

ENVIRONMENTAL RESOURCES FOR CHURCH BUILDINGS

Towards New Zero



As PCCs and church congregations seek to respond to the climate emergency and the move towards net carbon zero by 2030, this guidance note provides information and signposts resources to assist.

It is intended that the guidance note is accessed electronically. In this way, the links which appear as underlined text can be clicked on and should take you straight to the relevant web page.

This note will be updated periodically as new resources come to our attention.

Introduction

The guidance and resources on these pages are to encourage parishes to think about how they might apply best practice and do their part in moving towards net zero carbon by 2030.

It is worth remembering many of our church buildings have stood for hundreds of years and, with regular maintenance, they will stand for hundreds more. They already embody significant amounts of carbon and resources in their fabric. It is important to note that the construction industry is one of the UK's biggest carbon emitters. So, it is essential, therefore, that we care for our existing historic buildings, with an increasing awareness that the greenest building is the one that is already there.

Our churchyards are often biodiversity 'hotspots', and have become refuges for rare plants and animals. Even if they are not already assets of this type, they can become one with the introduction of simple management programmes and small-scale interventions.

Where to start?

Recognising that each church is at a different point on its environmental journey, we would recommend a gradual process of research and discernment as to what is right for your local situation before instantly leaping to solutions. The 'Quick Wins' on the next page could be a good starting point, alongside becoming an ECO Church.

The resources below provide some really useful information for PCC's to explore further:

- **The Church of England**

The Church of England's [website](#) has a section dedicated to the 2030 environmental target as well as lots of helpful guidance, videos and other resources to help churches achieve net carbon zero. Be aware that there is a huge amount of information here which could be overwhelming if you are just starting out. We suggest working through the sections gradually and don't try to do everything all at once.

- **Diocese of Leicester**

There is a whole section on the environment on the diocesan [website](#), including information and resources around Eco diocese. This guidance note contains supplementary links specifically aimed at church buildings.

• ECO Church

The Diocese is seeking to become an 'Eco Diocese' with high numbers of Eco churches. We would encourage you to register and get involved with A Rocha's [Eco Diocese & Eco Church Awards](#) scheme. They have a [questionnaire](#) as a toolkit for change in your church.

Quick Wins

It doesn't matter whether you are a small rural parish or a large urban one, there is always something you can do to save energy and reduce your impact on the environment. Here are a few suggestions to start:

- Regular maintenance of roofs, gutters and drains, this is a really important first step for all church buildings.
- Deal with draughts but remember that old buildings also need adequate ventilation, so please consult your architect.
- Replace existing light fittings with LED lamps where suitable
- Switch to 100% renewable energy tariffs and make sure you have not been paying the climate change levy (CCL) or more than 5% VAT on your fuel bills. Parishes may be entitled to refunds going back 6 years. Parishes may also be able to take advantage of the C of E Parish Buying Scheme for [energy suppliers](#)
- Match heating times to usage
- Insulate heating pipes where appropriate
- Clean and dust heater units ideally once a year
- Add anti-freeze and anti-sludge filters to your radiator system
- Use A+++ rated electrical appliances
- Behaviour changes – remember to switch things off and make sure timers are set correctly. Consider switching off wet heating systems 15 minutes before the service ends.
- Consider moving service and meeting times to suit weather/seasons. If they cannot be moved ask people to wear more suitable clothing
- When felling trees in the churchyard a new tree can be planted in its place or as part of a tree planting scheme through the [Woodland Trust](#). You also need a plan for the disposal/reuse of any waste timber. Some of the wood could be stacked in a suitable area to help encourage biodiversity. When caring for your churchyard and its biodiversity please consider mowing schedules, hedgerow trimming (ideally once every 3 years), chemical usage, masonry care and planting of native species only. We recommend you look at the [God's Acre Project](#) for useful advice. Such works can attract grant-aid in some circumstances.
- Use the Energy Footprint Tool as part of the online Parish Returns. There is a short YouTube video produced by the [Diocese of Manchester](#) to help you.

Next Steps...

