



Historic Environment Forum, June 2022

Net Zero Carbon : What we've done & what we've learned



1

Start point: we have some of the most sustainable buildings in Britain.....



... but they need to continue to adapt, to respond to the climate crisis.



2

Feb 2020 General Synod:

That this Synod, **recognising that the global climate emergency is a crisis for God's creation, and a fundamental injustice, ...**



(a) **call upon all parts of the Church of England ... to work to achieve year-on-year reductions in emissions and urgently examine what would be required to reach net zero emissions by 2045 2030** in order that a plan of action can be drawn up to achieve that target;

(b) request reports on progress from the Environment Working Group and the NCI's every three years beginning in 2022 and;

(c) call on each Diocesan Synod, and cathedral Chapter, to address progress toward net zero emissions every three years.

Transferrable learning?:



Get a mandate from the most senior level in your organisation.

Having a big, scary target is very motivational (even if it's not clear how to get there).

There had been considerable progress
since then....

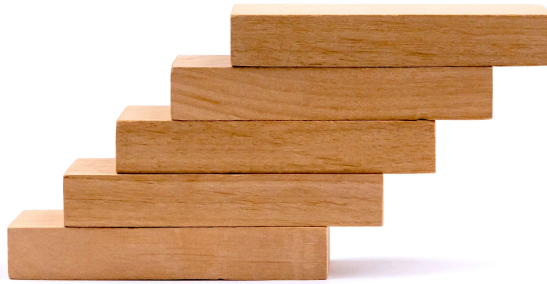


Photo by [Volodymyr Hryshchenko](#) on [Unsplash](#)



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Transferrable
learning?:

*Think about all the existing 'points of contact' you
have across the organisation, and how you can
integrate net zero carbon into them.*

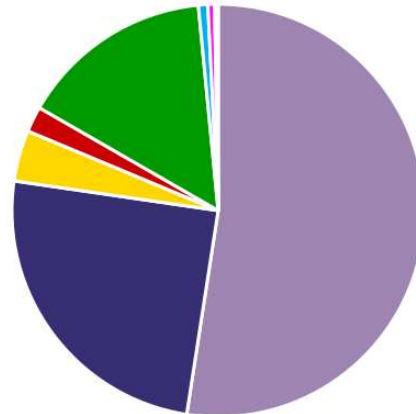


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For context, churches are only a portion of the Church's overall footprint...

Sources of carbon footprint Church of England (2020 data)

- Schools (52%)
- Churches (25%)
- Church Halls (4%)
- Cathedrals (2%)
- Housing (15%)
- Diocesan Offices (1%)
- NCLs (1%)
- Royal Peculiars (<1%)
- Other Dio Buildings (<1%)



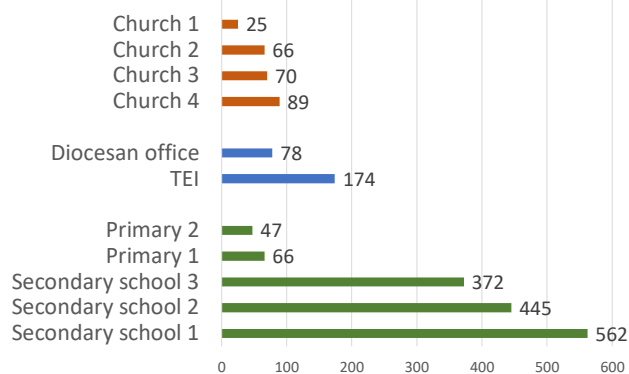
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And we know, within this, we need to focus strategically on high-energy-use buildings....

Carbon footprint (tCO₂e p.a.)

