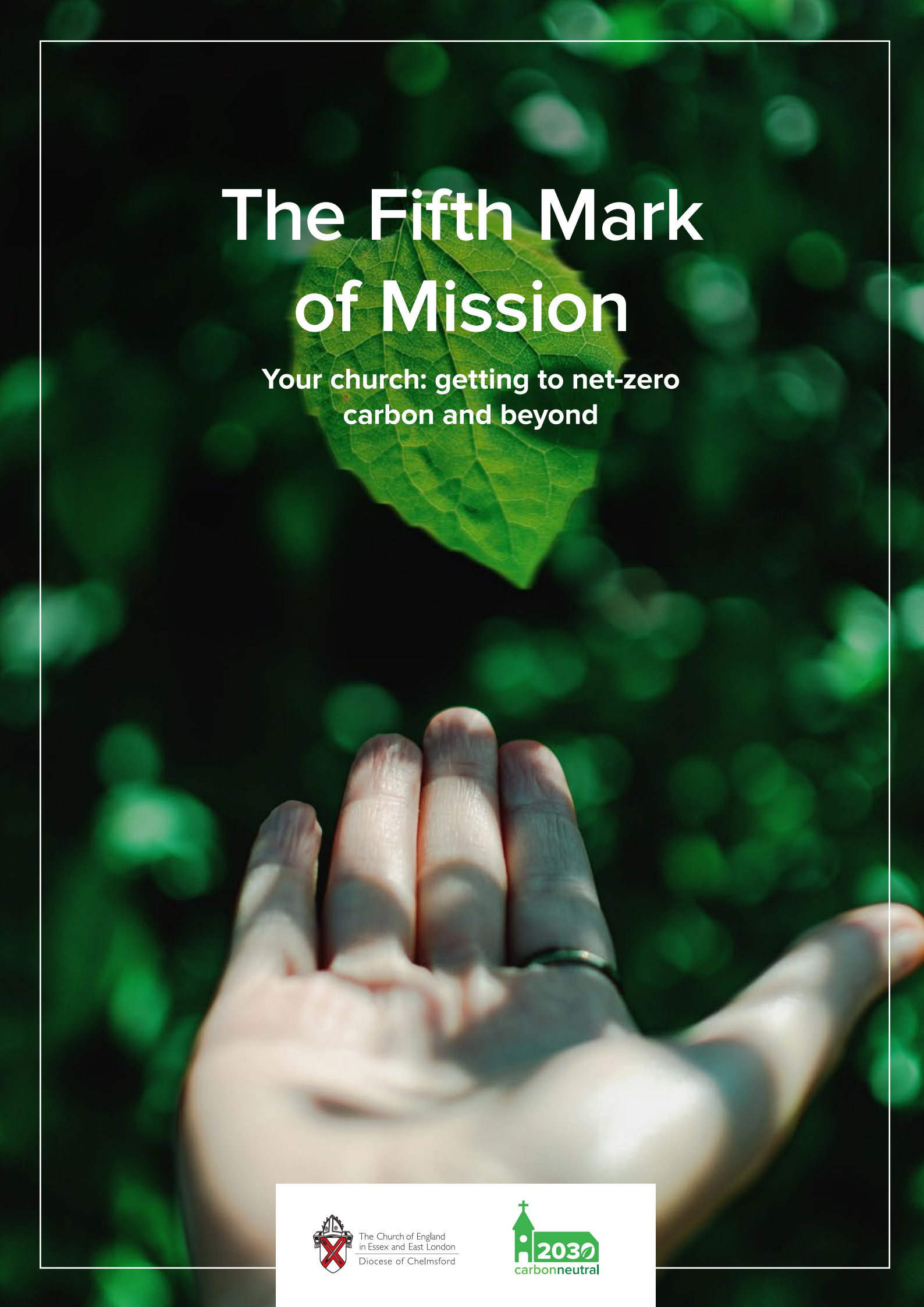


The Fifth Mark of Mission

Your church: getting to net-zero carbon and beyond

The Church of England
in Essex and East London
Diocese of Chelmsford

2030 carbonneutral

WWW.CHELMSFORD.ANGLICAN.ORG/ENVIRONMENT

The Fifth Mark of Mission

The mission of the Church is the mission of Christ. Five Marks of Mission have been developed by the Anglican Consultative Council, the official body representing Anglicans worldwide. The marks are intended to provide parishes with a structure for discerning their own mission activities. They are fluid and designed to equip churches to meet the missional needs of the times in which we live.