After the quick wins there are still plenty of areas where improvements can be made. The DAC are happy to assist with early advice on the following:

- Replace broken glass and make sure hopper windows are repaired, if they don't fit correctly. Investigate whether draught-proofing is possible or appropriate (remembering that old buildings need to breathe)
- Improve zoning, install space thermostats and frost-stats (or 2 stage frost protection in large churches)
- Install thermal or motion sensors on external lights or walk-in storage cupboards
- Get timers, smart controllers and smart meters
- See separate guidance note for information on new modern efficient gas boiler if nothing else is viable and for replacing gas or oil portable heaters with electric pew or panel heaters

- Install Solar PV panels or a small wind turbine where appropriate
- If considering floodlighting please question whether this is a suitable use of resources, how much light pollution it will cause and the impact on local wildlife?
- Offset some of your carbon footprint by means of [Climate Stewards](#)
- Positively encourage biodiversity within your churchyard. There are useful tips on the [God's Acre website](#)
- Provide bike racks and shoe scrapers to encourage people to cycle or walk

New Development Schemes

For major works to a church building, we advise that you contact the DAC at the earliest possible opportunity, so that we can assist and work with you to achieve the optimum outcome.

- Extensions or new buildings will have to follow current building regulations which will include all current eco requirements as a minimum standard. Your architect should ensure that all building materials and practices are as sustainable as possible.
- When considering new heating or lighting schemes ensure that these are appropriately designed to give suitable heat output and lighting levels
- If floors are being replaced, investigate under floor heating which can be left on a constant low temperature. This is particularly effective where the building is regularly used
- Heat pumps (Air or Ground Source) or Biomass can be considered for larger buildings that are used frequently
- Include measures to minimise waste water which will reduce pressure on local sewers

Do remember that many grant-givers these days (including the NLHF) will ask you to consider making your larger development environmentally sustainable, and they will usually be willing to fund any extra costs that doing this might entail.

Further information and helpful resources

Historic England and The SPAB

- Guidance on photovoltaics, ground source heat pumps and other low and zero carbon technologies in Historic Properties can be found [here](#)
- General guidance and principles on [Energy Efficiency in historic buildings](#)
- SPAB briefing note [Energy Efficiency in Old Buildings](#)

Quinquennial Inspections

As part of the Quinquennial Inspection (QI), your inspector will comment upon particular aspects of the church building with regard to the environment.

- The C of E has produced a self-guided [checklist](#) to help churches on the path to net zero and as part of the QI process, the inspector will address a selection of these. Churches may wish to complete the full checklist in advance of their QI being completed, especially if it is not due for a few years.

Funding

- CofE [funding guide](#) (scroll down to No. 4)
- Community Energy England [funding list](#)

Greening Framland

In late 2019, Framland Deanery was awarded a grant from the Rural Community Energy Fund to investigate the feasibility of sustainable energy systems in Parish Churches. They commissioned Nottingham Energy Partnership together with T4 Sustainability to undertake the study and the project has now produced a final report which is in two parts.

The main report [Reducing the Carbon Footprint of Our Churches – Framland RCEF Feasibility Study Main Report](#) is an overview and evaluation of insulation or sustainable energy systems that churches can install to reduce their carbon footprint.

The second part of the report [Reducing the Carbon Footprint of Our Churches – Supporting Technical Document](#) has a detailed description of an assessment tool that parishes can use to evaluate their own energy usage and requirements. This is followed by a report of the outcomes having applied the tool to seven churches as part of the consultancy work.

The assessment tool can be downloaded from [Church Energy Assessment Tool](#)

Parishes may find that they need some support and advice to use the assessment tool and to evaluate the findings. If you want to know more please contact:

David Davies david.ithaca@btinternet.com 07747 790135 or
Stuart Evans stuartevans4@gmail.com 07772 661023.

Examples and Case Studies

- Ground source heat pumps – a [case study](#)
- [Case studies](#) on the CofE environmental pages

Allied Miscellaneous Resources

- Water saving tips and cutting your carbon emissions and costs as a result from the [Waterwise website](#)
- Details of how to start a butterfly garden, at home or in your churchyard, from [here](#) and [here](#)
- How to buy [paper](#) in an environmentally friendly way

Where to get further help and advice

The Church Buildings Team and the Diocesan Advisory Committee (DAC) can provide further help and advice.

DAC Secretary:

Rev Rupert Allen 07947 353125 Rupert.Allen@LeicesterCofE.org

Historic Churches Support Officer:

Simon Headley 07398 639326 Simon.Headley@LeicesterCofE.org

Building Development Enabler:

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The production of this document has drawn together various resources and we are particularly grateful to the Diocese of Lincoln DAC who have kindly allowed us to share some of their work. All the links were correct and working at the time of publication.

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