

Net Zero Carbon Impact Report

2024 Working together to
care for God's creation





The Bishop of Berwick, Rt Rev Mark Wroe, blesses the new solar panels on the roof of Holy Trinity and St Mary's Church, in Berwick-upon-Tweed, Northumberland.

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Useful navigation tips and tricks

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"We're only ever asked as a church to make a difference where we are at, where God has placed us, and if we can do that, then we'll make the world a better place and that's our command."

Rev James Turk, Holy Trinity Church, Stroud.
The church has installed an all-electric heating system.

Net Zero by 2030 the story so far

**In July 2020,
General Synod
voted for the
whole of the
Church of
England to
achieve net zero
carbon by 2030.**

The vote recognised that the global climate emergency is both a crisis for God's creation and a fundamental injustice.

Achieving net zero carbon is a complex challenge, but in setting this target Synod recognised the urgency in reducing our contribution to climate change and the 2030 ambition seeks to galvanise action in every corner of the Church.

Since then, a plan of action called the [Routemap to Net Zero](#) has been created, as well as a small central team and a network of officers across the country supporting parishes to deliver local carbon reducing projects.

The Church Commissioners released £30 million in funding for the development phase of the programme (2023-2025) and this has been allocated to a series of grants and projects with a focus on reducing carbon emissions from our highest emitting buildings.

WATCH OUR LATEST VIDEO TO FIND OUT MORE



Welcome

We're delighted to share with you our second Impact Report for the Church of England's Net Zero Carbon Programme.

We hope this Impact Report will give you a taste of the work of the programme over the last year (2024) and that you will be encouraged as you read about the progress already being made to reduce carbon emissions in our buildings.

The programme is now in full swing delivering support to parishes, dioceses, cathedrals, schools and other buildings to help all parts of the Church of England reduce its carbon emissions towards net zero by 2030.

We know this is hugely challenging but caring for God's creation and reducing the impact we have upon our planet are fundamental aspects of our Christian mission.

The Anglican Communion's fifth mark of mission calls for us to 'strive to safeguard the integrity of creation and sustain and renew the life of the earth.'

Our work to reverse the damage we have done to the world, through our care, prayer and action, is also a chance to live our faith alongside our neighbours and those we might not usually get the chance to engage with. As such, our activities in this area can become evangelistic opportunities.

No matter the size or age of the building, a church's journey to net zero carbon, often begins with a small change which can make a big difference.

As a result of making these changes, many churches are finding people in their communities are interested in what they are doing – helping to support the Church of England's mission to make disciples of Jesus.

The work so far has not been without its challenges, and we know there is still a long way to go, but we're so encouraged by what has been achieved so far and our hope is, that as you read this Impact Report, you will be encouraged and inspired too.



The Rt Rev Bishop Graham Usher
Bishop of Norwich and Church of England Lead Bishop for the Environment



Sir Robert Buckland KBE
Third Church Estates Commissioner and Chair of the Net Zero Programme Board



The congregation of All Saints Church in Bedworth, a Demonstrator Church, celebrate the installation of new solar panels.

Caring for creation is missional

In making changes to lower our carbon emissions the Net Zero Programme is bearing witness to **all** of the Anglican Communion's Five Marks of Mission.



Rev Kay Jones from St John and St Stephen's Church, Grimsby, says caring for creation has helped the church engage with local people.

1

Tell

To proclaim the Good News of the Kingdom

We recognise that all we do comes back to telling the Good News of Jesus Christ, which is good news for the poor, good news for those who are affected by climate change, and good news for the whole of creation.

2

Teach

To teach, baptise and nurture new believers

When we act to care for God's creation, we demonstrate a Christian response to the threats facing creation. This says something about who we are as Christian people and the Gospel we teach and nurture new believers into.

3

Tend

To respond to human need by loving service

By reducing our carbon footprint, we are seeking to tread more lightly on this Earth and upon the lives of others. In addressing climate change and its devastating consequences we are seeking to love our neighbour and respond to human need.

