



DIOCESAN SYNOD

Towards Net Zero – Updated Action Plan

Presentation by the Net Zero Programme Manager, and moved by the Bishop of Kingston that:

“THIS SYNOD endorses the updated action plan towards Net Zero as recommended by the Diocesan Council of Trustees.”

Introduction

1. The Diocesan Synod will be asked to approve the updated action plan Towards Net Zero, that sets out the targets, plans and priorities for our journey towards net zero CO₂ emissions. This document will replace the plan presented to Synod in November 2023. It includes the revised overall approach and the framing of the targets to Net Zero. The Policy was reviewed and recommended by the Policy & Finance Committee and the Diocesan Council of Trustees.

Background

2. The Church of England have taken a strong national lead on aiming to be Net Zero by 2030. They have set aside significant funding (circa £190m) as well as created central support and a knowledge base.
3. The Diocese of Southwark have made good progress in securing Net Zero Carbon (NZC) capacity building funding from the Church of England, creating a short-term plan, and securing some initial church NZC project funding through the *Give to Go Green* and *Quick Wins* programmes.
4. We have put in place a new internal governance structure with a Programme Board (which includes the Diocesan Secretary, Bishop Martin and the Archdeacon of Reigate, the Ven Moira Astin) giving strategic direction and driving buy-in across the Diocese as well as a Delivery Team with programme leads for churches, schools, property Department, and the cathedral.
5. There have already been some tangible reduction in emissions which are now estimated to be between 5-10% below the starting 2022 baseline. This has been achieved primarily by:
 - i. A significant number of moves to clean electricity tariffs which reduce all electricity usage to zero emissions on the energy footprint tool
 - ii. Improving building energy efficiency including work to reduce heat loss
 - iii. Some early initiatives to directly reduce the use of gas and oil heating and make more use of small electrically heated spaces
 - iv. Some implementations of hybrid heating systems particularly in our schools and church halls that switch the primary heating provision from gas to electrically powered heat pumps.

Key Points of the Proposed Plan

6. It is proposed that as a Diocese we fully commit to make best efforts to achieve the Church of England ambition of being net zero by 2030, in line with National Grant funding requirements. Whilst making this commitment we also acknowledge the significant challenges in achieving this

and have 2035 as a backstop net zero target, by when we must have fully overcome these challenges and achieved net zero. We fully expect that many of our churches and schools will achieve the 2030 target.

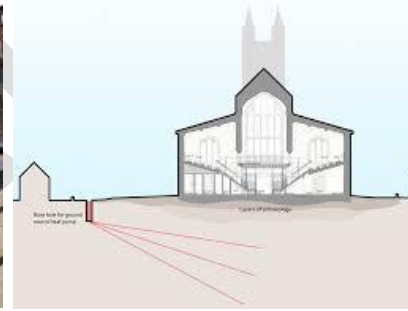
7. The focus of our net zero programme will be to reduce the use of gas heating which accounts for 85% of total emissions across the Diocese. This work will focus on action to reduce gas heating needs such as zoning of heated spaces supported by heat management systems, improving insulation and other causes of heat loss, increasing the use of solar power, introducing hybrid heating systems that utilise electric heat pumps and reduce gas usage, building use strategies to prevent heating unused space as well as replacing gas heating with technologies such as far infrared where appropriate. The ultimate end goal will be to remove all fossil fuel heating or reduce the use to an amount in line with the 10% allowable offset. The Diocesan Advisory Committee (DAC) have been involved with discussions and are completely on board.
8. It is proposed that in line with the Church of England plan we prioritise our 42 high emitter churches and this paper sets out our specific plan for this as well as indicative costs. The plan for our high emitter churches will commence with a free energy audit and a £3,000 grant from the CofE Net Zero Programme for early works recommended as part of the audit. This group will also be supported initially through the Net Zero Quick Wins fund of £58K also secured from the CofE. 12 of these churches have also secured a share of £80K funding from the CofE Give to go Green initiative.
9. The Programme Board will monitor and support net zero progress for the Diocese as whole including schools, the cathedral, property and churches, recognising the autonomy of the cathedral and schools in setting plans and budgets. Key stakeholders in these areas are also members of the Delivery Team. It will also recognise the specific challenges for property, the cost of retrofit work and the challenges of doing major work in a parsonage during incumbency which is the incumbent's home. The Policy & Finance Committee will also have annual updates aligned with the annual reporting to Synod which forms part of the Net Zero Carbon Routemap.

