Diocese of Chichester
Net Zero Carbon Action Plan

Definition of Net Zero Carbon

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

Introduction

Initial Cost Estimate

As an initial cost estimate, the total cost of this programme for the Diocese of Chichester is estimated at approximately **£69m**, of which £55m will require the diocese to seek funding sources and **£14m** is identified as likely to be spent on schools and paid for by UK Government grants. This estimate includes Capacity Building costs of approximately **£1.9m**, 3% annual inflation, 10% Project Management, and 20% VAT. This is a high level estimate, and it will need to be developed into a more accurate Cost Plan, as Heat Decarbonisation Plans, quotations and spending plans are produced.

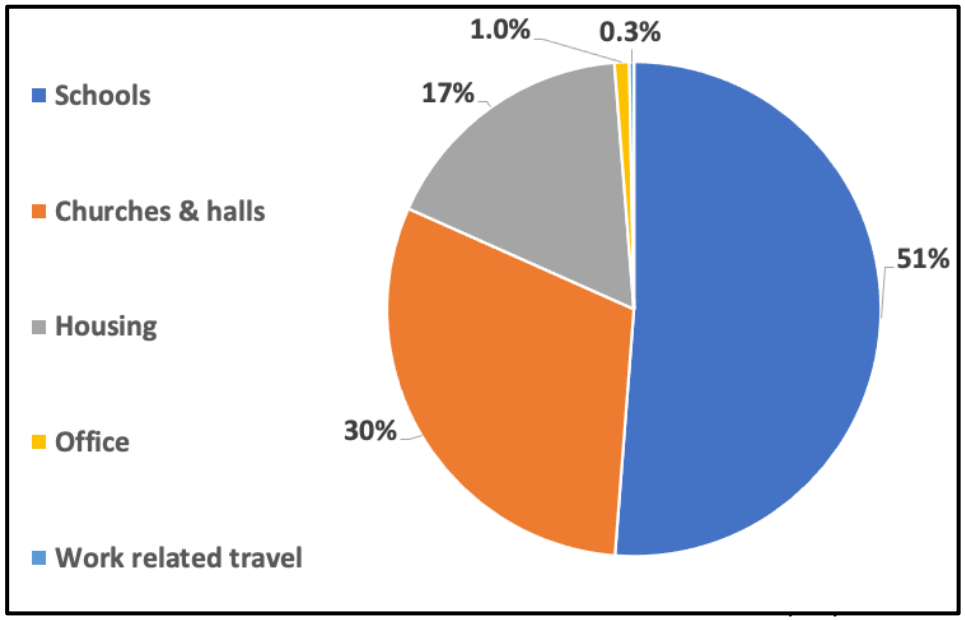
Carbon Baseline

The pie chart to the right shows our 2021 starting point baseline from which decarbonisation savings will be measured – **13,500 tCO_2e** (tonnes of Carbon Dioxide equivalent).

This baseline data does not include the cathedral or Palace, which are out of scope of this plan. The annual carbon emissions data (the results of the EFT / Energy Footprint Tool issued by the National Church) is expected to be issued at the end of each calendar year.

Just over a half of our baseline emissions came from schools, just under a third from churches and church halls and about a fifth from clergy housing. However, much of this information is based on estimates. For example, only about 60% of PCCs and a third of schools provided their energy usage. The accuracy of our annual emissions data should improve as we work to achieve higher EFT response rates and better estimates.

2021 Diocesan Carbon Baseline – 13,500 tonnes



When General Synod adopted a commitment to the ambition of achieving net zero carbon by 2030, it was clear that it would be very challenging - and expensive. However, the significant changes in global weather events in recent years have underlined the urgency of tackling the amount of carbon we produce, and showing leadership in what we are doing about it. It is right that the Church of England should take a lead in this.

This Action Plan takes a positive approach to working towards this ambition. It focusses on the processes, actions, resources and funding that will be required to make significant yearly progress towards achieving the target. It does not analyse or comment on whether the target is achievable. Nor could it, given that the availability of resources and funding is unknown at present and given the significant dependence on the energy market, advances in technology, availability of qualified trades to undertake the works and the national grid etc.

This plan sets out how the diocese can work towards implementing the Church of England Routemap to Net Zero Carbon by 2030. We will simply refer to this as the Routemap.

The Routemap commitment seeks an ambition for each diocese to reduce at least 90% of their carbon emissions compared to their baseline by 2030. A maximum of the remaining 10% will then be offset from 2030 onwards. This summary works through each contribution to our carbon footprint from highest to lowest proportions.

This plan sets out how the diocese of Chichester might achieve this goal.

Please note, the Cathedral and Palace have been omitted from the scope and costs in this Action Plan as their Net Zero journey will be managed by others.

Benefits

Aside from the global environmental benefits of reducing carbon emissions, there are a number of potential benefits to diocesan stakeholders that come from reducing carbon emissions and burning fuels on site. These include:

Lower costs for heating, lighting and operating our buildings (leading to better financial security and budget for core activities); better air quality in and around buildings; more comfortable, welcoming and productive spaces; optimised use of spaces and buildings; potential revenue from renting heated spaces; additional interest in mission by those inspired by the Net Zero ambitions of the diocese; wider influence on society to act on sustainability.

