

Space heating systems

DO YOU HAVE?

- Heating that is on longer than necessary?
- Heating that is controlled by time clocks?
- Un-insulated heating pipe work?
- Heating controls that are difficult to access and/or understand?
- High ceilings which trap hot air?
- Heating provided by inefficient boilers?
- Areas of the building with different occupancy needs but the same heating circuit?
- Inefficient electric heating?

Good Practice

Match heating to occupancy and use with automatic controls.

Building maintenance programme should include regular review of heating controls

Regular inspection of current insulation to ensure it is fit for purpose and replace when necessary.

Old inefficient boilers should be replaced with modern energy efficient units (when financially possible – NB: high capital cost).

The Opportunities

The site surveys show a number of heating opportunities that include:

- The need for heating to match occupancy and use.
- The control of space heating on site can be improved - space heating could be controlled utilising optimisers, push timers, thermostat and wireless controls.
- Waste heat can be reduced in rooms where Church and Hall boilers are located by insulating any exposed valves, flanges and pipes.

If your church building is being refurbished investigate opportunities to update heating systems and controls as part of the refurbishment programme.

Making it Happen – Boiler optimiser

- An optimiser takes the outside temperature into account when determining when to switch on a boiler. This helps the boiler to switch on when required in order to reach target temperatures at the right time, in line with temperature fluctuations.
- Assess whether or not your boiler system could benefit from an optimiser.
- Obtain quotes to install boiler optimiser.

Making it Happen – Thermostat controls

- Review Church building heating systems to check whether space heating is controlled by the boiler return temperature or thermostatic control sensors located in the heating space.
- Obtain quotes for installation of thermostat controls.

- Ensure thermostat is located properly and will not be influenced by draughts or heat sources such as sunlight, radiators or electric heaters.

Making it Happen – Push timers

- Assess whether or not there is the potential for electric heaters in Church buildings to be accidentally left on – if so, push button timers may be suitable controls against this occurring.
- The can help reduce the need to heat areas which might not be occupied, by providing users with the ability to switch on heating for defined periods only as needed.
- Obtain quotes to install push button timer between the fused spur and the heater.



Making it Happen – Wireless heating controls

- Where access to heating controls is difficult consider installing a wireless thermostat and controller to heated areas / zones to allow easy access control of heating system.
- Obtain quotes to install wireless heating controls.

Making it Happen – Insulate valves, flanges & pipes

- Count the number, length and size of accessible un-insulated valves, flanges and pipes.
- Purchase and install insulation.



Making it Happen – De-stratification fans

- In heated rooms with ceilings higher than 5 meters de-stratification fans can help to blow down to ground level hot air which is trapped in the ceiling.
- If the ceiling is strong enough to hold de-stratification fans and there is space for them (amongst light fittings, beams etc), then obtain quotes to install de-stratification fans in your Chapel and/or Hall.
- Schedule installation to occur during heating season
- Care is required in the specification of de-stratification fans with due regard to the creation of noise and draft.

Making it Happen – Replace boiler

- If your boiler is old and inefficient then investigate the possibility of replacing it with a more energy efficient control system. In general a high efficiency condensing boiler should be installed.
- Consider linking the boiler to a time control, including an optimiser, which will vary the time of switch on according to outside temperature. Temperature control of the system is also required to ensure that overheating and energy waste is avoided.



- Obtain quotes to install new energy efficient boiler system
- Schedule the installation for a time that limits interference with church building operations.

Making it Happen – Zone heating

- If there are areas of your building which have different occupancy needs but the same heating circuit then you should consider separating these areas into different heating zones.
- To achieve this would require additional automated valves to be fitted to the heating circuit. It would also require additional sensors and controls. It may also require some additional pipework to be installed and possibly an additional pump set.
- Obtain quotes to install new heating zone/s within your building that is designed to effectively meet heating needs.
- If there is inefficient electric heating in your Church or Hall then replace current units with radiant heaters
- Obtain quotes to install radiant heaters