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# Diocese of Sodor and Man

## Net Zero Carbon Action Plan

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## Executive Summary

With this Action Plan, the Net Zero Carbon Group of the Diocese of Sodor and Man outlines our proposed response to the climate emergency through a reduction in fossil fuel use. It primarily covers carbon emissions from our use of buildings owned by the Diocese or significantly influenced by the Diocese. It also includes emissions due to reimbursable work related travel.

Travelling well together towards a net zero carbon goal involves change in culture, leadership, and governance. Work on this has already begun and the need for building new capacity is highlighted.

Minimising energy use remains the starting point on the decarbonisation journey, guided by use of the *Practical Pathway to Net Zero Carbon by 2030*.

The highest 20% of energy using churches together with the properties owned by the Diocese cause a significant proportion of overall diocesan emissions. This Plan includes some detail about these and proposes an overall approach, recognising that appropriate action will need to be tailored to each building and to available resources. At this early stage, only indicative costing can be used.

In addition, every church community is encouraged to begin its own journey towards decarbonising energy use as far as is practicable and the Diocese will offer the resources it is able to gather.

## 1 Introduction

Recognising the climate emergency, the Diocese of Sodor and Man was one of the first to react by disinvesting from fossil fuel companies and has also signed the Fossil Fuel Non-Proliferation Treaty. General Synod voted in February 2020 for the whole of the Church of England to achieve net zero carbon (NZC) by 2030, repeating that commitment to the 2030 target when it adopted the Routemap. This vote recognised that the global climate emergency is a crisis for God's creation and a fundamental injustice.

General Synod asked for a plan to be made, setting out how to get to net zero carbon. That plan of action, called the Routemap ([Routemap to Net Zero Carbon by 2030](#)), was approved by General Synod in July 2022 in a Motion that asked for the Routemap to be endorsed, requested every Diocesan Synod to debate the Routemap as it applies to them, requested high energy users within the Church to draw up a programme of action based on the Routemap, and called for progress reports to Synod every three years.

This Diocesan Action Plan sets out how we are answering that call. It is owned by the Diocesan Net Zero Group and written by the Diocesan Environment Officer (DEO), with input from the Environment Action Group. The great majority of churches now complete the Energy Footprint Tool, so we know which are the largest energy consumers and therefore the likely focus of early action. It has been difficult to find an independent housing energy assessor, but the first parsonage was surveyed in July 2023.

As an offshore island, it is not easy to collaborate with neighbouring dioceses. Diocesan officers including the DEO do benefit from membership of national groups however. Since the island population is small at 83,000, there are few resident independent experts with whom to work and this is a limitation on progress, particularly in relation to independent heating advice about decarbonisation.

The island's energy is largely produced by a gas fuelled power station, with diesel backups. There is one electricity interconnector to the UK grid, but this contributes a minority of the power used. Electricity is only available from the government supplier on the island, Manx Utilities. Thus there is no green electricity supplier. However, the Isle of Man government committed in its [Climate Change Action Plan 2022-2027](#) to at least 20MW of locally generated renewable electricity by 2026 and 100% electricity from carbon neutral sources by 2030.

## 2 Planning Principles

Guiding our work towards net zero carbon, we are using the planning principles in the Routemap, listed below and detailed in Appendix 2:

- Based in theology: treasuring God’s creation.
- Urgent, relevant and widely understood.
- Data-driven, focused and transparent.
- Embedded in all we do.
- Using less energy, and from cleaner sources.
- Travelling sustainably.
- After 2030, offsetting only what we cannot reduce, ideally 10% or less of our carbon footprint.

## 3 Routemap Milestones for Dioceses

Milestone ( ✓ Done. × to do)	Date
4.1.1. Dioceses: All dioceses to convene a Net Zero Carbon working group, with senior representatives.	✓ 2023
4.1.2. Dioceses: All dioceses provide an annual carbon emissions report to Diocesan Synod using the results provided by the national Carbon Emissions report from Research and Statistics.	× 2023
4.1.3. Dioceses: All dioceses develop a communication strategy to churches and schools - focus on the ‘why’, the theology, and make it positive.	Begun 2023
4.1.4. Dioceses: All dioceses provide an outline of their decarbonisation plans to Diocesan Synod as a Net Zero Carbon Action Plan, to include estimates of costs for different options, as well as the policy changes and levers for change required. To be reviewed annually by senior staff. The plan should make reference to the <i>Practical Path to Net Zero</i> and actively consider implementation of ‘quick wins’, how to decarbonise heat, how to reduce energy consumption and how to encourage behaviour change.	2023+
4.1.5. Dioceses: All dioceses audit clergy property (where possible) by 2023 and develop a property retrofitting plan by 2024 (see <a href="#">Section 4.4</a> ).	Begun 2023
4.1.6. Dioceses: All dioceses audit their landholdings and develop a land management plan.	2026

