

21.13

Environment - Net Zero Carbon

Led by the Revd Richard Stainer, representing the Net Zero Carbon Group



Overview

1) General Synod's motion passed in February 2020 and the marks of mission

2) Why we need to take action

3) Encouraging action across the diocese:

Schools

Clergy Housing

Church Buildings

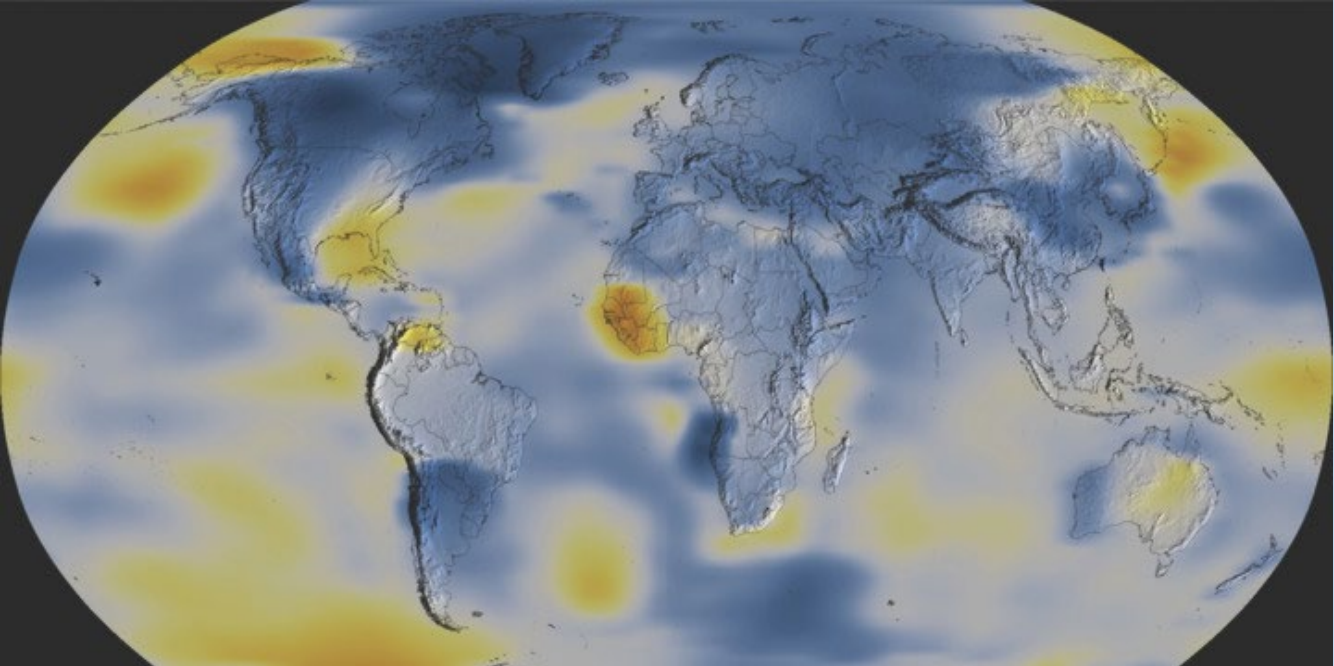
4) Raising awareness and how we need to respond

