

GENERAL SYNOD

Roadmap to Net Zero Carbon by 2030: Consultation

Summary

In February 2020, Synod requested that a routemap to achieving net zero by 2030 be developed. The Environmental Working Group (EWG) took on this task via a sub-committee, and is now launching a consultation on proposals for this routemap. The consultation runs from 28 October 2021 to 28 February 2022. The consultation document, entitled *Routemap to Net Zero Carbon by 2030*, is expected to result in changes to the plan in order that the views of consultees can inform Synod's debate, planned for July 2022.

This paper is for information and context. General Synod members are not expected to reply directly to this consultation, although views of members would be welcomed; the list of consultees is included below.

There will be a stand at the November meeting of Synod, providing information on all aspects of environmental work as well as a chance to join the Synod Environmental Group and meet some of the national environment team. We hope many of you will have the chance to visit it.

Environmental work will be a theme of many Synod sessions, with issues as varied as Faculty rules, biodiversity, investment and evangelism. Our hope is that this early sight of a key piece of work will give both old and new members of Synod assurance that this issue is a key priority for all parts of the Church.

The context and purpose of this consultation

1. COP26 begins in the UK in November 2021. We pray that this global gathering will give renewed energy and focus to international efforts to tackle the climate emergency.
2. It is appropriate that at the same time as this crucial conversation and call to action is happening, the Church of England is consulting on its own ambitious and challenging target to make its own buildings net zero by 2030.
3. The *Routemap to Net Zero Carbon by 2030* aims to respond to Synod's ambitious challenge from February 2020, to create a plan to achieve net zero carbon by 2030. It sets out what we know (and don't know) about what would be required to achieve net zero by 2030.
4. All involved in drafting this consultation document are aware that it will require everyone – from parishes to dioceses to the National Church Institutions – to think hard about what can and cannot be done. As with the global challenge, this requires hard choices and a shared commitment to action.
5. We recognise that parishes and dioceses are facing a range of challenges and demands at this present moment. This consultation is not about making demands; it is about gathering views and gauging what support is needed to make ambition into reality.
6. Since February 2020 the national environmental team and EWG have been focusing on developing practical support and clear policy agendas to support delivery of the 2030 target. These range from tools like the Energy Footprint Tool, training events, online webinars, work with Parish Buying on provision of renewable energy, and specialist guidance to conversations about heritage protection legislation and liaison with key groups about faith representation at COP26. This support for the work of

parishes and cathedrals will continue. The consultation should be read in the context of this ongoing supportive work.

What is this consultation aiming to achieve?

1. The *Routemap* has been prepared by the Net Zero Carbon Sub-committee of the national Environmental Working Group, a sub-committee consisting of diocesan representatives, church institutions, and external experts.
2. The Environmental Working Group is deliberately consulting early in its work; what you are reading is not the finished product. We are seeking the views of dioceses, cathedrals and church institutions early on in our work, so that the final *Routemap* that we bring to General Synod in July 2022 can be shaped by these views, be realistic and achievable.

Who is being consulted?

1. This consultation is primarily aimed at national Church bodies, diocesan structures (including DBFs and DBEs), and cathedrals. This is because it is about how the central and diocesan structures can plan for and support parishes and schools in achieving net zero by 2030, as well as tackling their own buildings, landholdings and work transport. This does not mean that the views of parishes are not vital to achieving the overall goal. Responses from parishes, individuals, and organisations not named below who wish to respond are welcome. All respondents will be asked to specify in which capacity they are responding.
2. The consultation is being sent to the following:
 - a. Chief Officers of the NCIs, inviting a response from the governing bodies
 - b. Diocesan Bishops and Secretaries (requesting a collated diocesan response that incorporates views of senior staff, archdeacons, DACs, DMPCs and DEOs)
 - c. Cathedral Deans (requesting a response that incorporates views of the Chief Operating Officer, Chapter and the FAC)
 - d. The national network of Archdeacons
 - e. The Chair of the Major Churches Network
 - f. Chairs of Diocesan Boards of Education and Diocesan Directors of Education
 - g. CEOs of Multi Academy Trusts
 - h. Directors of Theological Education Institutes
 - i. The Chair of the Church Buildings Council
 - j. The Chair of the Cathedrals Fabric Commission of England
 - k. The Chair of the Bishops and Cathedrals Committee
 - l. The Chair of the Mission, Pastoral and Church Property Committee

Bishop Graham Usher, Lead Bishop for the Environment
Bishop John Thomson, Chair of the Net Zero Working Group

October 2021

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**THE CHURCH
OF ENGLAND**
Environment Programme

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**

Message from the Chair of the Net Zero Carbon Sub-committee, The Bishop of Selby, Dr John Thomson



'The earth is the Lord's and all that is in it.'

Psalm 24 v1

The mission of the Church is the mission of Christ and the fifth mark of mission is to strive to safeguard the integrity of creation, and sustain and renew the life of the earth. In pursuit of this, in February 2020 Synod set the Church, and itself, an ambitious challenge: to reach net zero carbon across our parish, cathedral, diocesan and schools estates by 2030.

This consultation document, *Routemap to Net Zero Carbon by 2030*, is the result of 18 months of concentrated work, carried out in the context of the Covid-19 pandemic and being sent out into the world as the long-term effects of that crisis are just beginning to be felt. It sets out what we know (and don't know) about what would be required to achieve net zero by 2030.

The Routemap has been prepared by the Net Zero Carbon Sub-committee of the national Environmental Working Group. It is made up of diocesan representatives, church institutions, and external experts. We have worked within a theological framework that focuses our minds on the wider environmental programme and our Christ-centred reasons for keeping care for Creation as a key priority across the Church. I hope you will take time to read and consider the [theological reflections](#) developed alongside this consultation.

The Sub-committee is very aware that the past 18 months have been exceedingly challenging for all in the Church. We have no wish to add to feelings of burden; instead we hope this document will encourage respondents to think about what is possible, where help is needed, and to tell us what they hope and pray for. We are deliberately consulting early in our work; what you are reading is not the finished product. The committee is seeking the views of dioceses, church institutions, and others, so that the final Routemap that we bring to General Synod in July 2022 can be shaped by your views, be realistic, and be achievable.

Dioceses, cathedrals, TEIs, the National Church Institutions, and our national buildings committees are all encouraged to contribute to this Routemap, along with anybody else who is interested. Please challenge this draft, input to it, improve it. The answers are not all clear yet, and the Net Zero Carbon Sub-committee wants to listen and learn from your experiences. This Routemap aims to set out a path towards General Synod's aim that all parts of the Church become net zero carbon by 2030; not all the steps in the path are clear yet, and you can help inform our collective journey.

Executive Summary

All parts of the Church of England recognise the climate emergency and the necessity of a strong, visible Christian response to what is happening to our world. Twenty-seven diocesan synods have passed a motion committing to net zero, with five more planning to propose one. This *Routemap to Net Zero Carbon by 2030* has been drafted to allow you to join the conversation, to contribute your ideas and allow us to work together to deliver positive change. Your response to the survey about this document will shape the actions that will be taken this decade.

The document is divided into sources of emissions (our different building types and travel) but there are cross-cutting themes across these. Issues of communication, motivation, funding, capacity and resource, training and support, are relevant to all audiences.

[Section 1](#) lays out what this consultation is focused on, and what is not in scope. This does not mean that out of scope elements are not part of the wider environmental programme.

[Section 2](#) tells you how to use this document and gives advice on responding to sections most relevant for your context, as well as providing information on online events being held to support this consultation.

[Section 3](#) covers the high-level principles that frame this work and we hope all respondents will take time to read and respond to these.

[Section 4](#) breaks out the different intended audiences of this consultation; you need only read the sections relevant to you. There are milestones associated with each topic. You can find a single [summary sheet of all milestones](#) here.

[Section 5](#) covers general topics relevant to all respondents: communications, capacity building, work-based travel and funding.

[Section 6](#) explores some complex areas where decisions still need to be made; land use, offsetting and carbon sequestration and embodied carbon in building projects.

Throughout this document there is an understanding that the resources to deliver much of this change are not yet in place. The document does not explore these issues and potential barriers in detail but that does not mean there is not a real appreciation that they exist. Respondents are encouraged to both identify barriers and issues, and also to offer potential or actual solutions to these where they exist.

We have arranged online information sessions, and officers and committee members will make ourselves available to attend your meetings if wished. Details of this can be found in Section 2.

This is a key issue and we hope to receive many responses via the [online survey](#) by the end of February 2022.

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1. Scope

The Routemap you are reading is one part of a wide-ranging Environment Programme. It has a very specific purpose; to set out what is needed if we are to achieve the prophetic Net Zero Carbon by 2030 ambition laid down by General Synod in February 2020.