The Fifth Mark of Mission is discerned in response to the environmental crisis. It is this:

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

Whilst huge progress has already been made by some churches in discerning their own response to this Mark of Mission. it is increasingly evident that every individual and every church needs to do all they can in this regard, if God's creation is truly to be safeguarded for future generation.

This booklet is designed to help churches respond to the Fifth Mark of Mission, by ensuring their own buildings are as environmentally friendly as possible. In doing so, it is hoped that churches will act as beacons to their communities in safeguarding the integrity of creation, and encourage others to do likewise.

Facts on Chelmsford Diocese's carbon emissions

Research carried out in 2012 estimates that the total CO2 emissions for the Church of England amount to somewhere between 800,000 and one million tonnes every year.

This constitutes the total emissions from all our cathedrals, churches, church halls, schools, offices and houses, and from our work-related travel.

It is estimated that Chelmsford Diocese alone emits c.20,000 tonnes of CO2 annually.

If just one tonne of CO2 was gathered together, it would have roughly sufficient volume to fill two double-decker buses. So, thinking in terms of our diocese's emissions, if one was to put all those double decker buses full of Chelmsford's emissions of CO2 bumper to bumper, they would stretch from Chelmsford Cathedral right the way to the Scottish border. And that's just one year's worth of emissions!

Getting to net-zero and beyond

Philippians 4:6: 'Do not be anxious about anything, but in every situation, by prayer and petition, with thanksgiving, present your requests to God.'

Pray about it

Everything that we do as Christians should be rooted in prayer. Why not set some time aside for your congregation to pray about the issues involved in becoming more environmentally friendly as a church and a community? You might like to make this a feature of your daily prayer, and regularly include it as an intercession subject on Sundays.

There are lots of resources on environmental theology to be found on the diocesan environment webpages (for more details, see contacts page at the end of this booklet). These are designed to help you reflect theologically on the environment and to pray about the issues this raises. The resources include Lent and study material, which you might like to use as a group.

Your clergy and lay leaders might also think about including creation care as a preaching subject in their sermons and talks, as a way of getting the whole congregation involved and interested.

Discuss it as a PCC

Most changes in a church need widespread acceptance to be successful and long-lasting. Creation care is an important subject and it is something that should be discussed by your whole PCC.

It helps if several people have read this booklet in its entirety, but there is also a smaller leaflet available, which just includes the main points so that everyone can get to grips with the issues involved reasonably quickly.

It will be helpful for most PCCs to delegate a small group to look at these issues and then report back. That group will be responsible for thinking about how your church can best care for God's creation, and formulating a zero-carbon plan (there is a section on how to do this later on in the booklet).

Your group can then report back to the main PCC, and indeed maybe to the whole church. The group might well include people not currently on your PCC. If you are blessed with young people in your congregation, you might want to ask whether some of these would be willing to take part in the group.

Measure your energy use

Every church uses energy of some form to provide heat, light and power to their buildings. The diagram below shows the average percentage of energy consumption for churches.

Although heating and electricity aren't the only ways that churches generate CO2, clearly they are the most serious and immediate contributions we make to causing climate change, so these are the most obvious places to start when combatting the problem.

The first thing every church should do if they want to reduce their carbon consumption, is to work out how much energy their buildings are actually using at the moment.

Every year, each parish is required to make a parish return, which is now most easily completed online. From 2020, there has been an additional short section of the parish return that asks parishes to enter their floorspace measurement plus the number of units of gas or oil, and electricity that they used last year. It will then calculate your building's energy use per m2 for you.

Calculating a church building's energy use is easy. All you need is your electricity and gas or oil bills from last year (or, of course, just electricity, if you don't use oil or gas). You will also need a measurement of the area of floorspace of your church.