5) The debate and the motion

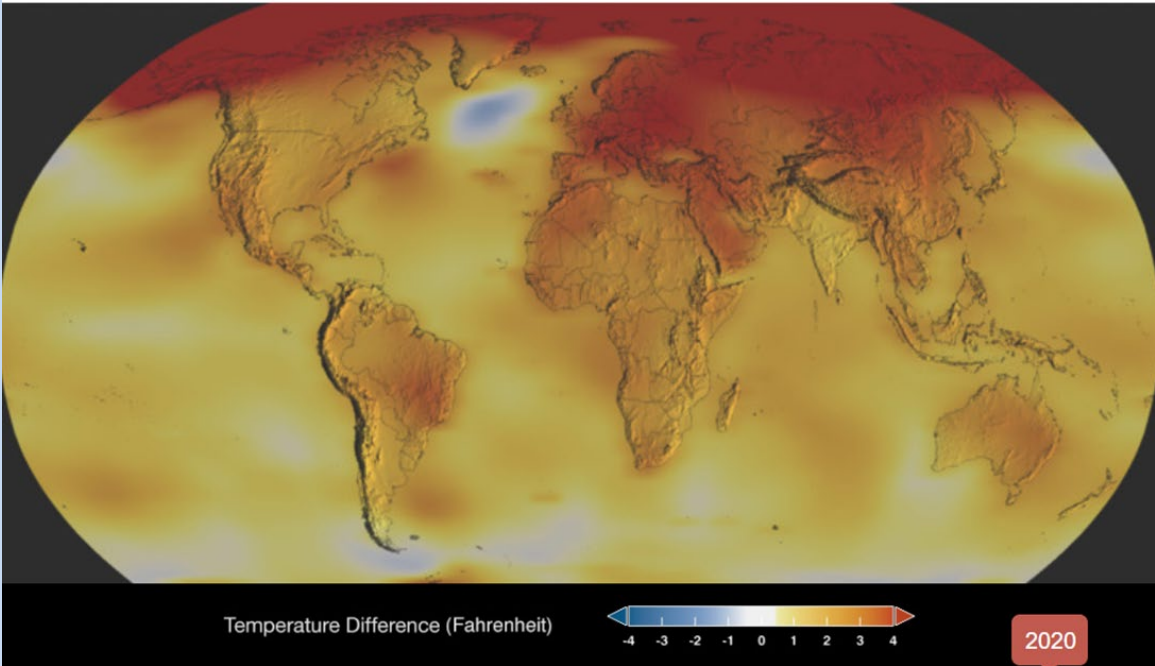


Net Zero Carbon by 2030

1884



2020



The General Synod motion

Passed February 2020

That this Synod, **recognising that the global climate emergency is a crisis for God's creation, and a fundamental injustice**, and following the call of the Anglican Communion in ACC Resolutions A17.05 and A17.06;

(a) call upon all parts of the Church of England, including parishes, BMOs [Bishop Mission Orders], education institutions, dioceses, cathedrals, and the NCIs [National Church Institutions], to work to achieve year-on-year reductions in emissions and urgently examine what would be required **to reach net zero emissions by 2030** in order that a plan of action can be drawn up to achieve that target;

(b) request reports on progress from the Environment Working Group and the NCI's every three years beginning in 2022 and;

(c) **call on each Diocesan Synod, and cathedral Chapter, to address progress toward net zero emissions every three years.**





The 4th Mark of Mission: To transform unjust structures of society, to challenge violence of every kind and pursue peace and reconciliation