Sodor and Man Diocese has established a Net Zero Carbon Group of senior staff, who meet monthly. Its members currently are the archdeacon (chair), diocesan secretary, diocesan fundraiser and DEO. Whilst always keeping the Routemap milestones in mind, work has focused on preparation of the Action Plan.

Under the Diocesan Environmental Policy, an Environment Action Group of volunteers supports the DEO, for example one member leads on EcoChurch. Another shares his experiences gained during the introduction of infrared heating into his church, as a local demonstrator site.

The Environment Action Group has created the ‘We Care Campaign’ to engage with the community and with government in a positive way, by encouraging ‘more action more quickly’.

Following diocesan synod’s adoption of a strengthened Faculty Jurisdiction (Amendment) Rules (Isle of Man) 2023, the archdeacon announced that church boiler plans will be included in her 2023 visitations.

## 4 The Scope of the Net Zero Carbon Target

### What is Net Zero Carbon?

The Church of England defines Net Zero Carbon as the reduction as far as possible of all in-scope carbon emissions (from the oil, gas and electricity we use in our buildings and petrol and diesel in transport) and the removal of an equivalent amount of carbon from the atmosphere for the remaining in-scope emissions by use of accredited offsetting schemes.

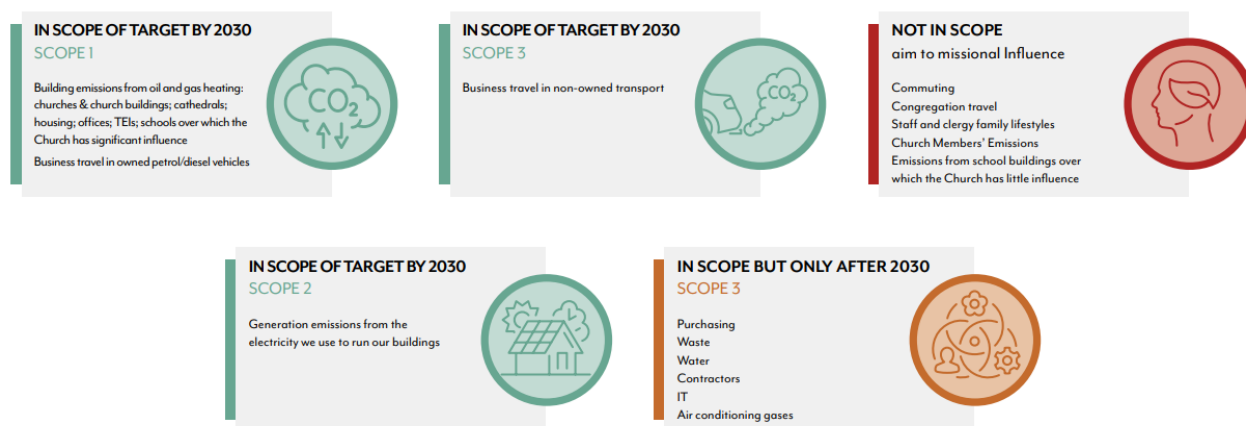
### What is the Net Zero Carbon 2030 Target?

In February 2020 the General Synod agreed a Motion to 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 2030 in order that a plan of action can be drawn up to achieve that target.

This 2030 target was reaffirmed on the adoption of the Routemap by General Synod in July 2022.

The full scope of the net zero carbon target is presented in Appendix 1, which also shows what will come within scope after 2030 and what will never be in scope, but which we will aim to missionally influence.

The following is from the Routemap appendix - [Net zero carbon routemap | The Church of England](#) :



### 4.1 Diocesan structures

Since 2022, membership of the Bishop's Leadership Team has included the DEO, with the opportunity for a monthly report on the environment, but particularly on progress towards net zero carbon. The archdeacon chairs the Property Committee and the new (2023) Net Zero Group, with the DEO, diocesan secretary and diocesan fundraiser as permanent members. The chair of the DAC is a member of the Environment Action Group, which is chaired by the DEO. The bishop chairs the DBF.

