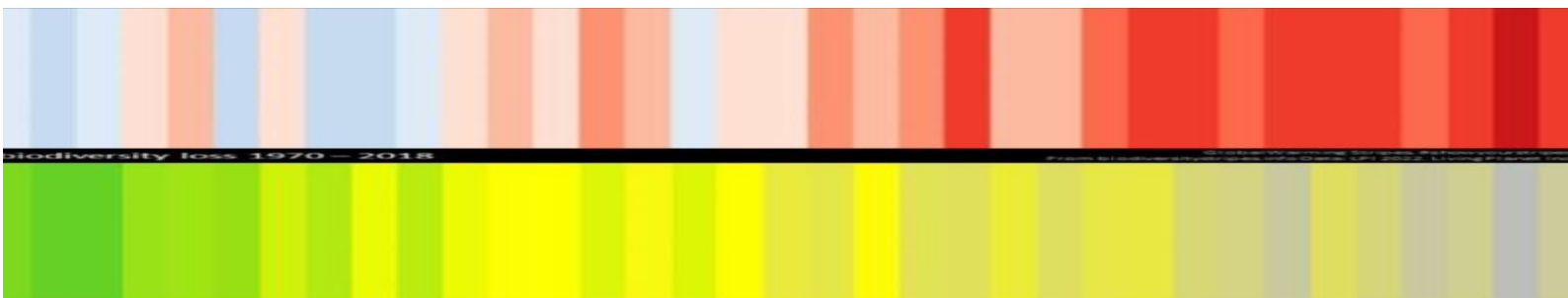




THE DIOCESE OF  
**SHEFFIELD**

**Net Zero Carbon Action Plan**  
**2023 - 2030**



## Revision history

Version	Date	Description of changes	Author
1.0	14/11/2023	Initial document release for Diocesan Synod, 25 November 2023	David Castle, NZ Project Officer

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## Acknowledgements:

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## 1 Introduction

- 1.1 Climate change and its impacts on people is one of the biggest issues confronting our world today. This document sets out one of the major ways the Diocese of Sheffield is seeking to respond to this challenge.
- 1.2 General Synod voted in February 2020 for the whole of the Church of England to achieve net zero carbon by 2030. The vote recognised that the global climate emergency is a crisis for God’s creation and a fundamental injustice.
- 1.3 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, 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.
- 1.4 On 28<sup>th</sup> November 2020 Sheffield Diocesan Synod approved a motion to
  - *Declare a climate and ecological emergency*
  - *Support General Synod’s 2020 motion for all parts of the Church to reach ‘Net Zero’ carbon emissions by 2030*
  - *Produce a detailed updated Environment and Climate Justice Policy by July 2021 Diocesan Synod*
  - *Commit to the A Rocha UK Eco Church and Eco Diocese programmes*
- 1.5 This action plan sets out how we are answering this call. It builds on the work already undertaken across the diocesan estate in the recent past and incorporates the milestones set out in the Church of England 2030 Net Zero Carbon Routemap, which can be accessed [here](#). It also specifically fulfils the requirements in Milestone 4.1.4 of that Routemap.

## 2 Diocesan strategy – Renewed, Released, Rejuvenated

- 2.1 Our Net Zero mission flows from and enhances our Diocesan strategy:
- In seeking to be a church that is *renewed* we also work towards the renewal of the earth
  - In seeking to be a church that is *released* we find increasing freedom from lifestyles that abuse the natural world
  - In seeking to be a church that is *rejuvenated* we stand by succeeding generations, who will be most impacted by the climate and ecological emergencies.
- 2.2 People of all ages, backgrounds and experience are finding that taking action on climate change is at the very heart of what it means to be a Christian for them. The Anglican five marks of mission have always seen the safeguarding of creation and challenges to injustice as part of the mission of the church. In the light of the climate emergency, the church is uniquely placed to hold in tension narratives of hope and action. Proclaiming the gospel afresh in a climate emergency involves holding out hope in Jesus Christ along with a resolute commitment to action on climate change.
- 2.3 The Diocese's ambition to become net zero carbon is a symbol. By itself it will not prevent global climate change. However, it stands in a long and biblical tradition of prophetic action drawing attention to all that runs counter to God's will and the common good. The Kingdom of God is characterised by justice, peace and ecological wholeness. The vocation of the church is to be sign, a sacrament, and a foretaste of Christ's Kingdom. Our ambition is to grow sustainable churches and church schools, which demonstrate what is possible when Jesus' reign is acknowledged.
- 2.4 We already have a number of churches and schools who have embraced the net zero carbon challenge as part of their core mission, seeing their action as integral to the wider mission of the church. They are taking the good news of the gospel out to transform their communities, to play a part in creating a net zero world. Our net zero carbon work is a small, if costly, act of sacrificial love, which tells the next generation and the world's most vulnerable that they are heard, they matter, and we stand alongside them.
- 2.5 We are called to stand in solidarity with our global siblings across the Anglican Communion. We know the injustice of climate change, which is impacting more deeply on the poorest in society, both locally and globally, and future generations, who have historically done the least to cause it. The ecological crisis is a humanitarian crisis, not just one that relates to the natural world, and addressing it is as much about how we love one another as how we care for God's creation.

### 3 The Diocesan Net Zero Carbon Ambition

- 3.1 The diocese is striving to be net zero carbon by 2030.
- 3.2 Our vision for 2030 for our clergy properties, schools and churches is as warm, bright and welcoming buildings, well maintained, powered by renewable energy and more energy efficient, with lower energy costs. Investing in the future of our buildings will enable them to be sustainable signs of the Kingdom: better serving the needs of the worshipping congregation and community; and acting as beacons of excellence in the transition away from fossil fuels. Our ministerial travel will also be decarbonised as far as possible with any remaining carbon emissions offset in verified schemes.
- 3.3 We are acting in response to and in support of the General Synod's call in February 2020, to be net zero carbon by 2030. This Action Plan builds on the existing Diocesan Climate Justice and Environment policy.
- 3.4 In July 2022 the General Synod approved the Church of England's Net Zero Carbon Routemap which sets out specific milestones on the journey to 2030 for all sectors of the Church's estate. These milestones have been incorporated into this action planning, but, given that there are forty-six of them, they are not specifically cited.
- 3.5 The Church of England Net Zero Carbon Programme Board will require each diocese to report on progress on the milestones in 2025, 2028 and 2031, which is reflected in the phased approach in this action plan.
- 3.6 The following key principles which underpin the ambition to be net zero across the diocesan estate are:
  - Rooted in a strong theological foundation
  - Urgent, relevant and widely understood
  - Data driven and focused
  - Embedded in all we do.
- 3.7 Our action to decarbonise the diocesan estate is not our only response to climate change, nor should it be our only way in which we express our mission to care for all creation. The inclusion of the Eco Church Award scheme, a tool to assist creation care being threaded through the life of a church, is one acknowledgement of this. The opportunities that our net zero programme provide for all Christians, and in particular our Bishops and senior clergy, to advocate with credibility in the public sphere should be explored further.

## 4 What is in scope for our 2030 target? (see also Appendix 1)

4.1 Across the diocesan estate the following are included in this plan: 153 clergy properties; 8 VA schools; 205 churches, some with church halls; and 1 office within the diocese.

- The diocese has direct control over the clergy property portfolio, being responsible for the carbon emission relating to each property's construction, but not for the occupiers' energy use.
- This action plan recognises that the diocese has an important role in engaging, supporting and equipping our PCCs and VA schools to care for creation, while recognising that each acts as an autonomous organisation.
- Voluntary Controlled schools and Academies fall outside the Church of England net zero definition, recognising the limited influence that the diocese can bring to bear on these bodies. However, this plan does include some actions to support all CofE schools recognising their place in the mission of the diocese.
- Our Cathedral is following a parallel path to net zero carbon, but reports directly to the Church Commissioners. As such it is out of scope of the Diocesan Action Plan but will work in partnership with the wider diocese.

4.2 The Church of England has broadly defined the net zero carbon ambition for 2030 to include Scope 1 and 2 greenhouse gas emissions.

- Scope 1 emission are generated from fossil fuels being burned directly:
  - As gas, oil or LPG heating fuel in a school, church or diocesan office
  - As petrol or diesel for travel for staff and ministerial miles (however congregations' and school students' travel to church or school is not included)
- Scope 2 emission are generated where fossil fuels are burned to generate electricity. Electricity used that has been generated from renewable sources (e.g. solar, wind, hydro), either onsite or via a renewable electric tariff, can be discounted from any building's carbon footprint.

4.3 Twenty-three churches in the diocese (11%) already have an estimated carbon footprint of less than one tonne according to the EFT and supplementary data.

4.4 While the greenhouse gases associated with our diocesan land are not in scope yet, the Church of England does expect diocesan land management plans to align to our environmental policies. Glebe and other land may be able to provide some carbon offsetting opportunities and so early sight of this is included in this action plan.

4.5 Scope 3 greenhouse gas emissions are where greenhouse gases are emitted indirectly e.g. from the manufacture of building materials, food production and processing, and provision of services such as insurance or banking. These are likely to be included in the Church of England net zero carbon programme after 2030. This action plan, therefore, makes provision for developing a pathway for this in Phase 4 2029-30. However, it is essential that we recognise that the carbon cost of these items should be borne in mind at all times in ongoing decision making.

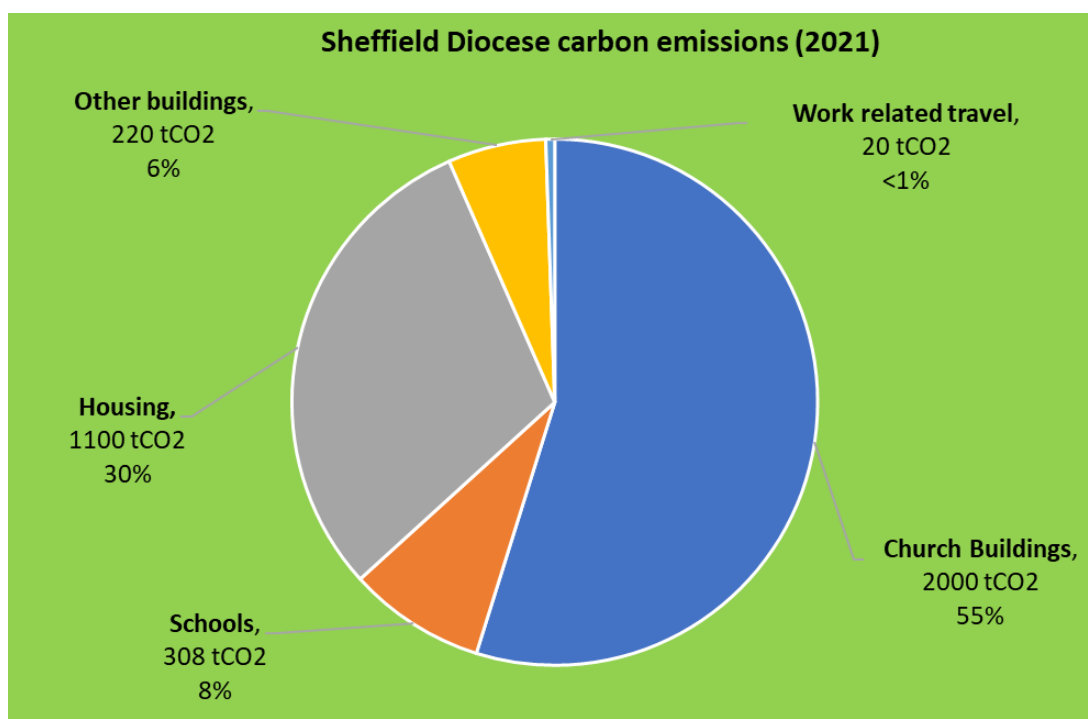
## 5 Baseline Carbon Emissions

5.1 We will use the Carbon Emissions Report 2021 as a baseline for monitoring the future carbon footprint of the diocese. Continuing to gather more accurate and up to date data will be important in setting priorities for support and funding across the phases of this action plan, in particular maximising engagement with the Energy Footprint Tool (EFT) by PCCs.