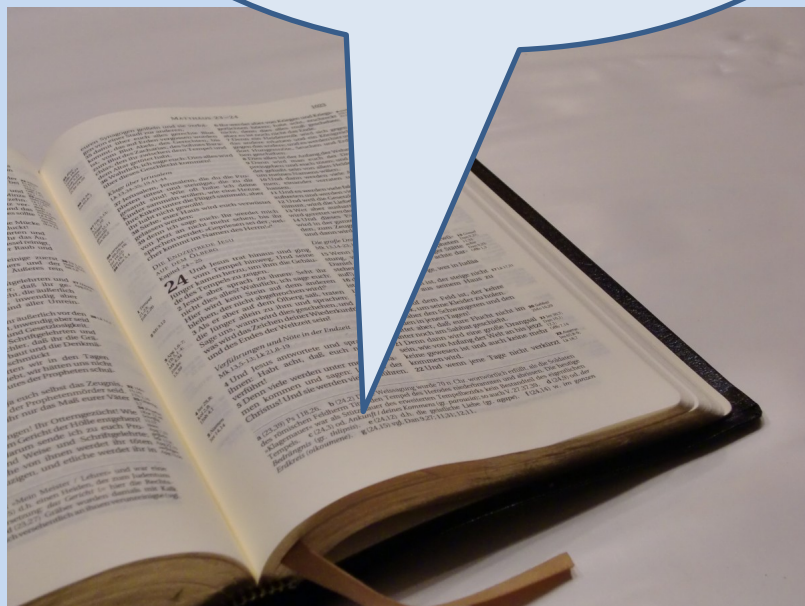






1. To proclaim the Good News of the Kingdom

2. The thief comes only to steal and kill and destroy. I came that they may have life, and have it abundantly.



3. To respond to human need by loving service







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Environment

Bishop Mike

 Growing in God



 THE CHURCH
OF ENGLAND
Diocese of St Edmundsbury
and Ipswich

Social Justice



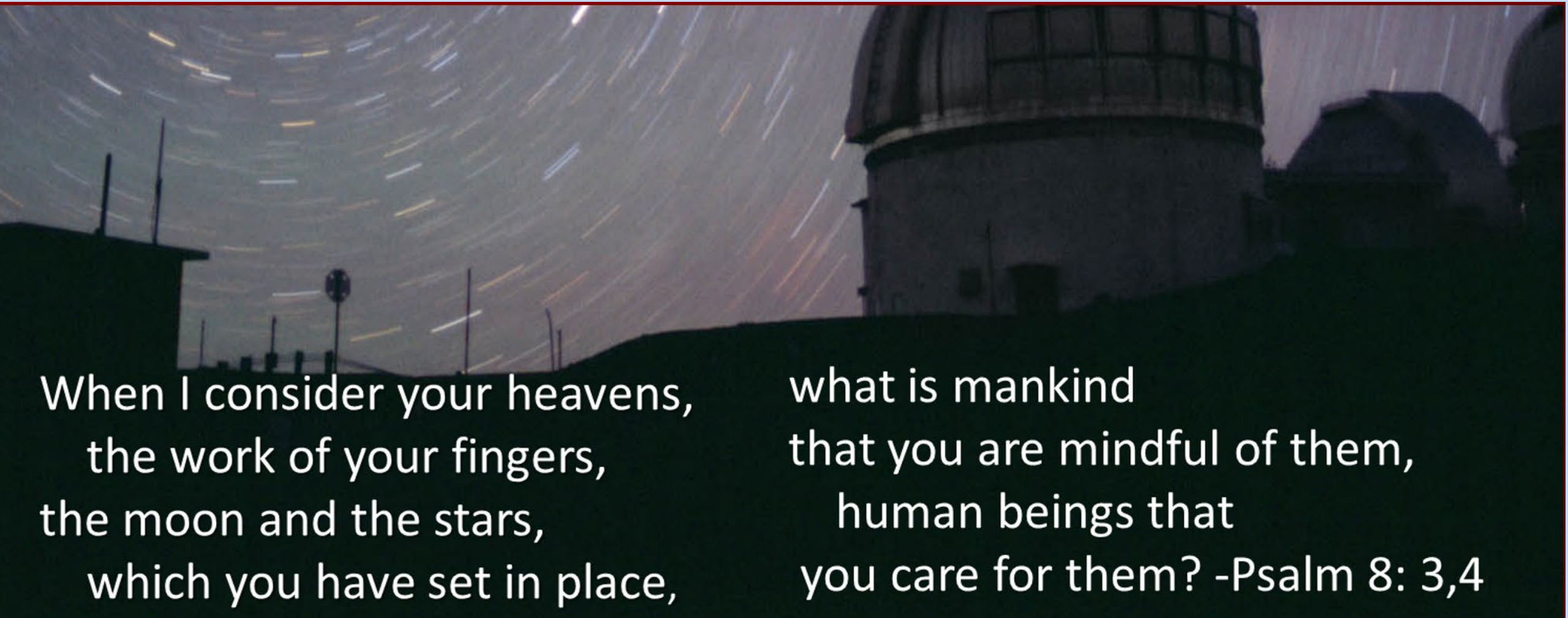
Interdependence



Stewardship



Our place in creation



When I consider your heavens,
the work of your fingers,
the moon and the stars,
which you have set in place,

what is mankind
that you are mindful of them,
human beings that
you care for them? -Psalm 8: 3,4

“I believe that the community – in its fullest sense: a place and all its creatures – is the smallest unit of health and that to speak of the health of an isolated individual is a contradiction in terms”

