



DIOCESE OF BRISTOL CARBON EMISSIONS REPORT

2021 -2022

Introduction

This report contains the carbon emissions for the Diocese of Bristol for the calendar years of 2021 and 2022.

The report for 2023 will be available for November Synod.

The emissions contained in the report align with those included in the Church of England's Net Zero target. These are:

- Church buildings' electricity, gas, oil, LPG and any other heating fuels
- School buildings' electricity, gas, oil, LPG and any other heating fuels
- Clergy homes owned or managed by the Diocese - electricity, gas, oil, LPG and any other heating fuels
- DSS business travel and office buildings
- Clergy business travel
- School business travel

Results

The following two tables show the tonnes of CO₂ equivalent emitted during the calendar year in the different building types and activities.

Total emissions for 2021: 6332 tCO₂e (tonnes of carbon equivalent)

Total emissions for 2022: 4910 tCO₂e (tonnes of carbon equivalent)

2021	Churches	Clergy Homes	Schools	DSS
Electricity	506.69	180	820.91	88.81
Heating	2415.83	812.3	1497.05	0
Business Travel	No data	n/a	No data	10.44

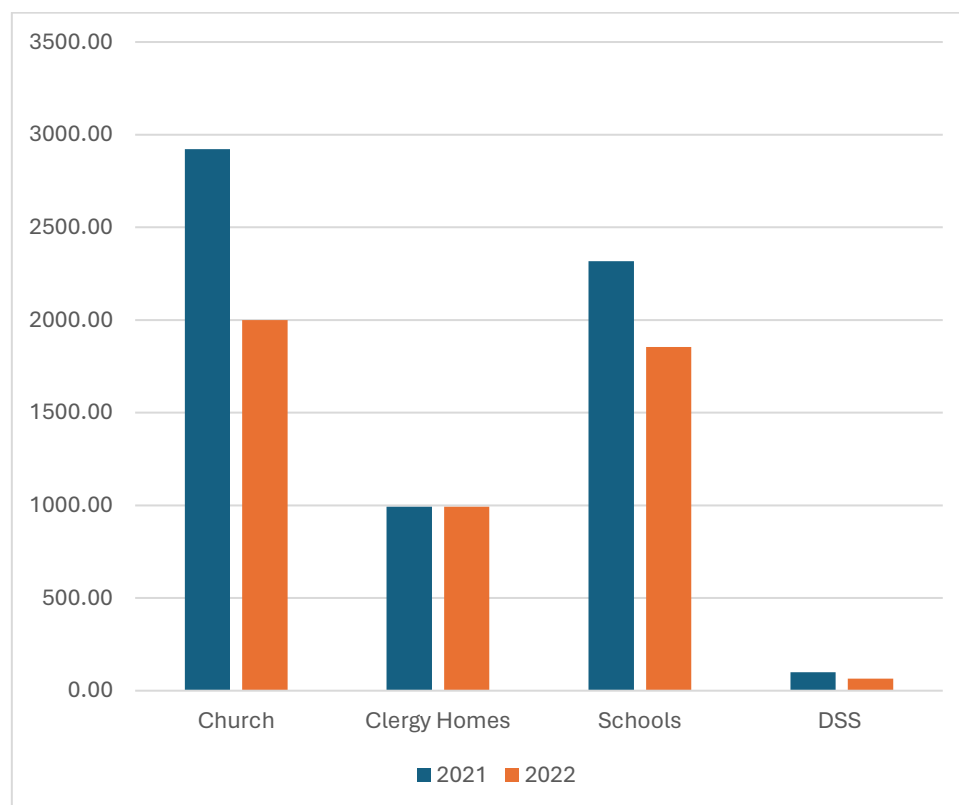
2022	Churches	Clergy Homes	Schools	DSS
Electricity	398.55	180.00	674.07	51.67
Heating	1601.01	812.30	1180.28	0
Business Travel	No data	n/a	No data	12.58

This third table shows the percentage change from year to year.