	Number of buildings in scope	Carbon emissions 2021 (tCO2e)	Carbon emissions 2020 (tCO2e)	% total carbon emissions (2021)
Church Buildings	205	2000	2400	55%
Schools *	8	308	300	8%
Housing	160	1100	1100	30%
Other buildings	?	220	250	6%
Work related travel	n/a	20	n/a	-
<b>TOTAL</b>	<b>373</b>	<b>3,648</b>	<b>4,050</b>	<b>100%</b>

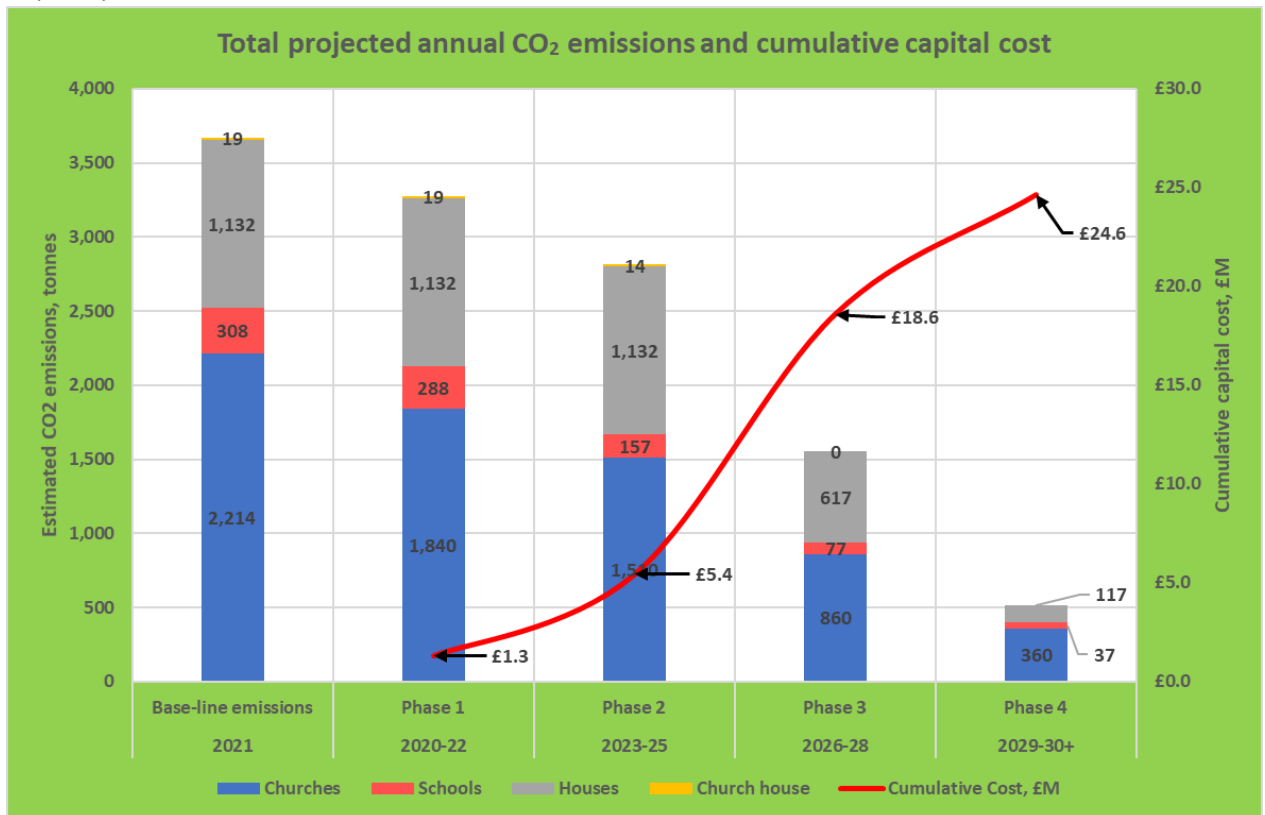
\* Only Voluntary Aided CofE Schools are in scope. Voluntary Controlled and Academies are not in scope.

*Estimated Carbon Emissions for Diocese of Sheffield (from national Carbon Emissions Report 2021)  
– amended for schools in scope*



## 5.2 Projected emissions 2020 – 2030

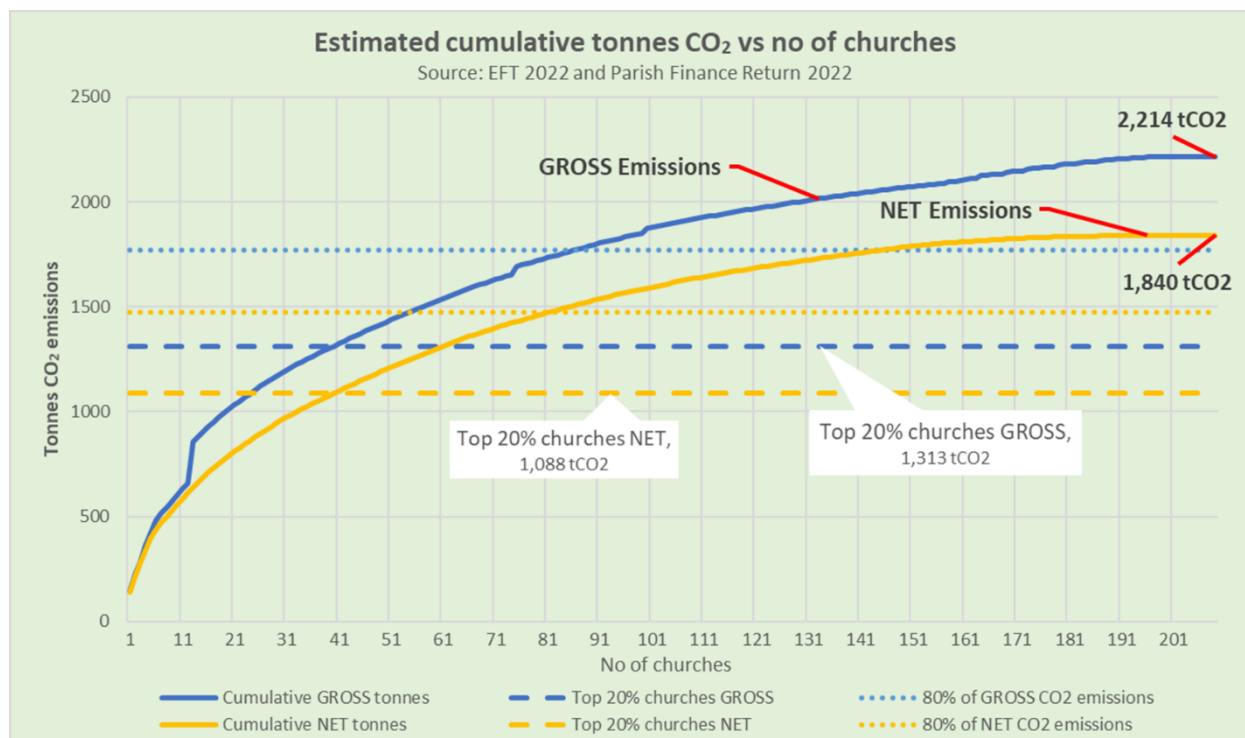
5.2.1 The individual Action Plans aim to reduce emissions at an accelerating rate over the period to 2023 as the programme gains momentum. There are 3 key enablers of this: motivation of stakeholders, technical feasibility, and sufficient funding. The part of the Diocesan estate that is most likely to lag is churches due to the number of buildings, technical complexities, capacity within PCCs, and available funds.





## 5.3 Churches

5.3.1 Using data from the Energy Footprint Tool (EFT) 2022, Parish Finance Returns 2022 and CofE Strategic Review 2021, the estimated gross CO<sub>2</sub> emissions are 2,214 tCO<sub>2</sub>, or 1,840 net tCO<sub>2</sub>. The 2022 EFT was filed by 79 churches, 39% of the total. As this is the most accurate method of estimating emissions, parishes will be actively encouraged to file their EFT return at the earliest opportunity each year and help given as necessary.



5.3.2 The 40 top 20% of churches’ emissions amount to 1,313 tCO<sub>2</sub> gross and 1,088 tCO<sub>2</sub> net. This is 59% of total net emissions.

The difference is due to the effect of using “Green” energy tariffs and on-site electricity generation through solar PV systems.

5.3.3 The following table shows the ages and carbon footprints of our churches:

Period	Net tCO <sub>2</sub>	No. in top 20%	Average tCO <sub>2</sub> per church	No. of churches	No. of Listed churches	No. in Conservation area
Early Medieval	33	1	6.6	5	5	4
Medieval	281	6	5.4	53	53	38
Post-Medieval	150	2	10.7	14	13	7
Victorian/Pre WWI	843	20	10.9	78	48	15
Modern	533	11	9.5	56	12	3
<b>Grand Total</b>	<b>1,840</b>	<b>40</b>	<b>11.5</b>	<b>206</b>	<b>131</b>	<b>67</b>

## 5.4 Schools

5.4.1 As of 27 June 2023, there are 8 Voluntary Aided (VA), 5 Voluntary Controlled (VC) and 28 Academy Trust schools.

5.4.2 The funding and control criteria for the various types of school labelled “Church of England schools” mean that only the Voluntary Aided schools are fully in scope. Over the Voluntary Controlled and Academy Trust school the Diocese has no responsibility or authority for capital investments nor the carbon footprint.

5.4.3 The following table shows the estimated emissions and ages of the VA schools:

School	Age	Emissions tCO <sub>2</sub>
Branton St Wilfrid's CE School	1966/68 Reconstructed 2012	43
Deepcar St John's	1966/68	39
Eastoft	1965, 2009 & 2014	13
Pollington Balne	1854, 1978 & 2916	55
St John The Baptist CE Primary Penistone	1966/68, 2019 & 2023	50
Tankersley St Peters CE Primary	Victorian, 1966/69 & 2013	46
Tickhill St Marys - Lower	1965/67	30
Tickhill St Marys - Upper	1965/67	33
<b>Total</b>		<b>308</b>

Source: current EPC data for schools

## 5.5 Clergy Housing

5.5.1 As of 15 August 2023, there are 157 houses, 153 of which are designated for clergy and 4 for other purposes. The EPC ratings and estimated carbon emissions of the clergy houses are as follows:

EPC rating	Number of houses	Total tCO <sub>2</sub> e	Mean tCO <sub>2</sub> e per house
B	5 (2%)	11 (1%)	2.3
C	49 (32%)	265 (23%)	5.3
D	78 (50%)	557 (49%)	7.2
E	25 (16%)	298 (27%)	11.9
<b>Total</b>	<b>153</b>	<b>1,132</b>	<b>7.2</b>

5.5.2 All but three properties are on mains gas, of which two are on oil and one on LPG.

5.5.3 Ages of the 153 clergy houses, including 4 Grade II listed buildings, are as follows:

Property Build Date	Number of houses
Pre 1900	15
1900-1919	5
1920-1939	20
1940-1959	14
1960-1979	50
1980-2000	38
2000-2023	11

## 5.6 Land (Glebe Estate)

5.6.1 Total area as at 31 December 2022 was 520 acres

5.6.2 Breakdown on type of property:

Type	Acreage
Arable land	420
Grassland	70
Recreation	18
Car park	0.5
Allotment	12
Commercial	0.3

5.6.3 Breakdown on type of tenancy:

Type	Number
Agricultural Holding Act	24
Farm Business Tenancy	7
Landlord & Tenant 1954 Act	7
Secure/Historic agreement	4
Ground Rents	100

## 5.7 Church House

5.7.1 Church House in Rotherham is a modern office building owned and entirely occupied by the Diocese. It has a combination of gas central heating and air-to-air heat pumps for heating and cooling.

The latest EPC certificate from 2017 shows a rating of C. The table below shows the energy use and CO2 emissions for 2022, based on actual meter readings.

2022	Electricity	Gas	Total	PV
Energy kWh	20,406	70,267	90,673	-13,297
tCO2	4.5	14.1	18.5	-2.9

## 6 Growing Churches

- 6.1 The increase in the frequency and intensity of use of church within the diocesan estate which come from growth is to be welcomed. We recognise that in the short term this may increase absolute carbon emissions, for example where a church is being lit and heated for more hours a week. Data on the carbon emissions per person hour will give a more nuanced picture of building performance and the EFT will, over time, reflect this. In the longer term, as our buildings are decarbonised, church growth will not present this issue.

## 7 Overcoming Barriers

### 7.1 Other Priorities

We see caring for creation as integral to the whole ministry and mission of our churches and church schools. Developing a net zero action and climate resilience plan should become part of the overall longer-term strategic planning for the diocese, every school governing body and every PCC. In so doing each organisation not only becomes relevant and inspirational, but also gives the buildings our communities use a firm footing for many years to come. Continued engagement and communication with a wide range of stakeholders will be essential. We acknowledge that not all PCCs, schools or clergy property occupants will be in a position to move at the same speed and careful support and guidance will be needed as we journey together. However, Eco Church and other programmes for schools will help to embed environmental issues into every-day behaviour.

### 7.2 Expertise and Capacity

Decarbonisation brings new challenges in an area where the church does not have prior expertise. As we learn together, training and upskilling will be vital to help meet our ambition of net zero. There are several training strands already either in planning or underway include Carbon Literacy training for diocesan staff and the wider diocese, input into the curates and first incumbents training, and regular building maintenance training for PCCs. This programme will be reviewed and adapted to meet the needs of learners at different stages. Our objective is Confident Christians for the climate emergency context.

- 7.2.1 An increase in staff capacity will be required by the diocese to support our mission. A joined-up approach is being developed that will ensure that Net Zero is embedded as a fundamental layer that informs and binds all our activities.