The parish return page can be found at:
www.parishreturns.churchofengland.org/login

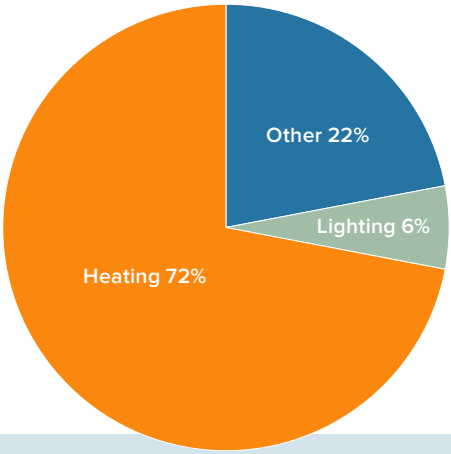
You can normally find the floorspace measurement on your last quinquennial inspection. However, if you don't have access to this, getting a rough floor area measurement in m2 isn't too tricky, provided you own a tape measure (if you are unsure, there is a video on the Diocese's environment webpages, showing you how to do it).

If your parish also has ownership of a church hall or other buildings that are used for parish purposes (but not houses that are owned by the parish and rented out privately), it would be good to do the same for these.

If you'd like to undertake a more comprehensive survey of your energy use, or would like to calculate exactly how many tonnes of CO2 your church produces annually, you can use the free Carbon 360 tool at **360carbon.org/church/start**

For churches, we know that heating makes up the bulk of energy use

What is energy used for? (sample 38 churches and halls)



Become an Eco Church

Eco Church provides a system of accreditation, through awards at the levels of bronze, silver and gold, which allows churches to engage with a wide variety of environmentally positive actions.

It is a great way of starting a conversation in your parish about environmental issues, and hopefully ending up with a church building and community that is not only environmentally sustainable itself, but also one which acts as an environmental beacon to the rest of its parish.

Many churches from our diocese and beyond have already registered to become Eco Churches, and some have already attained bronze, silver or gold status. Registering your church is free and easily done on the Eco Church website: https://app.ecochurch.org

Once your church is registered, you have access to lots of helpful resources, as well as the questionnaire which your PCC (or maybe an especially-delegated group) fill in. The questionnaire has five areas which need to be considered:

Create a zero carbon plan

Becoming a carbon neutral church, and looking at your environmental footprint more widely, is a great thing for any church to do.

However, it is useful to have a plan of action, so that you are able to highlight the things that will make the most difference, and keep track of your progress. You may want your PCC to create an environmental policy for your church including a plan.

An example of a church environmental policy can be found on the diocesan webpages, which you are welcome to use and adapt. The following is an example of a zero-carbon plan for one year, which might give you ideas for your church's own.

Zero Carbon Plan 20XX

Church: **Date Agreed by PCC:**

Action	By Whom?	By What Date?	Achieved?
Measure energy use & fill in parish return to diocese	Treasurer	End April	✓
Ensure electricity supplier is 100% green and if not, change supplier	Treasurer	End April	
Delegate a small Eco group to have responsibility for the environment	PCC	March meeting	
Sign up to Eco Church	Eco group	End April	
Identify potential actions, having discussed Eco Church requirements,	Eco group	End June	
and create a draft church environment policy	PCC	July meeting	
Assess current heating and insulation provision and make long-term heating plan	Fabric officer	End September	

Revisit your plans

It's a good idea to review your plan at least annually with your PCC, to ensure that progress has been made. You will then be able to add to your plan for the forthcoming year, and identify any lessons you've learnt along the way.

When you send your Spirit, they are created,
and you renew the face of the ground.'
Psalm 104: 30

Case studies from within Chelmsford Diocese

Stapleford Abbots: Benefice of small semi-rural churches, ancient building

In 2015, a church team of four people started exploring the best way to move our church forward to a position where we could legitimately claim that we were striving to make our church “green”. We quickly found that the Eco Church survey process was an excellent vehicle for directing us to explore opportunities and to manage our progress.

A review of their survey soon made us realise that not everything in the process was achievable due to our church’s age and location and this focused our attention on projects which we could achieve and equally importantly, could afford. Our team met regularly to review our response to the survey and the actions needed to ensure we were progressing in the right direction. We kept our church members updated on the subject and in that way were able to recruit volunteers when required on various projects. In 2018 we submitted our survey to A Rocha for their review and were subsequently given a Silver Award.