### 4.2 Bishop Mission Orders

There are no relevant BMOs.

### 4.3 Offices

The diocese is not large enough to warrant a separate diocesan office building. Responsibility for the Bishop's residence is held by the Diocese. The bishop's secretary has an office in the Bishop's residence and also provides secretarial support to the DEO. The Bishop's chaplain also has an office there, which has space for small groups to meet. The electricity and heating for the office are from the residence and cannot be identified separately. There is a larger meeting room within the residence.

The archdeacon’s secretary has an office in the archdeacon’s residence and energy consumption is similarly on the meter and fuel bill of the residence.

#### 4.4 Housing

Fourteen parsonages and two retirement houses are owned by the Diocese and in scope. These properties are inspected every three years.

#### 4.5 Schools

There is one church school, St Thomas Primary, but as it is accommodated in a government owned school complex, the emissions from the building are currently out of scope.

#### 4.6 Work-related travel

In scope work related travel as declared on the 2021 EFT return represents less than one percent of the diocesan carbon footprint.

#### 4.7 Land

The Diocesan Board of Finance owns approximately fifteen acres of glebe land, which is all grassland. Some eight acres are let as pasture, mainly for sheep.

#### 4.8 Areas of Influence

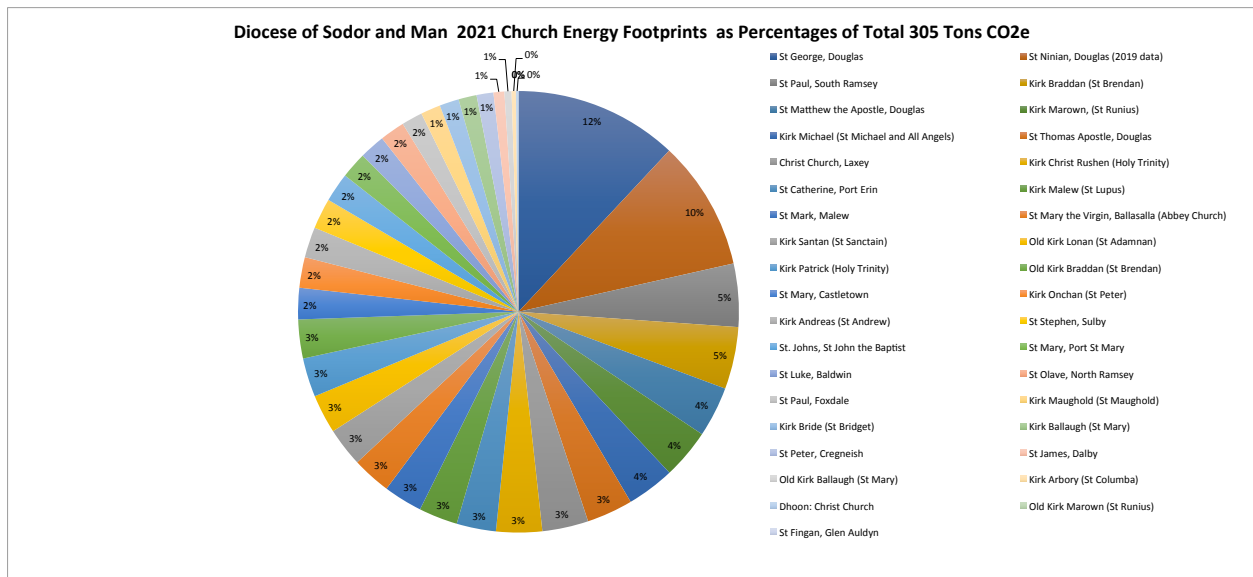
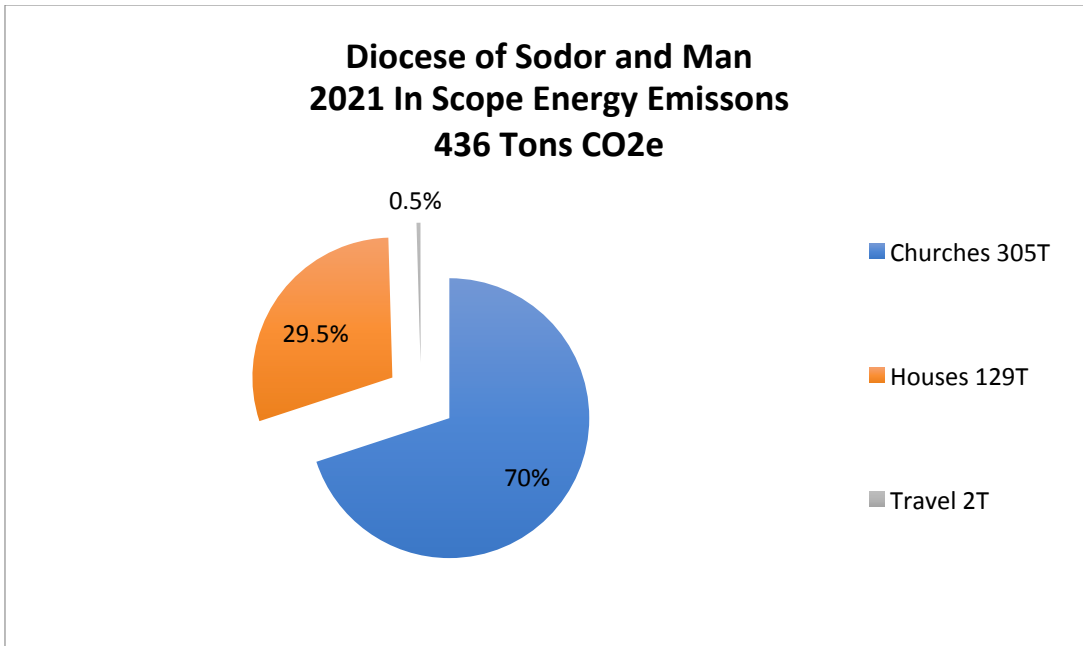
Our small cathedral has also been a parish church until very recently and is very much part of the west Mission Partnership group of churches. There is no on island church training institution.