This Routemap IS:	This Routemap IS NOT:
<ul style="list-style-type: none"> ✓ Focused only on the Church’s own greenhouse gas emissions. It covers those areas under our control or significantly under our influence. 	<ul style="list-style-type: none"> ✗ Focused on the important work of influencing the lifestyles of our parishioners and school families. Whilst this work is vital, it is not the aim of this document. Expanding Eco Church will be particularly important to achieving this wider engagement.
<ul style="list-style-type: none"> ✓ Focused on the areas ‘in scope’ of the 2030 target set by General Synod: the oil, gas, and electricity used to heat, light and power our buildings, and our work-related travel. See the full scope of the Synod target in Appendix 2. 	<ul style="list-style-type: none"> ✗ Focused on wider areas such as procurement, construction projects, or land, nor climate resilience and the adaptations needed to operate and grow in a changing climate. These are touched on in Section 6 but are currently out of scope of the 2030 target.
<ul style="list-style-type: none"> ✓ Inclusive of the operational aspects of the Church Commissioners (for example See houses, offices, and retired clergy housing). 	<ul style="list-style-type: none"> ✗ Inclusive of the investment portfolios of the Church Commissioners, which have a 2050 target, reflecting their global nature.
<ul style="list-style-type: none"> ✓ Primarily intended for an internal audience, to gain valuable input at an early stage from those most impacted by the proposals. 	<ul style="list-style-type: none"> ✗ Intended for an external audience. We will consult with key partners and external organisations on the next draft, in 2022.
<ul style="list-style-type: none"> ✓ Primarily intended to gather contributions from a group including dioceses, DBFs, DBEs, cathedrals, TEIs, archdeacons, and key committees and institutions. 	<ul style="list-style-type: none"> ✗ Intended to add any burden to individual clergy, school heads, or parishioners. Whilst they are welcome to respond, this is not expected of them.
<ul style="list-style-type: none"> ✓ Intended, once finalised and agreed by Synod, to be adopted by all parts of the Church of England within this scope. 	<ul style="list-style-type: none"> ✗ Intended to cover issues of biodiversity and habitat. These are in scope for the wider CofE Environment Programme.

2. How to use this document and respond to the consultation

2.1 The Net Zero Carbon Sub-committee is keen to get a range of views to inform development of this *Routemap*. There are some general sections which all consultees are invited to engage with: these are in Section 3.

2.2 Section 4 is divided into specific audiences and invites more focused responses.

2.3 The questions that you will find in the online survey can be found in [Appendix 1](#).

2.4 The other appendices to this document provide background information:

[Appendix 2](#): Scope of Net Zero 2030 (agreed by General Synod in November 2020)

[Appendix 3](#): Membership of the Net Zero Sub-committee

[Appendix 4](#): Existing Resources

2.5 There are various resources associated with this work that may help give context to your discussions and responses. All can be found on the [dedicated Net Zero consultation webpage \(www.churchofengland.org/net-zero-consultation\)](http://www.churchofengland.org/net-zero-consultation).

2.6 Invitations to respond have been sent to the following:

- a) Chief Officers of the NCIs, inviting a response from the governing bodies
- b) Diocesan Bishops and Secretaries (requesting a collated diocesan response that incorporates views of senior staff, archdeacons, DACs, DMPCs and DEOs)
- c) Cathedral Deans, inviting a response that incorporates views of the Chief Operating Officer, Chapter and the FAC
- d) The national network of Archdeacons
- e) The Chair of the Major Churches Network
- f) Chairs of Diocesan Boards of Education and Diocesan Directors of Education
- g) CEOs of Multi Academy Trusts
- h) Directors of Theological Education Institutes
- i) The Chair of the Church Buildings Council
- j) The Chair of the Cathedrals Fabric Commission of England
- k) The Chair of the Bishoprics and Cathedrals Committee
- l) The Chair of the Mission, Pastoral and Church Property Committee

2.7 This consultation is primarily aimed at national Church bodies, diocesan structures (including DBFs and DBEs), and cathedrals. This is because it is about how the central and diocesan structures can plan for and support parishes and schools in achieving net zero by 2030, as well as tackling their own buildings, landholdings and work transport. This does not mean that the views of parishes are not vital to achieving the overall goal. Responses from parishes, schools, and individuals are welcome. All respondents will be asked to specify in which capacity they are responding.

2.8 The deadline for responses is 5pm on 28th February 2022.

2.9 The Bishop of Selby and members of the National Environment team are running information sessions to help support this consultation. At these, the key points of the Routemap will be introduced and you will be able to ask questions. You can register to join these sessions by clicking the links below. The links are also on [consultation webpage](#):

[Tuesday 16 November at 3pm](#)

[Monday 22 November at 3pm](#)

[Monday 6 December at 2pm](#)

[Tuesday 14 December at 11am](#)

2.10 If you are holding a meeting to discuss the Routemap, officers from the Environment team or Net Zero Carbon Sub-committee members are available to attend. Please email [Denise Rowley](#) to arrange this.

2.11 In parallel, a library of case studies and net zero plans is being developed. Please share your net zero plan and any case studies you have by emailing them to [Denise Rowley](#). Case studies may be technological (e.g. zero carbon heating), behaviour change (e.g. campaigns to remind people to turn off lights), energy efficiency (e.g. installing insulation, maintenance), energy reduction (e.g. lights on timers) or carbon removal (e.g. tree planting).

2.12 Respond by completing the [online survey here by 5pm on 28th February](#). If you have any difficulty accessing this or need to respond in another format please [contact Denise Rowley](#).

2.13 The questions it will ask are shown in [Appendix 1](#). We very much value your input, but we also understand the constraints on your time; please therefore only answer those questions relevant to your area of interest, and skip others.

2.14 We are asking for either one or two collated responses from each diocese – it is up to you if you would like to respond both via your DBF and Bishops senior staff team - and individual responses from other consultees.

3. Net zero carbon planning principles

The following seven principles need to guide all our work if we are to achieve year-on-year reductions in our greenhouse gas emissions and, ultimately, reach net zero carbon.


 A question in the online consultation response asks your views on each of these principles.

Net Zero Carbon planning principles:	
1. Based in theology	<ul style="list-style-type: none"> The climate emergency is the context into which we are preaching the Gospel. It informs all we do. We will link all our actions on net zero carbon to our Christian mission, as expressed in the five marks of mission. You can read a theological reflection on the climate crisis here. We will grow the Church while reducing our footprint; our loving gospel message will reach and engage new people, particularly the young.
2. Urgent, relevant and widely understood	<ul style="list-style-type: none"> We will communicate clearly the reasons for action, and for acting now. We embrace the call to net zero carbon as an opportunity to be credible and missional in our communities across the country. This is an integral part of our mission; caring for creation, achieving climate justice, ending poverty, creating a viable future for ourselves and coming generations, and increasing engagement with our communities through our commitment to net zero. Net zero is needed by 2030 but it starts now. We aren't waiting; a significant reduction is needed every year, year-on-year.
3. Data-driven and focused	<ul style="list-style-type: none"> We recognise this work covers all of our activities as a Church, as set out in the scope agreed by Synod. We are identifying the major sources of emissions for our buildings and institutions so that we can create a data-driven action plan. We will be strategic, using our energy data to focus effort on the large, busy buildings: schools, major churches, cathedrals, offices. Most small, rural churches are already low carbon. We will aim to gather a solid information base on which to act: EPC surveys of clergy housing, energy audits of churches and cathedrals, heat decarbonisation plans for schools. We will learn from others, sharing resources and good practice and collaborating. We will cost for the changes required and actively seek funding to enable these over the 10-year period to 2030.
4. Embedded in all we do	<ul style="list-style-type: none"> We will aim to integrate environmental principles into everything we as the CoFE are doing, not see it as an 'add on'. We will encourage every level and part of the Church to take a formal decision to answer the call from General Synod; e.g. a

	<p>motion by the PCC, school governors, cathedral chapter, diocesan synod.</p> <ul style="list-style-type: none"> • We will identify those things directly in our control and the things we influence, and discern appropriate strategies to effect decarbonisation for both. • We will encourage each part of the Church to gather a team who will work on it, and ensure someone in a leadership position champions the work; within a church, school, cathedral, diocese. • We will build carbon footprint reporting into our reporting systems; for example, including proposing to General Synod to include carbon data in the APCM report requirements. • When thinking about our plans for climate mitigation (reducing emissions to prevent climate change) we will also keep climate adaptation in mind (actions to protect our buildings and communities from harm during increasingly extreme weather).
<p>5. Using less energy, and from cleaner sources</p>	<ul style="list-style-type: none"> • We need to first reduce demand for energy: maintain our buildings, tackle damp, start with the simple changes (broken windows, lagging pipes), reduce heat loss (with appropriate methods to the age, significance and nature of the buildings). Then we need to increase energy efficiency, through steps such as LED lights, zoning and controls. • We will aim for quick wins, however we will not delay difficult things or they may never be achieved. • We will aim for our energy to be supplied from cleaner sources: encouraging switching to ‘green’ tariffs, increasing the number of solar PV installations and other renewables on our buildings. • We recognise the vital importance of decarbonising heat. We will focus on fossil fuels including oil, the dirtiest fuel, then fossil gas. We acknowledge that doing this is difficult but critical. We understand it is vital that options appraisals take place for all heating replacements, since any new oil/gas boiler installed now will outlast 2030. • There are many uncertainties in the external world, around regulation, funding, carbon pricing, and technologies such as hydrogen. We recognise that some decisions will need to wait until later in the decade, but in some cases it will be possible to ‘future-proof’ solutions. • We will aim to avoid maladaptation and to remember the embodied carbon in our building projects; we will avoid carrying out big interventions for small savings.
<p>6. Travelling sustainably</p>	<ul style="list-style-type: none"> • We will encourage sustainable transport and remember the travel hierarchy (from best to worst): walking, cycling, public transport, shared journeys, electric cars, fuel efficient cars, less efficient cars.

7. Offsetting only what we cannot reduce	<ul style="list-style-type: none"> We will reduce all the carbon emissions we can; we must not over-rely on offsetting due to the risk they may be poor quality, ineffective, temporary, unethical or not additional¹. However, there will be some role for offsetting and sequestration, towards 2030. We will continue to explore viable options for tangible and beneficial offsetting. Tree planting and rewilding is beneficial but not in itself the solution; newly planted trees do not all survive, and take decades to grow to maturity and absorb the emissions we are emitting right now. We will protect and nurture the trees and wild spaces we already have.
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4. The kind of change that is needed

 In the online consultation response you are asked to provide comments on the sections that are relevant to you and your work: for example, cathedrals are not asked to respond on the schools section. Please feel free to skip all the sections that are not directly relevant to you.