Technologies and Interventions

This plan encourages the use of the Energy Hierarchy and Fabric First principles. Below is a list of (inexhaustive) interventions or technologies that could form the basis for energy efficiency or renewable projects, depending on existing conditions, and building operation:

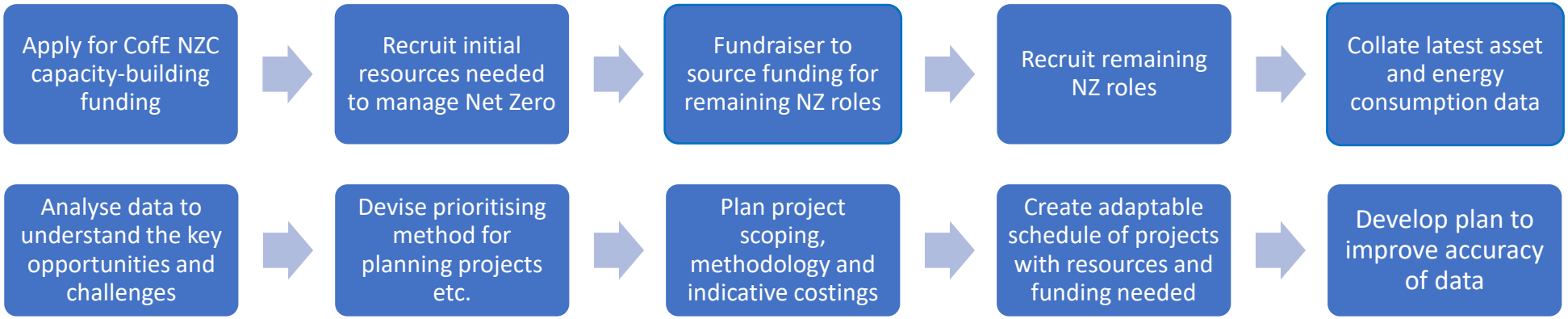
- Behavioural Change (low-investment)
- Building envelope fabric improvement (*keeping heat in*) – insulation and draft proofing, including windows/doors, roof, wall and floor insulation

- Pipework insulation
- Lighting technology upgrades to LED, and lighting controls
- Decarbonisation of heating and DHW (Domestic Hot Water) systems – to Heap Pumps (Air, Ground or Water)
- Electronification of heating to Radiant or Direct Electrical Heating
- DHW storage systems
- Building Services controls (e.g. BMS/Building Management Systems) or Smart Controls
- Solar Photovoltaic (PV) and battery storage systems
- Water reduction measures (particularly DHW)

Outline approach

This section provides a broad overview of the two key phases of the programme. These phases may overlap to some extent.

Programme Set-Up



Key Activities	Owner	'23	'24	'25	'26	'27	'28	'29	'30
Apply for Church of England Net Zero Carbon capacity-building funding.	Net Zero Lead	*							
Recruit initial resources needed to manage Net Zero	Managers		*						
Fundraiser to source funding for remaining NZ roles	Net Zero Lead		*						

Key Activities	Owner	'23	'24	'25	'26	'27	'28	'29	'30
Recruit remaining NZ roles	Net Zero Lead		*						
Collate latest asset and energy consumption data (as accurately as possible)	NZ staff		*	*					
Analyse data to understand the key opportunities and challenges	NZ staff		*	*	*				
Devise prioritising method for planning projects etc.	NZ staff		*	*	*	*			
Plan project scoping, methodology and indicative costings. Use a methodology that is repeatable and efficient wherever feasible.	NZ staff		*	*	*	*	*	*	
Create adaptable schedule of projects with resources and funding needed.	NZ staff			*	*	*	*	*	
Develop plan to improve the accuracy of data (e.g. Energy Footprint Tool)	NZ staff		*	*	*	*			

Programme Funding and Delivery

Key Activities	Owner	'24	'25	'26	'27	'28	'29	'30
Apply for project funding	NZ staff +	*	*	*	*	*	*	*
Deliver the projects/activities	NZ staff +	*	*	*	*	*	*	*
Communicate project successes	Comms	*	*	*	*	*	*	*
Regular reporting on progress to Net Zero Programme Manager and NZ Working Group	NZ staff	*	*	*	*	*	*	*
Annual lessons learned to improve the programme	NZ staff	*	*	*	*	*	*	*

Note: Applying for funding and delivery of projects will be a joint activity with NZ staff and the responsible body e.g. church, school etc.

Schools

Scope

The energy used by schools where the Diocesan Board of Education (DBE) has a significant degree of influence. Work-related travel including school trips are also within scope. There are a total of 67 schools in scope of which 45 are Voluntary Aided (VA) and 22 are either single or multi Academy trusts.

Notes

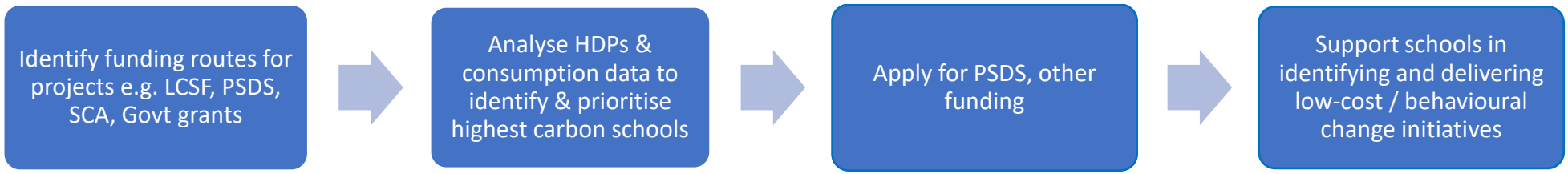
The Diocesan Board of Education (DBE) is directly responsible for the capital funding of the 45 VA schools and will prepare and bid for Government funding (e.g. Public Sector Decarbonisation Scheme / PSDS and Low Carbon Skills Fund / LCSF) for a large proportion of the decarbonisation.