## 5 The Main Sources of Our Carbon Emissions

Carbon Emissions for Diocese of Sodor and Man (from national Carbon Emissions Report 2021). EPCs are not required and so not generally used on the Isle of Man. The table below summarises our emissions. The first pie chart below illustrates recent data that show these emissions are about one third from housing and two thirds from churches / church halls. Reimbursed work related travel is responsible for less than one per cent of the total emissions.

	Number of buildings in-scope	Carbon emissions 2021 (tCO2e)	% total carbon emissions (2021)	Carbon emissions 2022 (tCO2e)
Church Buildings	39	305	70	N/A
Schools	N/A	N/A	N/A	N/A
Housing	17	129	29.5	N/A
Other buildings	0	0	0	N/A
Work related travel		2	0.5	N/A
TOTAL	56	436	100	Not yet available

**Diocesan Carbon Emissions (2021 Data):**



The pie chart above shows the church / church hall energy footprints as percentages of the total CO2 equivalent emissions in 2021. As in other dioceses, a minority of churches contribute a significant proportion of our Diocesan carbon footprint. In our case, the seven (19%) highest energy using of our thirty seven churches\* contributed 42% of all the churches' carbon footprint in 2021. Six of these seven are used regularly during the week. Four of these are registered EcoChurches.

\* As listed on the Energy Footprint Tool page of the Parish Returns website in 2021



## 6 Actions for Diocesan structures

With the addition of the Environment Action Group and the Net Zero Group, and with the Archdeacon already chairing the property committee and the bishop chairing the Diocesan Board of Finance, diocesan structures appear to be adequate in our context. The DEO is chair of the Environment Action Group, and a member of Bishop's Leadership Team and of the Net Zero Group.

**Action: Property Committee to make energy efficiency and decarbonisation paramount considerations and to modernise properties by replacement of energy inefficient ones, as funds allow.**

## 7 Actions for Bishop Mission Orders

None required (no relevant BMOs).

## 8 Actions for Offices

Working from home is an established approach in the diocese. Promoting low carbon travel via the reimbursement system is already under discussion. Meetings are held in church halls, churches that are already heated and sometimes online. Low energy lights are installed in the offices.

The offices in the Bishop's and archdeacon's residences are not heated separately from the residences themselves. There is therefore a double incentive to change from fossil fuel use in these buildings. The Diocesan See vacancy from October 28<sup>th</sup> 2023 offers a timely opportunity to decarbonise the heating in the Bishop's residence and offices.