Nicola Thomas
Diocesan Secretary

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Towards Net Zero

Diocese of Southwark Updated Net Zero Carbon Plan



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1. Context

Safeguarding the integrity of creation, as per the Fifth Mark of Mission, is a priority in the Diocese of Southwark. It forms part of our work in the Justice, Peace and Integrity of Creation Team, set out in the Environment Policy which was last refreshed and endorsed by Synod in [date] and a revised version of which will be put to Synod in November. Part of safeguarding the integrity of creation is tackling climate change by reducing Carbon emissions, in line with the Church of England's Route map to Net Zero by 2030. Southwark was an early adopter of Net Zero work, and Synod approved a first action plan towards Net Zero in 2022 and receives annual updates on Carbon emissions against the 2021 baseline. This more developed action plan, aligned with the Church of England 2030 target, is the latest iteration of this work. It forms part of the 'Healing' strand of Southwark Vision 2024-35 – Christ centred Outward Focused – which was endorsed by Diocesan Synod in [July 2023?]. This will remain a living document as work towards Net Zero is constantly evolving.



2. The Targets

The Diocese of Southwark will fully commit to focus on and make best endeavours towards the ambition of the Church of England target of achieving net zero by 2030. We are confident that the cathedral, as well as many of our churches and schools can make significant progress towards the 2030 target and that we will support and encourage as many as possible to achieve it. It is acknowledged that this target is extremely challenging particularly for our clergy properties and some of our churches and schools and for that reason we will also have a backstop target of 2035 by which we must have achieved net zero across the Diocese as a whole.

Achieving net zero will require that we remove our scope 1 and 2 CO₂ emissions with the option of up to 10% of residual emissions removed through offsetting. Scope 1 and 2 emissions are part of the globally recognized emission categorisation framework and for the purpose of the Diocese NZC work refer to the use of electricity and gas. Offsetting allows for the purchase of Carbon credits that have been achieved outside of the Church of England.



The Diocese of Southwark will focus on the Church of England 2030 Net Zero target and believe that we will make significant progress towards this and in some cases achieve the target

3. Focus Areas

Baseline figures estimate that around 85% of our emission are produced from gas heating systems and our initial strategy will be to focus on reducing the reliance on these systems. Our end goal and focus will be the complete decarbonisation of heating provision, but it is recognised that there are very different levels of challenge and there will be subsequently different speeds in achieving this.

The other element of initial focus will be on our current high emitting churches. This group represent an estimated 60% of total church emissions. Using data from the Energy Footprint Tool a target group of 42 churches has been identified and individual net zero plans will be produced for each one. The implementation of these plans will be the focus of our support for churches and the target of NZC church funding we receive.



Our focus will be on reducing the use of and eventual removal of heating systems powered by fossil fuels such as gas and oil

4. Addressing the Challenges

Achieving net zero across the Diocese comes with multiple challenges and it is vital that we are transparent and open on what these are and have clear mitigation plans to address them.