4.1 Dioceses

Proposed Milestone	Proposed Date
4.1.1. All dioceses provide an annual carbon emissions report to Diocesan Synod	2022
4.1.2. All dioceses provide a costed 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 (see Section 4.4)	2023
4.1.5. All dioceses audit their landholdings and develop a land management plan	2026

What the national Church is proposing to do:

1. Creating a footprinting toolkit for all major sources of emissions.
2. Work to develop funding streams for both capital installations in our buildings and to provide support to parishes.
3. Provide central consultancy / expertise so dioceses can access real expertise, as a matter of urgency.
4. Develop further national policy and guidelines and offer free training.
5. Update Faculty Rules (proposed for approval in 2022).

¹ [Voluntary Carbon offsets \(parliament.uk\)](https://www.parliament.uk)

6. Share model approaches to achieving carbon reductions for different categories or types of building.
7. Central procurement for boilers, radiant panels etc; help with switching fossil gas and electricity tariffs; electric vehicle charging points; mass purchase of renewable tariffs so this is the obvious easy choice for a PCC.

What it is suggested every diocese should do:

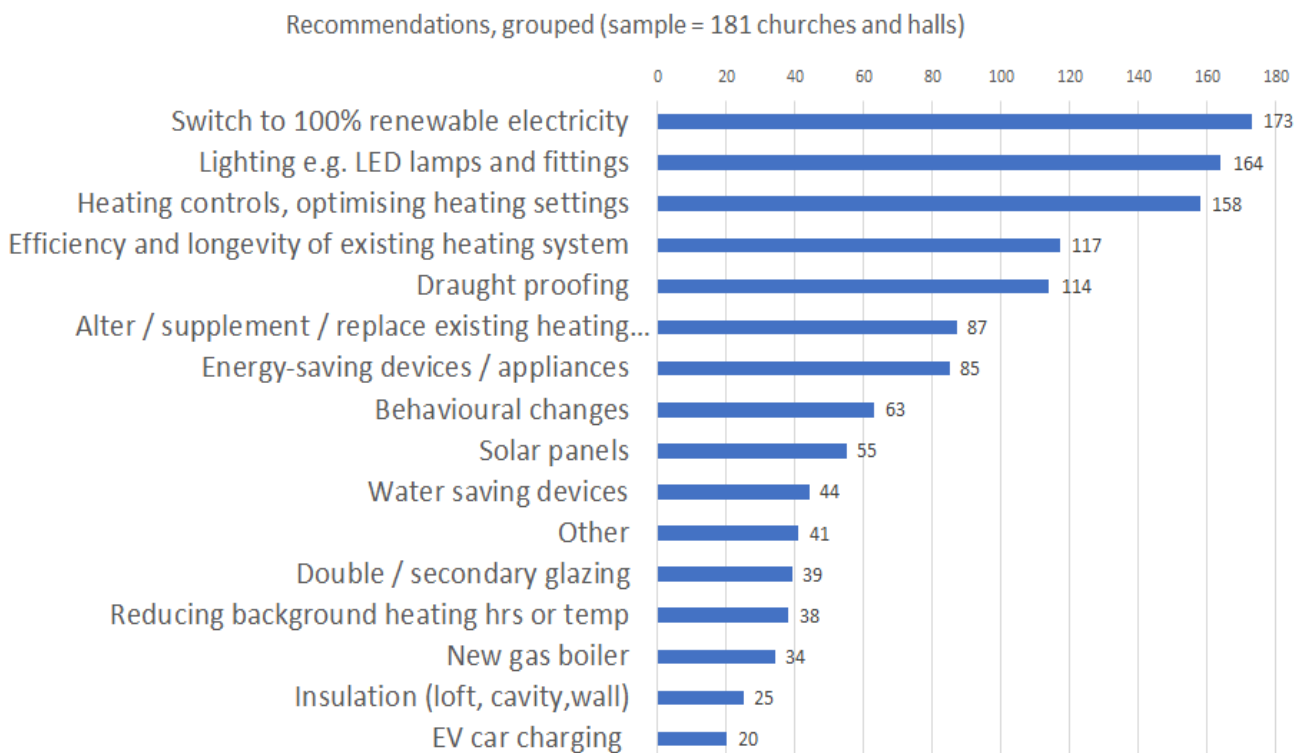
1. Establish a working group: Bring on board key stakeholders from all departments, bishops, archdeacons, and look for existing commitments and delivery of policy change.
2. Increase capacity and understanding: Potentially use the national “train the trainer” scheme in Carbon Literacy (launching in 2021) to increase understanding across the diocese.
3. Gather data and work to it: Task someone with creating an annual greenhouse gas emissions report, promote the Energy Footprint Tool, and the range of other national tools as they become available.
4. Create a plan: Take a two-pronged attack (i) finding some quick wins and pilots which show what is possible, whilst (ii) focussing strategically on the highest energy use buildings in the diocese, saving energy, and decarbonising heat. Don’t forget the impact of behaviour change.
5. Identify required policy changes/levers for change: Create a DAC policy, set expectations for APCM reports, quinquennial inspections and archdeacon’s visitations.
6. Develop and agree a costed (costs and savings) strategy with Synod support. If possible, establish a local grants and/or loans scheme.
7. Create a communications plan. Focus on the ‘why’, the theology, and make it positive. Cover both churches and schools.
8. Promote Eco Church: Register for Eco Diocese and use the criteria to inform your planning. Promote Eco Church across the dioceses.

4.2 Churches and cathedrals

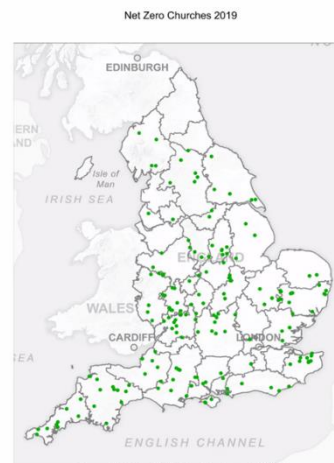
Proposed Milestone	Proposed Date
4.2.1. National: Faculty rule changes to come to General Synod, proposing a range of changes to the rules to support net zero carbon. Clear guidance to be issued on any agreed changes, and wide communication about the implications.	2022
4.2.2. National: Proposal to change APCM 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
4.2.4. All churches and cathedrals are on a 100% electricity renewable tariff, encouraged through a major national switching campaign.	2023

4.2.5. Every diocese has a 90%+ completion rate for the Energy Footprint Tool, and 100% of cathedrals complete the Energy Footprint Tool	2023
4.2.6. All cathedrals to have sustainability reviews completed	2023
4.2.7. National: Pilot an investment scheme for projects with high enough Return on Investment	2023
4.2.8. Eco Church registration <ul style="list-style-type: none"> All cathedrals registered for Eco Church and achieve bronze 10% of local churches in every diocese registered; 5% of local churches awarded at least at bronze (= Bronze Eco Dioceses standard) 40% of local churches registered; 30% of local churches awarded Silver or higher (= Silver Eco Dioceses standard) All dioceses reach Gold Eco Dioceses standard – targets are currently being amended by A Rocha 	2023 2023 2026 2029
4.2.9. All churches and cathedrals with gas heating are on a 'green' biogas tariff (not offsetting).	2024
4.2.10. No new oil boilers installed in churches and cathedrals after this date (note: contingent on government action to connect rural communities to the grid)	2025
4.2.11. All churches have energy efficient lighting installed in all regularly used areas (interior and exterior) with light and motion sensors where appropriate	2025

The analysis of our programme of church energy audits indicates the main areas for action:



Net zero carbon churches aren't just a theory, they exist now. The [analysis of last year's Energy Footprint Tool](#) results showed that 5% of churches were already 'net zero'. Each green dot on the map to the right is one of these net zero carbon churches. In the main, these churches have electric heating and have switched to a 100% renewable electricity tariff.



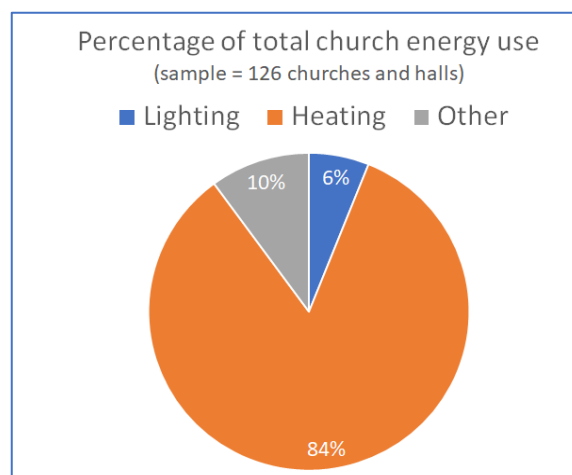
What the national Church is proposing to do:

1. A review of the Faculty Rules is already underway. The Rules Committee is considering a range of changes which support net zero carbon; making positive changes easier to make, and make a continued dependence on fossil fuels require greater consideration. These proposals will come to General Synod in 2022. Any changes will need to be accompanied by clear guidance and wide-ranging communication about the implications.
2. The Cathedrals Fabric Commission is in conversation with cathedrals about strengthening understanding of green technology projects in cathedrals.
3. Extensive work has been done on church heating, including with Historic England. Early advice on this can be found as part of the [Practical Path to Net Zero](#). A conference on this is planned for 2022 and a database of case studies is being developed.
4. In 2021 diocesan heating advisers have formed a network to share good practice and some dioceses have had success recruiting new advisers. It has become more mainstream for churches and the DAC to include a move to net zero carbon as part of their considerations when moving to a new heating scheme. In the capacity-building section of this plan it is recommended that a national recruitment exercise is done annually on behalf of the dioceses, and that a national training/induction programme for heating advisors is created and run annually.