**Action: Seek specialist heating advice to map a decarbonisation path for the Bishop's and archdeacon's residences and offices, including an assessment of the suitability of photovoltaic panels for the Bishop's residence. The complicated roof of the archdeacon's residence is likely unsuitable for PV.**  
(Note: responsibility for our Bishop's residence is held by the Diocese)

Chargers for electric cars used by visitors would require separate metering and will be reconsidered later in the decade. Milestone 4.6.4.

There is a new green energy tariff for businesses available on island (2023) but not for domestic users. Milestones 4.6.5. and 4.6.6.

Milestones 4.6.1. 4.6.2. 4.6.3. are not applicable.

## 9 Actions for Housing

The property committee keeps diocesan housing in a good state of repair through triennial inspections and regular maintenance. Of the fourteen properties, seven were built in the 1970s, three in the 1930s and one each in 1880, 1920, 1950, 1980, 1990 and 2000. Two have solar PV arrays and none have heat pumps.

Although there is no Isle of Man Government EPC rating requirement, a programme of EPC rating of diocesan housing had been initiated by the DEO and the first property, built in 1970, was rated at band D. Loft insulation in this property is up to current standards and few recommendations could be made by the surveyor. Also the impact of these few recommendations would not improve the EPC banding, if implemented. The survey of a second property is arranged.

Cavity wall insulation retrofit is contentious on the island in view of the high winds and rainfall; a previous retrofit in a 1970s property led to damp ingress.

One parsonage and also the Deanery have solar panels. Most have oil boilers.

**Action: EPC rating of a representative sample of each age of building. Modernisation of the property portfolio by replacement of those that are too energy inefficient to be suitable for heat pumps. The Property Committee will need to make energy efficiency of paramount importance. Begin replacement of fossil fuelled boilers by heat pumps in suitable properties, together with solar photovoltaic panels where possible, plus house battery installation.**

## 10 Actions for Schools

At present, our church school emissions are out of scope. There is an opportunity for dialogue with the government department of infrastructure, although the chief minister has just (July 2023) announced a review of the department. The DEO has approached the Education Department about whether the property that accommodates our Church of England Primary School might adopt the newly announced guaranteed green energy business tariff. The Headmaster is in discussion with the Diocese about funding a Forest School initiative for all classes.

**Action: Identify funding to support Forest School initiative.**

## 11 Actions for Work-related travel

Island life brings particular challenges regarding travel. The higher cost of ferry travel makes it a more difficult choice compared with flying.

**Actions: Alterations to reimbursement of travel that encourage lower carbon options have been proposed. Agree a Travel Plan and investigate the lowest carbon options for regularly used routes. Promote active travel and car sharing.**

## 12 Actions for Land

The DBF has not yet initiated any actions to do with biodiversity, net zero or the environment generally. A proposal by one Parish to plant trees on one acre of glebe land has been supported.

**Actions: DBF to initiate Routemap guidance. The EcoChurch lead member of our Environment Action Group to continue encouraging all churches to appoint an EcoRep.**

## 13 Residual Emissions



Routemap milestone 6.1.4. is '2030. Implement carbon offsetting with an approved supplier to offset those emissions that have been impossible to eliminate.'

Early debate about carbon offsetting seriously risks deflecting effort away from energy use reduction and fossil fuel use avoidance. Without *a priori* evidence of our carbon reduction, we cannot calculate progress. Our headline intention was to wait until shortly before 2030.

Nevertheless, residual emissions and carbon offsetting have been discussed by the Net Zero Carbon Group, owing to a proposal for early tree planting on glebe land. However, there is little such land and only part of that is suitable for tree planting. One parish is proceeding with tree planting and might offer useful experience for consideration in 2030 if successful. While supporting planting the right trees in the

right places as a general principle, current international advice seems to be that protecting and preserving existing trees is a better economic option from the point of view of carbon sequestration.

## 14 Areas of Influence

Our cathedral has been for many years a leading light on the island in responding to the climate and biodiversity emergencies under the tireless leadership of the Dean. All parts of the diocese have benefitted from this leadership and the Dean's involvement.

Following the reorganisation of the churches in the diocese into Mission Partnerships, working relationships have gradually developed and now the new structure is beginning to offer a route for communication, for collaborative working and for sharing knowledge and experience.