Average for small, rural churches (EFT data)
Ave. for large, urban churches (EFT data)

*Wayfinders
buildings,
specifically
chosen because
they are
high-energy-use
buildings*



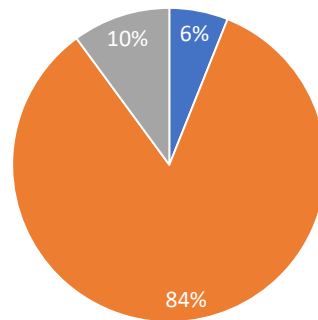
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We know we need to focus on heat loss and heating

Church and church hall energy use

(sample = 126 churches and halls)

■ Lighting ■ Heating ■ Other

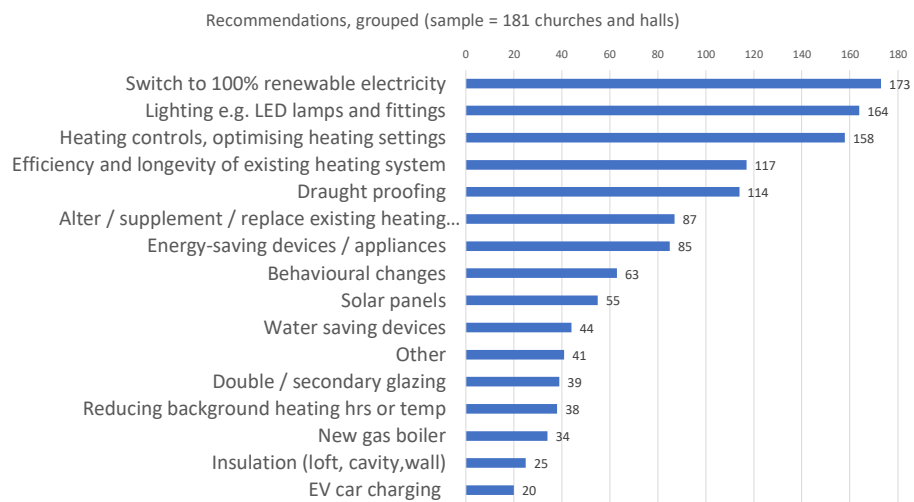


Transferrable learning?:

*Good data matters, but you don't need **perfect** data.*

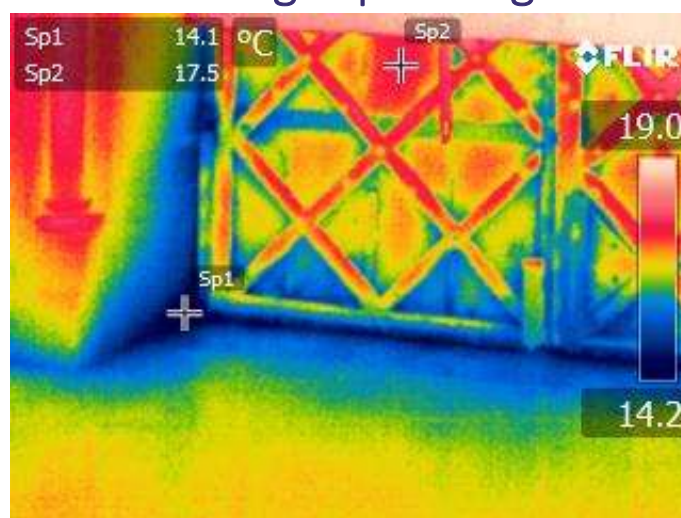
*Focus on the buildings which are **large** and **regularly used**, where the heating is turned on most of the week, and you won't go far wrong.*

Our church energy audits indicate the most important areas for action.



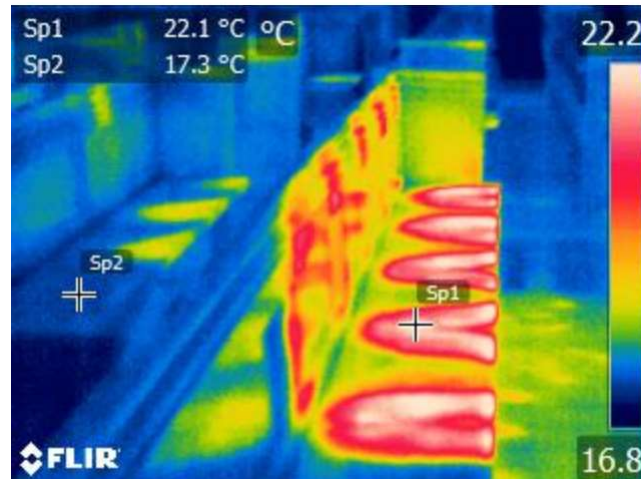
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This means simple steps to cut heat loss – like draught-proofing ...



