterns of worship and other uses to which the building is put throughout the week.

1.5 Many of our churches are listed and contain ancient fabric and are, by their very nature, difficult to heat in a way which is not invasive to ancient fabric. Many historic and irreplaceable items including furniture, houses need special consideration if they are to become redundant when the new heating is installed. Applications for faculty should also include details of the work relating to the decommissioning of the old system.

5.3 There may be archaeological implications during the installation of some systems. The costs associated with such work should be borne in mind during the costing of the project. This can have significant impact when underfloor heating is being considered.

5.4 Consider the implications of the system for future generations. to design a system that will have minimal effect on how the building can be used now and in the future.

SUMMARY

6.1 Expectations regarding the temperature expected in a church vary between congregations. Once installed it is often difficult and expensive to change to an alternative system. It is essential that the choice of a system is not rushed early in the autumn to satisfy the needs of the coming winter.

6.2 The aim of the DAC will be to help the PCC to choose a heating system which provides as comfortable a level of warmth as possible whilst taking account of the particular features of the church.

6.3 A faculty application will be necessary and the details of the system design and details of the equipment to be installed will be required when the application is made for the issue of a DAC certificate.

the week. Complex installation requirements are often better undertaken as part of a major church refurbishment.

(e) WATERBORNE (ELECTRIC, GAS AND OIL) – Radiator and underfloor systems similar to domestic use, may require more complex control systems and radiators sensitive to the needs of the building.

(f) FORCED AIR (ELECTRIC, GAS AND OIL) – These heaters are effective in warming the air in the church with minimal heating effect on the fabric. The units are available in varying types and sizes and although they can be effective when occasional heating is required, they can present installation problems requiring invasive access holes in the fabric of the building. Such form of installation is unlikely to be compatible with the fabric of many of our churches. The larger units can also present a serious noise problem from the fan units which can sometimes be overcome by running the fans at a lower speed. When larger units are being considered the advice of a heating engineer is considered essential.

OTHER CONSIDERATIONS

5.1 Energy efficiency can be managed by sophisticated controls. Investment in a good control system will save money in the long run.

5.2 There may be an old system which will need to be removed before the new one can be installed. Boiler organs, hatchments, paintings and memorials can be damaged if exposed to excessive heat and the effects of condensation. Condensation can normally be dispersed by adequate ventilation of the building.

1.6 During the planning stages the PCC should consider the implications of the proposed installation on the aesthetics of the building.

1.7 In considering the costs of installation, running and maintenance, the beneficial effect that regular background heating will have on the building fabric should not be ignored. However for occasional usage local “small area” heating is often more efficient.

1.8 It is acknowledged that there are very rarely easy answers and that, in some instances, a compromise may be the only solution. Consultation with the DAC at an early point in the planning stage is recommended, as solutions to similar requirements may have been overcome by other parishes. We are also often able to recommend churches that can be visited to see installed systems. The aim of the DAC will be to help the PCC to choose a heating system which provides as comfortable a level of warmth as possible whilst taking account of the particular features of the church.

1.9 Portable gas heaters are not recommended by the DAC. They present a significant safety hazard to all, especially the young and old, and also create condensation.

CHOICE OF FUEL

2.1 There are generally three choices available; gas natural and Liquid Petroleum Gas (LPG), electricity and oil.

Solar heating may be appropriate in some circumstances but it is unlikely to meet all the heating requirements without a backup system being available.

2.2 Not all fuels will necessarily be available to every church, especially in rural areas, and this may restrict the choice of system.

2.3 In today's very competitive marketplace with many contractors vying to provide the same fuel, prices can be volatile and it is strongly recommended that your needs are discussed with more than one supplier. In some instances better terms can be achieved by aggregating adjacent buildings (eg. church and hall) together. This does not require you to change to one meter.

FUEL COMPARISONS

	Cost		Advantage	Disadvantage
	Installation	Running		
Gas (Natural)	High	Low	Storage not Required	Not available in some areas
Gas (LPG)	High	High	Self contained	Need to maintain stock on site
Electricity	Low	Expensive	Simple installation	Some units unsightly
Oil	High	May fluctuate	Self-contained. Suppliers often offer incentives to install	Storage tanks can be unsightly
			the system	
Solar				Not generally viable
Solid				Not generally viable

In reality it is expected that the majority of schemes proposed will utilise gas or electricity.

HEAT SYSTEMS

4.1 Brief summary of systems in common use with some of their advantages and disadvantages:

(a) STORAGE (ELECTRIC) – Suitable to provide background heating. Instant heat not available.

(b) INFRA RED (ELECTRIC OR GAS) – Mounted above head height. Provide instant heat over a small area. It may result in hot head and cold feet for the congregation. Often obtrusive, affecting the sight lines of the building. Some modern types produce `black heat' thereby reducing glare, but may have poorer radiation characteristics than the other heaters and are therefore less suitable where instant heat is needed.

(c) PANEL/TUBULAR (ELECTRIC) – Localised application, typically pew heating. It is often prudent to have such installations wired so that the heating can be zoned throughout the church. Such installations can have separate switches to each pew, giving flexibility for control, depending on the size of congregation.

(d) UNDERFLOOR (ELECTRIC, GAS AND OIL) – Suitable for churches in constant use throughout