4

Transform

To seek to transform unjust structures of society, to challenge violence of every kind and to pursue peace and reconciliation

The imbalances and unfairness in our world mean that impacts of climate change are felt most by the poorest and those least responsible for the causes of climate change. We can transform society by reducing our own emissions and shedding light on this climate injustice.

5

Treasure

To strive to safeguard the integrity of creation and sustain and renew the life of the earth

By working together to lower our carbon emissions we can look after and care for our world and all God's creatures.

The last year at a glance

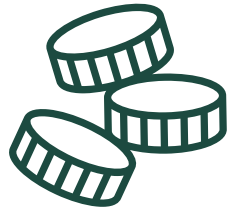


Churches

8891 churches submitted their 2023 energy data using the Energy Footprint Tool, reporting on 10,502 buildings



5 Demonstrator Churches began work on net zero projects such as solar panel and heat pumps installation thanks to (stage two) Demonstrator Church grants



£360,000 in grants was distributed to churches with co-funding from The Benefact Trust



488 fully funded energy audits carried out in some of the busiest churches in the country, which are open most days of the week serving the community

Eco Church

The Eco Church scheme is run by the Christian conservation charity A Rocha UK and is supported through a partnership grant from the Net Zero Carbon Programme. The scheme is a fantastic resource for encouraging churches, cathedrals, and dioceses to care for all of creation as reflected in the five Marks of Mission.

The year ended with 5541 churches engaged with A Rocha UK's Eco Church scheme. That's 16% more churches engaged than the previous year!

680
more churches registered with Eco Church
348 bronze
313 silver
19 gold

41
Eco Church cathedrals
4 bronze
8 silver
2 gold

9
Dioceses achieved bronze Eco Diocese



114 churches from **42** dioceses are being invited to be Demonstrator Churches - creating a network of net zero churches spanning the country which inspire others



20 churches began to develop their Demonstrator Church projects with the help of project development grants in 2024



Housing



Network of **70** individuals working to move net zero in housing forward



£2.5m committed for Housing Demonstrators, and over 50 predicted to be completed in 2025

Housing demonstrators already completed have achieved a



73%
carbon reduction, and are predicted to achieve a
95%
carbon reduction by 2030



Schools



102 Heat Decarbonisation Plans funded along with **33** Public Sector Decarbonisation Scheme applications



£490,494 of programme funding helped to lever in **£5.9m** worth of government funding (a leverage ratio of 12x)



Cathedrals



£600K allocated to carry out **technical surveys**



£1.4M has been allocated to help cathedrals move forward with net zero projects - learnings from this work will be **shared with other cathedrals**



Applications for **3** Cathedral **Demonstrator Projects** and

3 **Quick Wins** projects were approved



Communications

Produced our first Impact Report which has had over **1K views** worldwide

Created **8 case studies with videos, photographs** and blogs to inspire others in their net zero journeys

Published **22 blogs** to inform, encourage and inspire people to care for God's creation with over **7500** reads

Produced a **Campaign Toolkit** for dioceses to use to promote net zero work in their local areas

The Church of England's carbon footprint (from 2023)

The Routemap to Net Zero sets out the challenge that being net zero carbon means that the carbon emissions of our buildings and work travel will be reduced by at least 90 per cent compared to our baseline levels.

Any remaining hard to tackle emissions (no more than 10 per cent) will be offset in verified schemes that remove carbon dioxide from the atmosphere. That means overall, our buildings and travel will not contribute to rising carbon emissions: their contribution will be 'net zero.'