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... soft furnishings to retain body heat ...



THE CHURCH
OF ENGLAND

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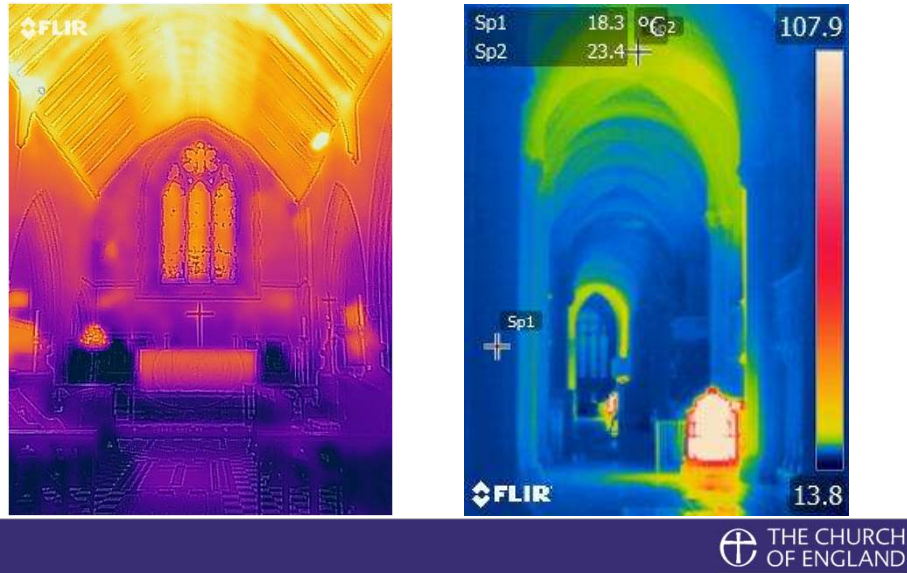
... and maintaining existing systems.



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And it means gradually moving from space-heating, powered by burning oil and gas ...



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... to lower carbon, generally electric, heating systems, which make people comfortable whilst conserving interiors.



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Transferrable learning?:

Energy audits are very valuable. We centrally procure and subsidise them, with the churches paying the rest.

As well as the individual reports, commission an overall analysis to show you the most common recommendations.

Thermal imaging camera photos tell the story for you.



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Our Wayfinders Project created net zero plans for a small sample of our highest energy buildings



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For all of them, a technical solution exists



- Air-to-Air Source Heat Pumps are main solution for larger buildings
- Electric point of use hot water needed everywhere
- Solar PV – has strong relevance on large sites (big/busy churches, schools, offices)
- How controls are used is significant on new sites
- Don't forget the basics
 - fabric insulation - valid on 80% of sites,
 - replacement of single glazed windows - found in all secondary schools
 - LED lighting still needed to be completed on 90% of sites.

So why is it not being done everywhere?



- Finance
- Permission
- Time /competing priorities
- Need for advice

Transferrable learning?:

*It's **technically** possible; with **existing** tech.*

Money, time, advice, and permission are the issues.

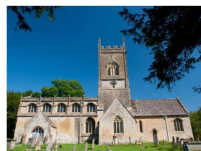
It's worth paying for NZC plans for your highest energy buildings.

The “Routemap to Net Zero Carbon by 2030” sets out the direction of travel....



The Church of England Routemap to Net Zero Carbon by 2030

Consultation document
October 2021

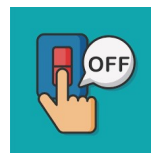


St Michael All Angels Withington –
the Church of England's first zero-carbon church in the modern era

- Working group formed spring 2021
- Draft Routemap launched on 28 October 2021
- Consultation November 2021 to February 2022
- Analysis and updating
- Going to General Synod July 2022

It sets out the planning principles that need to be applied ...

- Based in theology
- Urgent, relevant and widely understood
- Data-driven and focused
- Embedded in all we do
- Using less energy, and from cleaner sources
- Travelling sustainably
- Offsetting only what we cannot reduce



The Routemap is broken into different sections for different issues ...