- 7.2.2 Using the initial Net Zero Carbon Capacity Building Fund grant we have a Net Zero Project Officer until January 2024.

The existing Property Team of 3 has 2 Chartered Building Surveyors who look after our clergy housing, land and schools, addressing the net zero opportunities in those areas.

The Buildings team has just doubled in size from 2 to 4 with central funding from the Transitional fund and has sustainability principles embedded within the team's working practice.

Resourcing Churches has 1 Chartered Building Surveyor looking after 5 of our churches.

Our Giving and Generosity team has expertise in fundraising and will ensure that fundraising activities for projects are co-ordinated as necessary across the diocese.

- 7.2.3 We have been granted funding from the Net Zero Carbon Capacity Building Fund of £111,000 for the two-year period 2024-2025. This will fund
- the employment a Net Zero Programme Manager for an initial two-year period. This will be a part time role that will replace and expand on the role of the NZ Project Officer.
  - an increase the hours of the Environmental Project Support, in support of the Programme Manager.
  - a number of detailed energy audits for our most complex buildings.
  - external energy consultancy to support our in-house teams where necessary.

### 7.3 Costs and Funding

- 7.3.1 We anticipate that the total capital investment of reaching net zero will be in the region of £24.6M over the next three phases of this action plan; £12M across our 205 churches; £9.6M for schools (extensively for the 8 VA schools); and £3.0M to retrofit clergy properties. The majority of this will need to be sourced by school governing bodies and PCCs. Post pandemic and in a time of economic downturn this will be extremely challenging.
- 7.3.2 As mentioned in 7.2.2 above, we have directed the initial £15k received from the national Net Zero Carbon Capacity Building Fund to employ a Net Zero Project Officer to manage the initial stages of the NZ Programme.
- 7.3.3 The National Net Zero Carbon Programme has central resources available to assist in identifying funding options and writing applications.
- 7.3.4 Further Central funding will become available in 2023-25 under the National Net Zero Carbon Programme to help initiate NZ projects, to support “quick wins” for small scale work in churches, and match-funding small decarbonisation projects. Beyond that there will be more announcements as the programme rolls on.
- 7.3.5 Recognising that many of our clergy properties, schools and PCCs will need to find significant external funding to reach net zero we will draw on the planned National and Regional Funding Teams to inform and help us to support the property team, schools and PCCs.

## 7.4 Churches and church halls - £12M

- 7.4.1 £500k of the net zero costs relate to general maintenance cost and should be within PCCs' existing budgets.
- 7.4.2 Some of our PCCs will be able to fund their net zero capital investment internally, for instance low-cost energy saving measures such as heating controls and LED lighting. For smaller energy efficiency projects the diocese already provides grants up to £5K from the Church Building Fund. However, most PCCs will require substantive support in accessing external funding to be able to decarbonise their buildings.
- 7.4.3 In Phase 1 2023-25 some funding may be available through Church of England pilot initiatives. Some further funds may be available from the Church of England in Phase 2 2026-28, but this is likely to only be a small portion of the expected capital requirement and will be useful as match-funding for other funding streams.
- 7.4.4 As stated above, we will explore ways to provide additional support for our PCCs in accessing external funding.

## 7.5 Schools - £9.6M

- 7.5.1 Government policy is to encourage the transfer of schools to Academies, so our 8 VA schools may be reduced in number as a result, and so will fall out of scope of this plan. However the Action Plan assumes that this does not happen and therefore provides a decarbonisation programme assuming the current status of each school is unchanged.
- 7.5.2 The DBE has already committed £8k funding to provide a Heat Decarbonisation Audit to be developed for every VA school. All CofE Academy Trusts within the DoS have also been invited to join this programme. The reports from these audits are essential in accessing funding from the government *Public Sector Decarbonisation Scheme*, where we anticipate the majority of the capital funding to be sourced.
- 7.5.3 We will assess where external funding can be sourced to support the consequent demands that additional building projects will place on SCA funding and the need for VA schools to make their 10% contribution.
- 7.5.4 DBF & DBE should encourage CofE Academy Trusts to participate in the NZ Action Plan but drawing on their own funding arrangements.

## 7.6 Clergy Property - £2.5M

- 7.6.1 Some of the actions associated with retrofitting properties will come within the regular maintenance budget.
- 7.6.2 Disposal of some properties may contribute to the funds needed for the major roll out of retrofitting in Phase 4, 2025-30.

7.6.3 Government and Local Authority grants, and other funding streams will be exploited where possible.

7.6.4 We will seek external funding wherever possible, drawing on the advice of the National and in-house funding resources.

## 7.7 Land

7.7.1 The guidance note 'Managing Glebe Land for Biodiversity and Climate' (link in Appendix 2) was approved by the Church of England Environment Working Group in 2023 to help diocese committees endorse and adopt policies which promote biodiversity improvements and climate resilience.

7.7.2 Our agents, Savills, are engaged to manage a number of Diocesan portfolios across the UK and have established a working group to consider potential benefits of an inter-Diocesan approach including actions towards biodiversity improvements and climate resilience.

7.7.3 As opportunities arise, Savills aim to establish constructive dialogue with stakeholders, most notably farm tenants. By understanding their aspirations they can identify opportunities to enhance returns (through for example change of use or by gaining vacant possession); and help ensure they advance the Diocese sustainability agenda.

7.7.4 Detailed data on market trends and practical insights into best practice and innovation also have a vital role to play in achieving estates' financial, social and environmental aims.

7.7.5 Looking forward, Savills can provide an appraisal of all existing tenancies against the criteria within the new guidance note, highlighting the possible opportunities and constraints.

7.7.6 Investigations into potential sites for renewables will be kept under review.

## 8 Offsetting and Insetting

8.1 It will not be possible to reduce the scope 1 and 2 emissions from the diocesan estate to zero. We will strive to cut emissions to as close to 10% of the 2021 baseline as possible, approximately 365 tCO<sub>2</sub>. To reach net zero these residual emissions will need to be offset through recognised and properly accredited schemes.

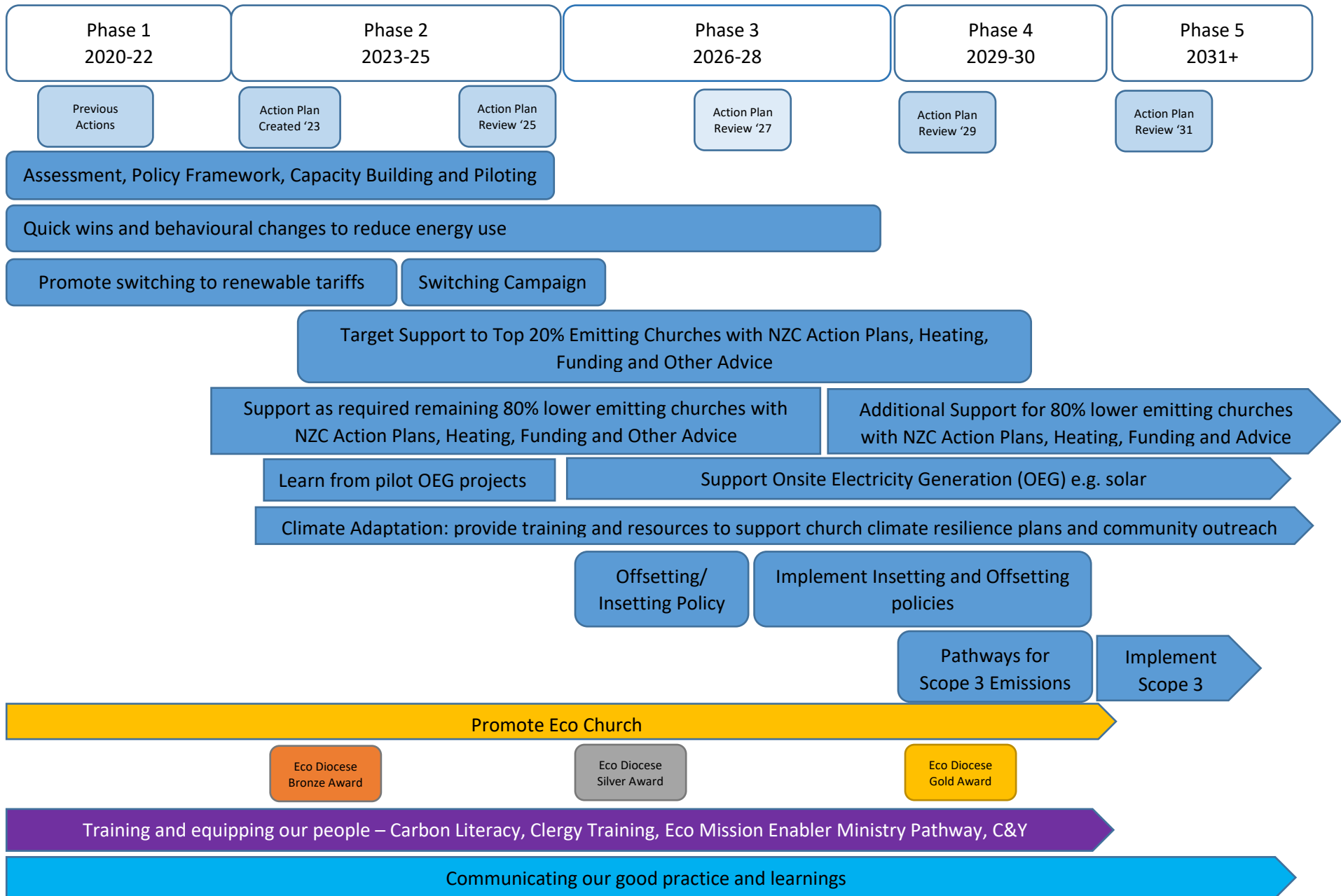
8.2 In Phase 3 2026-28 we will explore potential pathways for offsetting and insetting, for staged introduction towards 2030. Insetting is an emerging mechanism for companies to reduce carbon emissions and store carbon by investing in interventions within their own value chain, for example PCCs could inset by contributing to a fund used to support solar panel installation at church schools or churches. Carbon sequestration through accredited woodland planting on some diocesan land may also be possible.

- 8.3 Within the diocese there are some smaller buildings with low use where it may be more appropriate to offset annually than bring forward costly capital investment, for example, to change a heating system.



## 9 Action Plans

### Action Plan 1: Our Churches & Church Halls



## 2020-22 Phase 1: Initiating our net zero carbon (NZC) ambition

<b>Lead</b>	DEO	<b>Estimated Annual Carbon Reduction</b>	374 tCO <sub>2</sub> e
<b>Delivery Team</b>	Church Buildings Team, DAC, Diocesan Environment Working Group, Archdeacons, Communications Team, Resourcing Churches Team	<b>Cost to date</b>	Not calculated
<b>Stakeholders</b>	PCCs, Parish Eco Church groups, Deanery Synods	<b>Potential Cost Savings</b>	Not calculated

### Objectives and Actions Delivered to Date

1. Develop a strategy and communicate the net zero carbon ambition
  - ✓ Cross departmental NZC: A planning workshop was held in Mar 21 and the NZ Steering Group established in 2022, meeting every two months and chaired by Bishop Sophie, with LJ Buxton as Vice-Chair. One meeting a year is open to all. Provides ongoing monitoring and implementation for net zero work across the diocesan estate and embedded in the mission and objectives of the diocese
  - ✓ The DEO spoke at clergy chapter meetings and the churchwardens conference, led an Eco Church and Net Zero workshop at the 3-day residential Diocesan Conference, DEO and/or Net Zero Carbon Project Officer have spoken at eight Deanery Synod meetings (out of 12 Deanery Synods), buildings officers running regular maintenance workshops including the Practical Path to NZ. The Bishops lecture and Diocesan Development Day have had an Environment theme.
  - ✓ Regular communication through a Comms strategy including Green mailings, Eco Church Facebook group Network magazine and Diocesan communications.
  - ✓ Encourage engagement with the Eco Church Award Scheme as a route into NZC action including a Bronze Eco Diocese award in Sept 23 and a quadrupling in numbers of Eco Churches.
  - ✓ The Diocesan Environment Working Group membership has been increased and broadened, with regular reports on net zero and Eco Diocese work.
  - ✓ The DEO sits on the Board of Faith and Justice chaired by an Archdeacon, enabling reporting upwards to Diocesan Synod, Bishops Council etc.
2. Put in place the data collection mechanisms, policy framework, upskilling, piloting and capacity building training to support the transition to NZC
  - ✓ 38% of PCCs completing the Energy Footprint Tool section of the Online Parish Returns
  - ✓ Green tariffs from the Green Journey scheme etc
  - ✓ NZC question included in Archdeacons Articles of Enquiry 2021
  - ✓ Diocesan Environment Group reconfigured to support NZC and other environmental objectives including appointment of environment project support 7 hours per week
3. Engaged with DAC to bring NZ to the fore in discussions
4. Switching to Green Tariff
  - ✓ Nearly ¼ of all churches have switched to a green electricity tariff.