Seven large and busy churches, including our cathedral, have the highest 20% carbon footprints. So far, of those, only the cathedral has embarked on a comprehensive carbon emissions reduction journey. With the necessary resources, the Diocese can support these and all churches to reduce their carbon footprints and increase biodiversity. Quick wins for churches continue to be identified and one Douglas church has identified a project to reduce draughts.

**Action: support quick wins that reduce energy use and reduce carbon emissions.**

The Routemap identifies a number of common challenges. Some are less significant on a small island, such as the size of the estate, while some are more significant, such as the current lack of significant renewable energy generation and the perceived need to use air travel. The new ferry will hopefully help reduce demand for 'domestic' flights, which incur such a large carbon penalty for Creation.

While life is lived at a slower pace on the island and new ideas require time to be accepted, demonstrator sites will have a potentially greater impact. But a NZC training resource would be very beneficial in promoting wider understanding of NZC and culture change.

Working with other dioceses is also less easy as an offshore island diocese and so our efforts include working with our cathedral.

## 15 What Resources will be needed?

Lay training about net zero carbon for people across the Diocese could significantly accelerate an understanding of the need for our NZC journey and the culture change required to embrace it. It would promote action in all part of the Diocese and counteract the slowing effect of being an island community. This training will be provided on a sessional basis, according to funding.

The Diocese urgently needs someone with knowledge and experience to provide churches with project management support to deliver net zero carbon. It is anticipated the role requires up to one day a week.

Heating advice to the Diocese, such as on the DAC and the Property Committee, is provided by established island based firms experienced in the installation and maintenance of gas and oil boilers. Independent and up to date heating advice that includes detailed knowledge and experience of electric systems in church buildings is still being sought. Funding for this advice will be required, whether it is sourced on or off island.

We have two particular churches where action on NZC is noteworthy. The first is Marown church, where their heated seat cushions trial is recognised nationally. The second was completed in July 2023 at St Mary's church, Port St Mary, as part of re-ordering including the installation of infrared heating in the nave and chancel. These have the potential to act as case studies for other churches to consider.

In addition, the Cathedral has commenced re-ordering including the installation of under floor heating in the nave. The size of our cathedral is not significantly different from the other large churches on the island. So will provide useful experience of under floor heating and hopefully a case study of interest to them.

Summary of additional posts needed, requiring new funding:

- Project Officer for delivering net zero, one day per week – 45 days per year
- Electric heating advice, as required, for churches, halls and properties
- Net Zero Carbon Lay Training, sessional – 15 sessions per year

## 16 What will it cost and how will you fund it?

Increasing diocesan capacity is the initial requirement as outlined in the section above and a bid will be submitted for central funding to cover this triennium in the first instance (2023-2025).

While our properties are well maintained, a proportion needs to be modernised by replacement (from a net zero carbon by 2030 perspective). Those that are already suitably insulated will require electrification of the heating system.

Funding for decarbonising diocesan properties will partly be diocesan funds from property sales and partly from future grants. If the portfolio remains at sixteen properties, and if all are eventually suitable for non-fossil fuelled heating, then a ball park total cost of around £320,000 might be expected for decarbonising heating systems.

### Diocesan Net Zero Carbon Action Plan Costs 2023-2025 Triennium

Project	Cost £	Start date	Funding
Project Officer	15,248	2024	Bid for grant submitted
NZC trainer	3,000	2024	Bid for grant submitted
Specialist heating advice	7,000	As required	Bid for grant submitted
EPC surveys of selection of properties	2,210	2023	Funded
Begin decarbonising heating in properties	Up to 320,000	2024	DBF; bids for grants

Regarding decarbonisation projects in churches and church halls, we are currently at the stage of relying on indicative costs. On island costs will not be the same as those across, so caution is needed in using the indicative costs provided by the central Church. Further information for possible decarbonisation of heating in churches is included in Appendix 3.

## 17 What is the timeline for action?

Diocesan capacity, in the form of human resources, is key to moving forward with net zero carbon by 2030. A bid for the three new posts was submitted in October 2023. Engaging with all parts of the Diocese will continue during this triennium.

Modernisation of Diocesan properties is the remit of the Property Committee, chaired by the archdeacon. The Bishop's residence could be retrofitted with a heat pump in early 2024 during the vacancy in See.