Wendell Berry



With the end in mind



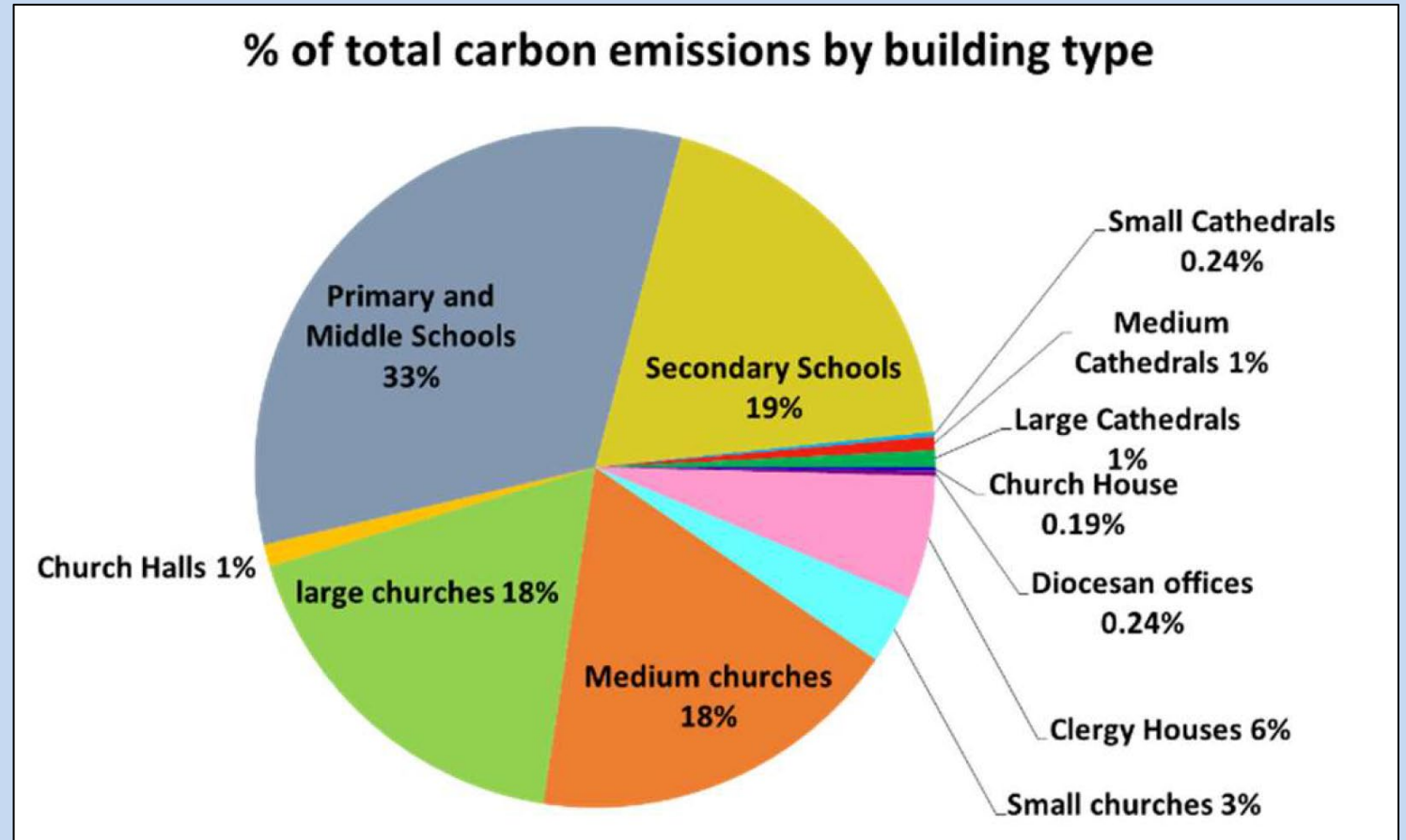
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Environment | Education