## 2023-25 Phase 2: Implementation – Quick Wins

<b>Lead</b>	NZ Project Officer, NZ Programme Manager and Church Buildings Team	<b>Estimated Annual Carbon Reduction</b>	330 tCO <sub>2</sub> e
<b>Delivery Team</b>	DAC, NZ Steering Group, DEO, Deanery Environment Champions, Archdeacons, Communications Team, Resourcing Churches Team, Church Operations and Buildings Support (COBS) Team	<b>Cost Estimate</b>	£2.7M
<b>Stakeholders</b>	PCCs, Parish Environment Officers, Area Deans, Deanery Synods, Bishops	<b>Potential Cost Savings</b>	Not calculated

### Objectives

1. Increase capacity for Net Zero
  - Appoint Net Zero Project Officer for 2023
  - Expand NZ admin support
  - Apply to the NZ Capacity Building Fund to
    - Appoint Net Zero Programme Manager to deliver the NZ programme 2024-25
    - Fund additional expertise to advise in energy systems and management
2. Carbon Literacy training programme, NZC training included in First Incumbents and Curates training
3. Appoint DAC Energy Advisor
  - Develop DAC sustainability and heating policies and guidance.
4. Clear theological foundations
  - Continue and extend upskilling for clergy and lay people
  - St Hild's Theological College received a Bronze Eco Church award (2017) and provides training for many Diocesan ordinands, with environmental mission as central to its training including cross-curricular links throughout our programme.
  - Mission Action Plan has a section on Eco Church and Net zero, to help clergy and PCCs to develop their own authentic narrative for how NZC and wider care for creation fits into their broader mission plans.
  - Local foundations programme (for those exploring vocation) and focal ministry training (for local ministers) to incorporate creation care. Aim to recruit Deanery Champions via these and other programmes
  - Further training initiatives will be implemented as part of the Silver Eco Diocese criteria
  - The Diocesan Environment Working Group now has a theology/spirituality subgroup
5. Identify and target support to the churches with the highest 20% carbon footprint (approximately 40 churches) who emit an estimated 61% of emissions, 1,449 tonnes CO<sub>2</sub> pa.
  - Encourage all PCCs to complete the Energy Footprint Tool to provide data and expect this report to be included in the APCM reports
  - Work with Church Buildings Team, Archdeacons, & Bishops to prioritise NZC support most effectively
  - Offer bespoke support (from staff, advisors, Deanery Environment Champions, Archdeacons) for each parish to develop a NZC plan, including low carbon and renewable heating advice and energy audits.
  - Work with Church Buildings Team to instigate a learning community of a targeted group of PCCs who will act as exemplars for other churches
6. Ensure all PCCs are encouraged to take “quick win” and behavioural change energy saving actions by following the National “Practical Path to Net Zero” steps and advice
  - Include NZ in Church Wardens' Conference and Toolkit.

- Provide central training and updated resources to support all PCCs, including building maintenance workshops
  - Continue to train and equip Parish Environment Officers to enable behavioural changes
  - Encourage engagement with the Eco Church Award scheme as a route to enabling theological grounding, behavioural change, NZ quick wins and wider ecological mission.
7. Undertake a campaign to promote tariff switching to renewable energy,
- Promote knowledge and understanding of the value of switching, including value for money in the medium term
  - Target PCCs that are not currently using the Green Journey Scheme, Parish Buying or another renewable energy provider
8. Enable PCCs to align with DAC Sustainability Policies
- Increase capacity to offer support and advice to parishes by expanding the Building Officer team from 2 to 4, funded by the National Transition Fund
  - Target support in order to provide adequate advice to parishes with oil fired boilers to ensure that no new oil boilers are installed after 2025 where practical.
9. Increase funding to support implementation
- Continue to deploy Diocesan Grants to facilitate small scale NZC projects
  - Work with National and Regional Funding Officers and the COBS Team to identify potential funding streams, create a NZC funding action plan, develop resources and upskill staff and parishes.
  - Seek further funding for NZ Programme Manager, energy audits and energy consultancy from 2026 onwards.
10. Learn from Demonstrator Projects
- Identify parishes with good practice to act as demonstrators and case studies
  - Identify and support PCCs to apply to Church of England to be Net Zero Demonstrator Projects to obtain additional funding
  - Work with PCCs trialling new technologies and onsite generation to ensure maximum learning ahead of Phase 3 upscaling.
11. Climate adaptation
- Embedded in DAC sustainability policies and guidance
  - Continue to provide climate resilience resources and training
12. Community Energy Schemes
- Explore potential for renewable electricity generation and funding through Community Energy Schemes.

## 2026-28 Phase 3: Implementation – Upscaling

<b>Lead</b>	NZPM and Church Buildings Team	<b>Estimated Carbon Reduction</b>	650 tCO <sub>2</sub> e
<b>Delivery Team</b>	DAC, NZ Steering Group, Deanery Environment Champions, Archdeacons, Communications Team, Giving and Generosity Team, Green Journey Scrutiny Group	<b>Cost Estimate</b>	£5.4M
<b>Stakeholders</b>	PCCs, Parish Environment Officers, Area Deans, Deanery Synods, Bishops	<b>Potential Cost Savings</b>	Not calculated

### Objectives

1. Continue to target support to high emitting churches
  - Track and support the development and implementation of NZC Plans
  - Ensure all quick wins have been undertaken
  - Net Zero Programme Manager to continue to offer bespoke advice and support to ensure transition to low carbon or renewable heating in majority of high emitting churches
2. Continue to provide resources and support for all PCCs
  - Encourage continued good maintenance and ensure deployment of quick wins at all churches
  - Provide ongoing training and resources to equip PCCs and Parish Environment Officers to create and deliver NZC action plans and wider eco mission
  - Encourage stepping up Eco Church Award accreditation as a route to enabling theological grounding, behavioural change, quick wins, motivation for hard to tackle decarbonisation and wider eco outreach.
  - Expand on learning communities established in Phase 2 to provide further reach
  - Provide support and training around any new Church of England policy and guidance on embodied carbon in building materials
3. Upscale funding
  - Review and utilise the Funding Action Plan to obtain funding to support implementation of church NZC action plans eg lighting and heating schemes
  - Seek further funding to ensure NZ programme capacity is sufficient
  - Actively engage with National NZ Programme on capital funding opportunities
4. On site electricity Generation
  - Encourage and support the installation of solar, wind, hydro generation where appropriate, to reduce energy costs and contribute to community energy generation
  - Enable learning communities/peer support from PCCs who have installed electricity generation
5. Climate Adaptation
  - Encourage and support PCCs to carry out building improvements
  - Encourage and support PCCs to implement plans to serve their communities e.g. as cool spaces in heat waves
6. Offsetting/Insetting
  - Establish a policy framework for insetting/offsetting. Explore the potential for a diocesan scheme
  - Encourage all PCCs to start to inset/offset as necessary to be net zero carbon ahead of 2030.

## 2029-30 Phase 4: Implementation – Tackling Challenging Emissions

<b>Lead</b>	NZPM and Church Buildings Team	<b>Estimated Annual Carbon Reduction</b>	500 tCO <sub>2</sub> e
<b>Delivery Team</b>	DAC, NZ Steering Group, Deanery Environment Champions, Archdeacons, Communications Team, Giving and Generosity Team, Green Journey Scrutiny Group	<b>Cost Estimate</b>	£3.95M
<b>Stakeholders</b>	PCCs, Parish Environment Officers, Area Deans, Deanery Synods, Bishops	<b>Potential Cost Savings</b>	Not calculated

### Objectives

1. Continue support for all PCCs in implementing NZC action plans
2. Seek additional funding to tackle “hard to treat” buildings
3. Encourage continued installation of onsite energy generation where appropriate
4. Upscale climate adaptation
  - Ensure all PCCs have a climate resilience plan in place
5. Upscale uptake of insetting/offsetting for PCCs to reach NZC
6. Prepare for indirect emissions coming into scope
  - Work with the national church on data collection mechanisms for Scope 3 carbon emissions
  - Establish policy framework around indirect emissions from churches
  - Pilot and provide capacity building training to support parishes

## 2031+ Phase 5: Mop Up and Scope 3 Emissions

<b>Lead</b>	NZPM and Church Buildings Team	<b>Estimated Annual Carbon Reduction/Offsetting Requirement</b>	Not calculated
<b>Delivery Team</b>	DAC, Church Buildings Team, Diocesan Environment Group, Deanery Environment Champions, Archdeacons, Communications Team, Stewardship Team, Green Journey Scrutiny Group	<b>Cost Estimate</b>	Not calculated
<b>Stakeholders</b>	PCCs, Parish Environment Officers, Area Deans, Deanery Synods, Bishops	<b>Potential Cost Savings</b>	Not calculated

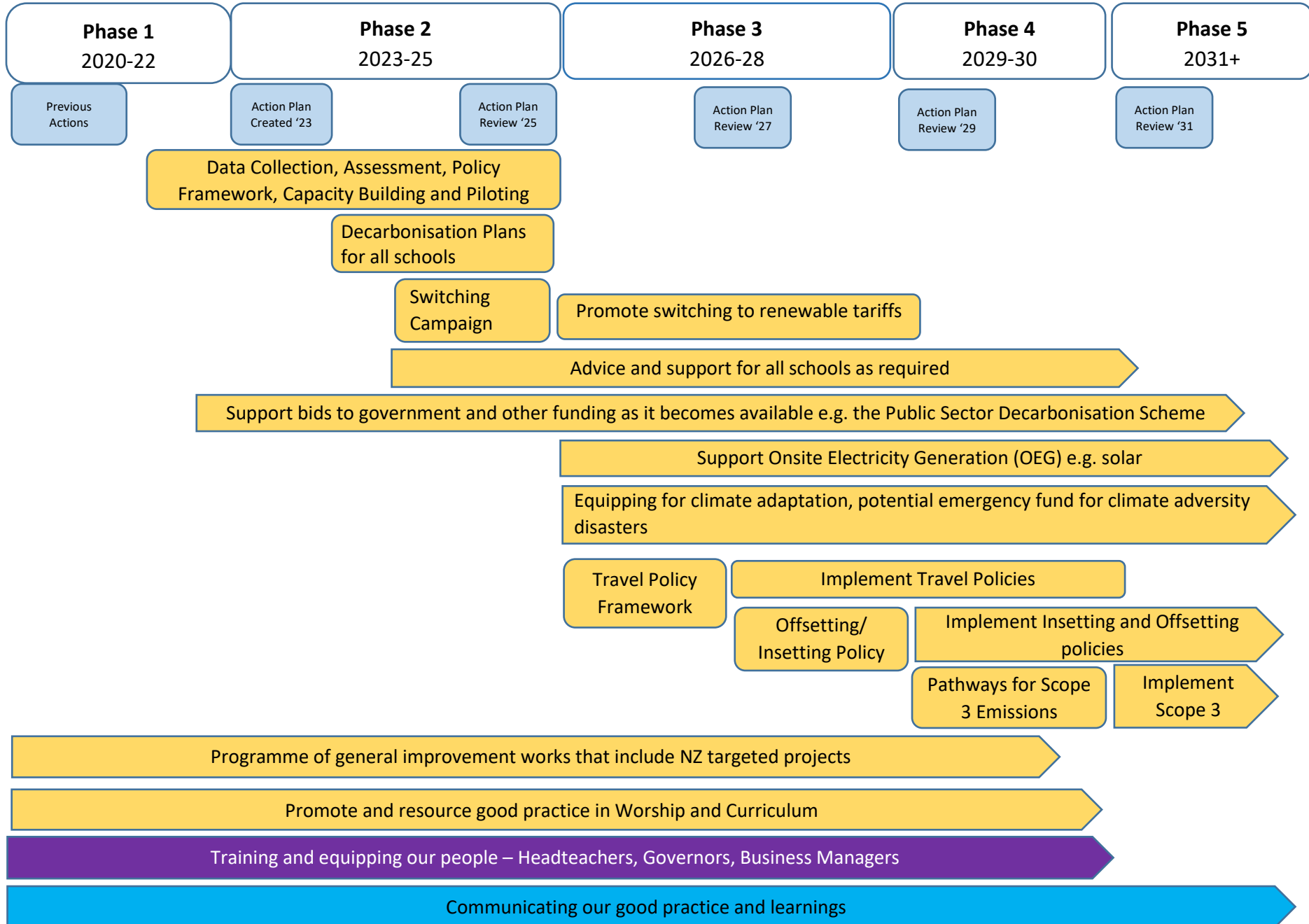
### Objectives

1. Provide targeted support to PCCs with church buildings that have not met their decarbonisation ambition
2. Continue the work of climate adaptation
3. Track ongoing offsetting
4. Support the implementation of indirect (scope 3) emissions

### Cathedral

Our Cathedral is working in parallel and partnership with the diocese to strive to be net zero by 2030 across their estate of buildings. As mother church it is a significant leader both within the diocese and for the wider community in which it sits, and has gained the Bronze Eco Church award. The Cathedral reports their carbon emissions in conjunction with the diocese but are responsible to and funded by the Church Commissioners. The cathedral has had energy audits undertaken on behalf of the Church Commissioners and are working towards develop NZC plans.