Heating makes up the vast majority of a typical church's energy use; 84% in the sample analysed in 2020. The majority of the recommendations from the energy audits, shown above, concern tackling heat loss, optimising the existing heating, or changing to new heating systems.

The key is to change our default starting point from heating the church (space heating) to making people comfortable, whilst protecting our historic interiors (people heating).

Decarbonising heat (moving away from fossil oil and gas) is not simple, especially in large churches currently on oil and gas, perhaps with chair seating and full schedules of users. Working on this is a national priority.



What it is suggested every cathedral and church should do:

1. Measure your carbon footprint with the church Energy Footprint Tool or the new equivalent for cathedrals. Use the [Practical Path to Net Zero Carbon](#) as a start point for an action plan.
2. For most smaller churches, heated only a few hours per week or month, the carbon footprint is already very low. Here, good maintenance is key; looking after the roof, gutters, windows, and doors, and tackling the causes of damp.
3. The most common recommendation from the audits is to switch to a green electricity tariff.
 - Switching to ‘green’ electricity is an affordable swap from standard ‘brown’ grid electricity. This is an easy win; the analysis of the first year of the Energy Footprint Tool suggests that churches could reduce their collective carbon footprint by 22% through this step alone. Combining electric heating with a 100% renewable tariff makes a church - nearly - net zero, leaving only their transport to consider.
 - It is therefore recommended that we set a target milestone of 100% of churches having switched to a 100% renewable ‘green’ electricity tariff by 2023, and that a national switching campaign supports this effort between now and then.
4. The second most common recommendation is lighting.
 - For light, the change required is often straightforward, with a shift to LED lamps powered by a 100% renewable “green” electricity tariff, lighting becomes both energy efficient and net zero. Movement and light-level sensors can be useful if lights are routinely left on.
 - However, lighting is only a relatively small amount of a church’s energy use; heating is a far more significant consumer.
5. The most cost-effective option is to ‘switch off’. Turning off lights and equipment that aren’t needed and reviewing heating settings will reduce carbon emissions and also save money on energy costs.
6. Take appropriate steps to reduce heat loss, to make their existing systems as efficient as possible, and to plan ahead for replacements when the current system reaches the end of its working life.

4.3 Schools

Proposed Milestone	Proposed Date
4.3.1. Establish ‘Regional School Environment Groups’ (school leaders, diocesan buildings officers, diocesan environmental officers, local authority, consultants, local champions, people with technical expertise)	2022
4.3.2. Schools, children and young people to produce key documents (flyers, presentations, info sheets etc.) to make the declaration to work toward net zero visible to the community	2022
4.3.3. School boards to integrate an ‘Annual Resilience Statement’ into their agenda items	2022

4.3.4. Schools to establish an estates vision and strategy informed by DfE GEMS ² <ul style="list-style-type: none"> • revised to include Execution Plan • revised to include HDP 	2022 2024 2026
4.3.5. CEEO ³ to engage with schools and communities (through flyers, webinars, presentations etc)	2022
4.3.6. Commence data collection: Energy Footprint Tool (EFT) pilot in autumn 2021 for formal launch of the EFT in January 2022	2022
4.3.7. Regional Environment Groups are to work with schools to identify opportunities to decarbonise from the data	2023
4.3.8. Regional Environment Groups to look at batching applications for funding where possible	2023
4.3.9. School Governing Boards are to establish execution plans (funding, delivery method, programme etc) by end 2023 which will feed into their estates vision and strategy	2023
4.3.10. Project delivery – overseen by Regional Environment Groups and reported to the Diocesan EWG	2023
4.3.11. Each school to undertake a Heat Decarbonisation Plan (HDP) (to be integrated with a revised Estates Vision and Strategy)	2025
4.3.12. All schools to switch to renewable energy tariffs	2025

Context

There are approximately 4,700 Church of England schools, which are estimated to collectively contribute 52% of total carbon emissions by building type⁴ for the whole Church of England. It is for this reason that schools are integral to the Church’s mission to work towards net zero as a whole Church.

The scope of the target for 2030 includes those schools where the Diocesan Board of Education has “a significant degree of influence (generally Voluntary Aided & Diocesan Academy Trusts⁵) including halls/other buildings”. It should also be noted that work-related travel including school trips are also within scope.

Out of scope of the target (but still within our mission to influence) are “those Church of England schools over which DBEs have limited influence (generally Voluntary Controlled Schools which are fully controlled by Local Authorities)”.

² Department for Education Good Estate Management

³ Church of England Education Office

⁴ GS Misc 1262 ‘Rising to the Challenge: reaching Net Zero by 2030’ A Background Paper from the Environment Working Group Primary Schools were 33% and Secondary 19%

⁵ Accounts for approx. 64% of schools

The issues of delivering this are well known and many are shared with other aspects of the Church, covered in the section on communication: in particular, aligning targets between the national and the local, and the lack of dedicated funding, but also basic infrastructure issues like availability of reliable electricity connections.

What the national Church is proposing to do:

1. To inspire and to encourage Church of England schools to sign up to a vision of sustainable schools that create better outcomes for all children and young people, to conserve the environment and to enable the planet to flourish for future generations.
2. To capture the voice of young people, by working with dioceses to encourage young people onto Diocesan Environment Working Groups.
3. DBEs and their community of schools can collate data through DEC reports, school energy bills and smart meters. However, information about school's energy consumption is currently inconsistent and variable. To aid in the process of assimilating data, an Energy Footprint Toolkit ('EFT') for schools is being created by the national Research and Statistics department.
4. To maximise the establishment of an estate vision and strategy, including accessing future funding opportunities, the National Society is also working to support the establishment of a network of regional hubs to help DBEs access consultants and technical support to implement a programme of energy audits (Heat Decarbonisation Plans) for schools.
5. To work with government on funding options.

What it is suggested every DBE should do:

1. Once schools understand how they are performing they need to be able to identify what the technical route is to achieve zero carbon. The best way of doing this is to produce a Heat Decarbonisation Plan ('HDP'). The key to progressing schools toward the target is for each to understand the bespoke route by commissioning these audits, and establishing business cases to bid for funding required to deliver the projects that are identified. Without the information, and an appreciation of the technical solution, then progress is halted. An estimated £7M of funding is required to complete HDPs for all Church of England schools. There is currently no direct funding route for energy audits. Dioceses are encouraged to support schools to use their limited sum of DFC⁶ to commission audits where there is likely to be a resulting project. The difficulty is that the resulting project requires additional funding which is not guaranteed.
2. Dioceses are encouraged to support the allocation of a significant proportion⁷ of the capital funding received, including capital funding for Boards of MATs⁸, to fund projects outlined in HDPs. This would demonstrate progress against the HDP. Other capital works such as solar panels and LED lights could also be funded through school capital⁹. The significant barrier is the cost of the actual heat decarbonisation, for example, moving from fossil gas/oil to air-source or ground-source heat pump (especially as this will cost perhaps 3 or 4 time more than a gas replacement). Where sustainable technology is comparatively expensive, it

⁶ Devolved Formula Capital Funding [Capital income - Consistent financial reporting framework: 2021 to 2022 - Guidance - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/614443/capital-income-consistent-financial-reporting-framework-2021-to-2022-guidance.pdf)

⁷ 60% allocation is suggested.

⁸ (CIF or SCA as above)

⁹ through SCA

becomes difficult to justify and prioritise the limited sum of school capital funding available. These are issues that will have to continue to be addressed collectively as we progress towards 2030.

3. Some local authorities, who have responsibility for school places, have resolved to build greener and more efficient school buildings. Dioceses should support this policy and there should be an understanding that all new buildings – whether funded through PSPB¹⁰, SCA or Basic Need¹¹ or any other means – would have to have a non-carbon heat source and in effect be a net zero carbon building.
4. Dioceses should also consider the use of well-established diocesan landholdings and woodland as an asset not only in terms of offsetting for the diocese but also for use as forest schools and other activities that raise awareness and appreciation of the natural environment.