## 18 Communication Strategy

The DEO belongs to the Northeast DEOs group and while being an island inhibits some forms of collaboration, support and information sharing have been routine since 2023.

**Action: The Diocesan Action Plan will be communicated to all parts of the Diocese and to the island media.** Building users in parishes will be shown the Action Plan at a routine Mission Partnership (grouping of parishes) meeting. The largest churches will be offered a presentation to their congregations. Diocesan Ministers will be shown the Action Plan at a monthly Continuing Ministerial Development meeting. Diocesan committees will be invited to schedule the Action Plan at one of their meetings. The Environment Action Group has a website, [eag.im](http://eag.im), devoted to the environment and this will be updated regularly, with the medium term aim of integrating it into the Diocesan website. The church school is currently out of scope, housed in a government school, but contact has been made with the head teacher.

**Actions: The 'We Care' campaign of the Environment Action Group is a positive action communication aimed at the community and the government. EcoChurch and EcoDiocese will be promoted by a nominated member on the Environment Action Group.** Most parishes have an EcoRep and communication with all parishes is easier in a very small diocese.

**Action: The archdeacon, chair of the Diocesan Net Zero Group, now includes heating plans in church visitations.**

## 19 Monitoring, Reporting and Responsibilities

**Action: An annual Net Zero Carbon agenda item at Diocesan Synod will allow reporting both on the changing carbon footprint, progress with emissions reduction and decarbonisation, Routemap milestones, and on any Diocesan Net Zero Carbon Action Plan refinements required. (Milestone 4.1.2)**

The small size of the Diocese of Sodor and Man allows easy communication with parishes through the four Mission Partnership Leads. Each Mission Partnership, North, East, South and West is comprised of a handful of parishes. The Net Zero Carbon Group will meet with Mission Partnership Leads individually each year to assess plans, needs and progress.

In 2025, 2028 and 2031 a report on progress on Routemap milestones will be made centrally by the Net Zero Group, in time for the July General Synod, as per milestone 7.1.3.

Reporting will be the responsibility of the Net Zero Carbon Group.

## 20 Review

**Actions: Two levels of review are planned. The first is an annual review by the Net Zero Group of progress on the ground, with a report to Synod as above; the second is a high level strategic review every three years by the diocesan leadership team.**

# Appendix 1 - Scope of the national Net Zero Carbon target

## From Appendix 1 of the Routemap to Net Zero Carbon by 2030.

### 2030 NET ZERO

These are in scope of our "net zero by 2030" target.

We will aim to measure and report these as soon as possible, as a first step towards making real and sustained reductions.

The national EWG will review, and potentially expand this scope, every three years, from 2022 onwards, in line with reporting to General Synod.

1. The energy use of our buildings;
  - 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;
    - 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 average reasonable use, not actual usage)
- Church bodies' offices including Church House Westminster, diocesan offices, and bishops' offices
- Peculiar, 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).

*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.*

3. From this, and on the understanding that real reductions in energy use have been made, the following can be removed:
  - 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.] – see note on Green Energy Tariffs
  - Other reliable offsetting schemes, meeting national criteria to be developed – see note on Offsetting

### NET ZERO AFTER 2030

These will be in our next phase of work.

Some dioceses may opt to include these in their diocesan 2030 targets.

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

*In standard Greenhouse Gas definitions, these are those parts of our "Scope 3" emissions which are within our influence to a significant degree.*

*\* 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*

### NOT INCLUDED IN TARGET

Out of scope of our target (but still within our mission to influence)

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)

*In standard Greenhouse Gas definitions, see below, these are either out of our scope or are scope 3 but largely outside our influence*

# Appendix 2 – Planning Principles



## Net Zero Carbon planning principles:

### 1. Based in theology: Treasuring God's creation

- We recognise that the global climate emergency is a crisis for God's creation, and unjust to the poor and future generations. It is the context into which we are called to live and preach the Gospel.
- We will link all our actions on net zero carbon to our Christian mission, as expressed in the Five Marks of Mission.
- We will grow the Church while reducing our environmental footprint; Christ's Gospel message will reach and engage new people, particularly the young.

### 2. Urgent, relevant and widely understood

- Net zero is needed by 2030 but it starts now. We aren't waiting; a significant reduction is needed every year, year-on-year.
- We will communicate clearly the reasons for action, and for acting now recognising the existential threat that we all face.
- We embrace the call to net zero carbon as 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.
- We will implement only tried and tested technology.