- Separate sections:
 - Dioceses
 - Churches and Cathedrals
 - Schools
 - Housing
 - TEIs
 - Offices
 - Travel
- Making the change
 - Leadership
 - Communications
 - Funding

Milestones from the Routemap to Net Zero Carbon by 2030

In the consultation document milestones are broken down by audience and topic. This document provides a way to view them all together.

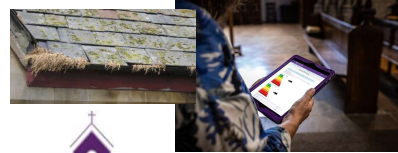
Proposed Milestone	Proposed Date									
	2022	2023	2024	2025	2026	2027	2028	2029	2030	
4.1 Dioceses										
4.1.1. All dioceses provide an annual carbon emissions report to Diocesan Synod	2022									
4.1.2. All dioceses provide a control plan to carbon net zero to Diocesan Synod, to include the policy changes and levers for change required	2022									
4.1.3. All dioceses develop a communication strategy to churches and schools	2022									
4.1.4. All dioceses audit clergy property and develop a property retrofitting plan	2023									
4.1.5. All dioceses audit their landholdings and develop a land management plan					2026					
4.2 Churches and Cathedrals										
4.2.1. National Faculty rule changes to come to General Synod, proposing a range of changes to the rules to support net zero carbon. Clear guidance to be issued on any agreed changes, and wide communication about the implications	2022									
4.2.2. National Proposal to change AFPM rules to require reporting of carbon footprint results to come to General Synod	2023									
4.2.3. National Parish Buying rolls out new net zero product offering, including 'green' biogas tariff	2022									

Routemap to Net Zero Carbon by 2030, Revision 0, October 2021

1

There are common themes coming out across the different types of building ...

- Start planning now
- Maintenance and insulation
- Heat decarbonisation
- Energy efficiency
- Renewable tariffs
- Renewable energy
- Eliminate emissions before offsetting
“Less Net, more Zero”
- Measurement, monitoring and reporting
– including the Energy Footprint Tool



PARISH
BUYING

ECO CHURCH
AN APOCALYPSE PROJECT



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Leadership and Comms are vital. Decisions are taken locally by thousands of people.



- Engaging bishops and leaders
- Newsletters
- Webinars
- Videos
- Training
- Conferences
- Talks
- Local champions
- Linking to vision, worship & teaching
- Eco Church programme

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Transferrable learning?:

Form a working group to create your plan, that represents all main stakeholder groups.

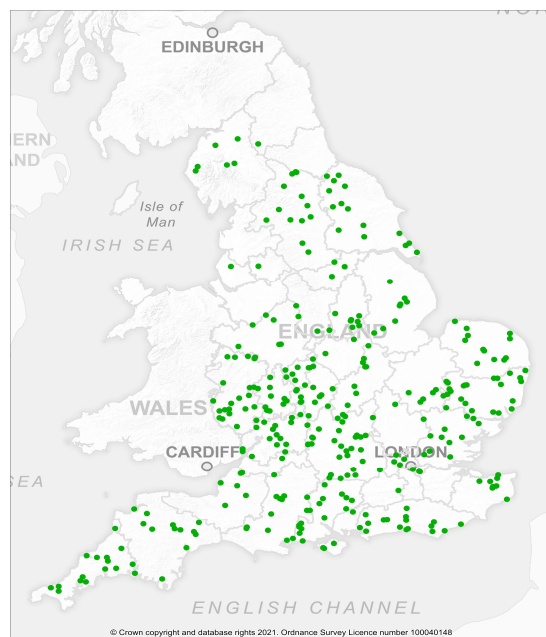
*Approach the creation of your plan as an **opportunity for engagement**, not just about making the plan itself.*

People are the absolute key to this. Engage them, support them. Find champions. Avoid jargon.

It's not just a theory...

7% of churches completing the Energy Footprint Tool are already net zero

(source: CofE Energy Footprint Tool, 2020 data)



(If time) video –
St Michael's
Baddesley
Clinton



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Questions and Discussion



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