What it is suggested every school should do:

1. School governing boards are supported to make a formal declaration¹² to become carbon zero by 2030, and ex-officio governors are also encouraged to share good practices across the school and church community on this issue.
2. Consider establishing an ‘eco charter’ for school councils to implement, identifying personal pledges to work towards the target as a collective¹³.
3. Consider providing an ‘Annual Resilience Statement’ to review their declaration. A suggestion is that this would be a statement setting out how directors/governors are measuring the school’s climate resilience and targets, and addressing challenges over the short, medium and long term, including risks posed by climate change. Future planning and decision making should also be taken with consideration of any impact on future generations.
4. Schools are encouraged to switch to 100% ‘green’ energy tariffs (for example using ‘[School Switch](#)’ available through the Crown Commercial Services). Switching to renewable tariffs is an easy way for schools to reduce reliance on fossil fuels, and will be encouraged to switch as soon as possible, whilst recognising that some are tied-in to local authority energy tariffs for a number of years.
5. The Heat Decarbonisation Plans (HDPs) provide a roadmap toward the zero carbon target. From these plans there can be developed at a strategic level with Boards of Education, a phased plan for implementing the HDP. A significant amount of the capital works required to meet the HDP will be fabric work (to roofs and windows) which can be funded through school capital funding¹⁴. HDPs will also identify ‘low-hanging fruit’ and will discuss habits and working practices that could be addressed relatively easily.
6. Decarbonisation needs to be integrated into estate strategy and planning in schools, and efforts need to be increased to ensure that schools work to set a sustainable strategy and vision for their estates. Integrating environmental considerations, an understanding of

¹⁰ [Priority School Building Programme \(PSBP\) - GOV.UK \(www.gov.uk\)](#)

¹¹ [Basic need allocations - GOV.UK \(www.gov.uk\)](#)

¹² [UK Climate Change • Lets Go Zero](#)

¹³ A good example of this work can be found at the Five Islands Academy Trust, please see [Eco Exhibition Presentation 2019 to 2021 \(2\).pdf - Google Drive](#)

¹⁴ Funding routes include through [CIF](#) and [SCA](#), although CIF is unlikely to provide support for decarbonisation projects directly without a significant contribution from the Academy.

climate risks and where adaptations are required, is key to driving change. The kinds of changes needed to school buildings include:

- Upgrading thermal envelopes (where required) such as walls, windows, roofs, floors
 - Focusing on big win/ lower cost items first such as roof insulation
 - Installing energy efficient boilers and heating equipment powered by 'green' energy tariffs, OR
 - Installing carbon heating systems and/ or energy sources (wind, biomass, air-source, ground-source, solar, etc)
 - Switching to energy-efficient lighting and other building systems
7. Schools and DBEs that hold capital funding, are required to assess the school's current approach and consumption of resources which will help to motivate sustainable practices. Effective buildings maintenance, glazing, insulation and draught proofing are all important to improving efficiency.
 8. Schools also must consider other improvements to energy efficiency for example through swapping to LED lighting, and to include provision for any planned installation of renewables on buildings such as solar PV. This also has the benefit of reducing energy demand and the possibility that schools may have to review incoming electricity supply. An example of a net zero carbon school can be found at [St Andrews CofE Primary School](#).
 9. Schools are encouraged to promote [walking buses](#) and to use sustainable transport where possible, and to plan for the installation of Electric Vehicle charging points where applicable. Schools could work with local authorities to develop local travel action plans for safe active travel infrastructure around schools. Schools could review their programme of school trips, calculating the carbon emissions from these and reviewing the potential for trips with lower carbon emissions.
 10. There are further considerations to be made by each school community, in terms of habits and to offset the carbon that schools cannot avoid using. For example, there could be a multi-year plan with ideas on how to reduce travel, fund-raise for charging points, plant trees, or offset by other creative ways.
 11. There are many ways in which schools can integrate the environment into their programme; from utilising data from smart meters within the classroom to inspire sustainable habits, to exploring the grounds of the adjoining church yard and looking at plants to learn new scientific knowledge and skills. Schools are encouraged to identify and outline ways to teach this agenda, with a commitment to share resources where possible with their local church, and to share stories and experiences. This is also helping to encourage community projects, such as shared electric vehicle charging points.
 12. Schools are asked to consider other policies such as creating recycling points which can be used by the whole community, for example battery recycling.

4.4 Clergy housing and retired clergy housing

Proposed Milestone	Proposed Date
4.4.1. All dioceses and NCIs to have run switching campaigns to encourage clergy to switch to 'green' electricity and biogas tariffs	2022
4.4.2. All dioceses and the NCIs to have retrofitting and maintenance plans in place	2023
4.4.3. All dioceses to have commissioned stock surveys such as EPC+ reports for at least a representative sample of clergy housing	2023
4.4.4. All dioceses to have stock improvement plans in place, having regard to the timing of when properties become vacant	2024
4.4.5. National: All See houses and bishop's offices have energy efficient lighting installed in all regularly used areas (interior and exterior) with light and motion sensors where appropriate	2025
4.4.6. National: The NCIs to install or upgrade roof and cavity wall insulation, where feasible, to See houses and offices.	2026

Context

The energy use of housing is an area of significant concern when it comes to carbon emissions. It is estimated that 30% of UK household carbon emissions come from heating our homes and hot water¹⁵ and clergy housing contributes 6% of total Church carbon emissions.

Housing has therefore rightly been an area targeted for action by Central Government. They have already directed that installation of new fossil fuel boilers will be banned from new houses constructed by 2025 and from existing housing by 2035, whilst domestic properties with an EPC Band of less than E cannot be let after 1 April 2020, unless covered by a valid exemption¹⁶. The government has also recently consulted¹⁷ on plans for privately rented homes to be upgraded to EPC Band C by 2030.

However, it is worth noting that there are concerns about how this is tackled, with a coalition of industry and consumer groups stating that Government plans to decarbonise homes are too complicated and confusing¹⁸. According to the coalition, simply choosing the right technology or finding a reputable installer demands huge amounts of time, knowledge and effort. Far too often, things go wrong with poor installation and technologies not working as expected, and they say there are three key concerns that need to be addressed to ensure that plans to decarbonise homes don't fail; information, consumer protection, and costs.

¹⁵ Source - Energy Saving Trust

¹⁶ [Domestic private rented property: minimum energy efficiency standard - landlord guidance - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance)

¹⁷ [Improving the energy performance of privately rented homes - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/improving-the-energy-performance-of-privately-rented-homes)

¹⁸ Source: BBC article 25 August 2021 [Climate change: Consumer 'confusion' threatens net zero homes plan - BBC News](https://www.bbc.com/news/health-58111111)

In this wider context, where do we as a Church start, when considering our clergy housing (owned by the dioceses), Bishopric housing and offices (owned by the National Church Institutions) and retired clergy housing (owned by the Pensions Board)?

What it is suggested all clergy housing owners/managers should do:

1. **Switching campaign:** Dioceses, the NCIs, and the Pensions Board should raise with all occupiers, clergy and tenants, the need to switch to a 100% renewable electricity and carbon-neutral biogas gas tariffs.
2. **Develop maintenance plans:** All Dioceses will have good records of the condition of their housing stock from the Quinquennial Inspections required every 5 years¹⁹. These reports should identify works that should be carried out immediately, or within the next 5 years, that will help identify what maintenance works will help reduce energy waste, for example replacing worn window seals and regular servicing of boilers and other heat sources. Dioceses should use this information to develop maintenance plans, leading to a programme of works. The Pensions Board should take a similar approach.
3. **Understand your stock condition:** Research and Statistics are creating a tool to allow dioceses to calculate the carbon footprint from clergy housing, using an EPC²⁰. Some dioceses and parishes have started commissioning reports on their housing portfolios to help them plan for change, and a few have already started a programme of works focussing first on 'easy wins'. Dioceses are increasingly talking to each other to learn from the experience of those who are further ahead. There is now a recognition that a better quality of survey of our housing is needed, than the standard 'house purchaser type EPC'. The quality of these EPC reports can vary significantly and the recommended works arising from those reports are too limited in scope. EPC Plus reports cover a broader scope.
4. **Develop stock improvement plans:** From the EPC Plus reports, a programme of works can be produced. The quality of our housing stock needs to improve significantly, meaning a significant capital investment in improvements is necessary. The improvements will be focussed on the source of heating and heat retention capability. There will inevitably be a focus around replacing fossil fuel boilers. It remains to be seen whether the existing gas network can be re-used with hydrogen. Therefore renewable energy solutions such as ground/air-source heat pumps and biomass boilers are likely to be seen as priority projects given the timescales we are working to. For buildings older than ten years, heat pump installation will be accompanied by insulation of walls, floors and roofs to improve energy efficiency. All of this work is highly disruptive and not to be recommended whilst a property is occupied. It needs to be recognised that most housing cannot be made entirely carbon neutral, but meaningful energy efficiencies can be achieved, including through good insulation and glazing improvements. Any building undergoing a major renovation should be prioritised for heat pump retrofit. Stock improvement plans should also assess the options for a building – whether to keep, retrofit or replace.

¹⁹ Required by the Repair of Benefice Buildings Measure 1972 [as amended]

²⁰ Energy Performance Certificate

4.5 Theological Education Institutions (TEIs)

Proposed Milestone	Proposed Date
4.5.1. Incorporation of environmental teaching and learning within all TEI syllabuses and practices; to be part of the formation criteria for ministry training, and a learning outcome for all students	2023
4.5.2. Net Zero Carbon Action Plans to be developed for all TEIs which have their own buildings	2023
4.5.3. (As for churches and cathedrals) all TEIs to be on a 100% electricity renewable tariff by 2023, encouraged through a major national switching campaign in 2022.	2023
4.5.4. (As for churches and cathedrals) all TEIs with gas heating are on a 'green' biogas tariff (not offsetting).	2024
4.5.5. All TEIs to be registered with Eco Church, and have achieved at least bronze.	2024
4.5.6. (As for churches and cathedrals) no new oil boilers installed in TEIs after this date (note: contingent on government action to connect rural communities to the grid)	2025

What the national Church is proposing to do:

1. A new national network of environmental champions within TEIs is currently being set up, offering peer support on these issues.
2. Considering the conclusions of a meeting of 21 theological educators who gathered in 2020 to discuss the place of environmental teaching and learning within UK theological education institutions²¹. They concluded that:
 - a. If the environment and creation care are to be taken seriously by TEIs, then they need to be made formation criteria by denominations for ministry training and should be a learning outcome for all students.
 - b. Specialist modules on environmental theology and related topics are highly desirable, and a key recommendation is to aim for integration of an environmental perspective across the whole curriculum.

What it is suggested TEIs should do:

1. The practical issues facing those TEIs who have their own buildings are very similar to those facing our churches, cathedrals and schools, as laid out in earlier sections; i.e. how to decarbonise their heating and make their (often old, listed) buildings more energy efficient. The actions also therefore need to be similar: maintain the buildings, improve energy efficiency, move away from fossil oil and gas where possible, and switch to renewable energy tariffs.
2. Net Zero Carbon Action Plans to be developed for all TEIs which have their own buildings.