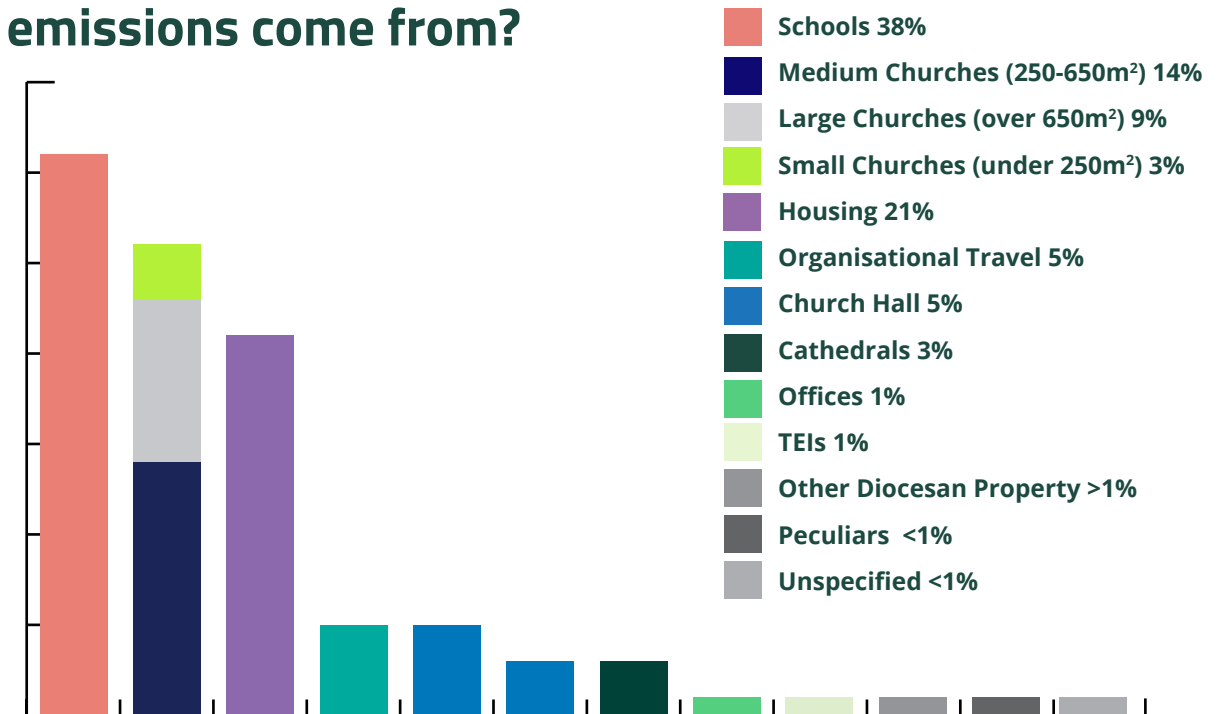
In 2024, the Church of England commissioned Arup to review our approach to carbon footprinting as part of producing our Annual Carbon Footprint reports for 2022 and 2023. The reports, which

will be published in final form later this summer, are based on more complete data and improved analysis. The report for 2024 will be published in the autumn of 2025.

Although the reports suggest an overall reduction in carbon emissions compared to 2021, the totals are not directly comparable due to improvements in the assessment methods. The figures also pre-date the commencement of the Net Zero Programme. We expect figures to decrease significantly year on year, as the Programme is rolled out and delivered.

There is also a timelag in seeing the full impact of net zero projects due to the length of time it takes to deliver projects and then report on energy data and savings.

Where do our carbon emissions come from?



"We've now insulated the building which means it's cheaper to run, which means it's more accessible for the local community and people are warmer."

Rev Simon Gatenby, Brunswick Parish Church, Manchester.



Rev Fran Carabott from St Margaret's Church in Portsmouth, who have installed solar panels and a heat pump.

Equipping dioceses and parishes

Through our national Net Zero Carbon Programme we are providing financial support through grants to dioceses to help parishes in making progress with their net zero plans.

£600,000 was released in the autumn as part of the Boiler Replacement Hardship Fund to help churches pay for a carbon friendly heating solution when their boiler fails.

Six churches applied in November and December and four have already been awarded grants totalling **£132,423**.



£2.4M Quick Wins Fund was launched to help parishes pay for small projects such as heated cushions and LED lighting with **37 dioceses** receiving grants of approx. **£50K each**. Onward grants have already helped **281 churches**.

"It was manna from heaven"

A church on the edge of the Cotswolds is set to reduce its energy bills after replacing an unreliable oil-fired boiler with electric under-pew heaters, thanks to a grant from the Church of England's Net Zero Programme.