CHALLENGE	MITIGATIONS
Funding	<p>We will work hard to ensure the Diocese optimise any funding opportunities from the national programme funds which are planned to be a further £160m nationally up to 2030. We will also seek to establish a regional NCZ fundraising co-ordinator role funded by the Church of England as well as support fundraising plans at local level.</p> <p>We will also develop low-cost high impact strategies to ensure some progress is made despite any funding shortfall. This will include church usage plans that ensure that the use of heated space is optimised, and that heating of empty space is avoided where possible.</p>
Buy-in	<p>The Net Zero Programme Board will work to ensure the case for Net Zero action is powerfully conveyed and understood across the Diocese. Communications will support this in celebrating our Net Zero successes.</p>
Data	<p>Submission to the energy footprint tool have risen from 22% in 2022, to 44% in 2023, and 58% in 2024. We will seek to move the data submissions to the Energy Footprint Tool to a least 90% by 2026. This will be achieved through positive messaging of the benefits as well as providing advice and support on completing the annual submissions.</p>
Technical / Legal	<p>We will work to better understand and find solutions for the technical and protected building challenges faced especially with reference to ancient churches. This will be supported by the national net zero programme team and the technical forums they have put in place</p>

We will have mitigation plans in place for all the significant challenges we will face in moving to a net zero Carbon future.

Progress so Far

The Church of England have taken a strong national lead on aiming to be Net Zero by 2030. They have set aside significant funding (circa £190m) as well as created a central support organisation and knowledge base.

The Diocese of Southwark have made good progress in securing NZC capacity building funding from the Church of England, creating a short-term plan, securing some initial church NZC project funding through the Give to Go Green and Quick Win programmes, and finally taking initial actions to begin the process of reducing emissions.

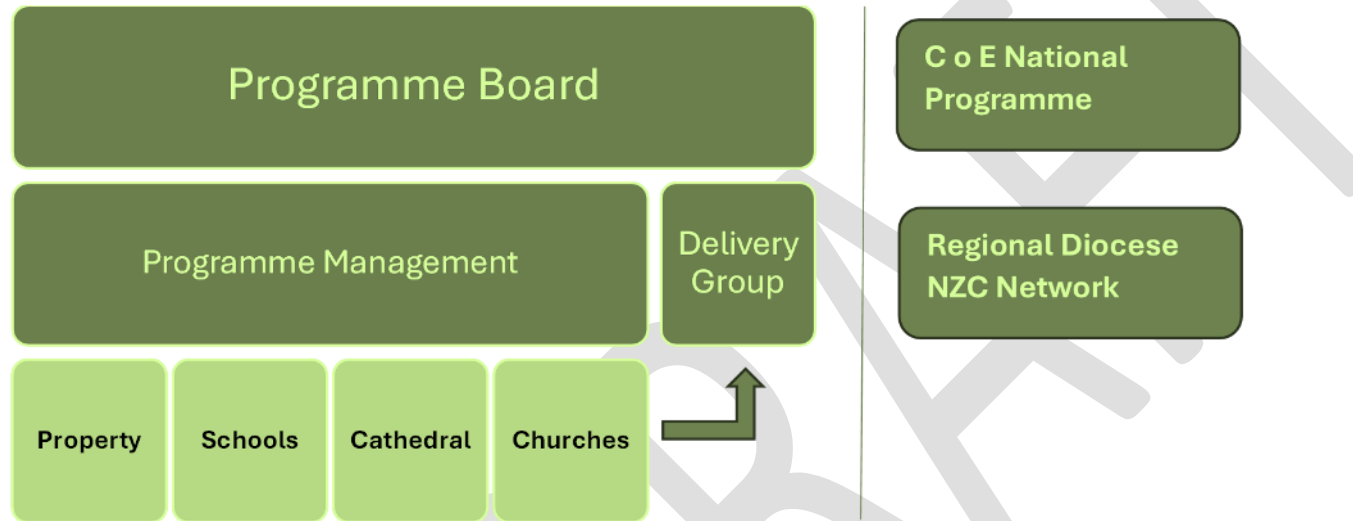
There have already been some tangible reduction in emissions which are now estimated to be between 5-10% below the starting 2022 baseline. This has been achieved primarily by:

- **A significant number of moves to clean electricity tariffs which reduce all electricity usage to zero emissions on the energy footprint tool**
- **Improving building energy efficiency including work to reduce heat loss**
- **Some early initiatives to directly reduce the use of gas and oil heating and make more use of small electrically heated spaces**
- **Some implementations of hybrid heating systems particularly in our schools and church halls that switch the prime heating provision from gas to electrically powered heat pumps.**



Some of our church halls and schools are already using electrically powered heat pumps to significantly reduce CO₂ emissions

To accelerate action and ensure focus a new programme governance structure is now in place. It provides strong leadership and ensures cross organisational accountability and ownership of the NZC plan .