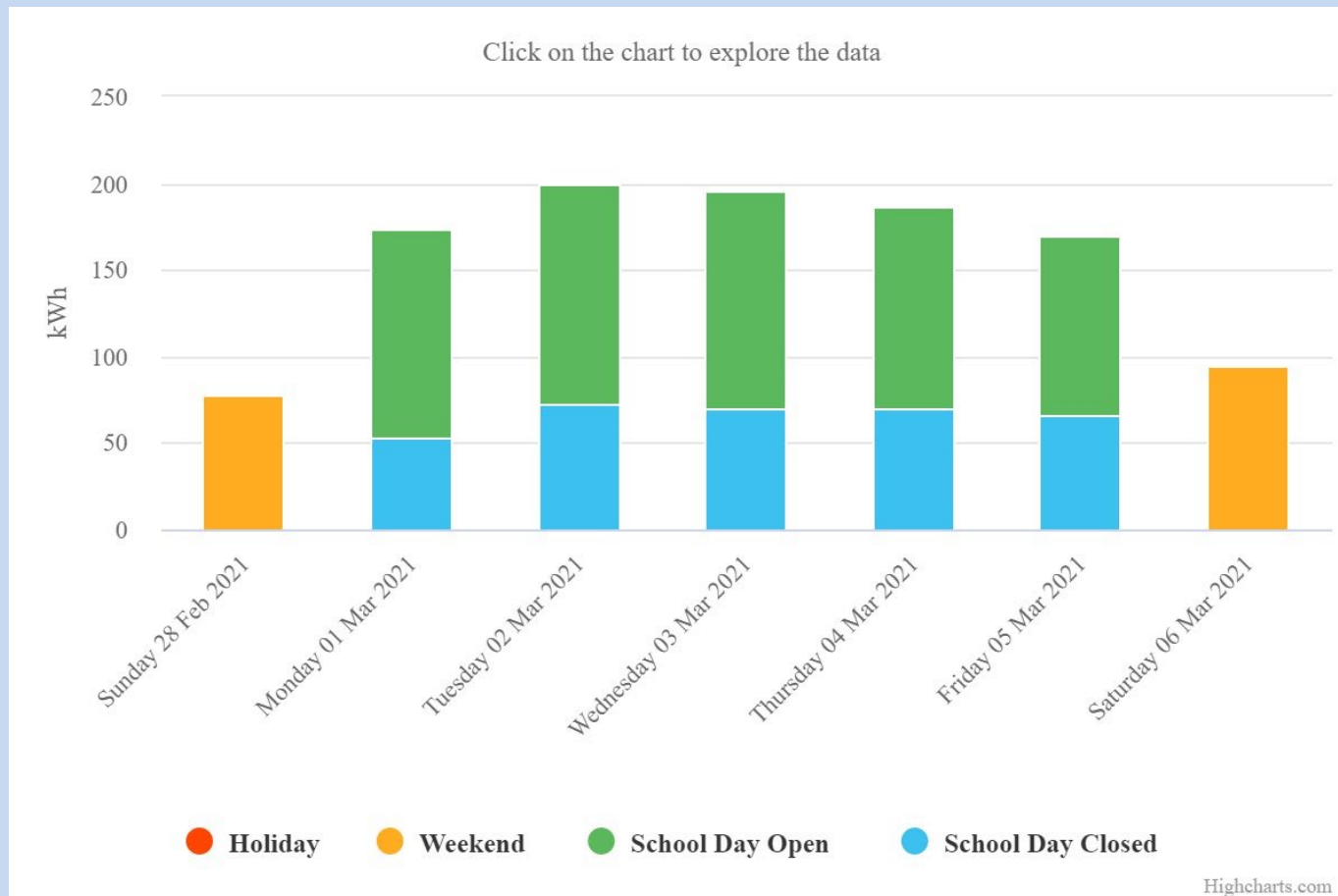
Our starting position, aims and actions

Daniel Jones - Schools' Buildings Officer

2012 Church of England study



Typical weekly school electricity consumption



Action plan – Understanding

- Analyse energy consumption data
- Follow guidance
- Obtain professional advice
- Liaise with partners - Local Authority and other MATs.

Meter readings Key C = customer A = actual E = estimate

⚡ Electricity readings

Period	Meter no.	Previous	Present	Rate	kilowatt hours
27 Jan 21 to 1 Apr 21	A12LB33704	03960 E	03960 E	Normal	0
27 Jan 21 to 1 Apr 21	A12LB33704	13894 E	13894 E	Normal	0
1 Apr 21 to 30 Apr 21	A12LB33704	03960 E	03960 E	Normal	0
1 Apr 21 to 30 Apr 21	A12LB33704	13894 E	13894 E	Normal	0

How much energy you have used

⚡ Electricity charges

E.ON EnergyPlan

Usage charges	£0.00
27 Jan 2021 to 01 Apr 2021 Normal units used 0 at 17.221p each	£0.00
Standing charges	£17.68
27 Jan 2021 to 31 Mar 2021 64 days at 27.63p	£17.68
Usage charges	£0.00
01 Apr 2021 to 30 Apr 2021 Normal units used 0 at 19.062p each	£0.00
Standing charges	£7.88
01 Apr 2021 to 29 Apr 2021 29 days at 27.19p	£7.88

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the Citizens Advice for help with your bills or meters, or if you're struggling to pay. Visit citizensadvice.org/energy or call 0808 223 1133.