### 3. Data-driven, focused and transparent

- We recognise this work covers all of our activities as a Church, as set out in the scope agreed by Synod.
- We will gather good data on major sources of emissions, to inform our decisions e.g. energy consumption, EPC surveys and travel data.
- We will be strategic, using our data to focus effort on the large, busy buildings such as secondary schools and our busiest churches. We know most small, rural churches already have a very small carbon footprint and the onus for action does not lie with them.
- We will learn from others, sharing resources and collaborating.
- We will estimate costs for the changes and actively seek funding.

### 4. Embedded in all we do

- We will aim to integrate ethical environmental principles into everything we are doing as the CoE.
- 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 motion by the PCC, school governors, cathedral chapter, diocesan synod. Leaders at all levels will need to prioritise action.
- We will identify those things directly in our control, and the things we influence, and discern appropriate strategies for both (including co-located wildlife, social value, health, com[No Title]).
- We will encourage each part of the Church to gather a team to work on this, including a champion in a leadership position.
- We will include carbon footprints into our reporting systems, both nationally and locally, e.g. APCM reports.
- We will also include climate adaptation/resilience to protect our buildings and communities in increasingly extreme weather.



### 5. Using less energy, and from cleaner sources

- We will aim for quick wins, whilst planning ahead for the harder actions such as moving away from oil and gas.
- We will first reduce demand for energy by maintaining our buildings well (tackling damp, fixing broken windows etc) and by reducing heat loss as appropriate. Then we will increase energy efficiency through steps such as LED lighting, zoning and controls.
- We will ensure energy is supplied from cleaner sources: switching to 'green' tariffs and increasing renewables on our buildings.
- We recognise the vital importance of decarbonising heat since any new oil/gas boiler installed now will outlast 2030. We acknowledge the challenge and will strive to ensure options appraisals take place for all heating replacements of fossil oil and gas systems.
- We recognise that some decisions will need to wait until later in the decade, for more certainty on technologies, funding and regulation.
- 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, while recognising the need to future-proof buildings to comply with potential future legislation.

### 6. Travelling sustainably

- We will avoid unnecessary travel.
- We will encourage sustainable transport and remember the travel hierarchy: walking, cycling, public transport, shared journeys, electric cars, fuel efficient cars, less efficient cars, ferries, flights.

### 7. Offsetting only what we cannot reduce

- We will reduce all the carbon emissions we can, offsetting should be a last resort.
- There will however be some role for offsetting and sequestration, towards 2030, and we will explore viable options whilst recognising most will not sequester carbon in the timescale of our target.
- Where excess renewable energy is generated on our sites (e.g. from solar PV) we can export to the national grid as a valid offset.
- We will protect and nurture the trees, soils and wild spaces we already have and the carbon they store. There are a range of nature-based climate interventions which are to be encouraged in appropriate places, but which will take time to come to maturity and do not offset the effect of the carbon we are producing now.



## Appendix 3 – Indicative Costs

### Supporting church and church hall heating decarbonisation

As the key starting point for planning energy use reduction and decarbonisation, The Practical Pathway to Net Zero Carbon by 2030 will continue to be promoted for use in managing churches and church halls.

Where church communities reach the point where an evaluation of the heating in their churches and church halls is the next step, specialist heating advice will be needed and the Diocese is seeking to identify a source for this advice. The seven highest energy using churches should be writing their heating resilience plan in 2023.

An early focus for the Diocese is to help the seven highest energy using churches to reduce their carbon emissions. Six of these churches are over 600 square metres in area. Only one of these churches is known to have its heating running 24/7 or nearly.

Prior to specialist heating advice being available, it is assumed this church might benefit from under floor heating paired with heat pumps, while the other six might be candidates for infrared heaters (also assuming adequate three phase electricity supply).

A separate assessment of church halls is also required. Available data often does not distinguish between church and church hall emissions. This is important to tease out because halls will generally be easier to decarbonise than churches.

A working ball park cost estimate of £550,000 for decarbonizing these seven churches is based on these assumptions and uses available indicative costs.

Medium and some smaller churches could also consider infrared heading. The re-ordering at St Mary's will offer other church communities the opportunity to experience a working example.