Holy Trinity in Sibford, Oxfordshire, started out simply considering installing a toilet and level access to the Grade II Listed church. But it soon started to think about how its heating could become more efficient too.

The thought swiftly led to an energy audit that recommended the installation of 121 under-pew heaters. Treasurer David Gill and the Sibford team were determined to see the change brought

about and needed to find ways of funding the £39,000 bill.

So, they applied for grants, and received four, the largest - £19,284 - coming from the Church of England's Net Zero Programme's Boiler Replacement Hardship Grant Fund.

"It was manna from heaven," said David. "It made the difference between doing it and not doing it. We would not have been deflected from our determination to do it, if we hadn't received a grant, but now we are about to turn the new system on."

The move is set to make the church building net zero carbon and reduce its heating costs.



"It is economically justifiable, but it is spiritually justifiable too and that's the starting point for this."

David Gill, Treasurer at Holy Trinity Church, Sibford, Oxfordshire.

READ THE FULL STORY [↗](#)



GIVE TO GO GREEN

Give To Go Green is a pilot scheme from the Net Zero Programme which helps churches double locally raised donations through match-funding from the Church of England.

71 churches in 8 dioceses participated in the pilot fundraising rounds – collectively raising £503K – matched by £452K in Net Zero Programme funding towards £1.4M worth of projects.

40 of the 71 raised more than they needed to, and 63 out of 71 raised more than 80%.



£1.4M
WORTH OF
PROJECTS
FUNDED

Couple drive fundraising for green projects at church

Passionate environmentalists Susan and Roger Moseley are helping their local church replace its old gas boiler with a more environmentally friendly heating system – thanks to spearheading the Give To Go Green scheme.

The couple, along with the St Margaret & St Andrew's Church community in Littleham, Devon, raised £10,000 which was match funded by Give To Go Green. The £20,000 total will help pay towards the cost of installing new electric infrared heaters in parts of the church.

Driven by their passion to care for God's creation, Roger and Susan helped to organise a series of fundraising events including a concert featuring the church's handbell ringers;

a board game morning; wood turning lessons; sailing opportunities; craft and painting sessions; a clothes swap; weekly lent lunches with homemade soup; items for sale made from recycled wool; and even a sponsored parachute jump.

The money raised will pay for electric heaters in the nave area of the church, but further fundraising is needed to pay for a 'three phase' electricity supply, as well as additional electric heaters in the choir and side chapel.

"We're committed to making our churches as environmentally friendly as possible and protecting God's glorious creation."

Susan Moseley, St Margaret & St Andrew's Church, Littleham, Devon.

READ THE FULL STORY



Small changes make a big difference

No matter the size or age of the building, a church's journey to net zero carbon often begins with a small change which can make a big difference.

Half of the Church of England's carbon emissions from churches come from just 20% of churches - generally the larger, busier ones, most of which are in use every day. Around 7% of churches* are already at net zero, largely because they are medieval buildings in rural areas without gas or electricity connections.

For the busier churches with the highest emissions, often smaller steps are taken first which can make a significant difference. Churches have been switching to LED lighting, installing timers on lights and heating people rather than the building with electric or infrared heaters.

The Net Zero Programme is supporting churches to make small changes through its £2.4M Quick Wins grants, £2M fully funded energy audits, a £250K Pilot and Innovation Fund and a wealth of online resources including a [Practical Guide and Checklist](#).



Small changes save urban church thousands of pounds in energy bills

A busy city church has saved thousands of pounds on its energy bills thanks to making a number of small changes to reduce its carbon footprint and help care for God's creation.

Priest in Charge Rev Sera Rumble and a team of passionate volunteers at St Denys's Church, on the edge of the inner city of Southampton, have made subtle changes to reduce the church's energy consumption and as a result have saved an estimated £5,000 off their annual £20,000 utilities bill.