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If we can't fix it right away and it takes longer than eight weeks, we'll let you know. After this, you can pass your complaint to the Ombudsman Services, this is a free, independent and impartial service and their decision is binding on us not you. Contact them on: 0330 440 1624, email: enquiry@ombudsman-services.org, visit: www.ombudsman-services.org/sectors/energyor write to: PO Box 966, Warrington WA4 9DF. For more information search E.ON complaint

Supply details
Electricity supply number:

S	02	807	007
	10	1271	2552 180

Electricity distributor UK Power Networks, Fore Hamlet, Ipswich, IP3 8AA

Electricity source
This table includes both residential and small business
from 1 April 2019 to 31 March 2020.

Action plan – doing

- **Brief schools and advisers**
- **Ensure key decisions aligned with net zero target**
- **Seek capital funding**
- **Minimise travel**
- **Energy purchasing strategy**
- **Promote educational programmes for behavioural change.**



Action plan – Influencing

- **Publicising our plans and actions.**
- **Engagement with VC and non-Diocesan MAT academies.**

Action plan – Reviewing

- **Establish a governance reporting structure.**
- **Embed a monitoring programme to learn lessons from projects.**
- **Consider peer review opportunities within the Diocese and further afield.**



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Environment | Clergy Housing

Our starting position, aims and actions

Dawn Gillett – Head of Property and Diocesan
Surveyor

Overview

- **According to the Climate Change Committee, 40% of UK emissions comes from households.**
- **Our property portfolio covers some 154 houses ranging in age from the early 1800's (Eye; Hadleigh Deanery) right up to 2018 (Reydon) and everything in between.**
- **Of our 154 houses, 98 have solar panels and all are currently using gas or oil heating through standard boilers.**

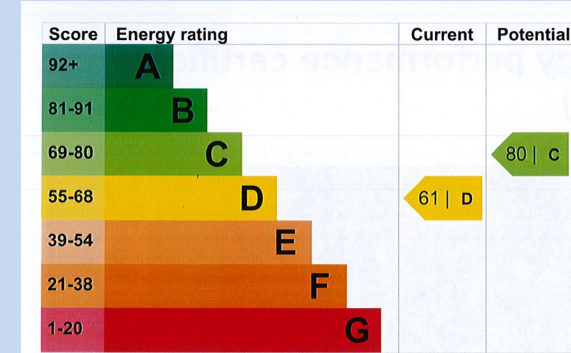


Our range of properties



Action plan – understanding our starting position

- Examine energy consumption data through EPC's (energy performance certificated)
- 7 with B rating
64 with C rating
57 with D rating
14 with E rating
1 with F rating
- 98 of the 154 have solar panels (others not feasible due to listing or shading issues)
- Discussions with colleagues across other Diocese Property teams to share knowledge
- Explore funding / green deals.



The graph shows this property's current and potential energy efficiency.
Properties are given a rating from A (most efficient) to G (least efficient).
Properties are also given a score. The higher the number the lower your fuel bills are likely to be.

Action plan – what are we already doing

- **Considering energy efficiency when purchasing new parsonages.**
- **Installing LED lighting whenever older units fail.**
- **Replacing failed boilers with modern energy efficient units and smart controls.**
- **Using local contractors to reduce travel.**



Action plan – how can we influence

- **Inform the clergy of energy saving methods through updates and progress reports**
- **Encourage the installation of smart meters**
- **Encourage the use of electric cars and charging points for those with solar panels.**



Action plan – how can we review and develop

- **Work with clergy to review energy usage and monitor changes.**
- **Use actual energy costs to compare against capital investment.**
- **Carry out peer to peer review across neighbouring diocese.**
- **Work with specialist contractors to identify suitable properties for upgrades as existing systems fail.**
- **Measure improvements and report back to the Environment Group.**



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Environment | Church buildings

Our starting position, aims and actions

Richard Stainer





HN Halogen Heaters heating a church in Market Harborough

Features

- Replaceable halogen lamp with 7000 hours operating life
- Choice of conventional red-glow lamp or Magic Lamp for zero glare
- Wall mounting bracket with 'up and down' and 'side to side' adjustment
- Pre-wired 1m high temperature cable (2 core and earth)
- Lamps on vertical two lamp heaters and all 3 lamp heaters can be switched independently using remote-mounted switch
- Optional suspension kit available

Example: A Site Visit Report for All Saints Holbrook

Outcome of Visit:

The church is currently heated by high level infra-red heaters which are reaching the end of their useful life, with spares increasingly difficult to obtain.