## Action Plan 2: Our Voluntary Aided Schools





## 2020-22 Phase 1: Initiating our net zero carbon (NZC) ambition

<b>Lead</b>	Schools Building Officer (Paul Beckett)	<b>Estimated Annual Carbon Reduction</b>	20 tCO <sub>2</sub>
<b>Stakeholders</b>	Director of Education Schools Building Officer, Education Advisors, DBE, Schools' Business Managers, Schools' Buildings Consultants, Headteachers, Diocese of Lincoln (shared Capital Funding DofE), Department of Education (Darlington)	<b>Cost to date</b>	£1.3M
		<b>Cost savings made</b>	Not calculated

### Objectives and Actions Delivered to Date

1. Develop a strategy across the Dioceses of Sheffield and Lincoln and communicate the net zero carbon ambition
  - ✓ Cross departmental NZ Steering Group established in 2020 and providing ongoing monitoring and implementation for net zero work across the diocesan estate and embedded in the mission and objectives of the diocese.
  
2. Put in place the data collection mechanisms, policy framework, upskilling, piloting and capacity building training to support the transition to NZC
  - ✓ Initiated biennial carbon emissions data collection from schools through the Energy Footprinting Tool.
  - ✓ The DBE Buildings sub-committee have committed to supporting VA schools with their efforts to reduce the carbon footprint on their respective sites. To date this has been achieved, where possible, through the capital programme.
  - ✓ With SCA funding within the last four years we have carried out 5 re-roofing projects which include new insulation to the buildings. Within these projects we upgrade the ceilings and fitting LED lighting. This programme will continue until all flat roofs are renewed under this strategy.

## 2023-25 Phase 2: Implementation – Quick Wins

<b>Leads</b>	Director of Education, Schools Building Officer	<b>Estimated Annual Carbon Reduction</b>	131 tCO <sub>2</sub>
<b>Stakeholders</b>	Schools Building Officer, Education Advisors, DBE, Headteachers, Governors, Schools' Business Managers, Schools' Buildings, Diocese of Lincoln (Shared Capital Funding DofE)	<b>Total Cost Estimate</b>	£1.3M
<b>Direct costs to DofS Net Zero Decarbonisation Audits</b>	£1,000	<b>Potential Cost Savings</b>	Not calculated

### Objectives:

1. Identify and target support to the VA schools with the greatest need for works.
  - Encourage all schools to complete the Energy Footprinting tool to provide data and expect this report to be included in biennial reports to governing bodies.
  - Prioritise funding Heat Decarbonisation Plan Assessments (£1,500 per school) for all VA schools and utilise these to offer bespoke support for each to develop a NZC action plan as part of their action planning process.
  - Encourage quick wins and behavioural changes to be actioned expediently.
  - Facilitate a learning community of a targeted group of schools.
2. Ensure all schools (Voluntary Aided, Voluntary Controlled and MATs) are encouraged to take “quick win” and behavioural change energy saving actions
  - Encourage a firm theological grounding for schools' NZC planning and action that is embedded in their wider mission objectives, collective worship and curriculum.
  - Working in conjunction with the National Framework for Church of England Schools and Academies (NFCESA) provide central training and updated resources to support all schools.
  - Encourage the development of NZC action plans as part of estate management plan for the VA schools.
  - Encourage all schools to install SMART metering.
  - Work with Local Authorities to establish where district heating schemes may be deployed to the benefit of a school(s).
  - Encourage engagement with the Eco Schools and Let's Go Zero initiatives to empower students, effect behavioural change, integrating learning and equipping on climate action into the curriculum.
3. Undertake a campaign to promote tariff switching to renewable energy
  - Working in conjunction with the NFCESA explore potential procurement schemes and establish a diocesan scheme if necessary.
  - Where schools procure energy through the Local Authority, advocate changes in LA procurement practice as necessary.
  - Target schools that are not currently using a renewable energy provider and promote knowledge and understanding of the value of switching.
4. Increase funding to support implementation
  - DBE support, where possible, through the capital programme and by sourcing other avenues of funding to enable an uptick in capital projects.
  - Engage with National and Regional church funding officers to identify potential funding streams, create a NZC funding action plan, develop resources and upskill diocesan and school staff.
5. Learn from Demonstrator Projects

- Identify schools with good practice to act as demonstrators and case studies
- Work with schools trialling new technologies and onsite generation (e.g. solar, wind, hydro) to ensure maximum learning ahead of Phase 3 upscaling.
- Develop a clear pathway for schools to undertake onsite generation projects.

### 2026-28 Phase 3: Implementation – Upscaling

<b>Lead</b>	Director of Education	<b>Annual Carbon Emissions Reduction</b>	80 tCO <sub>2</sub>
<b>Stakeholders</b>	Schools Building Support and Sustainability Officer, Schools Building Officer, Education Advisors, DBE Buildings Subgroup, Headteachers, Governors, Schools' Business Managers	<b>Total Cost Estimate</b>	£2.5M
		<b>Potential Cost Savings</b>	Not calculated

#### Objectives:

1. Continue to target support to VA schools
  - Track and support the implementation of NZC Action Plans.
  - Continue to deploy the funding action plan to support implementation of decarbonisation measures.
  - Widen learning communities to include more schools.
2. Continue to provide resources and support for all schools
  - Work in collaboration with the NCFESA.
  - DBE to encourage engagement of Academy Trusts in pursuit of NZ
  - Fund Heat Decarbonisation Plans for any schools who have not already been audited.
  - Expect all schools to have a NZC Action Plan.
3. Promote and support onsite energy generation
  - Work with all schools to maximise onsite electricity generation as appropriate to the school. site e.g. through solar, wind, hydro.
4. Equipping for Climate Adaptation
  - Provide resources and training to enable all schools to put in place a climate resilience plan e.g. building modifications and timetabling for heat waves.
  - Explore the possibilities of establishing an emergency fund for climate change damage to ensure educational continuity e.g. a school being flooded, accident or injury due to extreme weather.
5. Develop the pathway and support implementation for decarbonising school travel
  - Work with the national Church of England to add travel data collection to the Energy Footprinting Tool.
  - Provide pathway resources to facilitate schools to decarbonise their school related travel e.g. staff lift sharing, salary sacrifice schemes, school minibus and coach procurement, travel policies on long distance trips.
  - Support the development and implementation of School Travel Plans and wider community engagement such as establishing Schools Streets schemes.
6. Develop an Offsetting and/or Insetting policy guidance and pathway for all schools
  - Explore options and prepare resources.
  - Apprise all schools of the likely budget implications for Phase 4 and beyond.

- Develop pathway tools for maximising carbon capture in school grounds e.g. through tree planting, grassland and soil management.

#### 2029-30 Phase 4: Implementation – Tackling Challenging Emissions

<b>Lead</b>	Building and Ecclesiastical Surveyor	<b>Annual Carbon Emissions Reduction</b>	40 tCO <sub>2</sub>
<b>Stakeholders</b>	Schools Building Support and Sustainability Officer, Schools Building Officer, Education Advisors, DBE Buildings Subgroup, Headteachers, Governors, Schools' Business Managers	<b>Cost Estimate</b>	£0.5M
		<b>Potential Cost Savings</b>	Not calculated

#### Objectives:

1. Continue to support all schools to implement NZC Action Plans
  - Offer support and guidance if NZC Actions Plans are not being implemented
  - Seek additional external funding to tackle hard to treat buildings.
2. All schools still using gas to switch to a green gas tariff
3. Ensure onsite energy generation is maximised
4. Climate Adaptation
  - Ensure all schools have a climate resilience plan in place
5. Introduce an Offsetting/Insetting scheme for schools
6. Prepare for indirect emissions coming into scope
  - Work with the national church on data collection mechanisms for Scope 3 carbon emissions
  - Establish policy framework around indirect emissions from schools
  - Pilot and provide capacity building training to support.

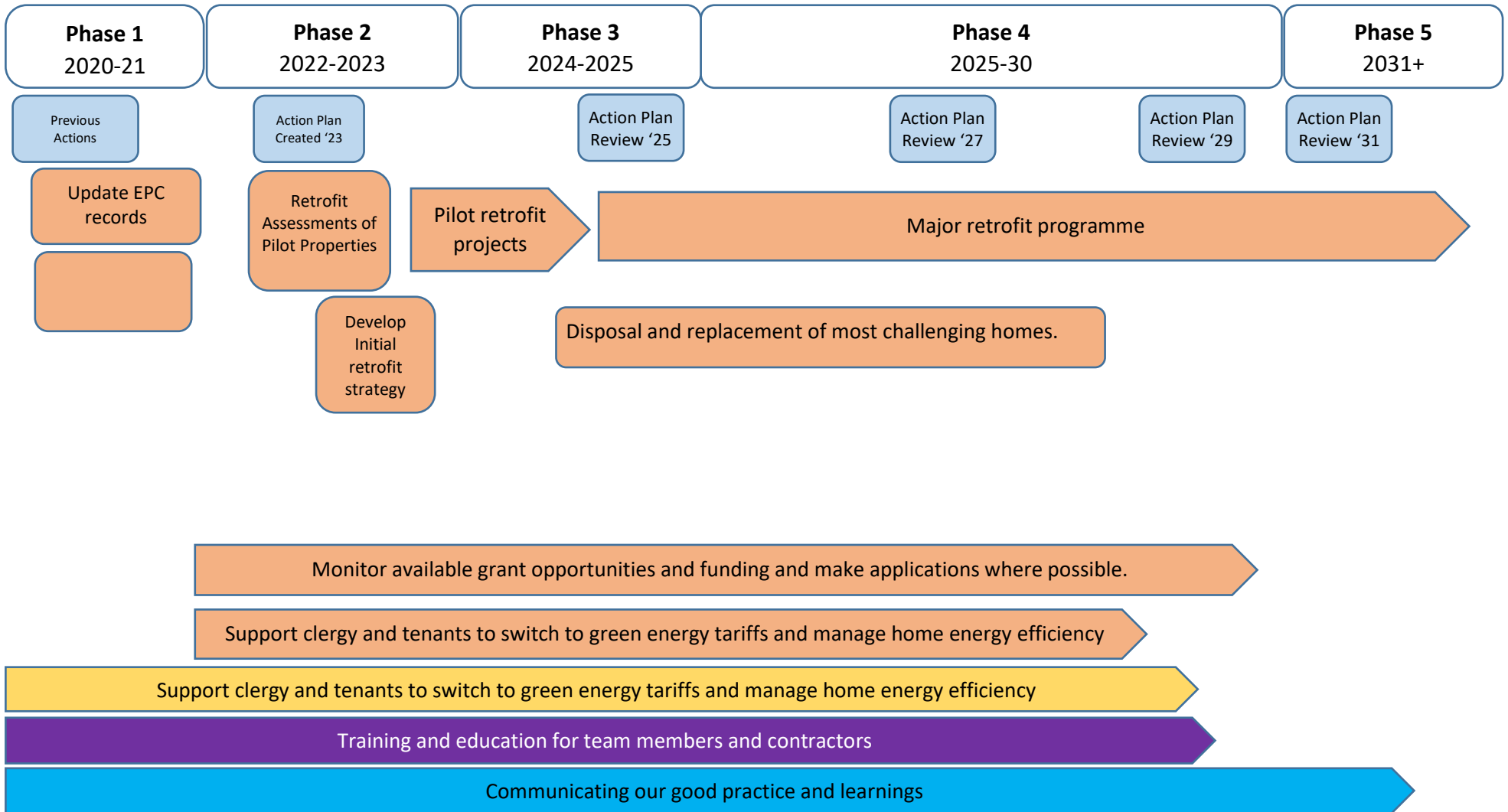
## 2031+ Phase 5: Mop Up and Scope 3 Emissions

<b>Lead</b>	Building and Ecclesiastical Surveyor	<b>Annual Carbon Emissions Reduction</b>	Not calculated
<b>Stakeholders</b>	Schools Building Support and Sustainability Officer, Schools Building Officer, Education Advisors, DBE Buildings Subgroup, Headteachers, Governors, Schools' Business Managers	<b>Cost Estimate</b>	Not calculated
		<b>Potential Cost Savings</b>	Not calculated

### Objectives:

1. Provide targeted support to schools who have not met decarbonisation requirements
2. Track ongoing offsetting
3. Support the implementation of indirect emissions reductions.