The changes have included switching halogen lightbulbs for LED lighting; replacing kettles with triple-insulated urns; insulating pipes

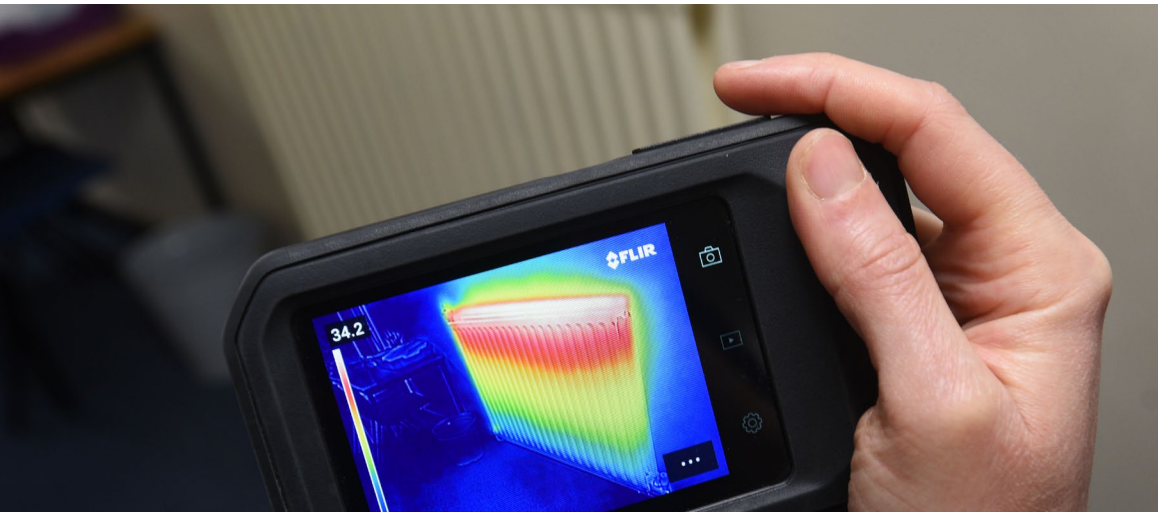
throughout the building; monitoring electricity use through smart meters, buying heated pads for office chairs and installing automatic timers for lights and electric heaters.

Volunteer Mike Strickland said: "Loving the local people, loving the planet, loving the people in this world who are struggling with conflict, loving our community - are all reasons we are making these changes. They kind of build on the church's mission - we're not just doing this because we are 'greenies' (although we probably are!) - but this is part of loving the world out there and loving the world around here."

"Small differences over time have made a huge difference - meaning we can love nature, love people and express our love for God."

Priest-in-charge Rev Sera Rumble, St Denys Church, Southampton.

READ THE FULL STORY



Cost savings

Heating typically makes up over 80% of a church's energy use. So, decarbonising this heat is critical in cutting our carbon footprint. This means moving away from fossil fuels such as oil, gas or LPG for heating.

Our churches and churchyards, and the objects and artefacts they contain, along with the nature and wildlife they sustain - are some of our nation's most valuable heritage assets. So it is important that we approach decarbonisation works sensitively.

The Net Zero Carbon Programme has [resources and guidance](#) to help all types of churches reach net zero carbon, wherever they are on the journey.

Many of the churches who have carried out net zero projects are finding their buildings are warmer and more welcoming, and many are finding that they are saving them money. This means more resources can be available for other missional activities in their church building.

Church slashes heating bill by 80% after Net Zero overhaul

A church in Stroud has cut its carbon emissions, saved money and been able to invite more people into the building, all thanks to the inspiration of two members of the congregation.

The congregation at Holy Trinity Church in Stroud, Gloucestershire, which can seat 250 people, were struggling with an old gas heating system, that cost an average of £122 to heat the building for a Sunday service.

Left 'buzzing' by a Diocesan seminar on sustainability, two members of the PCC, Jai Carr (pictured) and Richard Hollick, decided to investigate the best options for Holy Trinity.

The answer: targeted heating. Earlier this year, the gas-fuelled

boiler was replaced with targeted heating. Convection heaters have been placed under the pews and the whole church is divided into heating zones, so that just one area can be heated for a small meeting, for example, rather than heating the whole church.