The incoming electrical supply is 100amp 3-Phase serving the heaters, organ, small power and lighting.

Options

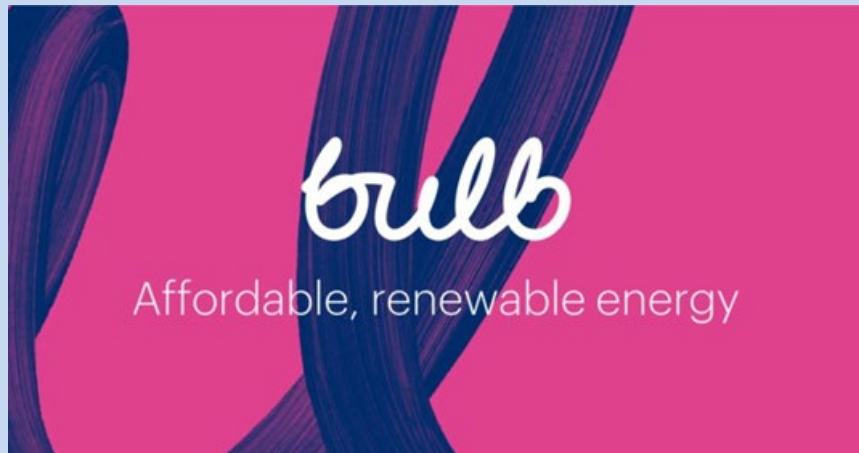
The first option is to replace the existing heaters with high level Quartz Halogen infra-red heaters with a gold coating, to be mounted throughout the church, fixed to walls or columns, servicing as many of the areas as can be covered within the capacity of the existing electrical supply. These areas include the Nave, Sanctuary, south aisle, north aisle and west end of the Nave.

The second option is to provide under pew heaters in the central aisle of the Nave with the Quartz Halogen heaters serving the south aisle, the west end of the Nave to include the area around the Font and the Sanctuary, with radiant panel heaters serving the open plan north aisle. Again the total number of heaters installed may be limited by the available capacity of the electrical supply.

The organist is currently served by a portable heater located at the side of the stool. This could be replaced by fixing the smallest available under pew heater to the underside of the stool which would use less power. This heater would be considered a portable appliance requiring periodic PAT testing.

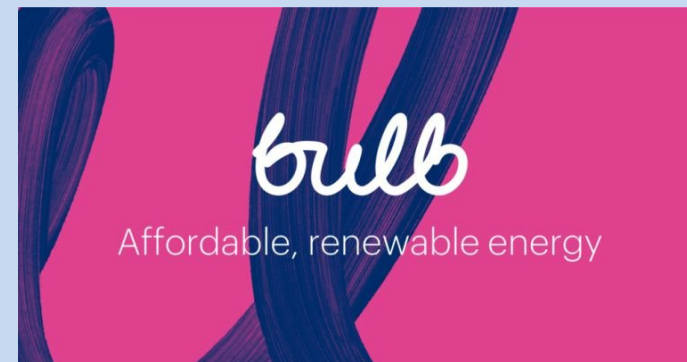
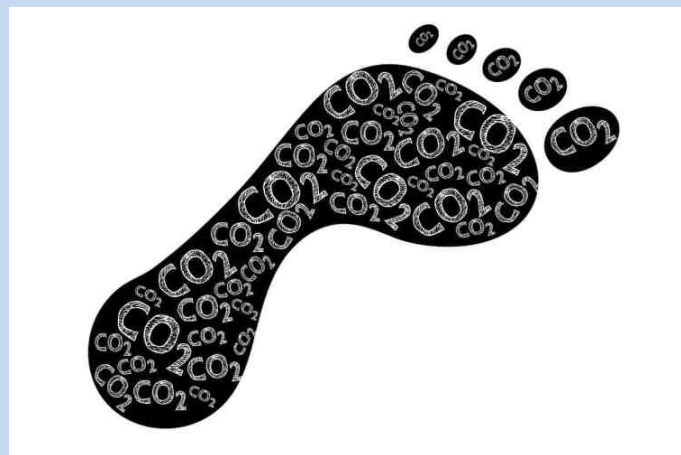
Consideration should be given to changing the high level spot lighting to LED's which will probably mean changing the light fittings. This will have the advantage of reducing the electrical demand, but will need specialist advice, which can be obtained through the DAC.