# Action Plan 3: Our Clergy Properties



## 2020-21 Phase 1: EPC records

<b>Lead</b>	Diocesan Surveyor	<b>Estimated Annual Carbon Reduction</b>	
<b>Stakeholders</b>	Property team, Archdeacons	<b>Cost to date</b>	Not calculated
		<b>Cost savings made</b>	Not calculated

### Actions Delivered to Date

#### 1.1 EPC Records

- ✓ Work undertaken to provide a completed EPC record for all DBF homes. This is complete and new EPCs are to be commissioned once EPC records become out of date.
- ✓ Compilation of EPC records into excel database. This now acts as the main tool for a high level understanding the performance of the portfolio.

## 2022-23 Phase 2: Assessments, Feasibility Design and Strategy Development

<b>Lead</b>	Diocesan Surveyor	<b>Estimated Annual Carbon Reduction</b>	0 tCO <sub>2</sub>
<b>Stakeholders</b>	Property Team, Consultant Team, Finance, Archdeacons, Clergy, tenants, Communications Team, Church Commissioners.	<b>Total Cost Estimate</b>	£60k
		<b>Potential Cost Savings</b>	Not calculated

### Objectives:

1. Prioritise lifting all properties to EPC rating of C or above by targeting those with ratings of D or E.
2. Undertake retrofit assessments of sample properties.
  - Retrofit assessments have been undertaken across 10 sample properties in the diocese. The sample is representative of the wider portfolio. The assessments will be used to develop a preferred specification for net zero and better understand costs and technical challenges for the whole portfolio.
3. Retrofit Pilot Programme
  - Installation of retrofit measures including solar panels and cavity wall insulation on a selection of 10 vicarage properties. This work is currently being undertaken with funding from DBF and managed internally.
4. Net zero carbon survey  
Detailed analysis of retrofit options for 15 houses ongoing, funded by National Church.
5. Strategy Development
  - Analysis of the assessment work done on the sample properties, alongside the EPC data held across the portfolio. This information will be combined with additional stock data, including age and value of properties to help generate a strategy for achieving net zero by 2030 in more detail.
  - Analysing the different house types into relevant groupings;
    - Developing a preferred specification for different house types. This will be a combination of insulation works, electrification of heating and hot water systems, solar PV and possibly battery technologies. Different house types will require different specifications and each option will need to be assessed and costed as part of this process;

- Analysis of current EPC data to separate all properties into groupings of similar house types and their required solutions. Measures put against properties to be given cost estimates to support budget development;
- Analysis of costs for each retrofit solution to assess threshold at which retrofit is not realistic and properties should be sold and replaced instead. This needs to be followed by an assessment of which challenging properties could be sold, which will be dependent on their location, including the local housing market;
- Review of potential tender options for procuring the required retrofit works;
- Following this assessment, a final plan can be drafted which outlines: What our preferred solutions are, how many solutions are needed across the portfolio, how many and which properties we will instead seek to replace across the portfolio and finally the estimated total cost and a proposal for how we could procure the works.

6. Liaison with clergy via net zero clergy group

- Planning for how we can improve disseminating information to clergy on energy efficiency and behaviour change.

**2023-24 Phase 3: Pilot projects, procurement planning and Start of stock rationalisation programme**

<b>Lead</b>	Diocesan Surveyor	<b>Estimated Annual Carbon Reduction</b>	15 tCO <sub>2</sub>
<b>Stakeholders</b>	Property Team, Consultant Team, Finance, Archdeacons, Clergy, Tenants, Communications Team, Church Commissioners, procurement frameworks, contractors	<b>Total Cost Estimate</b>	£60k
		<b>Potential Cost Savings</b>	Not calculated

**Objectives:**

1. Pilot retrofit projects

- Procurement of contractor to undertake retrofit works on initial 5 properties. This would include, improvements to insulation and installation of PV.
- Installation of retrofit works to 10 properties.
- Monitoring and evaluation of installed measures to ensure they are operating correctly.
- Lessons learnt report from pilot projects to feed into the future major retrofit procurement strategy.

2. Procurement preparation and planning

- Period of engagement with retrofit contractors, procurement frameworks, consultants and other housing organisations to inform our procurement approach for the major retrofit programme.
- Appointment of procurement and contracting specialist if necessary to support with preparation of the major procurement works.
- Development of preferred specification for retrofit works, using lessons learnt from the pilot projects.
- Conduct exercise at the end of 2024 or early 2025 to appoint preferred contractors for the main retrofit programme.

3. Start of stock rationalisation programme



- Identification of existing homes which are too complex or costly to retrofit as part of net zero programme. In parallel review properties based on current value and availability of acceptable, more efficient stock within locality.
- Creation of list of target vicarages for disposal using above data.
- Systematic purchase of new vicarages in the locality of identified properties, followed by the sale of former vicarages.

## 2025-30 Phase 4: Delivery

<b>Lead</b>	Diocesan Surveyor	<b>Estimated Annual Emissions Reduction</b>	1,000 tCO <sub>2</sub> *
<b>Stakeholders</b>	Property Team, Consultant Team, Finance, Archdeacons, Clergy, Tenants, Communications Team, Church Commissioners, retrofit contractors, building contractors, estate agents, Registrar	<b>Cost Estimate</b>	£2.9M**
		<b>Potential Cost Savings</b>	Not calculated

\* Assumes ASHPs are the norm and Green electricity tariffs by tenants.

\*\*Based on improvement of 102 clergy properties from EPC rating D&E to C by 2030 at a cost of circa £24,000 per property for the remainder. Figure excludes inflation.

### Objectives:

1. Delivery of major retrofit programme.
  - Freeze on the installation of gas/oil boilers across the portfolio.
  - Installation of retrofit measures across all retained homes. Retrofit measures would deliver decarbonisation of heating and hot water, as well as energy efficiency improvements and solar PV where suitable.
  - Monitoring and management of retrofit contractors by the property team.
  - Liaison with clergy and tenants around construction works.
2. Delivery of rationalisation programme
  - All identified properties to be replaced with more efficient stock, targeting a minimum EPC of C.
  - Develop relationships with house builders and estate agents to aid with acquiring new-build energy efficient stock where viable.
3. Education and Information
  - Continued support to clergy and tenants on how they can improve efficiency through behaviour changes.
  - Advice and support using new technologies in home and how to maximise the benefits.
  - Advice and support on which green energy tariffs to use to maximise the benefit of solar PV.
4. Performance monitoring
  - Update of property EPC record upon completion retrofit works. These will then be fed back into the master database to monitor forecasted CO<sub>2</sub> emissions.
  - Monitoring of national grid emissions per unit of electricity. Decarbonisation of the clergy property is dependent on a combination of national grid decarbonisation and the surplus clean energy provided to the grid via solar PV.

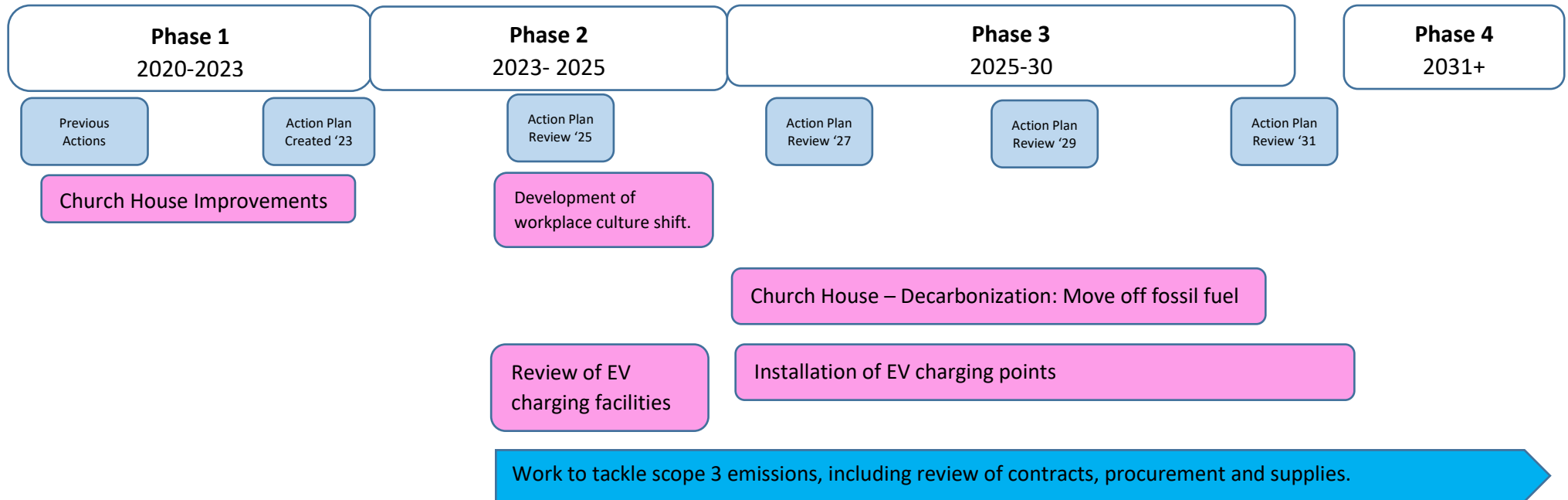
## Phase 5: Mop Up and Scope 3 Emissions

<b>Lead</b>	Diocesan Surveyor	<b>Estimated Annual Carbon Reduction</b>	Dependent on remaining emissions
<b>Stakeholders</b>	Property Team, Consultant Team, Finance, Archdeacons, Clergy, Tenants, Communications Team, Church Commissioners, retrofit contractors, building contractors, estate agents, Registrar	<b>Cost Estimate</b>	Dependent on remaining emissions
		<b>Potential Cost Savings</b>	Not calculated

**Objectives:**

1. Review performance and complete any outstanding actions
  - Review of property portfolio using best available information at that time to ensure adherence to net zero emissions.
  - Where items are still outstanding then these will be commissioned and completed.
  
2. Offsetting
  - Dependent on grid decarbonisation, the DBF may need to consider using carbon offsets to meet its net zero aspiration up to the point at which national grid emissions drop to a suitable level.

## Action Plan 4: Church House and Other Offices



## 2020-21 Phase 1: Church House improvements and introduction of workplace policies

<b>Lead</b>	Diocesan Surveyor	<b>Estimated Annual Emissions Reduction</b>	Not Calculated
<b>Stakeholders</b>	Property Team, All Church House users.	<b>Cost to date</b>	Not Calculated
		<b>Cost savings made</b>	Not calculated

### Actions Delivered to Date

1. Church House
  - ✓ Works undertaken to make more efficient use of Church House energy: efficient lighting and solar PV on rooftop.
2. Workplace practice changes
  - ✓ Recycling bins provided for different materials
  - ✓ Think before you print campaign
  - ✓ Move to laptops for lower energy use

## 2022-24 Phase 2: Review of external offices and EV charging

<b>Lead</b>	Diocesan Surveyor	<b>Estimated Annual Emissions Reduction</b>	4.5 tCO <sub>2</sub>
<b>Stakeholders</b>	Property Team, All DBF staff, all office users, consultants as required.	<b>Total Cost Estimate</b>	£0
		<b>Potential annual Cost Savings</b>	£6.6k

### Objectives:

1. Church House evaluation
  - a. Evaluate Church House emissions against 2030 grid emissions data.
  - b. Evaluate energy use and heating options
  - c. Evaluate need for EV charging points
2. Move to Green energy tariffs as soon as practicable.
3. Further workforce policies and review of contracts
  - Continued liaison with staff and new policies where necessary to reduce emissions and waste
  - Review of contracts and buying policies to reduce scope 3 emissions and encourage sustainable contracting
  - Convene Church House Eco Group
  - Carbon Literacy training for staff as appropriate

### 2025-30 Phase 3: Installation of remaining measures

<b>Lead</b>	Diocesan Surveyor	<b>Estimated Annual Emissions Reduction</b>	14 tCO <sub>2</sub>
<b>Stakeholders</b>	Property Team, archdeacons, land agents, Woodland Trust, energy consultants, Parish Buying, Northern Power Grid, Church Commissioners, PCCs	<b>Total Cost Estimate</b>	£20k
		<b>Potential Cost Savings</b>	Not Calculated

#### Objectives:

1. Installation of required retrofit measures
  - Specification and installation of measures as identified in previous phase. This may be removal of fossil fuel heating systems.
2. Scope 3 emissions and supply chain management
  - Review of purchasing policies to reduce scope 3 emissions from office supplies, food etc.
  - Review of supply chains and contracts to encourage lower emissions from supply chain partners.

### 2031+ Phase 4: Review and ongoing management

<b>Lead</b>	Diocesan Surveyor	<b>Estimated Annual Emissions Reduction</b>	Not calculated
<b>Stakeholders</b>	Property Team, archdeacons, land agents, Woodland Trust, energy consultants, Parish Buying, Northern Power Grid, Church Commissioners, PCCs	<b>Cost Estimate</b>	Not calculated
		<b>Potential Cost Savings</b>	Not calculated

#### Objectives:

1. Review of Progress
  - Evaluation of office emissions and ensure adherence to net zero target.
2. Ongoing Management
  - Continued engagement with staff to ensure sustainability in the workplace.
  - Monitor offices to seek additional savings and opportunities.