% Change	Churches	Clergy Homes	Schools	DSS
Electricity	-21.34	0.00	-17.89	-41.20
Heating	-33.73	0.00	-21.16	0
Business Travel	No data	n/a	No data	20.46

Total Emissions

This graph shows all the emissions for each category compared year by year to help visualise the reductions.



ANALYSIS – CHURCHES

The percentage of churches /parishes providing EFT increased for the year 2022 compared with 2021 jumping from 40% of parishes providing some data, to 72% in 2022. This was due to the increased support provided via the TC.T workstream and the incentive to access the free energy audit and the resulting £10k funding.

The increase in the data supplied helped provide a more accurate picture of our emissions, by reducing the amount of estimated (where unavailable/submitted) data has previously been used, it greatly increased the accuracy. This does in part explain the drop in emissions from year to year. It is really important that Parishes provide their energy consumption data to help us understand our progress towards netzero and help us target further help where it is needed.

However, data provided is still quite poor, meaning that there is a lot of inaccuracy in the data making it hard to track trends and understand what is really happening.

The EFT allows churches to supply either the amount they spent on electricity or the kWh purchased. When only the spend data provided is very poor information given the huge range of different prices churches pay for each kWh it is hard to estimate correctly the kWh purchased due to the very wide range of unit prices paid by churches and the large flux in energy prices over the last few years.

Secondly, the spend data may or may not include other costs such as standing charges or taxes, again making it hard to estimate accurately the emissions.

Even when kWh data is provided churches may struggle to provide the correct information due to challenges in reading the meters or interpreting their energy bills. E.g one church reported 100 kWh of gas use in 2021 and 21000 kWh in 2022. The 100 kWh figure is most likely to be a misreading of the meter or bill data.

To help resolve this, webinars will be offered to Parishes to provide training on how to locate energy consumption data and how to interpret energy bills and how to complete the EFT.

- Overall change: 15% reduction in emissions from churches
- Drivers of emissions change: Temperature: 7 % warmer in 2022, energy costs inflation
- Change in individual churches – The percentage change in emissions ranged from a 400% increase to a 75% decrease. Some of this change will be due to inaccurate data but much is likely due to changes in churches operating hours and energy efficiency.

ANALYSIS - CLERGY HOMES

No data is available for these years to calculate what the actual energy consumption was for clergy homes. This would require occupants to provide this data on an annual basis. Instead, emissions have been estimated based on the average emissions for similar sized homes.

In later years it would be preferable to obtain actual data. Some data was obtained following an email in 2022, but not enough to use for emission reporting.

It is intended to persist in seeking actual consumption data and focus communications to achieve this.

A reduction in emissions is expected from 2023 onwards due to the programme of works for clergy homes beginning in 2023.

ANALYSIS – SCHOOLS

Data for schools for 2021 and 2022 has been taken from a mixture of actual data supplied by the schools to the Diocese and DEC data. DEC are certificates schools, and all public buildings are required to report regularly. Data quality is generally good.

The impressive reductions have been achieved by a range of measures and energy management work undertaken by the schools as well as some capital upgrades such as heating, insulation and lighting upgrades. The increased cost of energy is likely to have been a significant driver.

ANALYSIS – DSS

Electricity Use

The DSS office is heated via an air-to-air heat pump providing heating and cooling. Hot water is provided via point of use hot water. There is no gas or other fuels used on site. The only emissions are from electricity use.

While a 9% reduction between 2021 to 2022 is due to the national grid decarbonising, the rest of the reduction is due to less consumption.

In 2023, we moved to a renewable energy tariff in line with NC requirements.

Business Travel

Business travel increased. Not enough data is available to understand the purpose of the journey in order to understand the increase. However, it is expected that due to TCT business travel will continue to increase as the parish facing activity increases. Action is already underway to limit this expected rise with a funded electric bike for our Outreach officer.