There will be a process put in place for monitoring the progress of our net zero plan.

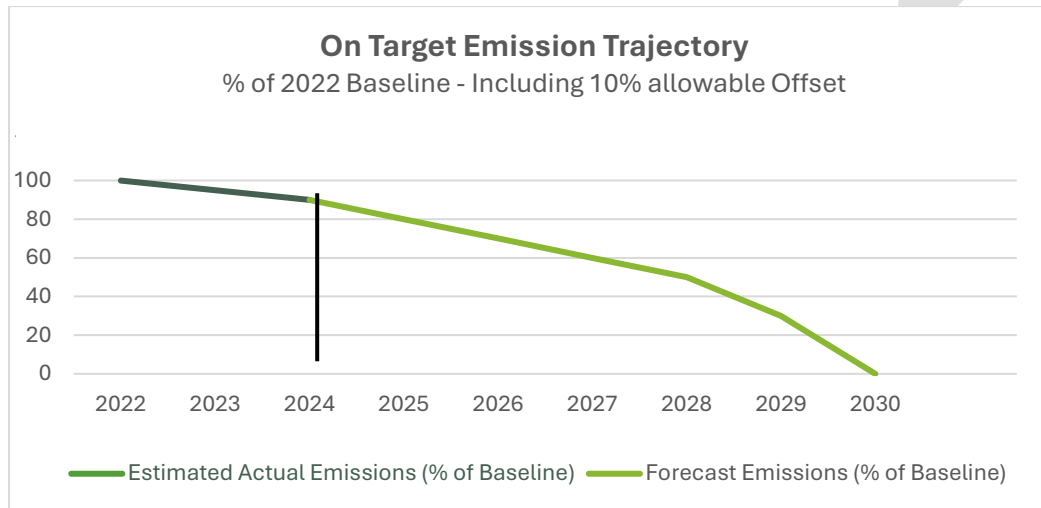
The Delivery Group will meet quarterly and produce updates on actions taken and likely impact which will be reviewed by the **Programme Board**. This will be an opportunity to address any issues in the delivery of the plan and to check we are making the required progress.

The key review will be an annual analysis based on data from the Energy Footprint Tool. This will be the best indicator of measurable emission reduction impact and will also enable a revised forward projection and a recalibration of the plan.

We are already making progress on net zero and are now organised to accelerate action

6. Diocese Net Zero Action Plan

The 2030 target emission reduction trajectory for the Diocese is illustrated in the graph below. It is expected that following steady progress downwards between 2025 and 2028 the highest level of reduction in emissions will be achieved from 2028 to 2030. This is due to the completion of required preparatory work for new heating systems and the potential increase in available capital funds. This would also be helped by a significant national reduction in electricity pricing and an increase in clean gas supply.



2022 -24	2025-27	2028-2030
Planning, scoping, quick wins, clean electricity	Hybrid heating systems, zoning and heating management systems, building fabric / insulation, solar	Replacement of fossil fuel heating systems, offset purchasing, clean gas tariffs

Emissions will drop most rapidly from 2028 onwards due to the completion of required preparatory work for heating retrofit, coupled with the likelihood of lower emission gas tariffs and cheaper clean electricity

Achieving Net Zero for the Diocese will be achieved through a variety of approaches:

- **Climate Positive:** complete Carbon removal and over production of on-sight clean energy allowing for the supply of clean energy into the grid.
- **Climate Neutral:** Complete Carbon removal with no residual emissions for offset
- **Net Zero Carbon** through 10% offset purchasing
- **Net zero Carbon** through purchasing of partial clean gas with embedded offsets for the CO₂ emitting gas