## Action Plan 5: Our Travel

<b>Lead</b>	DEO	<b>Estimated Annual Carbon Reduction/Offsetting Requirement</b>	Not calculated tCO <sub>2</sub> e
<b>Delivery Team</b>	HR Team, Property Team, Finance Team, Communications Team	<b>Cost Estimate</b>	Not calculated
<b>Stakeholders</b>	Parishes, DAC, Church Buildings Team, Diocesan Environment Group, Deanery Environment Champions, Bishops, Archdeacons, Area Deans, Deanery Synods	<b>Potential Cost Savings</b>	Not calculated

### 2020-22 Phase 1: Initiating our net zero carbon (NZC) ambition

1. Staff Travel - Data collection and exploration
  - ✓ Initiated collection of staff travel data via expenses claims forms (Finance Team)
  - ✓ Exploration of salary sacrifice travel schemes
2. Staff Travel – supporting behavioural change
  - ✓ Enabled the transition to hybrid working, reducing travel miles
  - ✓ Online meeting and training normalised
  - ✓ HR team provide information on public transport discount schemes
  - ✓ Carbon Literacy training and other messaging to encourage an understanding of the carbon cost of different modes of transport
3. “Ministerial Miles”– data collection
  - ✓ PCCs encouraged to give Ministerial Miles data through Parish Returns Energy Footprinting Tool

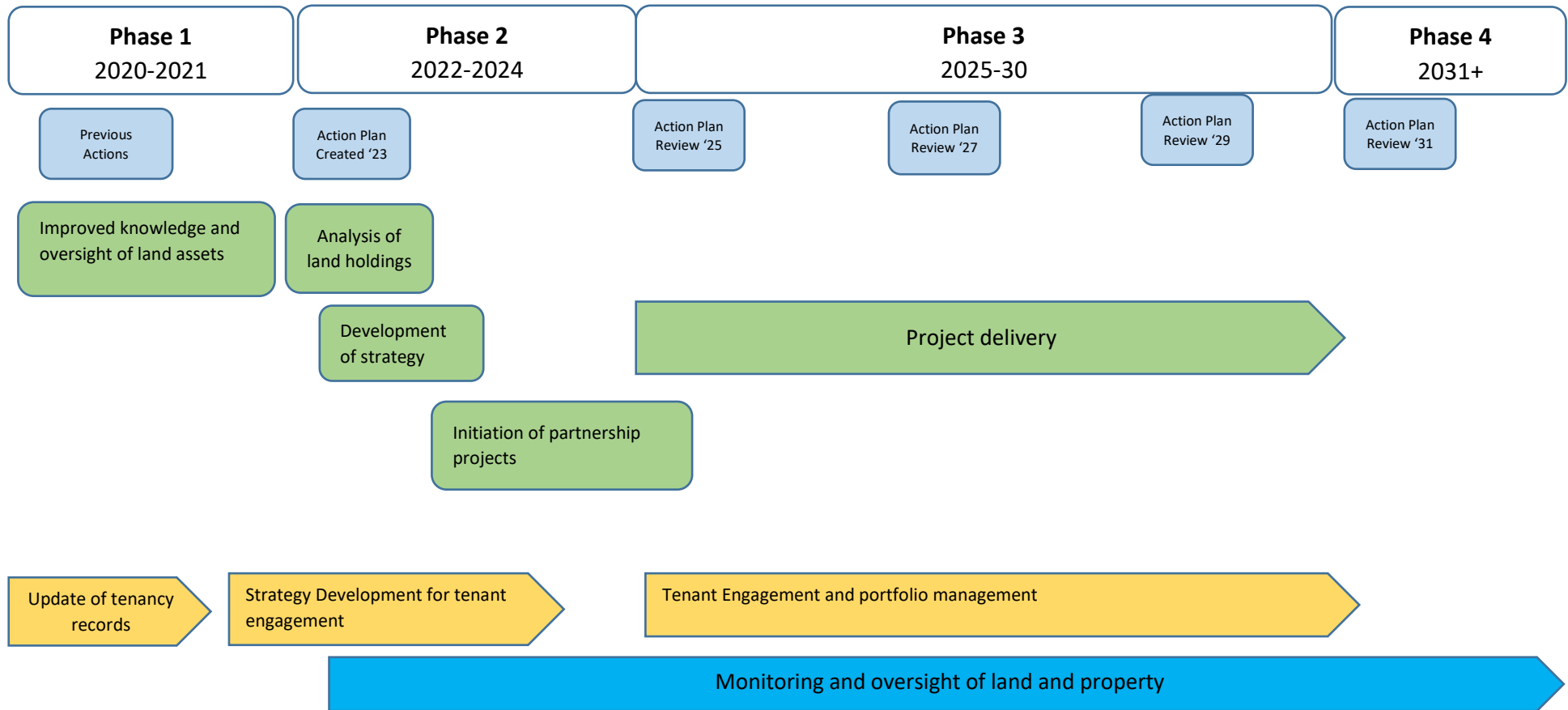
### 2023-25 Phase 2: Developing Plans and Policy

1. Staff Travel – Travel Plan
  - Analyse staff travel data and develop a NZC travel plan for implementation in Phase 3
  - HR and Finance Teams to explore salary sacrifice schemes for EVs and electric bikes/ scooters etc. and Cycle2Work scheme
  - EV charging point at Church House
  - Identify and address any policy changes required
2. Staff Travel – ongoing support for behavioural change
  - Continue upskilling with Carbon Literacy training
  - Facilitate staff lift sharing where appropriate
3. “Ministerial Miles” – Travel Plan
  - Analyse Ministerial Miles data to prioritise actions into a NZC travel plan
  - Identify and put in place any policy requirements for travel decarbonising
  - Property Team to explore providing EV charging points at clergy properties
  - Appoint a voluntary Travel Advisor to join the support team available through the Diocesan Environment Group

### 2026-28 Phase 3: Implementation

1. Implement Decarbonisation of Travel Plan
  - Provide resources and training to support the implementation

## Action Plan 6: Our Land



## 2020-21 Phase 1: Improved understanding and management of land assets

<b>Lead</b>	Diocesan Surveyor	<b>Carbon Emissions Reduction</b>	0
<b>Stakeholders</b>	Property team, registrar, land agents	<b>Cost to date</b>	TBC
		<b>Cost savings made</b>	Not calculated

### Actions Delivered to Date

1. Improved understanding of land assets
  - ✓ Creation of a digitally mapped complete list of holdings
  - ✓ Creation and annual update of a full and complete terrier
  - ✓ Tree planting assessment report for 10 sites
  - ✓ Carrying out first registration process for all unregistered parcels of land
  - ✓ Standard FBT's issued already include SDBF best interests regarding Natural Capital, Agri-environment schemes and inclusion of Landlord's ability to require the Tenant to enter into their preferred schemes
2. Exercise undertaken with solicitors to identify land registered to the DBF on the land registry. This activity helped identify additional land and also update records of previously known land, enabling better management
3. Oversight of land and tenancies
  - ✓ regular and formalised dialogue with the land agent who manages the portfolio.
  - ✓ Annual Terrier of holdings from land agent

## 2022-24 Phase 2: Analysis, strategy development and initiation

<b>Lead</b>	Diocesan Surveyor	<b>Annual Carbon Emissions Reduction</b>	0 tCO <sub>2</sub>
<b>Stakeholders</b>	Property Team, archdeacons, land agents, Woodland Trust, energy consultants, Parish Buying, Northern Power Grid, Church Commissioners	<b>Total Cost Estimate</b>	£20K
		<b>Potential Cost Savings</b>	0

### Objectives:

1. Analysis of land holdings
  - Review of all land holdings to identify those which would be suitable for net zero purposes. This review includes biodiversity works, woodland and renewables
  - Review of rural land holdings to understand any environmental factors which may impact preferred habitat or restrictions on change of use.
  - Mapping of all DBF land holdings by land agent.
2. Strategy Development
  - Sale strategy, disposing of low yielding land and land where SDBF had no management control (AHA and landlocked sites) providing funds to facilitate other activities.
  - Discussions with a range of potential partnership organisations and stakeholders to help inform the strategy that we take moving forward.
  - Development of a range of solutions which could be implemented across Diocesan land holdings to support net zero, including woodland creation and renewables.



- Information sharing with potential partnership organisations to identify suitable opportunities for net zero works.
- Discussions with Church Commissioners, land agents and other environmental bodies to understand how we can improve land management through our tenancies.
- Potential for appointing external consultant to advice on highest emitting tenants and land within portfolio. Conduct analysis of overall land-based emissions to use as benchmark.

### 3. Initiation of projects

- Continued review and identification of sites for woodland development.
- Shortlisting of sites based on land values, environmental factors, tenancy information and suitability for woodland
- Committee approval sought for shortlisted sites to be entered into woodland grant scheme
- Exclusivity agreements agreed for EV and renewables opportunities on DBF land with partnership organisations.

## 2025-30 Phase 3: Project Delivery and Tenant Engagement

<b>Lead</b>	Diocesan Surveyor	<b>Annual Carbon Emissions Reduction</b>	To be calculated tCO <sub>2</sub> *
<b>Stakeholders</b>	Property Team, archdeacons, land agents, Woodland Trust, energy consultants, Parish Buying, Northern Power Grid, Church Commissioners, PCCs	<b>Total Cost Estimate</b>	£30K
		<b>Potential Cost Savings</b>	**Not calculated

\*Annual carbon offset from woodland planting

\*\* Potential savings by inseting carbon credits from woodland, rather than offsetting. Also potential savings from leasing or using renewables sites.

### Objectives:

#### 1. Woodland and Biodiversity Projects

- Approval of identified sites for planting
- Appointment of contractor to undertake works along with maintenance contract for 10-year period.
- Grant agreement for draw-down of grant funding agreed with Woodland Trust or other body
- Planting works undertaken, followed by long term maintenance contract
- Carbon credits secured through Woodland Carbon Code or similar initiative.
- Continual review of available projects and biodiversity methods to ensure value for money and best use of land.

#### 2. Renewables projects

- Identification of renewables opportunities across glebe land via external organisation
- Decisions needed on each site as to whether the Diocese wants to be the beneficiary of the power created, which could then be used to create clean energy on other strands like education or housing.

#### 3. Tenant Engagement and management

- Working with land agents to introduce new tenancy agreements which require more environmentally friendly land usage.

- Working with land agents and charitable organisations to disseminate education to tenants on how they could better manage the land for sustainability.
- Identification of tenant organisations who may be better suited to managing land sustainably.
- Engage with tenants who are not farming in a sustainable manner to encourage improvement

#### 2031+ Phase 4: Review, ongoing management and continuous improvement

<b>Lead</b>	Diocesan Surveyor	<b>Annual Carbon Emissions Reduction</b>	Not calculated
<b>Stakeholders</b>	Property Team, archdeacons, land agents, Woodland Trust, energy consultants, Parish Buying, Northern Power Grid, Church Commissioners, PCCs	<b>Cost Estimate</b>	Not calculated
		<b>Potential Cost Savings</b>	Not calculated

#### Objectives:

1. Review of Progress
  - Evaluation of land-based CO<sub>2</sub> emissions and ensure adherence to net zero target.
  - Review land usage requirements for 2030s as per government advice at that time and check whether glebe land meets this.
2. Ongoing Management
  - Continued engagement with tenants to ensure land is used sustainably
  - Monitor maintenance contracts on woodland and renewables sites and ensure these provide best value for money
  - Continue seeking new opportunities as land and environmental needs evolve nationally over the next decade.

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

From Appendix 1 of the National 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
- 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).

*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 - Resources

### *Church of England Resources:*

Carbon Emissions Report 2021:

[https://www.churchofengland.org/sites/default/files/2022-12/energy-toolkit-report-2021\\_final.pdf](https://www.churchofengland.org/sites/default/files/2022-12/energy-toolkit-report-2021_final.pdf)

Net Zero Carbon Progress Report – June 2022:

[https://www.churchofengland.org/sites/default/files/2022-06/net\\_zero\\_progress\\_report\\_june2022.pdf](https://www.churchofengland.org/sites/default/files/2022-06/net_zero_progress_report_june2022.pdf)

[National Routemap to Net Zero Carbon](#).

[Summary of Routemap Milestones](#)

[Practical Path to Net Zero](#) for church buildings.

The landing pages for [net zero carbon churches](#) and [net zero carbon schools](#),

Net Zero [webinar programme](#)

Church [heating guidance](#) and [energy efficiency guidance](#).

Inspiring [case studies](#).