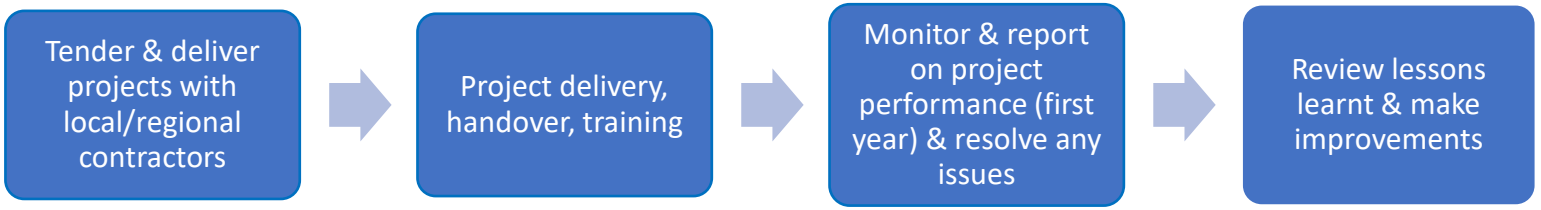
Academy schools and Academy Trusts are responsible for their own capital funding programmes and will therefore need to prepare and bid for Government funding themselves. The DBE will work proactively with Academies to seek to ensure that Net Zero plans are put in place and tracking their progress alongside the VA schools. Other Church of England schools are out of scope such as Voluntary Controlled (VC) Schools and Academy Trusts where the Church of England is in a minority at member level. We will seek to influence these where possible but will not need to track progress here.

A total of 64 Heat Decarbonisation Plans (HDPs) have been completed of the 66 VA schools and Academies within MATs with Church Majority Articles; two schools still require HDPs and the 67th school is part of a MAT that sits in another diocese, so this is excluded.

An exercise can be carried out in 2024 by the Education Net Zero Project Manager to analyse the completed HDPs, plan when to complete HDPs on the remaining two schools, and look at how the funding applications and projects could be phased.

Key Activities





Key Activities	Owner	'24	'25	'26	'27	'28	'29	'30
Identify funding routes for projects e.g. LCSF, PSDS, SCA, Govt grants	DBE	*	*	*	*	*	*	*
Analyse HDPs & consumption data to identify & prioritise highest carbon schools	DBE	*						
Apply for PSDS, other funding	DBE	*	*	*	*	*	*	*
Support schools to identify & deliver low-cost / behavioural change initiatives	DBE	*	*	*	*	*	*	*
Tender & deliver projects with local/regional contractors	DBE		*	*	*	*	*	*
Project Delivery, Handover, Training	DBE		*	*	*	*	*	*
Monitor & report on project performance (first year) & resolve any issues	DBE		*	*	*	*	*	*
Review Lessons Learnt & make improvements	DBE			*	*	*	*	*

Estimated costs and funding opportunities

This plan assumes an average cost of £395,000 per school (including 3% inflation, 10% Project Management, 20% VAT), over 45 VA schools. This gives a total investment of approximately £18m.

It is estimated that 80% of these costs, or £14m, could come from the UK Government Public Sector Decarbonisation Scheme grants.

Funding opportunities may come from the following areas:

- Public Sector Low Carbon Skills Fund (LCSF) grants, from the UK Government – for Heat Decarbonisation Plans
- Public Sector Decarbonisation Scheme grants, from the UK Government - for Heat Decarbonisation and Energy Efficiency Works (this can provide a grant for 80-87.5% of the project value)
- School Condition Allocations (SCA) grants – for insulation / keeping heat in
- Devolved Formula Capital
- Engage with County and district/borough Councils regarding potential collaboration on funding and delivery of school decarbonisation projects

Options

- The competition for the regularly oversubscribed Government LCSF and PSDS funding is high and the application criteria, demanding. We should look to work with a consultancy with a successful track-record to help us to prepare for these difficult applications (a route taken by the Diocese of Guildford) to achieve early successes.

- There are national managed frameworks that provide end-to-end support, documentation and process for decarbonisation and these should be considered, against commissioning a consultancy with the relevant experience and track record in delivering decarbonisation projects. The most widely used public sector framework is Re:fit (https://localpartnerships.org.uk/expertises/refit/), co-owned by Local Partnerships and the Greater London Authority / Mayor or London. Re:fit supports the funding applications such as LCSF and PSDS.

Churches and Church Halls

Scope

The scope includes the use of electricity, gas, oil, or other fuel for churches, church halls and ancillary buildings, non-parochial churches, BMOs and others if they have their own utility supplies.

We have around 465 churches across the diocese, from Rye Deanery in the east to the Westbourne and Midhurst Deaneries in the west. Data will need to be collated on the number and locations of church halls, which is lacking at this stage.

Notes

There is a wide variety in building size, type, age, fuels, building fabric, building services and usage patterns. Three quarters of the church buildings are listed, and many are Grade 1. The church wardens are often of an age where they need additional support to understand the benefits of the latest technologies. The DAC have tried to build up a list of heating specialists, however, does not currently have a heating advisor.

Parishes are currently being encouraged to commission heating options surveys, before the older heating equipment fails. There are about 30 parishes that are keen to undertake energy retrofit projects and some projects have been delivered or are in the process of being delivered:

2018/19 –St Michaels & All Angels, Berwick (circa £100k for a Ground Source Heat Pump)
2023 – St Leonard's Church, Hove

The Routemap focuses efforts on the highest 20% of carbon emitters and also identifies that all buildings should move to LED lighting and green energy tariffs

as soon as practical. Every Parochial Church Council (PCC) should be encouraged to develop plans to achieve this, with support and advice from the Diocesan Advisory Committee (DAC).

Churches that are being closed, would come out of scope and their emissions deleted from the year's emissions number.

Note: Some churches and church halls where there is low energy use may still be using oil or gas heating beyond 2030 until it is feasible to transfer over to electric heating. Three-phase power, required for Heat Pumps, would be an expensive installation in many locations.

No new oil boilers installed in churches after 2025 (contingent on government action to connect rural communities to the grid).

A Parish Energy Advisory Team (PEAT) should be established to **guide parishes**[1] through their funding and project delivery in order to decarbonise. To resource this work adequately, it is planned that this team will be dedicated to Parishes and not assist with other areas of the diocese. In the first instance, this team will collate a comprehensive database of the buildings. The Routemap asks all churches to move to LED lighting and the top 20% of carbon emitters (typically the busy churches that are used during the week as well as Sundays) to develop and implement Net Zero plans which will include replacing oil or gas heating wherever economically and technically feasible.