Backstop Target

It is acknowledged that there are significant funding, technical, planning and building ownership challenges for achieving the target net zero emission trajectory by 2030 across the diocese as whole. One scenario is that a reduction to around 50% of the 2022 baseline is achieved and that a plan to remove the 50% residual emissions will be developed for the period from 2030 – 2035. This possible scenario is acknowledged by the National Programme

The Diocese 2035 backstop target acknowledges the significant challenges for some in achieving the 2030 target and commits the Diocese to fully overcome these by 2035 at the very latest

Net Zero Action Plans Across the Diocese – Summary

Schools (49% of Diocese Emissions)

Net Zero is a key agenda item for Church school clusters with a guide to enable schools to complete Count your Carbon. Following this analysis any high emitting schools will be targeted for support. Funding support including for Salix LCSF heat decarb. Support 7 schools per year. Estate wide LED plan: Quantify extent of solar installs across school estate by Sept 2025 – identify priority schools with suitable roofs (5 per year). Estate-wide plan to identify the extent of smart metering and identify barriers to uptake. Target - September 2026.

Property / Clergy Housing (21% of Diocese Emissions)

Net Zero Carbon is a key priority for clergy housing and will also contribute to clergy well-being especially energy efficiencies. However, opportunities for action in parsonages are often at a time of vacancy and the detailed plans to make such improvements will be flexible around when properties are vacant. There is a particular focus on insulation and double-glazing, which help clergy finances as well as the environment. The revised property strategy is being produced that will include the approach to net zero and will include work to improve energy ratings.

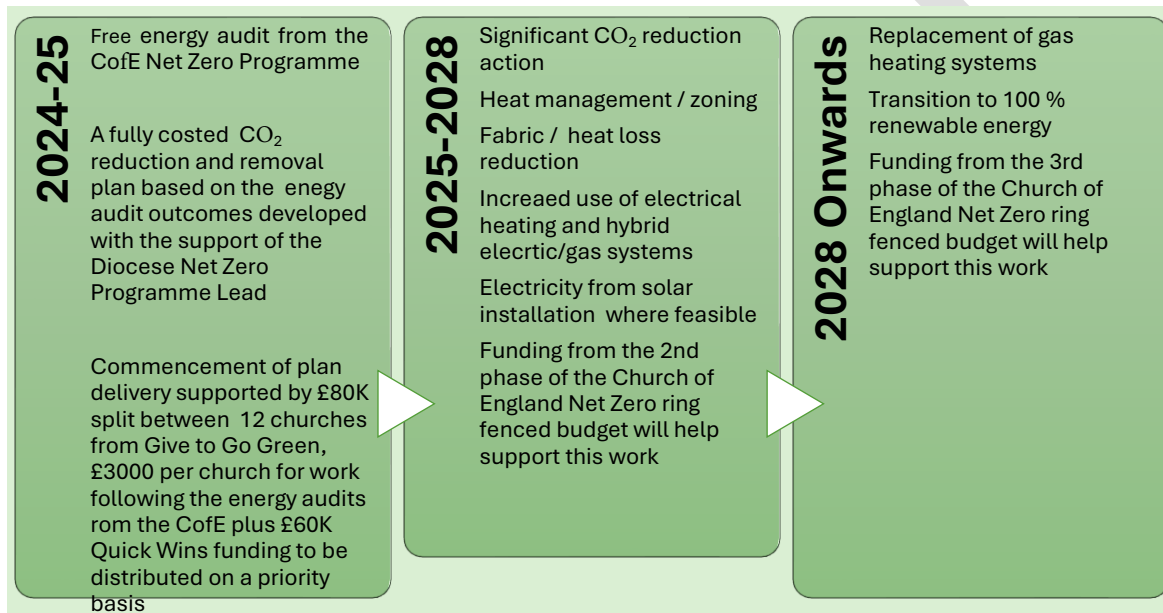
Cathedral (Emissions included in 30% from churches)

Initial action will be focussed on increasing renewables purchased from grid whilst work is done to reduce energy consumption across the precinct and to develop plans to reduce CO₂. In the medium term phased heating and lighting as well as infrastructural changes to address largest decarbonisation difference will be undertaken. Efficient heating controls and a progressive plan towards a co-ordinated building management system. There will also be a flag-ship project to decarbonise heating in worship space using on-site renewables.