²¹ source -*The Environment in UK Theological Education Institutions, Hodson & Hodson, 2021*

3. Embed environmental education into the curriculum of their religious teaching and leadership training.
4. Environmental sustainability should become a core element of lifestyle formation.

4.6 Offices

Proposed Milestone	Proposed Date
4.6.1. All offices to measure and report on their carbon emissions	2022
4.6.2. All offices have a Net Zero Carbon Plan	2023
4.6.3. Offices to review the potential for installation of electric vehicle charging points	2023
4.6.4. All offices on renewable electricity tariff	2023
4.6.5. All diocesan offices heated with gas heating are on a 'green' biogas tariff (not offsetting)	2024
4.6.6. No new oil boilers installed in diocesan offices after this date (note: contingent on government action to connect rural communities to the grid)	2025

It is important to distinguish here between adapting and improving existing offices (often in old buildings) from new, more modern offices, and again from new custom-built offices. We also need to recognise the difference between our ability to make changes in offices we own against offices we rent. The national office, Church House, is included here.

The following generic approach is proposed, but will need to be tailored based on the factors above. It is suggested that office managers should:

1. Review how offices are used, in terms of physical meetings, desk utilisation, and room rental. Simple layout changes can improve energy efficiency²². Decide if you are in the right building.
2. Adopt a policy of 'flexible working' to allow staff to work from home. This can reduce energy consumption within the building and reduce carbon emissions from travel to work (not currently included in scope). Once adopted, review desk utilisation as it may be possible to reduce the size of office buildings, thereby reducing energy costs and carbon emissions.
3. Use your energy bills to calculate your office's carbon emissions (the national Research and Statistics team are developing a tool to help with this).
4. If you rent your building, engage your landlord and establish what changes you can undertake under the terms of the lease, or what changes they may be willing to make.
5. Take advice from an energy consultant.

²² [Office energy efficiency guides | The Carbon Trust](#)

6. Engage with your staff, in order to work towards behavioural change. Carbon Literacy training can be a good option here, and national ‘train the trainer’ sessions are planned for 2022.
7. Develop a Net Zero Carbon Plan for your office.
8. Action the quick wins for reducing energy consumption.
9. Budget and work towards major project work.
10. Review the potential to install electric vehicle charging points for business vehicles.
11. Ensure equipment replacements are energy efficient

5. How we will make the changes

 In the online consultation response, you are asked to provide comments on these sections as appropriate.

5.1 Communications, engagement and leadership

Proposed Milestone	Proposed Date
5.1.1. National: Communications strategy created for the Routemap to Net Zero Carbon by 2030, including promoting resources identified in Section 5.2.	2022
5.1.2. National: Carbon Literacy training and ‘train the trainer’ courses offered to all dioceses	2022
5.1.3. Net Zero Carbon messages to be incorporated in ongoing communications by dioceses and others, throughout the decade.	2022 onwards
5.1.4. National: Communication package with infographics and short videos aimed at each of the stakeholder groups, which show what the route to net zero carbon means for each group.	2023
5.1.5. National: National greenhouse gas reports and progress towards net zero to be reported to General Synod in 2022, 2025, 2028 and 2031	2022, 2025, 2028, 2031

Communication, engagement and leadership needs to happen at three levels. All three must emphasise that we all have a part to play to deliver net zero, and that positive change is achievable.

What the national Church is proposing to do:

1. Communicating the theological and missional principles that describe a specifically Christian response to the climate emergency.
2. Take the lead on a clear and engaging communications campaign, to ensure key messages are shared widely and consistently, to maintain momentum by sharing positive stories, and sharing best practice. Raise awareness further of existing materials, such as the Practical Path to Net Zero Carbon for churches, the Season of Creation, and Eco Church.
3. Communicate nationally created guidelines for churches, dioceses and others to follow.
4. Develop a Church of England “Carbon Literacy” training course, covering the climate science and the action required, and offering it to diocesan staff and NCI’s staff. “Train the trainer”

courses will then allow the knowledge to be cascaded cost-effectively, and tailored to groups.

5. The national Cathedral and Church Buildings team will lead the Church’s engagement with Historic England and the Amenity Societies, with the aim to coordinate guidance where possible, in the light of the increased understanding of the urgency of the climate crisis. CCB will work together with Historic England to find tools that allow a long term environmental perspective to be taken on the full lifecycle carbon of building projects, so that good environmental decisions are taken.
6. Communicate progress on relevant milestones by the NCIs, including both Archbishops Palaces.
7. Provide resources and share diocesan-level resources, and offer communications training to relevant groups.

What dioceses/cathedrals/regional bodies should do:

1. Develop a clear and engaging communications campaign, covering all stakeholder groups, and ensure key messages are shared widely and consistently. Build on and localise the national communications strategy, and make use of national materials where locally useful.
2. Communicate progress on Eco Diocese and share ways in which progress has been made with others.
3. Collaborate across dioceses in regional groups (such as those which Diocesan Secretaries belong to) to trouble-shoot, share best practice, make easier access to case studies and maintain momentum by providing peer support.
4. Archdeacons are key, because they contact all churches at times of change. They can integrate questions into their Articles of Inquiry.

What parishes should do:

1. The Eco Church scheme is identified as a significant vehicle for driving engagement and commitment at parish level, and ties in with the Eco Diocese scheme above.
2. Commit to sharing experiences (good and bad) via the DEO or Archdeacons.

5.2 Capacity-building

Proposed Milestone	Proposed Date
5.2.1. National: Use Green Church Showcase entries to create a bank of new case studies	2022
5.2.2. National: Continue and expand the national Environment Programme webinar series, including practical examples of churches and schools taking action	2022
5.2.3. National: Annual nationally-run volunteer recruitment programme, to fill vacancies where wished in DACs and FACs, and for DEOs	2022
5.2.4. National: Annual nationally-run induction day for new DEOs	2022

5.2.5. National: Additional central staffing for the environmental aspects of school buildings and clergy housing, and on heating and renewables	2022
5.2.6. National: Create guidance similar to the Practical Path to Net Zero for Churches for other types of building	2022
5.2.7. National: Increase fundraising capacity, at both national and diocesan levels, and run periodic training for parishes. Share information about new funds	2022
5.2.8. National: Work with A Rocha UK to integrate net zero carbon actions more fully into the Eco Church and Eco Dioceses criteria	2023
5.2.9. National: Creation of a national training programme for heating and sustainability advisors	2023
5.2.10. National: Create a national technical panel, with specialists in specific areas such as heat pumps and insulating lime render, who can hold surgeries and input on case work.	2023
5.2.11. National: Create an online library of good examples of Net Zero Carbon Plans from around the country, to include results from research projects	2022

In order to achieve Synod's target of net zero carbon by 2030 a whole range of stakeholders need varying degrees of awareness-raising and skills-development.

What the national Church is proposing to do:

1. Enhance and maintain the [renewables map](#), heating case studies, [net zero case studies](#), and Eco Church pages. Grow the list of eco case studies and continue to develop the [Practical Path to Net Zero](#).
2. Provide clear, relevant national guidance on all the main aspects of net zero carbon, for all of our types of building.
3. Provide advice and support in environmental fundraising.
4. Provide advice and support on measuring and monitoring, and using the Energy Footprint Tool.
5. Continue to run the national programme of training webinars and events.
6. Run an annual volunteer recruitment campaign looking for heating/sustainability advisors to join DACs and FACs, and DEOs where they are needed.
7. Run an induction day once per year for new DEOs.
8. Create and run an annual training programme for church heating advisors and energy auditors.
9. Create continuing professional development requirements for heating/sustainability advisors, through webinars and conferences, and by attending site visits with experienced church energy auditors/heating advisors.
10. Maintain a national procurement team focused on offering a range of net zero carbon solutions.

11. Increase the staffing centrally for the environmental aspects of school buildings and clergy housing. Increase the technical knowledge centrally on heating and renewables.
12. Create a national technical panel, with specialists in specific areas such as heat pumps and insulating lime render, who can hold surgeries and input on case work, which dioceses can call on.
13. Focus on those areas where dioceses struggle to have their own specialist available.

What it is suggested dioceses should do:

1. Most dioceses have a heating advisor and/or sustainability advisor, but not all; and similarly not all have a [Diocesan Environment Officer](#). These staff/volunteers vary considerably in the time they have and the skills/background they came to the role from. Every diocese is encouraged to invest in this key role and to include them in decision-making functions.
2. Discuss with the DAC and archdeacons how decision-making can best incorporate net zero ambitions.
3. Make carbon-footprint reporting a required element of the APCM each year.
4. Provide a Lay Training Pathway for Parish Environment Officers (to be piloted in the Diocese of Leeds, subject to EWG funding approval).
5. Gather and share case studies. Update church records on the OFS Renewables Map.

5.3 Work-related travel

Proposed Milestone	Proposed Date
5.3.1. National: Create, pilot and roll-out a tool for measuring travel emissions	2022
5.3.2. National: EV car leasing to be offered to clergy by Parish Buying	2023
5.3.3. All dioceses to update expenses policies to encourage sustainable transport	2024
5.3.4. All new bishops', archdeacons' and pool cars to be EV after this date (assuming a minimum range of 250 miles)	2024
5.3.5. National: Review bishop's and archdeacon's expenses policies to encourage sustainable transport	2024
5.3.6. National: Install EV charging at all bishop's premises at next vacancy, on obtaining new EV car, or by 2026.	2026

What the national Church is proposing to do:

1. As part of the wider Energy Toolkit, the Research and Statistics team will be developing a tool to allow churches, schools and dioceses to estimate their carbon footprint from records of reimbursable travel receipts. Emissions from cars can be estimated using a parish/school's reimbursable mileage rate and total spend, while emissions from public transport are estimated using cost-per-mile estimates (which are localised where possible to reflect differences in local travel costs between dioceses). The tool also allows for emissions from

air and ferry journeys to be measured by inputting the start and end points of these journeys.