At contract renewal and by 2024, all churches (and cathedrals) will be encouraged to switch to 100% green electricity tariffs, through a national switch campaign (timing to be under review, depending on the stabilisation of the energy markets).

Projects will be prioritised on the top 20% of emitters and 'readiness to go'. Funding opportunities (including local fundraising) will be identified. The Parish Energy Advisory Team will guide the parishes through the project process in data collation, development of audits/proposals, project management, tendering, funding and contracting a supplier to deliver works. Training and behavioural change initiatives complement the projects.

Key Activities

[1] *the PEAT will guide parishes, but not provide the type of advice where there is a Professional Indemnity risk. The PEAT will not design, tender or contract with suppliers directly; this will be the responsibility and the governance of each PCC.*

Key Activities	Owner	'24	'25	'26	'27	'28	'29	'30
Set up Parish Energy Advisory Team (PEAT) to create & support project delivery process	DAC	*						
Collate information on entire estate, including church halls	PEAT / DAC	*						
Continue Heat Decarbonisation plans & low-cost measures recommendations	PEAT / DAC	*	*	*	*			
Build clear picture of assets using different fuels for heat: electricity, 3-Phase electricity supply, oil and gas	PEAT / DAC	*						
Identify funding sources for multiple or single parishes	PEAT	*	*	*	*	*	*	*
Prioritise parishes by 'ready to go' and 'highest emitters'	PEAT	*						
Plan batches of parishes for funding, procurement and delivery	PEAT	*	*	*	*	*	*	*
Tender, deliver and handover projects	PEAT	*	*	*	*	*	*	*
Post-projects checks on performance & satisfaction	PEAT	*	*	*	*	*	*	*
Report on lessons learned & continuous improvement	PEAT	*	*	*	*	*	*	*

Estimated costs and funding opportunities

This plan assumes an average cost of £45,000 per church (including 3% inflation, 10% Project Management, 20% VAT), over 465 churches. This gives a total investment of £21m.

This is based on research into case studies and estimating that a small Heat Pump installation may cost around £20-30k (assuming that most churches will not be suitable for heat pumps).

Funding opportunities may come from the following areas:

- NCI (National Church Institutions) funding
- Grant applications made through the diocese for national or other funding
- PCC funds or Local donation fundraising

- Rampion Community Energy Fund - https://www.rampionoffshore.com/community/benefit-fund/
- Veolia Environmental Trust Funding https://www.veoliatrust.org/funding/

Clergy Housing

Scope

The energy use of the 360 properties currently managed by the diocese, which are mainly 4-5 bedroom properties of a wide spectrum of type.
Note: Routemap targets are based on EPC grades, not actual usage.

Notes

The department has been running trials on retrofitting houses and already been working to improve boilers, insulation, lights and windows (to double glazing). The approach has been to look at moving to alternative fuels if the houses have gas or oil boilers. The department has EPCs for properties that are let out, although not for all clergy houses.

Key Activities

Key Activities	Owner	'24	'25	'26	'27	'28	'29	'30
Commission benchmarking of stock to develop works scope and budget cost	Property	*						
Do initial pilots and learn lessons from these and national projects	Property	*						
Develop estimate programme	Property	*	*	*	*	*	*	*
Make Energy Efficiency a consideration on all properties we purchase	Property	*	*	*	*	*	*	*

Tender phases of work packages to qualified contractor list(s)	Property	*	*	*	*	*	*	*

Estimated costs and funding opportunities

This plan assumes an average cost of £75,000 per house (including 3% inflation, 10% Project Management, 20% VAT), over 360 houses. This gives a total investment of £27m.

Funding opportunities may come from the following areas:

- NCI (National Church Institutions) funding
- Charity funding for a consultant to benchmark the current stock, provide advice on priorities and budget costs.
- Diocesan funds – although these are extremely limited
- The Marshall's Charity
- UK Government grants for domestic properties

Diocesan Office

Scope

The energy use in our owned office, Church House, Hove.

Notes

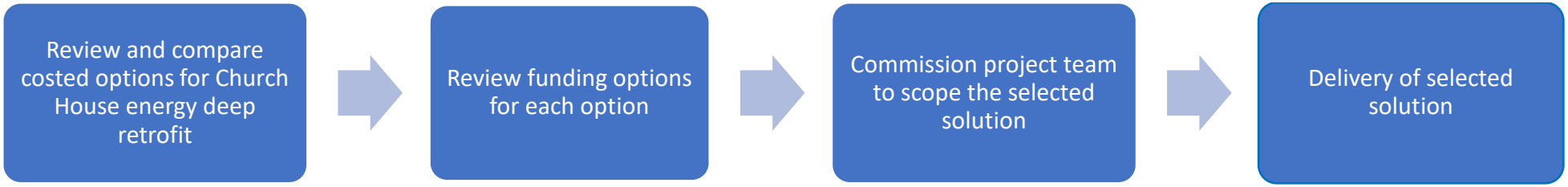
The Diocesan office would be a good 'sustainable demonstrator' project to encourage, inspire and educate others to undertake similar initiatives.

The steps to achieve this are:

- Plan for a deep retrofit early in the Net Zero programme of activities to provide the following benefits:
    i. The completed building can act as an exemplar and showcase / demonstration project of new technologies to visitors across the diocese
    ii. The emissions for the buildings can be reduced to close to zero
    iii. For the diocese to set an example by leadership at a key building, and help with Hearts and Minds

- Contact Brighton and Hove Energy Services Co-operative (BHESCo) https://bhesco.co.uk to explore if the organisation can assist with the process
- Procure and commission an experienced low-carbon consultancy to carry out an outline and then detailed design and costings for the retrofit.
- Review the widely recognised Passivhaus Standard or Passivhaus EnerPHit standard, which are some of the highest standards possible for buildings. The costs for achieving these standards are higher than those to meet regular Building Standards, however, this gap is narrowing, and energy costs would be significantly reduced.