The Diocese as a whole is committed to driving forward net zero action.

Churches (30% of Diocese Emissions)

High Emitting Churches are a key focus area for the Diocese NZC plan. The top 42 highest emitting churches have been identified from the results of the 2022 Energy Footprint Tool and will be further validated from the 2023 result. These churches represent over 60% of our overall church emissions. and will be the focus of support from Diocese Net Zero Lead as well as the key target of National NZC Programme funding. The plan for these target churches is set out in the diagram below.



Medium Emitter Churches are the largest grouping but represent an estimated 8% of total Diocese emissions. They will be supported through an online knowledge base including templates and tools, signposting to funding opportunities, partnering with high emitter focus churches, as well as some planning and implementation support and advice from the dedicated net zero programme resource. **Low Emitter Churches** represent an estimated 2% of Diocese emissions. These churches are likely to

Our 42 highest emitting churches based on Energy Footprint Tool data will be a focus area of this plan. This aligns with the Church of England Strategy and will be the likely target of their top-down funding

require minimal levels of support and will have the lowest impact for any financial or time investment made. These churches have low usage of energy for heating and are either currently net zero or will move to net zero as clean gas becomes a greater percentage of gas provision or electricity prices fall to a level where systems such as infra-red become more financially viable

Indicative Costs (Based on Church of England estimates by church type and usage)

	Enabling, Energy Efficiency Work, Some PV installations where possible <i>(Estimated average cost per church)</i>	Full Decarbonisation or to 90% of baseline allowing for 10% offset for residual CO ₂ <i>(Estimated average cost per church)</i>	Total cost	Overall Diocese CO ₂ Impact
	2025 to 2028	2028 Onwards		
42 High Emitter Churches (large churches in regular usage)	£120,000	£190,000	£310,000 x 42 = £13.02m	20% of Diocese emissions
250 Medium Emitter Churches	£37,500	£53,000	£90,500 x 250 = £22.6m	8% of Diocese emissions
60 Low Emitter Churches	£15,000	£30,000	£45,000 x 60 = £2.7M	2% of current Diocese emissions
TOTAL COST			£38m	

Notes:

- *Costs per church for high emitter churches will be more accurate following the free energy audits, recommendations arising and costed plans to deliver these recommendations. These will be produced in Q4 2024*
- *Any increase in clean and 100% offset gas tariffs as well as any reduction in clean electricity costs will potentially significantly reduce the capital costs of achieving net zero by 2030 or 2035.*
- *This table indicates costs over and above the scope of general maintenance*
- *Any case for capital investment in medium/low and low emitter churches will need to be pragmatic and balanced against resulting Carbon impact. The above table assumes some major works will not be justifiable or needed based on current emissions*

- *Where the required funding is not achieved, we will focus on driving progress from low-cost actions on areas such as space usage. We will also extend the NZC planning into the backstop period from 2030 to 2035*

8. Funding

The costs of achieving net zero are the most significant challenge faced and will require an increase in top-down funding from the Church of England as well as an increase in local and regionally sourced funding.

The Diocese has so far been successful in securing:

- funding for a dedicated part time net zero lead resource
- free energy audits and plans for 42 high emitting churches and £3K of funding for each of those churches to commence delivery of the plans.
- two-year quick win funding for high emitting churches totalling £58K
- give to go green match funding grants for 12 churches totalling over £80k

Going forward the amount of direct funding from the Church of England will increase and a new national NZC fund raising role has already been recruited. The Diocese will also work together with the Diocese of London to bid for a regional NZC fundraising resource in 2026.

The funding required to achieve net zero will be the most significant challenge faced. We will work locally, regionally and with the Church of England nationally to generate the funding required.