A Sunday service now costs just £22 to heat the congregation.

"It's the right thing for the church to do for the environment. It's God's will really."

Treasurer Jai Carr, Holy Trinity Church, Stroud.



[READ THE FULL STORY](#)



Cost savings



Let there be light!

A busy church in Kent is actively tackling its carbon emissions and energy usage by making small but vital changes to its building with the future of the planet in mind.

St Stephen's Church in Tonbridge has saved over £2,500 on its energy bills since making the switch to LED lighting throughout the building in late 2023 – and now, St Stephen's leadership team are planning on installing solar panels to help reach net zero carbon by 2030.

Rev Mark Barker said: "The footfall through the building is considerable each week and the energy use is quite high. We started to look for ways to reduce both our energy costs and our impact on the environment and began small with changing our lightbulbs in church to LED lightbulbs."

Chris Blackman, Premises Manager at St Stephen's said: "We had been using 100 watt halogen light bulbs which generate a lot of heat and also use up a lot of energy. We then replaced them with a 16 watt LED alternative, which instantly led to a big saving: around £2,500 within the first four months of 2024 alone."

"As Christians, the environment is very important to us," says Community Café Manager Wendy. "We need to look after this wonderful creation that God has given us. Every one of us can do a little thing."

"We are called to be good stewards of creation," adds Mark. "It's part of loving our world and loving our neighbours. We're hoping that we can make a difference as a church, and believe that we are beginning to do so."

WATCH & READ THE FULL STORY



'We think our bills will be halved' - the story of a vicarage's Net Zero overhaul

A vicarage in a deprived area of Bristol has been transformed by the installation of solar panels, insulation and an air source heat pump.

Formerly, the 1970s vicarage, which had gas central heating, "was cold on a warm day", according to the Rev Derek and his wife Anne Maddox.

Last summer, the Diocese of Bristol began a programme of making 130 of its vicarages more fuel efficient, as part of the Church of England's ambition to reach net zero carbon by 2030.

With the family at home, alongside a Ukrainian family who have also been living in the vicarage, work began

to improve the house's fuel efficiency. In went cavity wall insulation and loft insulation. Solar panels were fitted on the roof. And crucially, the old gas heating system was replaced with new pipework, radiators and an air source heat pump.

"The main benefit is that it will be energy efficient," says Rev Derek. "It will cost significantly less. We think that our bills will be halved, if not more. It will need less energy to heat the house due to the improvements to the building, and alongside an all-electric highly efficient heating system it means that we can be net zero. We are environmentally-concerned people, and so this is important to us."

WATCH THE FULL STORY





"I think it's important to care for our planet because it's not just our home it's the animals that live on it too."

Isaac from Barnwood CofE Primary School, Gloucester.

Tackling climate change is missional

As a result of making changes to lower their carbon emissions, many churches are finding people in their communities are interested in what they are doing – helping to support the Church of England's mission to make disciples of Jesus.

Climate change and society's response to it are issues which are of deep concern to younger generations and the work of the Net Zero Programme is deeply relevant to the congregations of the future.



"I think it's really amazing that not just our church, but the Church of England as a national institution is putting in the work to become more environmentally friendly."

Maisie, member of St Peter Mancroft, Norwich.

Young people in Norwich are inspired by net zero changes

St Peter Mancroft Church is located in the marketplace in the heart of the medieval city of Norwich and is the largest of the city's 31 surviving medieval parish churches.

Last year, the church received a Church of England Demonstrator Churches grant of £50,000 with co-funding from the scheme's partners, Benefact Trust, of £36,00 to transform its carbon footprint and energy use by replacing its entire interior lighting system and installing heat pumps as well as batteries and 48 solar panels.

Through this work, the church expects to see an 84% reduction in emissions by saving 52.26 tonnes of CO2 each year.

Teenager Tom from the church said: "The church has got a real name in the city, so to be a kind of role model for other churches and other sites in the city is really cool to be taking these steps."

Another young person from St Peter Mancroft, Sam, added: "It's so important these changes are made and I'm so proud of our church for doing it."