Key Activities



Key Activities	Owner	'24	'25	'26	'27	'28	'29	'30
Review and compare costed options for Church House energy deep retrofit	Property	*						
Review funding options for each option	Property	*						
Commission project team to scope the selected solution	Property	*						
Delivery of selected solution	Property		*	*				

Estimated costs and funding opportunities

This plan assumes a nominal total cost of £730,000 for Church House (including 3% inflation, 10% Project Management, 20% VAT). This number will need to be firmed up with surveys, proposals and quotes by technical consultants or contractors.

Funding might come from the following sources:

- NCI (National Church Institutions) funding
- Existing annual renewals and repairs budget
- Diocesan funding – although this is limited

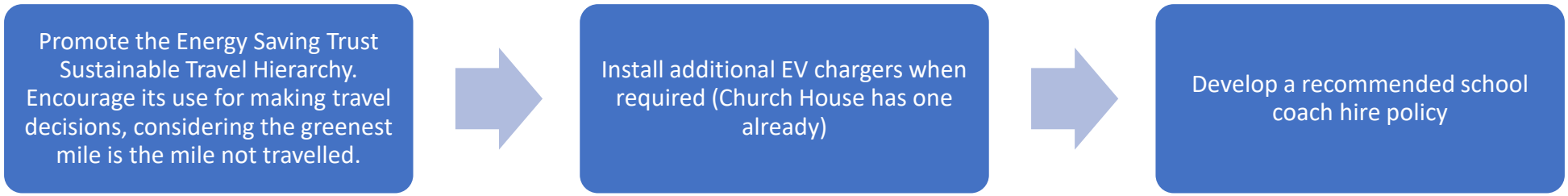
Work Related Travel

Scope

All work-related travel for diocesan staff (and expenses claimed on diocesan business), and staff in schools and parishes. This section of the plan focusses only on diocesan staff and Diocesan Church House.

The 2030 target does not include staff commuting, parishioner or school travel. However, these are areas in which the diocese can try to influence. As they are outside of scope, they are not covered in this plan.

Key Activities



Key Activities	Owner	'24	'25	'26	'27	'28	'29	'30
Promote the Energy Saving Trust Sustainable Travel Hierarchy. Encourage its use for making travel decisions, considering the greenest mile is the mile not travelled.	HR, IT & Facilities	*	*	*	*	*	*	*
Install additional EV chargers when required (Church House has one already)	HR, IT & Facilities	*	*	*	*			
Develop and share a recommended school coach hire policy which suggests the use of low carbon transport wherever possible and contains a sustainable coach hire hierarchy.	DBE	*	*					
Completed - Updated expenses policy to encourage sustainable transport: UK government mileage rates for cycling, motorbikes and carrying passengers on business. Government Cycle to Work Scheme to employees.	HR							

Estimated costs & funding opportunities

No costs have been included for these activities. It is assumed that they can be funded through existing budgets.

Carbon Offsetting 2030

Scope

Reductions in energy consumption will be prioritised first and after this, the installation of on-site renewable energy generation on suitable buildings, whilst all sites should switch to renewable energy tariffs.

In line with the Routemap, no action on carbon offsetting will be taken until the 2029 Carbon Footprint Report is issued. An early move to offsetting could divert attention and funds from reducing emissions.

Key Activities

In 2029, research and preparation should be made by the Diocese Board of Finance, for purchasing offsets in the following year, 2030. From 2025, the CofE will be providing a Parish Buying approved supplier list for carbon offsets.

As time progresses towards 2030, the costs, opportunities and certification structure in the carbon offset market will change, therefore, what is relevant in the market now, may not be towards the end of the decade.

The Routemap states that by 2030, a diocese should offset less than 10% of the baseline carbon emissions, annually.

Estimated costs

At current prices, carbon offsetting is estimated to cost £22/tonne in 2030. Based on a reduction of 90% emissions by 2030, the residual carbon is estimated to be circa 1350 tonnes. Carbon offsets would therefore cost an estimated £30,000 pa assuming the required reductions in emissions are achieved.

Communications Plan

Please note, excerpts from another diocese's draft Comms Plan is available in the appendices.

Scope

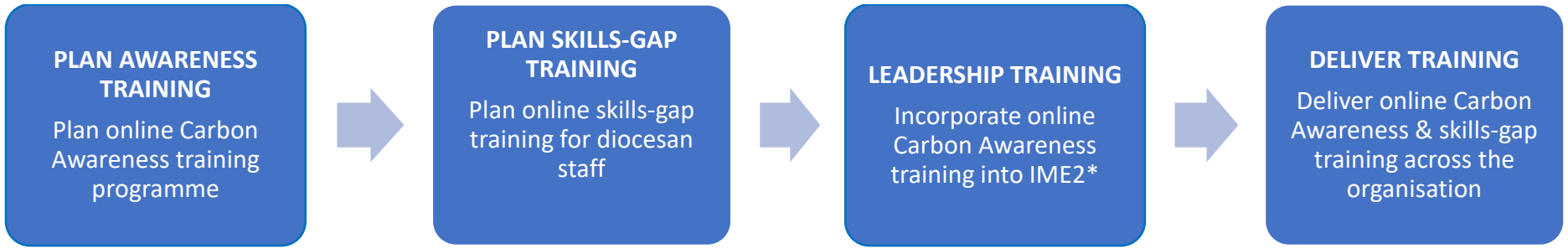
Communication, engagement and leadership should happen at all levels and must emphasise that we all have a part to play to deliver Net Zero Carbon, and that positive change is achievable. All levels of leadership should ensure they take up training opportunities and remain informed of the challenges and solutions.