ECO  **CHURCH**
AN A ROCHA UK PROJECT









INSIDE YOUR CHURCH



1. Well-maintained



2. Buy renewable



3. Waste less



4. Electric not gas/oil



5. Generate more



6. Offset the rest



OUTSIDE YOUR CHURCH



1. Well-maintained



2. Buy renewable



3. Waste less



4. Electric not gas/oil



5. Generate more



6. Offset the rest

A practical path to “net zero carbon” for our churches

These recommendations aim to help churches reduce their energy use and associated carbon emissions. They are based on the findings of our church energy audit programme and input from a range of professionals in the field.

NOTE: Many of the suggestions below require faculty; please seek input early on. If the church interior is of historic, artistic, architectural or artistic interest, seek professional & DAC advice first, before making changes; stabilising the environment for these interiors is important to minimise cycles of treatment, with their inherent carbon cost.

A. Where do we start?

These are actions that nearly all churches can benefit from, even low occupancy churches used only on a Sunday. They are relatively easy, with relatively fast pay back. They are a good place for churches to start, when trying to move towards ‘net zero’.

The building itself:

- A1. Maintain the roof and gutters, to prevent damp entering the building and warm air escaping.
- A2. Fix any broken window panes* and make sure opening windows shut tightly, to reduce heat loss.
- A3. Insulate around heating pipes to direct heat where you want it; this may allow other sources of heat to be reduced in this area.
- A4. If draughts from doors are problematic, draught-proof the gaps* or put up a door-curtain*.
- A5. Consider using rugs/floor-coverings (with breathable backings) and cushions on/around the pews/chairs.

Heating and lighting:

- A6. Switch to 100% renewable electricity, for example through Parish Buying’s energy basket, and “green” gas.
- A7. Match heating settings better to usage, so you only run the heating when necessary*.
- A8. If you have water-filled radiators, try turning-off the heating 15 minutes before the service ends; for most churches this allows the heating system to continue to radiate residual warmth*.
- A9. If you have radiators, add a glycol based “anti-freeze” to your radiator system and review your frost setting.
- A10. Replace lightbulbs with LEDs, where simple replacement is possible.
- A11. Replace floodlights with new LED units.
- A12. If you have internet connection, install a HIVE- or NEST-type heating controller, to better control heating.
- A13. If your current appliances fail, then replace with A+++ appliances.

People and policies:

- A14. Complete the Energy Footprint Tool each year, as part of your Parish Return, & communicate the results.
- A15. Create an Energy Champion who monitors bills and encourages people to turn things off when not needed.
- A16. Write an energy efficiency procurement policy; commit to renewable electricity & A+++ rated appliances.
- A17. Consider moving PCC meetings elsewhere during cold months, rather than running the church heating.

Offset the rest:

Our Facebook Group



Group by Diocese of St Edmundsbury & Ipswich

Diocese of St Edmundsbury & Ipswich Environment group

Public group · 150 members

+ Invite



21.13 Motion

This Synod, in line with General Synod motion GS2159 and the fifth mark of mission, recognises the Environment and Climate Emergency, and commits to the following:

1. Speaking the truth about the emergency and the changes that are needed to safeguard the environment and mitigate the climate crisis.
2. Encouraging PCCs, Voluntary Aided schools and the Diocesan Multi Academy Trust, the cathedral and diocesan officers to take the necessary action to reach net zero carbon across the St Edmundsbury and Ipswich Diocese by 2030 with the support of outside agencies.
3. Updating the Diocesan Environment Policy to include:
 1. Raising awareness in Parishes about the climate emergency and our diocesan response, through Deanery Synods, the celebration of Creationtide, and other opportunities within churches to highlight the climate emergency.
 2. Encouraging individual Christians in our diocese to change their lifestyles and engage in actions that care for creation.
 3. Highlighting and campaigning about social injustices caused by the environmental crisis."