2. Parish buying to expand options on non-fossil-fuel vehicles.

What it is suggested every diocesan-level organisation should do:

1. Update expenses policies to encourage sustainable transport.
2. Make all new car purchases non-fossil-fuel vehicles.

5.4 Funding options

Proposed Milestone	Proposed Date
5.4.1. National: Increase environmental fundraising capacity	2022
5.4.2. National: Fundraising strategy to be developed	2022
5.4.3. National: Cases for support for key projects to be developed	2022
5.4.4. National: Pilot an investment vehicle for church renewables	2022
5.4.5. National: Submit bids to the triennium funding review	2022
5.4.6. National: Implement the fundraising strategy	2023 onwards

The Routemap to Net Zero Carbon by 2030 aims to answer the question, “if we are to achieve our target, what do we need to do?”. It leads to the obvious next question, “How will we fund this work?”

The Sub-committee knows that this is vital. Detailed calculations of the scale of costs are not yet known as pilot surveys and the results of early evaluations are still being undertaken. The EWG will providing indicative figures before the Synod debate on the Routemap, so that debate can be informed by our best estimates, along with information on possible funding routes.

A large part of the answer will be through local fundraising, as the Church has always done. Each year, our churches and schools already raise tens of millions of pounds for work on their buildings. All involved recognise the funding environment is difficult and that large sums are hard to come by. One aspiration is to scope all building projects in a way which achieves environmental objectives that will lead us towards net zero. There will also be additional costs; for capacity and for capital works. All of these will be included in the work preparing for the Synod debate.

Developing a national fundraising strategy is a work in progress, and the Routemap does not yet contain all the answers. In particular, there are two strands of ongoing work:

- nationally we have commissioned a fundraising consultancy to help us think through the routes to external funding,

- the triennium funding review is about to commence, setting funding priorities for the next three years, and this work be carried out during the winter of 2021 and spring of 2022.

All funding sources will need to be considered: including internal, public, corporate, individual donations, major donors, and trusts and foundations. Loan finance can be explored for those actions which pay back over time, such as LED lighting. Investment vehicles may be possible, by grouping programmes of renewables together, which would be suitable for ‘green finance’, perhaps through the Church’s own social investment fund.

What the national Church is proposing to do:

- Lobby government on the need for capital repairs funding for places of worship, including for green technology installations and other works that will reduce carbon footprint.
- Explore the potential for an investment vehicle for installing renewables or energy efficient items on churches and other Church-owned buildings.
- Offer training on environmental fundraising.
- Regular information sharing, as new funds become available.

What it is suggested dioceses and others do:

- Prepare for funding opportunities, through carrying out energy audits, heat decarbonisation plans, and/or Net Zero Carbon Plans. Know what works needs to be done, what it costs, and be clear on the benefits and the case for funding.
- Allocate some time from the network of Giving Officers to focus on supporting parishes with environmental fundraising.
- Fundraise at diocesan and regional levels for opportunities as they arise.

6. Early thoughts on complex areas

 In the online consultation response you are asked to provide comments on these sections as appropriate.

6.1 Offsetting

Proposed Milestone	Proposed Date
6.1.1. National: Parish Buying to identify an approved supplier list for carbon offsets	2025
6.1.2. Implement carbon offsetting with an approved supplier to offset those emissions that have been impossible to eliminate	2030

Some means of balancing our residual emissions by offsetting will be needed. This needs to be set against a real ambition that our aim is to reduce our emissions year-on-year and to reduce our emissions as much as we possibly can. Offsetting is never a replacement or compensation for not cutting emissions which can be reduced, and in fact a major net zero standard is proposing that

offsetting covers no more than 10% of emissions²³, meaning the majority of carbon emissions must be eliminated.

This consultation document is not the right place to explore all the complexities of offsetting and carbon sequestration. It is enough for now to say that carbon offsetting is likely to be needed to achieve our net zero target, but remains an area where we are still to make complex decisions. The above milestones are therefore subject to change as the topic is further explored.

6.2 Church land

Proposed Milestone	Proposed Date
6.2.1. National: Develop standard questions a diocese should ask of their land agent	2022
6.2.2. National: Review whether to bring Church land within scope of the net zero target	2022
6.2.3. Baseline survey of current situation of carbon contribution of land holdings	2022
6.2.4. Dioceses to review with their land agents the terms of tenancy agreements and use of the land	2022
6.2.5. National: Research carbon sequestration of churchyards, with different management regimes	2022
6.2.6. National: Develop guidance on churchyard management for nature and climate	2023
6.2.7. All dioceses to include the diocesan environmental policy objectives within the contractual framework of their land agents	2025

The land the Church has responsibility for sits in four categories, that owned by the National Investing Bodies (NIBs) as assets, that owned by diocesan boards of finance, that held by cathedrals, which may include a mix of churchyard/precinct and other landholdings, and that associated with parishes including churchyards. The land managed by the NIBs is out of scope for this work as they have their own land management targets.

What it is proposed all responsible for land management should do:

1. Review with land agents the terms of tenancy agreements and use of the land. In terms of land use, careful consideration needs to be given to taking out productive arable land and replacing it with tree planting. Opportunities to renegotiate lease terms with tenants should be investigated even if there is a financial penalty, and/or tenants should be encouraged to take up Government grants such as under ELMS (Environmental Land Management Scheme).
2. Contribute to a baseline survey of the current situation of these holdings run by the national Church. This will allow participation in the first tier of ELMS which includes options for improving soil carbon.
3. Where appropriate encourage greater carbon sequestration. It should be noted though that this carbon may not contribute to the carbon budget of the landlord but be owned by the

²³ [Science-Based Net-Zero Targets: 'Less Net, more Zero' - Science Based Targets](#)

tenant as part of a scheme they have agreed to, and be part of the business' own carbon budget. It should also be noted that many of the schemes that would sequester significant amounts of carbon, such as certain types of tree planting, would not do so within the period before 2030, but sequestration will continue to be required. Planting now is valuable in biodiversity terms and provides for future carbon storage.

4. Land should be included within environmental policies by Church organisations so that where decisions present themselves, such as with a change of tenant or sale/purchase of land, climate and biodiversity (and wider environmental gains such as flood prevention, soil improvement, temperature moderation, and air quality improvements) are considered as part of the process. It is not reasonable though to include this land in the net zero target for 2030 because the Church organisations do not have the ability to directly change the management of it.
5. Parishes to engage with opportunities to enhance the biodiversity of their churchyards through work such as that led by Caring For God's Acre. For example, letting grass grow longer, in places where it doesn't cause a health-and-safety hazard, can enhance biodiversity and store carbon, whilst reduced mowing frequency saves carbon emissions from mowing machinery.

6.3 Embodied carbon in building projects

Proposed Milestone	Proposed Date
6.3.1. National: Joint research with Historic England to understand what Lifecycle Carbon Assessment tools already exist, what are under development, and how well they meet our needs	2022
6.3.2. National: Review whether to bring building projects into scope of the net zero target	2022
6.3.3. National: Consult with dioceses and EASA as to whether and if so when Lifecycle Carbon Assessments should be made part of faculty applications for all large projects, the materiality threshold to be applied, and the range of LCA approaches which are recommended to be used.	2022
6.3.4. National: Guidance for parishes and architects on requirement for Lifecycle Carbon Assessments for large projects to be published	2025
6.3.5. National: Tool created to allow emissions from all buildings projects during the year above a certain threshold to be estimated and reported as part of the annual national GHG emissions report, using project costs and average emissions per £ for typical types of project	2025
6.3.6. National: Generic guidance for parishes to be produced and shared, on (i) the principles to apply to reduce the embodied carbon from projects and (ii) the environmental impact of commonly used materials	2025

Currently operational carbon from heating and lighting is in scope by 2030 whilst 'embodied' carbon from buildings projects is in the amber section - after 2030. This is largely because there is no clear way yet for measuring it. A study reviewed 80 such carbon tools and determined none were ideally suited to our needs. The national Church will lead on the work needed to develop a suitable methodology and this issue will be returned to General Synod for consideration in due course.

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Appendix 1 – Online survey questions

To enable you to collate your response, the following questions will form the [online SurveyMonkey survey](#):

1. For statistical purposes, and to ensure that we have had responses from the full range of institutions, please provide the name of the diocese / institution / committee / organisation that you are responding on behalf of: *[comment box]*
2. Please choose your role from the drop down list.

Overall opinions:

3. Overall, do you think the Routemap sets out what is needed to achieve General Synod's intention of reaching net zero carbon by 2030? *[Yes, Partially, No, Not sure]*

Please provide comment:

*** 4. Overall, do you think the Routemap is deliverable, with the appropriate resource?**

[Yes, Partially, No, Not sure]

Please provide comment:

*** 5. Would you be willing to endorse the net zero planning principles in Section 2.1?**

Based in theology *[Yes, Partially, No, Not sure]*

Urgent, relevant and widely understood *[Yes, Partially, No, Not sure]*

Data-driven and focussed *[Yes, Partially, No, Not sure]*

Using less energy and from cleaner sources *[Yes, Partially, No, Not sure]*

Travelling sustainably *[Yes, Partially, No, Not sure]*

Offsetting the rest *[Yes, Partially, No, Not sure]*

Please comment:

Then, for each of the individual sub-sections in Sections 4 and 5:

(Note: You choose the relevant sections to your role. You are asked whether you want to answer each sub-section. If you tick 'yes' it shows those questions. Tick 'no' and it moves on to ask about the next sub-section.)

