

# Church Buildings Support Network

## Meeting Notes

**Date of Meeting:** 17th April 2024

**Focus:** Heating

### Net Zero Carbon

Geoffrey Hunter gave a brief introduction to the Church of England's Net Zero Carbon Target and introduced the Diocese's new Net Zero Carbon Officer, Sacha Watson. Sacha's role is to support churches, schools and clergy houses to move to net zero. The main focus of this is removing fossil fuels from energy consumption, starting with the easy things such as using low-energy lightbulbs, changing energy supplier etc. There is no simple solution, as every church is different.

### 2030 Carbon Zero Target – is it achievable?

The target is an ambition; it helps to inspire action.

### Energy Footprint Tool (EFT)

***The EFT is now open for churches to enter fuel and power use from 2023. It will close on 31st July 2024.***

Please ensure you have completed the EFT. It is really important because it gives us the starting point from which to judge progress, it will also help the C of E to identify where it needs to invest to make the biggest difference.

- For information about the EFT: <https://www.elydiocese.org/church-in-action/environment-and-sustainability/energy-footprint-tool/>
- A 20-minute video taking you through the process of completing the EFT <https://youtu.be/726bz10AuqU>
- Quick fire questions about the EFT <https://youtu.be/dbT2k3QgnPw>

### Green Energy Suppliers

Switching to these is a way to meet net zero but there are a limited number of renewable energy providers. The central team is looking for new ones.

See <https://www.churchofengland.org/sites/default/files/2024-02/green-energy-companies-and-the-energy-footprint-tool-feb-2024.pdf> for current approved renewable energy providers.

**Quick Wins Grants** – there will be some small, limited grants to help with minor works. Details expected soon.

### Heating Options

Need to consider heating the people versus heating the building. You don't want to be heating a lot of air which just rises up beyond everyone's heads.

There are electric options such as radiant heaters, under pew heaters, pew cushions etc.

If you do need to heat the building because it is used every day of the week, underfloor heating can be a more efficient option such as at St Mary's Ely. A heat pump is the primary way to do this.

- **Heat Pumps**

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Not new technology; the first electric heatpump in the UK was actually installed in 1946 in Norwich.

The success of heatpumps depends upon the quality of the design and installation, ensuring it is appropriate to the building and the patterns of use.

Three types of heat pumps – ground, air and water.

Ground Source Heat Pumps (GSHP) don't tend to work in churchyards due to the presence of burials and other archaeology, which requires a vertical ground loop, which is very expensive to install.

Water Source Heat Pumps were briefly discussed as Hemingford Grey has explored the potential of utilising the adjacent river. The PCC was, however, advised against it as it was felt the Environment Agency would not approve the laying of pipes on the river bed as it would lead to localised cooling which would upset the local ecology. Pumping water would be more likely to be approved but the cost and maintenance would not be appropriate for a village church.

Air Source Heat Pumps (ASHP) are the most common source either Air to Water or Air to Air systems (types of heaters/radiators used). Some existing heating systems can convert well to heat pumps, but others may require additional or new radiators, or underfloor heating which is where costs can quickly spiral.

Options for screening the units in churchyards were considered, with some photographs of both successful and unsuccessful attempts.

Noise has reduced as the technology has improved.

- **Pews**

Pews – relatively easy to put heaters under pews or to use heated pew cushions. No information yet on long term effects on historic pews. Pew cushions are effectively activated by pressure, and are thus designed so that most of the heat is absorbed by the sitter rather than the furniture.

- **Damp**

Damp churches are not efficient spaces to heat, particularly if you are running the heating most of the time to try to alleviate damp. If the cause of the damp is not obvious, an environmental survey could help. This is where an expert in built environments will look holistically at the building, surrounding environment, changes over time, usage etc. to identify the cause(s) of damp. Be cautious about seeking advice from a heating engineer or domestic damp specialist as they are more likely to focus on selling you items to fix the symptoms rather than address the underlying problem(s).

- **Things to consider when going electric**

- Does the electricity supply need to be upgraded?
- Is the supply available?
- What is the voltage of your supply and what do you need?

### Faculty Process

- Matter of limiting the impact as far as you can.
- Pew heaters are List B if pews are after 1850.
- Pew cushions are List B.

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### More Information

#### Diocese of Ely's Website

Faculty Applications – <https://www.elydiocese.org/xdb/churchbuildingsandchurchyards-guidance/show/a-guide-to-faculty-applications>

List A and List B Works – <https://www.elydiocese.org/xdb/churchbuildingsandchurchyards-guidance/show/lists-a-and-list-b-works>

Heating Seminar: Presentations on different ways of heating your church, from a Diocesan heating seminar held in 2023 - <https://www.elydiocese.org/xdb/churchbuildingsandchurchyards-guidance/show/church-heating>

#### Church of England's Website

Main webpage on heating with links to case studies and other resources:

<https://www.churchofengland.org/resources/churchcare/advice-and-guidance-church-buildings/heating>

A webinar about replacing your heating and lighting, taking in LED lighting, historic equipment, running costs, efficiency considerations, embodied carbon, maintenance for minimising carbon emissions <https://www.youtube.com/watch?v=6C6TE76-HQc>

A webinar covering heat pumps, electric heating solutions, and more. Pros and cons, carbon impact and funding? Key questions to ask. How to reduce demand in the first place by improving fabric? <https://www.youtube.com/watch?v=bGwk6q0QAk0>

Advice on how to move your church to NZC here

<https://www.churchofengland.org/resources/churchcare/net-zero-carbon-church>

A general collection of case studies including numerous heating projects

<https://www.churchofengland.org/about/environment-and-climate-change/towards-net-zero-carbon-case-studies>

### Contacts

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DAC - all queries please use the main email in the first instance.

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### NEXT MEETING OF THE CHURCH BUILDINGS SUPPORT NETWORK

Saturday 11<sup>th</sup> May 10am – 11:30am

## **Church Buildings Support Network**

Virtual Coffee Morning. This is an open session in which you can raise any question or topic for discussion.

### **FUTURE MEETING DATES**

Tuesday 4th June 7pm – 8:30pm

Focus: Installing a kitchen and toilet, featuring The Aisle Project at St Mary's Feltwell.