We were one of the first churches in our area to achieve a silver award, a fact which we unashamedly published to the parish and our church members. We now believe that people at our church enjoy the “feel good” factor of belonging to a church with high environmental aspirations and achievements.

> “We’re engaged in environmental projects such as Saved! Surplus Food Project, saving good food from landfill; promoting fair-trade; and encouraging use of local produce whenever possible.
>
> St Mary’s Loughton

Revd. Roger Gayler with the churches certificate.

St Mary’s Loughton: London suburb/town centre church, limited outdoor space

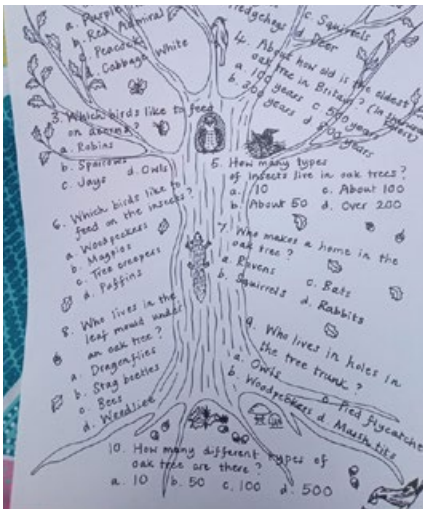
We believe that taking care of the environment is a reflection of God’s character and is a matter for all disciples of Jesus. It is an integral part of loving our neighbours and following God faithfully. We look forward to both learning more and promoting the theology of creation care.

Our church has achieved the Eco Church bronze award and is now looking to reach the silver award level by making changes within the church (including green energy and encouraging recycling such as spectacles) and the grounds (providing a bug hotel, bird boxes etc).

Our church is engaged in environmental projects such as Saved! Surplus Food Project, saving good food from landfill; promoting fair-trade; and encouraging use of local produce whenever possible. The Eco Epping Forest Facebook group is a good way of networking and sharing encouragements and information.

Our group has provided regular newsletters keeping the congregation informed of what has been happening and encouraging them to get involved in having an impact on the local environment by reducing the amount they buy (especially red meat); by reusing wherever possible; and by recycling as much as possible.

Meetings have been held with local Councillors to discuss air quality improvements which has also involved us in playing a part in EFDC declaring a Climate Emergency. We support Tearfund in the work they do with people struggling with the effects of climate change (www.tearfund.org). Other proposals included organising an Eco Fayre to bring our concern about the environment to people who do not know Him, towards our Creator God.



Oak tree quiz for junior church

Chelmsford Cathedral: City centre, ancient building, significant use throughout week

Chelmsford Cathedral have been awarded the Eco Church Silver Level. We have been working on this for some time and were an Eco Congregation before the Eco Church scheme was established. We have made changes in the way they care for our buildings and in our practices as a community.

As work has needed to be done, our Works Committee (for buildings) have kept sustainability high on their agenda: for example, in the Chapter House, dual flush lavatory cisterns, auto shut- off taps and motion sensitive lighting have been installed. Lights have been changed to LED in our offices and we have reduced our plastic usage and increased recycling. Refreshments provided for lettings are Fair Trade and hospitality uses Fair Trade tea and coffee.

Chelmsford Cathedral have hosted speakers, themed services, started Muddy Church, run courses and kept the environment in their regular prayers. We have also set up the Greening the Church Facebook Group which encourages people to share learning, ideas and projects.

We have much more that we wish to do to play our part in achieving Net Zero by 2030. However, through the gradual changes we are making, we continue to make our cathedral a green environment, caring for creation and being good stewards of God's earth.

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ecochurch.arocha.org.uk

St John's Moulsham: Suburban church, large Victorian building and churchyard

We began our Eco Church journey about 3 years ago, by focusing our worship on the care of God's creation. Wanting to do more, in August 2019 we completed the A Rocha survey on Eco churches, and changing our lifestyles and the way we do things in church was something the whole congregation has really engaged in.

We have switched to environmentally friendly products – ranging from office paper and toilet rolls to deodorants, shampoos and washing up scrubbers. Amongst other things, our members have made bags for Christmas gifts to replace wrapping paper, we have shared ideas about alternatives to plastic boxes for freezing left overs, recycled old tooth brushes, joined Christian Climate Action events, and twinned our own toilets.