Do you think the proposed milestones are correct? *Yes/ Partially / No / not sure*

Do you think the proposed dates are correct? *Yes/ Partially / No / not sure*

If you disagree with any particular milestones, please comment, giving the milestone number. Also comment if you can see omissions. *[comment box]*

Do you think the national actions are correct? *Yes/ Partially / No / not sure*

Please comment, particularly on any omissions. *[comment box]*

Do you think the diocesan / local actions are correct? *Yes/ Partially / No / not sure*

If you disagree with any actions, please provide comments below. *[comment box]*

What additional resource/support would be needed, to achieve this part of the Routemap? *[comment box]*

Then, for each of the sub-sections in Section 6

(Note: You choose the relevant sections to your role. You are asked whether you want to answer each sub-section. If you tick 'yes' it shows those questions. Tick 'no' and it moves on to ask about the next sub-section.)

Do you think the proposed milestones are correct? *Yes/ Partially / No / not sure*

Do you think the proposed dates are correct? *Yes/ Partially / No / not sure*

If you disagree with any particular milestones, please comment, giving the milestone number. Also comment if you can see omissions. *[comment box]*

Any other comments on this area? *[comment box]*

Final thoughts

Please comment if you have any messages for the Net Zero Carbon Sub-committee, when it reflects on this consultation and works on the next iteration of the Routemap? *[comment box]*

Do you have any good examples from your own work which you would be willing to share on a restricted national webpage? This could be net zero plans, environmental policies or environmental case studies that will inform and inspire others. *[Yes/ No / Other eg not currently finalised]*

If yes, please indicate what documents you have you are willing to share. *[comment box]*

If you are happy to be contacted to discuss/clarify your responses, and/or to provide the examples you've mentioned above, please provide the following details:

Name and email address

Appendix 2 – Scope of the Net Zero Carbon by 2030 target

In February 2020, General Synod called on all parts of the Church to achieve year-on-year reduction in greenhouse gas emissions and plan to become net zero carbon by 2030. Net zero carbon means we remove the equivalent amount of carbon from the atmosphere as we emit and is most easily achieved by reducing consumption to limit carbon emissions.

During 2020, there was extensive consultation with dioceses, cathedrals and other consultees on the scope and definition of this target, with generally positive responses to the proposed definition. The final version²⁴ went to Synod in November 2020. To meet Synod's target, our focus needs to be on reducing the energy-use of our buildings and work-related travel.

The table below shows the agreed definition of the scope of the net zero target set by General Synod. This definition will next be reviewed in 2022, by the national Environmental Working Group.

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²⁴ A national definition of 'net zero carbon' for the Church of England, and our approach to measuring it. November 2020.

In scope?	Buildings / activities
<p>2030 NET ZERO</p> <p>These are in scope of our “net zero by 2030” target.</p> <p>We will aim to measure and report these as soon as possible, as a first step towards making real and sustained reductions</p> <p>The national EWG will review, and potentially expand this scope, every three years, from 2022 onwards, in line with reporting to General Synod.</p>	<ol style="list-style-type: none"> 1. The energy use of our buildings; <ul style="list-style-type: none"> • Gas, oil, or other fuel use • Electricity purchased (no matter the source it is purchased from – renewable electricity purchased is accounted for later) • For the following buildings; <ul style="list-style-type: none"> • Churches, including church halls and ancillary buildings. (This includes non-parochial churches, BMOs and others if they have their own utility supplies.) • Cathedrals (all buildings within the green line forming part of the precinct) • Schools where the DBE has a significant degree of influence (generally Voluntary Aided & Diocesan Academy Trusts) including halls/other buildings • Clergy housing, bishop’s housing, and other staff accommodation wholly owned by the Church (based on EPC grades and <u>average</u> reasonable use, not actual usage) • Church bodies’ offices including Church House Westminster, diocesan offices, and bishops’ offices • Peculiars, only if they come under faculty jurisdiction • Other diocesan property, including common parts of tenanted properties • Theological Education Institutions which are part of the Church of England • For all the above, tenants’ energy use and mobile phone masts should be excluded if possible, e.g. if on their own sub-meters. Floodlights managed and paid for by the local council should also be excluded if possible. • Including the “well to tank” and “transmission and distribution” factors involved in getting energy to the building. • Note: Electricity used to charge EV vehicles will be included within the above. 2. All work-related travel (e.g. the petrol / diesel used by archdeacons on visitations, CBC / DAC members on visits to discuss projects, reimbursable clergy and ordinand travel, reimbursable staff and volunteer travel, reimbursable train journeys, staff and clergy making reimbursable flights for work or ministry, coaches hired for school trips etc). <p><i>In standard Greenhouse Gas reporting definitions, these are our “Scope 1” and “Scope 2” emissions and some small elements of Scope 3 which are operationally simpler to include.</i></p> <ol style="list-style-type: none"> 3. From this, and on the understanding that real reductions in energy use have been made, the following can be removed: <ul style="list-style-type: none"> • Excess energy generated on site (e.g. from solar PV) and exported to the grid • 100% renewable electricity purchased either from the Green Energy Basket or agreed companies, reviewed annually, having regard to the criteria used by the Big Church Switch Green gas [those certified each year.] • Other reliable offsetting schemes, meeting national criteria to be developed.

<p>NET ZERO AFTER 2030</p> <p>These will be in our next phase of work.</p> <p>Some dioceses may opt to include these in their diocesan 2030 targets.</p>	<ol style="list-style-type: none"> 4. All the emissions from major building projects (new builds and extensions, major re-orderings, solar panel installations, major new heating or lighting systems) * 5. Emissions generated from the farming / management of Church land (including church yards, unless fully controlled by local councils, and glebe land) less emissions sequestered through the farming / management of Church land (such as tree planting, soil improvement, and other nature-based solutions) * 6. All the emissions (including upstream process & transport) from the procurement of any items we buy (e.g. pews for churches, paper & printing for offices, new cars for bishops, catering for events) 7. Upstream and downstream emissions from water and drainage 8. Downstream emissions from waste disposal 9. Emissions from building contractors, plumbers, electricians and the like 10. Carbon generated from use of emails and the internet in work-based contexts 11. Diocesan investments, if they are a material amount 12. Air-conditioning gasses <p><i>In standard Greenhouse Gas definitions, these are those parts of our “Scope 3” emissions which are within our influence to a significant degree.</i></p> <p><i>* To be specifically reviewed in 2022, with the potential to bring them into scope of the 2030 target, only after consultation, and if feasible methodologies have been developed</i></p>
<p>NOT INCLUDED IN TARGET</p> <p>Out of scope of our target (but still within our mission to influence)</p>	<ol style="list-style-type: none"> 13. Travel of staff and clergy to and from their usual place of work or ministry 14. The travel of the public to and from church, school, and church events. 15. Clergy family’s & residents’ GHG emissions (consumer goods, travel, holidays). The energy used to heat and light the housing, if over the average reasonable use above. 16. Personal GHG emissions from the lives of worshippers attending church, other church users (such as people attending a choir or playgroup), and overseas visitors 17. Schools over which we have very limited influence (generally Voluntary Controlled Schools which are fully controlled by Local Authorities) <p><i>In standard Greenhouse Gas definitions, see below, these are either out of our scope or are scope 3 but largely outside our influence.</i></p>

Appendix 3 - Membership of the national Net Zero Carbon Sub-committee

- Chair: Bishop of Selby, Dr John Thomson
- Bev Botting, Head of Research and Statistics for the NCIs
- Jo Chamberlain, National Environment Officer
- Nick Edmonds, NCIs Communications
- Robyn Ford, School Estates and Policy Manager for the Church of England Education Office
- David Knight, Senior Church Buildings Officer at the Church Buildings Council
- Zach Lewis National Specialist - Low Carbon Adviser, National Trust
- David Mason, Oxford Director of Property and Glebe
- David Pain, Diocesan Secretary, Salisbury
- Jemima Parker, Environment Officer, Leeds Diocese
- Simon Pugh-Jones, Chair, Bristol DAC
- Catherine Ross, Open and Sustainable Churches Officer
- Denise Rowley, Net Zero Carbon Planning Officer
- Morwenna Slade, Head of Historic Building Climate Change Adaptation, Historic England
- Helen Wildsmith, Stewardship Director – Climate, CCLA

Appendix 4 – Existing guidance and support

Since the Synod commitment of February 2020 considerable guidance has been provided for PCCs and their professionals, to help them pursue the path to net-zero. This includes

- the [Practical Path to Net Zero](#)
- guidance for architects and surveyors [conducting quinquennial inspections](#) and [planning new projects in churches](#)
- the [energy footprint tool](#)
- our [webinars](#)
- a [new 'Net Zero Carbon Church' area of the website](#)
- the [case studies page](#)
- [Solar PV Guidance](#)
- [EV charging Guidance](#)
- updated [heating guidance](#).

For some time, the Church Heritage Record has also had the [renewables map](#) (although we know entries are incomplete) which allows churches to find near neighbours who have implemented change.

The nationally subsidised [Energy Audit programme](#) enables churches to have a low-cost report completed for them, with costed energy saving measured. Parish Buying also offered the [Green Energy Basket](#) and is [rapidly expanding the service it offers](#) to support churches achieve net zero carbon.