

CASE STUDY HIDDEN HEATERS USE ELECTRICITY TO WARM A PEAK DISTRICT VILLAGE CHURCH



N.B. This case study considers only one possible approach, which will not be suitable for every church. Always seek professional advice.

Key Points

- St Margarets installed a number of under-pew heaters in order to keep the congregation warm at a lower carbon emission level.
- The new installation is cheaper and more flexible to run, allowing a range of uses, including operating at short notice.
- There is very limited visibility of the new heaters, meaning that they do not clash with the church's historic interior.



1. One of the two panel heaters is located next to the porch, providing warmth upon entry to the church. The other is fitted behind the altar.

2. Under-pew heaters are placed discreetly throughout the building. Here a switch can be made out on the choir stalls.

3. A board of switches allows the heaters to be switched on at once when needed. Additional switches on the heaters themselves allow for individuals to turn them off, if desired.

The context

Wormhill St Margarets is a grade II*-listed church in the Diocese of Derby. The small village of Wormhill is located approximately 1,200 feet above sea level in the Peak District National Park. It is generally used for services approximately 3 times per month, with occasional additional use for PCC meetings and other events.

For more information, visit the church's entry on [A Church Near You](#) or the [Church Heritage Record](#).

The need for change

The building was previously heated by an oil boiler, which incurred significant carbon emissions and cost a lot, financially, to run. As this boiler was coming to the end of its life, becoming less reliable, a new option was sought.

What were the options?

- A lack of appropriate infrastructure and supply to the village meant that the installation of a gas boiler was immediately ruled out.
- With the high carbon cost of using oil that had been used for so long previously, it was deemed most suitable to look for an electric heating solution.

- With the church featuring a characterful interior, and a grade II*-listing to show for it, the parish team concluded that overhead electric heaters were not the most visually-sensitive hardware for the church.
- Therefore, a more sensitive option of under-pew heating was deemed the optimal choice in this context. Visits to churches already employing the technology consolidated this view.

What was done?

The old cast iron radiators were removed from the church, alongside the oil boiler that served the central heating.

Electric heaters were installed throughout the church, in the following locations:

- 2 panel heaters, located by the entrance door and behind the altar respectively.
- Under-pew heaters, located under 33 of the pews and choir stalls, with only the back-most pews being left without.

A board of switches for the individual heaters was also included, which allow flexibility in the use of the heaters. For example, just a few of the heaters at the front could be in operation for smaller services or meetings.

How well does it work?

The scheme has been a success in providing a comfortable church for the congregation, without needing to heat the fabric of entire building. Instead, **warmth is delivered more directly to the seated visitors.**

With the removal of the previous oil-based system, the **carbon emissions** and **bills** have been reduced.

In addition, flexibility is a key feature of the new system, which takes effect just **half an hour** after being switched on. In comparison, the central heating that was formerly in place needed switching on in the morning for a service in the evening.

How much did it cost?

- In total, the scheme cost £20,000
- £13,000 came from the church's own resources.
- The rest had to be fundraised, of which the most significant contribution was a £5,000 grants from the Bingham Trust, local to Derbyshire.
- In total, the church now faces fortnightly bills averaging £207.66 for electricity.

“One thing you need to remember of course, with all that power going into the church, we had to have three-phase fitted, and that cost us in excess of £6,000 with the local electricity board. So it's something to bear in mind.”

Barry Peirson, Churchwarden