At our green Communions we celebrate and recommit ourselves to supporting the environment, and of course, having achieved the silver Eco Church award we are now striving for our Gold award! Another aspect of Eco Church that our congregation adopted naturally from the A Rocha survey was the need to engage actively with the community on the eco agenda. We held a successful pre-loved prom dress sale, giving the donations received to a community in Bangladesh to achieve better working conditions for women in clothing factories.

Families attending Messy Church had a memorable day themed on toilets – designing their own toilet seat, making toilet themed cakes (delicious!) and pledging to help twin toilets in poorer countries. Their efforts twinned the final toilet in the church and the certificate is there for them to see!

During the pandemic we set up a local support network for our community. When going into church buildings was restricted, we ran outdoor events in the grounds such as Muddy Church (learning about the care of the environment with many youngsters and their families) and a "Spooky Saints" trail on All Hallows Eve.

> "We became aware of how important nature and the environment is to the mental health and wellbeing of our community"

Many of our congregation set to in the lockdown to knit a lifesize nativity and we are planning an outdoor "nativity trail" to tell the story of Christmas through our new knitted characters.

We became aware of how important nature and the environment is to the mental health and wellbeing of our community, so we are now in the midst of planning to develop our church building and grounds as a vibrant community hub, with a strong worshipping community at its centre.

We are so grateful for the support which has been shown for this project by our Archdeacon, the Diocesan Advisory Committee and Chelmsford City Council.

St John's is now a church where environmental awareness and action are part of how we live, both as a community and as individuals within it, and in December we will be encouraging everyone to make a green New Year's Resolution to measure their carbon footprints, and then offset to support projects such as smokeless stoves in Nepal and other projects being led by Climate Stewards.

St Andrew's Walthamstow, St Anne's Chingford Hatch, St Edmund's Chingford Mount: Bringing an MMU together with Eco Church

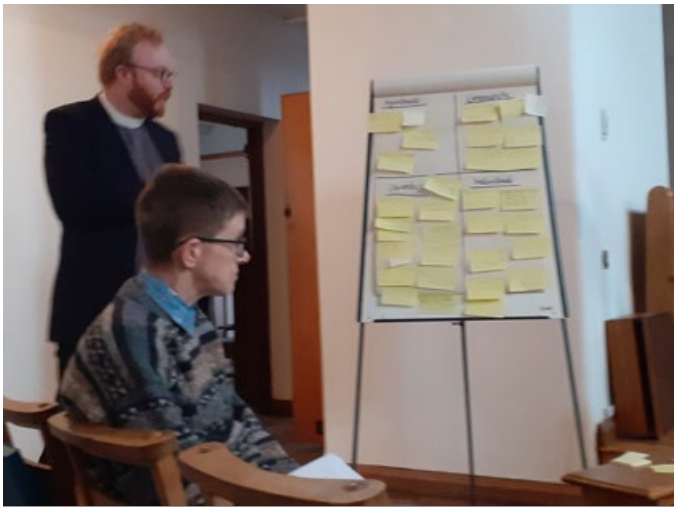
Our three churches only officially started working together at the end of 2019, and we wanted to do something together that would help us get to know one another. We wanted this to be a positive thing that everyone could get involved in, and something that didn't involve discussion about clergy numbers!

We decided that all three churches could work together to get our Bronze Eco Awards, so we started by meeting together as an organising group, to discuss the best way forward. In February 2020 we launched our joint project, with an away day shared by members of the congregations from all three churches.

Canon Imogen Nay came to speak to us, from Chelmsford Cathedral, to share what she and her previous congregations have achieved, and we then spent time in small groups discussing what we do well, and what we could do better in future.

Since then, despite the pandemic, each church has worked through the Eco Church framework, and our teams have come back together as best we can to help each other out. Our churches now use environmentally sustainable cleaning products, and we have community gardens behind one of our churches, whilst another has started a wildflower and nature area right on the busy high street.

If you are starting your MMU, would recommend using Eco Church as a way of getting to know each other in different churches. We have found that it becomes easier to talk about the more difficult issues of sharing church resources, when you have already worked together on a positive project, and one that does something to help the world and our local community too.