Key Activities

Key Activities	Owner	'24	'25	'26	'27	'28	'29	'30
Develop a communication strategy to churches and schools	Comms & Engagement	*						
Create a Routemap to Net Zero Carbon by 2030 Communications Strategy	Comms & Eng.	*						
Encourage churches to register for Eco Church and progress through award levels	Comms & Eng.	*	*	*				
Encourage churches to complete the Energy Footprint Tool each year	Comms & Eng.	*	*	*	*	*	*	*
Encourage churches to switch to 100% renewable electricity and "green" gas	Comms & Eng.	*	*	*	*	*	*	*
Encourage churches to switch to LED lighting	Comms & Eng.	*	*	*	*	*	*	*
Encourage the top 20% of churches, in terms of energy use, to work towards being carbon net zero by 2030.	Comms & Eng.	*	*	*	*	*	*	*
Tell stories of carbon reduction initiatives (e.g. PV panels, heat pumps etc.) and any benefits such as cost reductions that churches might have achieved.	Comms & Eng.	*	*	*	*	*	*	*
Campaigns over the year to raise awareness of our environmental responsibility	Comms & Eng.	*	*	*	*	*	*	*
Clear communication regarding the transparency of funding approaches demonstrating the DBF's commitment to the continued funding of mission	Comms & Eng.	*	*	*	*	*	*	*

Training

Key Activities



*Initial Ministerial Education 2, i.e. curacy training

Notes

Individuals have a different understanding and perceptions of Net Zero, decarbonisation and sustainability, and training can be an effective tool to educate and help people feel informed, involved and inspired. There are many levels of optimism in achieving Net Zero, and training can help to encourage people involved in the diocese to take steps to start journey, regardless of whether they feel they can personally make a difference or whether they feel that the targets are realistic.

Diocese-wide training is a powerful tool to encourage and empower individuals to act. Lack of training and knowledge can act as a barrier to action. Training and inspired cumulative actions of many people across the organisation can have significant impact in building the momentum of a centrally managed programme. Trained individuals and teams may go on to manage and create decarbonisation initiatives and bring decarbonisation decisions into many aspects of their working and personal lives. An online training programme can be low-cost to deliver and also inspire low-cost ‘behavioural change’ activity, such as eliminating energy use. In order for decarbonisation to occur across the many diocesan stakeholders, there needs to be a shared understanding of what the climate crisis comprises, and what action needs to be taken. This therefore necessitates training for clergy and other church leaders (lay ministers, Wardens & PCCs) as well as diocesan staff.

Carbon Literacy training

The CofE central team recommend the online Carbon Literacy Project (https://carbonliteracy.com) that can be offered to clergy and parish staff, church leaders and diocesan staff, to provide a broad basis of understanding for the diocese to move forward as a whole. Accredited and nationally recognised, it will cost the diocese nothing.

It is recommended that all relevant individuals are trained by the end of 2024. This is to embed foundation knowledge early in the programme so that it can make an impact. It is recommended that the training is repeated periodically to provide the opportunity for individuals to refresh and build on their knowledge (as most individuals do not absorb all required knowledge from a single training course). The training may also be updated, and it is important that this is available to all. It is also recommended that feedback is requested from all individuals following training courses, so that improvements can be made to future sessions.

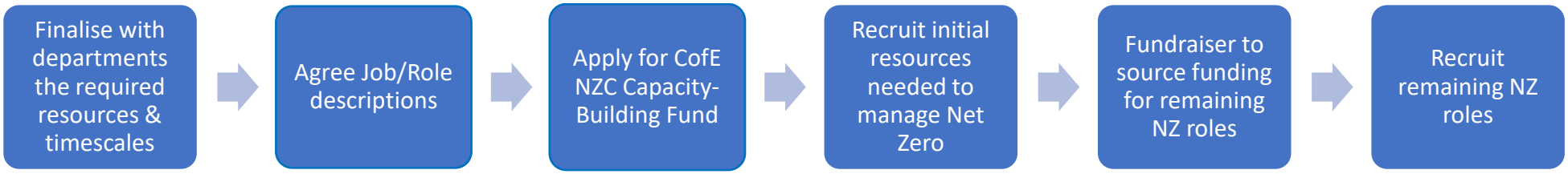
The training can be managed by the Net Zero Programme Manager or other designated member, and delivered internally. This arrangement can be amended to fit the availability of suitable individuals.

Capacity

Scope

This section looks at the additional capacity that will be needed to support the programme over and above the day-to-day workload of the respective teams. The national funding is broken down into triennia. Multiple bids will therefore need to be prepared. This section does not include estimates of resources that will be needed to manage the potential large number of retrofit projects that will arise if significant funding is obtained. It is assumed that such project management provision will be incorporated in any funding bids for works. We will be working with two other dioceses in the region to share key resources and the opportunity for close working and shared learning.

Key Activities



Key Activities	Owner	'24	'25	'26	'27	'28	'29	'30
Finalise with departments the required resources & timescales	Net Zero lead	*						
Agree Job/Role descriptions	Net Zero lead	*						
Apply for CofE NZC Capacity- Building Fund	Net Zero lead	*						
Recruit initial resources needed to manage Net Zero	Net Zero lead	*						
Fundraiser to source funding for remaining NZ roles	Net Zero lead	*						
Recruit remaining NZ roles	Net Zero lead	*	*					

Gap Analysis of Resources

The following tables identify the gaps in human resources required to deliver Net Zero for each of the diocesan teams:

Team	Capacity Role needed	FTE	Base Salary (£/yr)	Pro-rata Base Salary (£/yr)	Yearly Costs to DBF - Incl. Salary, Inflation, NIC & Pension							Totals (£) 2024-2030
					2024	2025	2026	2027	2028	2029	2030	
	Inflation multiplier (3% PA) >				1.03	1.06	1.09	1.13	1.16	1.19	1.23	
Programme level	**Programme Manager (programme-wide)**	0.40	£ 55,800	£ 22,320	£ 20,460	£ 23,679	£ 24,390	£ 25,121	£ 25,875	£ 26,651	£ 27,451	£ 173,627
	NIC (13.8% over £9,100) + Pension (15.25%) + £13k Office O/H				£ 17,688	£ 18,623	£ 18,829	£ 19,042	£ 19,261	£ 19,486	£ 19,719	£ 132,648
	Fundraiser (Programme-wide)	0.40	£ 37,500	£ 15,000	£ 7,500	£ 15,914	£ 16,391	£ 16,883	£ 17,389	£ 17,911	£ 18,448	£ 110,435
	NIC (13.8% over £9,100) + Pension (15.1%) + £13k Office O/H				£ 7,633	£ 15,403	£ 16,481	£ 16,623	£ 16,770	£ 16,920	£ 17,076	£ 106,906
Parish Energy Advisory Team	**Project Manager**	0.60	£ 40,000	£ 24,000	£ 12,000	£ 25,462	£ 26,225	£ 27,012	£ 27,823	£ 28,657	£ 29,517	£ 176,696
	NIC (13.8% over £9,100) + Pension (15.1%) + £13k Office O/H				£ 8,712	£ 19,103	£ 19,323	£ 19,551	£ 19,785	£ 20,026	£ 20,275	£ 126,775
	Heating, Energy & Renewable Advisor	0.60	£ 37,900	£ 22,740	£ 11,370	£ 24,125	£ 24,849	£ 25,594	£ 26,362	£ 27,153	£ 27,967	£ 167,420
	NIC (13.8% over £9,100) + Pension (15.1%) + £13k Office O/H				£ 8,530	£ 18,716	£ 18,925	£ 19,141	£ 19,363	£ 19,591	£ 19,827	£ 124,094
	Project Administrator	0.60	£ 24,000	£ 14,400	£ 7,200	£ 15,277	£ 15,735	£ 16,207	£ 16,694	£ 17,194	£ 17,710	£ 106,018
	NIC (13.8% over £9,100) + Pension (15.1%) + £13k Office O/H				£ 7,325	£ 16,159	£ 16,292	£ 16,428	£ 16,569	£ 16,713	£ 16,862	£ 106,348
Property Department	**Surveyor & Project Manager**	0.60	£ 37,900	£ 22,740	£ 11,370	£ 24,125	£ 24,849	£ 25,594	£ 26,362	£ 27,153	£ 27,967	£ 167,420
	NIC (13.8% over £9,100) + Pension (15.1%) + £13k Office O/H				£ 8,530	£ 18,716	£ 18,925	£ 19,141	£ 19,363	£ 19,591	£ 19,827	£ 124,094
Education Department	**Education NZ Project Manager**	0.60	£ 37,900	£ 22,740	£ 11,370	£ 24,125	£ 24,849	£ 25,594	£ 26,362	£ 27,153	£ 27,967	£ 167,420
	NIC (13.8% over £9,100) + Pension (15.1%) + £13k Office O/H				£ 8,530	£ 18,716	£ 18,925	£ 19,141	£ 19,363	£ 19,591	£ 19,827	£ 124,094
TOTAL CAPACITY COST					£148,218	£278,143	£284,989	£291,072	£297,338	£303,792	£310,440	£1,913,992

Assumptions

All roles (with exception Programme Manager that starts on 01/02/24) assumed to be 50% of FTE in 2024 to allow time to recruit the roles

All roles include a flat rate of £13,000 per year for Office Overheads

All yearly salary costs are uplifted with 3% annual inflation

Programme Manager - yearly costs include 15.25% Pensions contribution (Diocese of Guildford rate)

All other roles - yearly costs include 15.1% Pensions contribution (Diocese of Chichester rate)

All roles include 13.8% National Insurance Contributions over the £9,100 threshold

Salary rates will need to be checked against market rates at the time of recruitment.

Notes – Resource Assumptions

A programme level Programme Manager has been recruited (shared with Guildford and Portsmouth) to manage, coordinate and track the entire programme. This individual also manages the Net Zero Working Group and its reporting.

A programme level fundraiser is required to understand all programme fundraising requirements, coordinate across diocese teams, source appropriate funding options and prepare the applications (with assistance from diocesan teams).

The Parish Energy Advisory Team is required to handle the most challenging aspect of diocesan decarbonisation, the churches and halls. The team of three should sit in the DAC and will help PCCs with guidance, building energy audits, project management support and project/contract administration.

The Education and Property departments both stated that they would require a part-time resource to manage projects when the pipeline of decarbonisation work starts. These requirements and their timing should be discussed further with the department Heads.

It is assumed that these all the roles (with the exception of the Programme Manager who is starting on 01/02/2024) would start approximately half way through 2024, following successful funding applications and recruitment processes. The above table can then be amended for 2024.

Investment Summary

Based on the average estimates and works phased evenly over all years, the following summarises the investment estimated to be needed. Cost estimates will be refined as surveys and quotes are undertaken, and initial local and national projects progress.

					Yearly Costs - Incl. VAT, Inflation, PM Costs							
Emissions Area	Estimate Base Cost per asset	Number of assets	Total Investment (£) - excl. inflation, VAT, PM Costs	Investment per year (£) - excl. inflation, VAT, PM Costs	2024 (Planning year)	2025	2026	2027	2028	2029	2030	PROGRAMME TOTALS (£)
				Inflation multiplier >	1.03	1.06	1.09	1.13	1.16	1.19	1.23	
Schools (VA) - UK Government PSDS grant	£ 210,000	45	£ 9,450,000	£ 1,575,000	£ -	£ 2,205,611	£ 2,271,779	£ 2,339,933	£ 2,410,131	£ 2,482,435	£ 2,556,908	£ 14,266,797
Schools (VA) - Diocese contribution (20%)	£ 52,000	45	£ 2,340,000	£ 390,000	£ -	£ 546,151	£ 562,536	£ 579,412	£ 596,794	£ 614,698	£ 633,139	£ 3,532,731
Churches/Halls	£ 30,000	465	£ 13,950,000	£ 2,325,000	£ -	£ 3,255,902	£ 3,353,579	£ 3,454,187	£ 3,557,812	£ 3,664,546	£ 3,774,483	£ 21,060,509
Clergy Housing	£ 50,000	360	£ 18,000,000	£ 3,000,000	£ -	£ 4,201,164	£ 4,327,199	£ 4,457,015	£ 4,590,725	£ 4,728,447	£ 4,870,301	£ 27,174,851
Diocesan Office (tbc)	£ 500,000	1	£ 500,000	£ 250,000	£ -	£ -	£ 360,600	£ 371,418	£ -	£ -	£ -	£ 732,018
Work Related Travel	£ -		£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Training	£ -		£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Capacity Building 2024-2030					£ 148,218	£ 278,143	£ 284,989	£ 291,072	£ 297,338	£ 303,792	£ 310,440	£ 1,913,992
TOTALS					£ 148,218	£ 10,486,971	£ 11,160,682	£ 11,493,037	£ 11,452,801	£ 11,793,919	£ 12,145,270	£ 68,680,898

Assumptions

For demonstration purposes, costs have been spread equally over the 6 years 2025-2030. As the programme develops, the actual spend profile can be updates in a Cost Plan.