[READ THE FULL STORY](#)



Looking forwards to 2030

Julian Atkins (pictured far right below) is the Church of England's Net Zero Programme Director and writes here about the ambitious 2030 target and his vision for the programme.



Bishop Graham Usher (centre) and Julian Atkins (far right) join speakers at the British Antarctic Survey HQ in Cambridge as part of the Connect 2025 conference.

Events around the world over the last year or so have shifted attention away from the challenges posed by climate change to the more immediate pressures being faced by communities around the world.

Yet from the data being published by those tracking the changing climate of our single island planet home, we know that it's even more important that we continue the hard work on tackling the changes that are occurring and reducing the impacts of global warming. In 2024, the European Union's Copernicus programme published results which indicated that 2024 was the hottest year on record and the first year where the average global temperature exceeded the 1.5°C threshold set by the Paris Agreement. And that's a really worrying development.

2024 wasn't just the hottest year in terms of the global average, the average temperature in Europe and in the extra polar oceans was also the highest ever recorded. So we need to do everything we can to redouble our efforts to make progress on reducing the impacts of climate change and the rate at which they are wreaking havoc on vulnerable populations and on ecosystems and species.

Such a stark reminder should spur us on to do as much as we can to lead the way as the Church of England by taking practical steps to decarbonise our often complicated, yet historic and sensitive buildings – buildings which sit at the heart of every community.

The programme has only just started to gather momentum but we are already seeing the first fruits of the efforts of our early adopters – and the signs are encouraging – from communities getting behind

local fundraising efforts to support net zero projects in their local church, whether they are church goers or not, to smaller rural churches taking simple steps to find heating solutions which work for their building and which then help to offer a warmer welcome which is drawing people to them.

For our most iconic buildings, our cathedrals and more active churches are also starting to make good progress with their net zero plans though in many cases they will need to progress towards net zero in a series of stages, and that's ok. The early forecasts from our clergy housing decarbonisation work are also demonstrating that with the right investment, the homes our clergy live in can move a long way towards being net zero by 2030. And finally, the work we have been doing to develop the pipeline to decarbonise our schools is also starting to pay off with improving success rates in securing external grant funding, but there is still a long, long way to go.

And we know that some churches are finding the challenge harder than others for a whole host of reasons and so it's important that we all continue to work collaboratively across the Church to make as much progress as we can. And when the challenge seems impossible - it's important for us to stay positive and to remind ourselves that the task at hand is a marathon and not a sprint, but one in which we still need to try and set a good time.

And we should also take courage from the reading in Galatians 6:9:

"Let us not become weary in doing good, for at the proper time we will reap the harvest if we do not give up."

Our plans for the next year and beyond

Phase 2 (2025-2028)

- Assess carbon reduction pathways and forecast what is likely to be achieved by 2030
- Build on phase 1 pilots and projects to transition to decarbonisation delivery at scale
- Capture and share learning
- Develop and embed decarbonisation skills across our Church community
- Evaluate progress and develop measures to fill any gaps in support
- Expand projects/grant funds which have proven to be successful in Phase 1
- Begin process to embed net zero action into Business As Usual

Phase 3 (2029 – 2031)

- Continue delivery of decarbonisation projects established in phase 2 and transition to Business As Usual
- Evaluate progress and share learning
- Develop the plan for tackling Scope 3 emissions post 2030
- Complete work to decide whether and how best to align the Church's net zero programme with recognised science based targets
- Review



Children from St Margaret's Church in Southsea, Portsmouth, with the church's heat pumps.

2024 A year in pictures

The earth is the Lord's, and everything in it, the world, and all who live in it: for he founded it on the seas and established it on the waters.

Psalm 21:1-2

READ MORE CASE STUDIES HERE



Working together to care for God's creation



✉ nzcprogramme@churchofengland.org
💻 www.churchofengland.org/resources/net-zero-carbon-routemap

This document has been prepared by the Church of England Net Zero Programme team.
If you have any questions, please email nzcprogramme@churchofengland.org



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