Glebe land management guidance:

[https://www.churchofengland.org/sites/default/files/2023-05/Glebe\\_Land\\_Guidance.pdf](https://www.churchofengland.org/sites/default/files/2023-05/Glebe_Land_Guidance.pdf)

### *Other resources:*

Church environment - A Rocha Eco Church: <https://ecochurch.arocha.org.uk/>

Burial grounds - Caring for Gods acre: <https://www.caringforgodsacre.org.uk/>

### *UK Government:*

UK government NZ strategy: <https://www.gov.uk/government/publications/net-zero-strategy>

10 point plan: <https://www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution>

Education and Children's services: <https://www.gov.uk/government/publications/sustainability-and-climate-change-strategy/sustainability-and-climate-change-a-strategy-for-the-education-and-childrens-services-systems>

## Appendix 3: The theological basis of the diocesan approach to Creation Care

This short paper is reproduced with kind permission of the Diocese of Blackburn Net Zero Working Group.

*The theological basis of the diocesan approach to Creation Care is laid out in the Diocesan Environment and Climate Justice Policy, previously agreed by Diocesan Synod. It is grounded in the belief that all Creation is a gift from God and that we share a common home in his love and providence with his other creatures. Made in God's image, we are uniquely charged with a responsibility to celebrate the richness and wonder of Creation, to cherish its gifts and to lament the extent of our abuse of God's generosity. We believe that we shall be held to account by Him for neglect of this privilege and responsibility.*

*The Policy is our response to the Fifth Mark of Mission of the Anglican Communion: 'To strive to safeguard the integrity of Creation, and sustain and renew the life of the earth'. It is given added urgency by the Climate and Biodiversity Emergency, whose reality and impact is self-evident and supported by the vast majority of informed expertise. The Carbon Net Zero Action Plan is the Diocesan response to the Church's commitment to 2030 Net Zero target agreed by the General Synod.*

*People are poor and marginalised, in this diocese and across the world, because they are denied their fair share in the gifts of Creation and unable to celebrate God's providence. Our responsibility to proclaim this injustice is in no way diminished by our commitment to Creation Care. Indeed this commitment asks us to reflect on just what this due share is likely to be when Creation is so badly damaged by human greed, the mismanagement of resources, and a short-sighted preference for profit over investment for the future. There is an intimate link between the poverty of humanity, the condition of the environment and the way in which its resources are exploited by the few at the expense of the many. Neglect of Creation Care unjustly and disproportionately hurts the poor.*

*Our commitment of time and resources in responding to the Net Zero challenge is a long-term investment in the diocesan resilience for mission well beyond 2030, an investment in the well-being of its estate in property, land and people – and in those who have not yet responded to the Gospel of God's sacrificial generosity. It is the responsibility of us all to work together to ensure that the burden of our response does not fall inequitably on those without a safe and healthy life, a sustainable home and a community in which they feel welcome. And to anticipate an eternal life in Jesus Christ grounded in securing an immediate future for all here on God's earth.*

## Appendix 4: Net Zero Steering Group

### **Terms of Reference for the Net Zero Carbon Steering Group**

The [Diocesan Environment and Climate Justice policy](#) states that the Diocesan Net Zero Carbon Steering Group will work with churches, schools, property managers and other relevant bodies to:

- prepare an action programme to achieve the net zero target and fulfil the relevant commitments above
- co-ordinate and facilitate delivery of the programme by all diocesan agencies
- record progress in achieving its goals including independent verification.

It will be responsible for all aspects of creation care that need to be addressed at a diocesan level.

Its membership includes senior representatives of teams and other groupings with authority to initiate the actions required to work towards the Net Zero goal. Some roles can be represented by more than one person to maximise attendance.

- Bishop of Doncaster (Chair)
- Deputy Diocesan Secretary (Deputy Chair)
- Net Zero Carbon Project Officer
- Director of Finance
- DAC Secretary
- Director of Education
- Diocesan Surveyor
- A Buildings Officer
- Diocesan Environment Officer
- A member of parish clergy
- A member of parish laity
- Environment Project Support to convene and minute meetings

Others with specialist knowledge will be invited as and when required. Meeting notes and documentation will be circulated to the Archdeacons for information only. Each attendee should have a nominated deputy to represent them if unable to attend. The Communications Team will be kept informed to ensure clear lines of communication with the wider Diocese.

Meetings will normally be every two months though subgroups for specific purposes might meet separately at frequencies appropriate to their tasks. Annual meetings will be open to anyone who wishes to attend for transparency and to engage with and inform the wider Diocese.

The Steering Group will work within the framework of the Diocesan Strategy and the Lights for Christ initiative. It is accountable to the Bishop's Senior Staff Team and, through them, to the Bishop's Council. In line with the Diocesan policy, the Steering Group will provide them with an annual report but will also seek their strategic guidance as and when required.

The Steering Group will seek funding from the national church institutions and other relevant agencies. It will also report at least annually to the Finance and Property Committee and Bishop's Council regarding resources and budgeting, and to other committees and boards as required. The Diocesan Synod will

receive a progress report from the Bishop of Doncaster and the Diocesan Environment Officer at least every two years and recommend changes accordingly. Frequency and structure of reporting will be updated as needed following national or General Synod recommendations.

The Group will be serviced by a Project Manager, who will be responsible for preparing, monitoring and updating a comprehensive Project Plan, and will:

- prepare a brief setting out the overall scope of the project
- assign tasks and timings to agents (providing them with the initial overall Project Plan)
- consult on their priorities and capacity to meet the programme
- make adjustments to timings where tasks on critical paths cannot be delivered as initially proposed
- report to the Steering Group about the proposed resolution and trade-offs.

Once a year, the Steering Group meeting will take the form of a Net Zero Carbon **Open Meeting**, to which all who are working on the Net Zero programme and parish representatives will be welcome. The meeting will enable increased transparency and wider discussion of policy and operational issues. It will receive an update on progress, and there will be opportunities to offer advice and explore new possibilities. Partners with specialist experience might also be invited.

Commitments in the Diocesan Environment and Climate Justice policy that are particularly relevant to the Net Zero Steering Group are:

- making creation care an issue for our financial policy, including ethical management of Diocesan investments in line with national church policy
- promoting environmental care across schools in the Diocese
- working to reach net zero carbon emissions by 2030, including churches, clergy housing, church schools, theological education, work-related travel and Church House through:
  - energy savings
  - more energy-efficient buildings and use of buildings
  - the use of renewable energy
  - offsetting net emissions that we are unable to eliminate through a sound and appropriate scheme
- reducing emissions from transport by:
  - avoidance of unnecessary travel
  - use of public transport
  - car sharing
  - travel by bicycle and on foot
  - use of more energy efficient vehicles
  - switching to electric cars using renewably generated electricity

Section 5 of the A Rocha Silver Eco Diocese has a requirement to have agreed carbon reduction targets and develop an action plan to get there. This also informs the work of the Steering Group.



## Appendix 5: Top 20% of churches by carbon footprint

Compiled October 2023

General Synod passed a motion in July 2022 requesting that high energy users within the Church (every cathedral, TEI, school, office and the top 20% of energy consuming churches) to draw up a programme of action, with a clear time frame, based on the National Routemap 2030.

The list has been compiled using the 2022 Energy Footprint Tool Returns data, 2022 Parish Returns data, the 2021 Strategic Review, and local knowledge where possible. This is a working list and open to comment and review.

We recognise there are gaps in our data which mean the list could be inaccurate - it has been compiled with the best available data at the time. The best data for churches comes from the Energy Footprint Tool when it has been completed carefully and accurately, and so it is important that parishes complete this as accurately and completely as possible. In addition it is a condition of some grant making organisations that the EFT is complete.

As more churches complete the EFT, our data will improve. If you wish to provide insight into whether a church should or shouldn't be included in the top 20%, please contact [david.castle@sheffield.anglican.org](mailto:david.castle@sheffield.anglican.org)

Church Name	Net Carbon emissions tCO2	Energy Footprint Tool 2022 status
Doncaster: St George	137.5	Submitted, not verified
Ecclesall: All Saints	77.2	Submitted, not verified
St Thomas, Philadelphia	62.2	Not started
Crookes: St Thomas	60.9	Submitted, not verified
Fulwood: Christ Church	60.6	Not started
Sheffield: St Mary, Bramall Lane	37.8	Submitted, not verified
Ranmoor: St John the Evangelist	32.7	Submitted, not verified
Warmsworth: St Peter	32.0	Started, not submitted
Lodge Moor: St Luke	29.7	Submitted, not verified
Sheffield: St Bartholomew	29.1	Not started
St Paul's	26.9	Submitted, not verified
Netherthorpe: St Stephen	26.2	Not started
Rotherham: All Saints (Rotherham Minster)	25.9	Submitted, not verified
Malin Bridge: St Polycarp	25.6	Submitted, not verified
Norton Woodseats: St Chad	24.7	Submitted, not verified
Heeley: Christ Church	24.2	Not started
Handsworth: St Mary	20.2	Not started
Balby: St John the Evengelist	20.1	Started, not submitted
Pitsmoor: Christ Church	19.2	Submitted, not verified
Park: St John the Evangelist	18.9	Submitted, not verified
Crookes: St Timothy	18.3	Not started
Attercliffe: St Albans	17.6	Not started
Sprotbrough: St Mary the Virgin	17.5	Submitted, not verified
Ecclesfield: St Mary the Virgin	16.9	Not started
Millhouses: Holy Trinity	16.8	Not started
Sheffield Manor: St Aidan w St Luke	16.3	Submitted, not verified
Bradfield: St Nicholas	16.1	Submitted, not verified

Church Name	Net Carbon emissions tCO2	Energy Footprint Tool 2022 status
Mortomley, High Green: St Saviour, High Green	16.0	Not started
Oughtibridge: The Ascension	15.7	Started, not submitted
Goole: St John the Evangelist	15.4	Submitted, not verified
Owston: All Saints	14.5	Not started
New Bentley: St Philip & St James	13.3	Submitted, not verified
Sheffield: St Matthew	13.3	Not started
Owlerton: St John the Baptist	13.0	Not started
Thorpe Hesley: Holy Trinity	12.9	Not started
Kilnhurst: St Thomas	12.9	Submitted, not verified
Doncaster: St James	12.7	Not started
Cantley: St Wilfrid	12.4	Not started
Sheffield: St Oswald, Millhouses	12.4	Submitted, not verified
Norwood: St Leonard	12.0	Submitted, not verified

## Appendix 6: Methodology for calculating our carbon footprint

### General comments

Finding accurate and comparable data for energy use and energy sources for all our buildings is not easy. In addition, it may not be clear what GHG factors are used when converting energy use in kWh to carbon emissions in kgCO<sub>2</sub> as these change over time as the National Grid is gradually de-carbonised. Inevitably this means that there is a margin of error when calculating carbon footprints for different buildings.

The table below describes the current basis for calculation for different building types.

Building type	Primary source	Secondary source	Tertiary source
Church/church hall	Energy Footprint Tool 2022 <i>Net CO2</i>	Parish Finance return 2022 <i>24 - Church utility bills (gas, electricity, water, oil) - Unrestricted</i>	Strategic Review 2021 <i>Expenditure Parish Church Utility Bills</i>
School	Energy Performance Certificate, EPC		
Clergy house	Energy Performance Certificate, EPC		
Diocesan Church house	Energy Performance Certificate, EPC		

### Notes:

- i. Energy Performance Certificates (EPC) use a standard format and formulae for calculating energy use and resulting CO<sub>2</sub> emissions. The certificates are valid for 10 years. The results for any particular building will change over time as GHG factors for different fuels and energy sources change. For instance, the National electricity grid is slowly being de-carbonised as more renewable sources come on stream and displace dirty coal and gas plants.

EPCs do not take account whether a green energy tariff is being used, assuming instead the standard grid carbon intensity at the time of issue. Therefore, the results are **Gross CO<sub>2</sub> emissions**.

EPCs do not track actual energy use by occupants but use standardised assumptions of usage patterns to assess the performance of the building.

EPCs provide a reasonably standardised method for calculating the energy efficiency of a building and therefore can provide a satisfactory method for assessing its carbon footprint. They provide enough data for more accurate assessments to be made in the future.

- ii. The Energy Footprint Tool is designed to capture detailed data of churches and their halls by inputting actual energy use based on actual bills. These contain information of what type of tariffs are being used, green or standard, and the EFT then calculates the CO<sub>2</sub> emissions using standard GHG factors, and therefore also calculates the **Net CO<sub>2</sub> emissions**.

The EFT uses other data to allow energy use per m<sup>2</sup> and by occupancy, measures that indicate the effectiveness of energy use in terms of the benefit afforded to users of the building. This can be used to draw broad comparisons between building types and usage patterns.

***The EFT is by far the best method of assessing the carbon footprint of churches.***

- iii. Both the Parish Finance return data and the Strategic Review data use the total reported expenditure on utilities to estimate the carbon footprint. This is a blunt tool and takes no account of the energy mix (gas/electricity/water). The CO2 emissions are estimated based on an assumed cost per kg CO2 emitted.
- iv. In depth energy audits. In due course our schools and certain churches will have a comprehensive energy audit to inform their individual Decarbonisation Plans. These will give a further insight of current emissions and a pathway for reducing them.