Schools - using an average of £395k per school from Diocese of Guildford's 41 no. 2022 Heat Decarbonisation Plans. Chichester's HDPs have not yet been analysed for total investment.

Church/halls - £30,000 average per church is based on discussions with DACs, case studies and estimating that a small Heat Pump system may cost around £20-40k (and assuming that most churches will not be suitable for heat pumps).

Clergy Housing - £50,000 average per house was agreed with the Chichester Head of Property. A report by the CofE Pensions Board estimated £40k per house to progress to NZ.

Project Management consultancy costs have been applied to all costs at 10% of investment values

VAT has been applied at 20% (some technologies/interventions will attract lower VAT bands)

Inflation has been applied at 3% per annum

Cost estimates will be refined as the programme develops and costs are known.

Funding Sources

The order of magnitude of investment required is significant.

Investment for schools is primarily the responsibility of the UK Government through its grant funding programmes (Low Carbon Skills Fund and Public Sector

Decarbonisation Scheme). The current funding programmes are competitive and heavily oversubscribed and require a level of recipient match funding (upwards from 12.5%).

Whilst it is appropriate that some diocesan investment be made into this important programme this can only represent a very small proportion of the total investment required.

Some Parochial Church Councils (PCCs) have funds that could be invested although this is likely to be limited.

The national programme has £190m to invest over the period to support dioceses with their programmes. Divided amongst 42 dioceses this will represent a small part of the total investment. This funding will be used to build capacity and to lever in additional investment. There will be a separate national investment for cathedrals.

It is clear from the above that a significant amount of additional fundraising will be required. This will include local and national grant funders and appeals to those in the church and beyond.

This plan assumes that all responsible bodies will choose to migrate to green energy tariffs as soon as feasible. At the present time these are not the cheapest tariffs available. Change will therefore be difficult with tight budgets.

Governance

A Net Zero Working Group should be formed with senior representatives.

That Working Group will be expanded once additional capacity has been recruited to involve additional key individuals who are actively working on Net Zero. The role of the Working Group is to oversee the progress of the programme. It will also be responsible for reporting progress and recommending investment decisions to Bishop's Council/Diocesan Synod. The Net Zero Working Group will be chaired by the Net Zero Programme Manager once recruited.

A cathedral representative will be invited to attend the diocesan Net Zero Working Group.

Key Performance Indicators (KPIs)

The headline indicator will be the total carbon footprint of the diocese, measured against the 2021 baseline. This will be broken down into the various contributory elements, including the emissions reductions attributed to delivering projects, and the impact of annual grid decarbonisation reflected in the UK Government grid conversion factors. This measure is a "lag" indicator i.e. it takes some time for the measure to be produced. The national reporting is available late each year for the previous year.

The lag is further exacerbated by the additional delay between completion of carbon reduction projects and the outcomes being reflected in the carbon footprint. A project completed say in year 1 will not show a full year benefit until year 2 and this will not be reported until late in year 3. For this reason, the Programme Manager and Net Zero team will need to develop a set of "lead" indicators.

These additional measures will need to reflect the following:

- The accuracy of data collection e.g. the level of estimation versus actual data
- The progress of project delivery against the total number of projects required within each element of the programme
- The cumulative carbon reduction anticipated from projects.

There will also need to be a set of financial measures for example showing average costs of projects, funding breakdown etc., and the Programme Manager may wish to introduce KPIs across aspects of the programme.

Risk Management

A programme of work of this complexity would be challenging in its own right. In addition there is some uncertainty about capacity to plan the activities and considerable uncertainty about where the bulk of the funding will come from.

The Net Zero Programme Manager, once appointed, will be responsible for creating and maintaining a detailed Risk Register. The key risks as currently identified are included in the table below.

Key Risk	Level	Owner	Mitigation
Insufficient capacity to develop the programme of activity	High	Net Zero Lead	• Bid for national funding for capacity. • Alignment of existing capacity where feasible
Insufficient funding to undertake the full programme	High	Net Zero Lead	• This plan which identifies likely costs and potential funding sources • Local and national pilot projects to refine costs • Potential work frameworks or shared tendering to minimise costs of works • Bids to national programme and other funders for groups of projects • Maximising investment impact by starting with high-impact and low-investment, or behavioural change interventions
Insufficient funding within	High	DBE	• Lobby national government to prioritise Church of England schools or to

programme timescales for schools			increase investment available
Insufficient contractor capacity to carry out required works	High	Net Zero Lead	• Review opportunities in the contractor market for increased capacity, including looking at regional or national companies and working closely with other diocese.
Insufficient infrastructure especially in rural areas	High	Net Zero Lead	• Lobby local or national government through National programme to work on the infrastructure gap
Insufficient local knowledge or experience	Medium	Net Zero Lead	• Learning from other dioceses especially through pilot projects

Version history

Version	Date	Author
V2	4th October 2023	Tristan Oliver - Craig Partnership Ltd
V3	19th October 2023	Tristan Oliver - Craig Partnership Ltd
V4	24th October 2023	Tristan Oliver - Craig Partnership Ltd

Appendices Index