Frequently Asked Questions

What can we do about our heating?

Unless your church is heated electrically and you have switched to a green energy supplier, the chances are that your heating system will be the most significant contributor to your church's CO2 emissions. Oil fired heating systems tend to emit more CO2 than natural gas or LPG (bottled) gas systems, but all these are major contributors to a church's carbon footprint.

Environmentally-friendly alternatives to oil and gas systems, such as heat pumps, are available and, indeed, have been installed in a few churches in this diocese. However, these are costly and in reality, most churches simply will not have the funds to immediately embark on a major project to rip out their heating system and install something different!

Indeed, if your church has a small congregation or isn't heated very much during the week, it might actually not be very environmentally-friendly to do away with your old system, because any new system needs to be manufactured and installed, and that in itself has a carbon cost in most cases.

It would probably be sensible for all churches with gas or oil-fired systems to have a long-term heating plan in place, to be ready for when their current boiler requires replacement. If your church is used a lot throughout the week, a heat pump system can be very efficient and indeed cost-effective over time.

Heat pumps work a bit like a reverse-fridge or reverse air conditioning: they don't create new heat, but rather, extract heat energy from the air (or ground), and pump it into the building you wish to be warm.

If your church is not used very much, an electric heating system might well be a cheaper and better alternative. Electric systems have improved significantly in recent years and in churches with fixed pews, one can even now get heated pew cushions, which have a similar (and rather luxurious!) effect to heated seats in a motor car. Often nowadays, the emphasis has shifted to warming people, rather than warming space.

If you are thinking about changing your heating system in the near future, it is worth contacting the DAC, which can provide, both advice on the faculty procedure and access to specialist heating advisors. For information on any potential grant funding for green heating, or advice generally, please contact the Diocesan Environmental Officer (contacts at the rear of this booklet).

Unless your church is heated electrically and you have switched to a green energy supplier, the chances are that your heating system will be the most significant contributor to your church's CO2 emissions.

We have a gas / oil-fired boiler which doesn't need replacement. What should we do?

The first thing to consider is whether your building needlessly leaks heat. Overuse of your heating system may be emitting excess CO2, and simultaneously costing your church money. Naturally, ancient churches do not lend themselves to modern adaptations such as double glazing, and even the addition of insulation can sometimes cause unforeseen issues.

However, it is surprising how much basic draughtproofing can help, including thick curtaining of certain areas (note: alterations may need DAC approval – if in doubt, contact your archdeacon). If you have a tower, a great deal of heat can be lost if your ringing chamber / tower room is open to the nave. You might wish to consult your architect or an energy consultant as to whether there are some cost-effective methods of reducing your heating bills.

Likewise, just because you have a boiler, doesn't mean you need heat the entire church if you have a small congregation for certain services. If you have a very small congregation, it might be both cheaper and more environmentally friendly to purchase some inexpensive, portable, electric heaters, to place near where your congregation sit. Check your electricity supply is suitable first

It may well be that, in the next five years, the government make significant changes to the mains gas supply, to convert to greener gases such as hydrogen. This would help solve many churches' heating problems without them having to spend large amounts of money.

It is also anticipated that more funding will be available to help community buildings to become carbon neutral, as we progress through the 2020s. The Diocese will keep churches up-to-date with sources of funding through a section on our environment webpages.

Some utility companies currently offer what they term to be 'green gas'. This is gas that has mainly been created using biomass, and is currently a little more expensive than a normal gas tariff. It is anticipated that more versions of 'green gas' and alternative fuels will become available over the next decade.

It is also anticipated that more funding will be available to help community buildings to become carbon neutral, as we progress through the 2020s

Could we install solar panels on our church roof?

If your church is considering going one step further and installing solar panels, please do take a minute to read the other FAQs on heating before coming to any decision. Given the lack of government funding for solar panels currently and the comparative ease with which green electricity can be purchased from the National Grid, if your church only has enough money for one big capital project, you might well come to the conclusion that changing your heating system is more worthwhile, both environmentally and financially, than installing solar panels.

Don't forget that heating comprises over 70% of the average church's energy use, whilst power and lighting is less than 30%, and the carbon emission figures are likely to be roughly similar. So, changing to environmentally friendly heating will probably make a much bigger positive difference to your church's environmental impact than adding solar panels. Likewise, unless you are using electricity all the week, it is unlikely that you will get the benefit of most of the electricity you produce, and feed-in tariffs these days are unfortunately quite poor.

However, there certainly are instances where solar panels on churches have proven highly effective. The Chelmsford Diocesan Advisory Committee (DAC) can provide more advice on this subject (contacts at the rear of this booklet).

Should we offset our remaining emissions?

If as a church, you cannot attain complete carbon neutrality, you may decide to offset your remaining emissions, for example from a gas or oil boiler, and from your ministers' official travel.

It is thought that offsetting (paying someone else to do something environmentally positive, such as planting trees, to offset that which you do that is environmentally negative) can be effective in certain circumstances.

However, it is important to make sure the offsets you purchase are effective.

Climate Stewards are a Christian charity which works to offset carbon emissions. They allow you to calculate the amount of emissions that you create, then pay a small amount to offset that which you can't reduce to zero. Their website might be a good place to start, when thinking about purchasing carbon offsets: **www.climatestewards.org**

The Diocese of Chelmsford's designated lead on environmental issues is Ven Elizabeth Snowden, Archdeacon of Chelmsford. Elizabeth has overall charge of the Carbon Neutral 2030 project and of Eco Church within the diocese.
a.chelmsford@chelmsford.anglican.org • 01245 258257

The Diocese's Environmental Officer is Revd James Gilder. James is in charge of day-to-day running of the Carbon Neutral and Eco Church projects and is a good point of contact for enquiries related to anything mentioned in this document, as well as environmental information generally.
environment@chelmsford.anglican.org • 07729 109638

For faculty and permission issues relating to material changes to church buildings, contact either the relevant archdeacon for your parish or Sandra Turner, Secretary to the Diocesan Advisory Committee.
sturner@chelmsford.anglican.org • 01245 294423

For rural and farming-related environmental issues, as well as for liturgy and theology based on the rural year, please contact the Agricultural Chaplain and Diocesan Rural Adviser, Revd Janet Nicholls.
jnicholls@chelmsford.anglican.org • 01371 851317

For details on forthcoming Muddy Church and Forest Church services, and resources to lead your own, please contact Revd Canon Andy Griffiths.
agriffiths@chelmsford.anglican.org • 07976 673087

If you would like to publicise an environmental event or share an environmental success story about your church or community, we would love to hear from you! Please contact Sarah Newman at the Diocesan Communications Team.
snewman@chelmsford.anglican.org • 01245 294443

The Diocesan Environmental Group are a team of lay and ordained people with an interest in helping drive the environmental agenda forward in the diocese. They meet monthly to discuss environmental issues. For more details, contact the Archdeacon of Chelmsford.

Chelmsford Diocese website's environmental pages are a good hub of information about progress on achieving net-zero carbon; grant-making bodies; environmental theology and liturgy and events taking place near you.
www.chelmsford.anglican.org/environment

Chelmsford Cathedral's Greening the Church Facebook page is a great place to swap ideas and meet other Christians who are passionate about environmental issues across the Diocese.

Chelmsford Diocese's Carbon Neutral 2030 project plan was approved by Diocesan Synod in October 2020 and can be found on the diocesan website, along with the diocese's environmental policy.

Quick guide to reaching zero-carbon

Pray and Communicate

Change starts with prayer. Pray for guidance and strength as you and your church start to discuss these important issues. Pray for discernment of the right way ahead, and for the determination to see them through.

Measure and Change

Heating and electricity use are the main sources of carbon emissions from churches. Measuring and recording energy use allows churches to track how much energy they are using over time.

Changing your electricity to a green supplier is the single most positive thing every church can do to help the environment, and it needn't cost anything.

Plan & Implement

Churches that are really committed to becoming carbon neutral, will want to make a plan for how to achieve this.

Alongside your plans joining the Eco Church awards scheme is a great way for churches, large and small, to engage in a range of environmental projects in their buildings and local communities, from recycling to tree planting.

2030 carbonneutral

www.chelmsford.anglican.org/environment