ESOS-ENERGY
Energy efficient solutions

Energy Efficiency and Zero Carbon Advice

St Benedict's Church, Lowestoft
PCC of St Benedict's Church

Author	Reviewer	Audit Date	Version
Paul Hamley	Marisa Maitland	4th May 2022	1.1

Contents

1. Executive Summary

An energy survey of St Benedict's Church, Lowestoft was undertaken by ESOS Energy to provide advice to the church on how it can be more energy efficient and provide a sustainable and comfortable environment to support its continued use.

St Benedict's Church, Lowestoft is a brick built mid-20th century church constructed in 1958, with a flat roof extension dating from the 1980's and a small hall added in 2007. The site is unconsecrated and unlisted. There is both gas and electricity supplied to the site.

The church has a number of ways in which it can be more energy efficient.

Our key recommendations have been summarised in the table below and are described in more detail later in this report. It is recommended that this table is used as the action plan for the church in implementing these recommendations over the coming years.

Energy saving recommendation	Estimated Annual Energy Saving (kWh)	Estimated Annual Cost Saving (£)	Estimated capital cost (£)	Payback (years)	Permission needed	CO2 saving (tonnes of CO2e/year)
Switch utility supplies to a group purchasing scheme at end of contracts	None	10-15%	None	Immediate	None	1.4 if supply to 100% renewable electricity
Install PIR controller for external lights	1,000	£158	100	<1	List A	0.25
Door draughtproofing	2% 560	£20	50	3	Faculty	0.1
Do not use fixed water heater / install timer	500	£120	120	1	List A	0.1
Replace fluorescent lighting with LED strip lights	1000	£240	£2,600 30 LED strip lights, most 1.8m long	11	List B	0.2
Replace gas heaters with Air to Air Source heat pumps	28,000 gas Requires 7,000 electricity	£1,200 if electricity obtained from solar	8,100 For 20kW supplied	7	Faculty	3.4
Install Solar Photovoltaic Panels	23,000 max 5,750 current use + 7,000 heat pump use	£1,500	18,850 [For 13kWp system]	13	Faculty	1.4

The church should check any faculty requirements with the DAC Secretary at the Diocese before commencing any works.

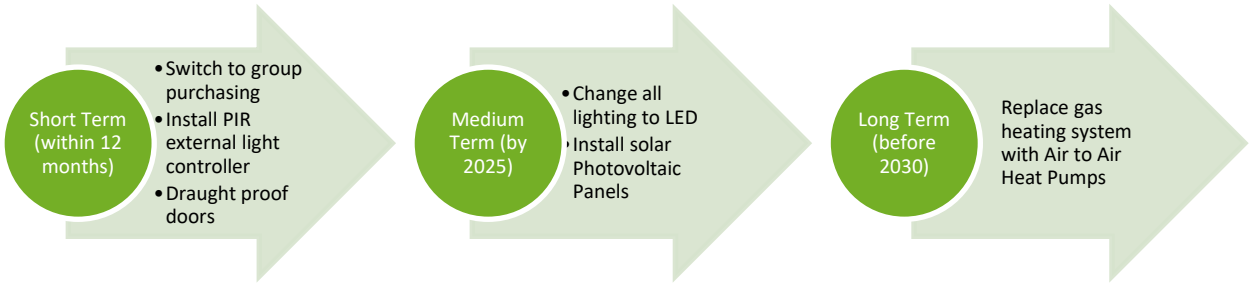
Based on current contracted prices of 23.87p/kWh (day), 15.80p/kWh (night) and 39.30p/kWh for electricity and mains gas respectively.

If all measures were implemented this would save the church around £2,700 per year in operating costs with onsite power generation.

2. The Route to Net Zero Carbon

The General Synod of the Church of England has indicated that the Church of England should be Net Zero Carbon by 2030. Every church, cathedral, church school and vicarage will therefore need to convert to be a net zero building in the next 10 years.

This church has a clear route to become net zero by 2035 by undertaking the following steps:



3. Introduction

This report is provided to the PCC of St Benedict's Church, Lowestoft to give them advice and guidance as to how the church can be improved to be more energy efficient. In doing so the church will also become more cost effective to run and seek to improve the levels of comfort. Where future church development and reordering plans are known, the recommendations in this report have been aligned with them.

An energy survey of the St Benedict's Church, Lowestoft, Hollingsworth Road, NR32 4AY was completed on the 4th May 2022 by Dr. Paul Hamley. Paul is an energy auditor with experience of advising churches and small businesses. He is part of the Church Energy Advisors Network developing advice for the Church of England and authored the "Assessing Energy Use in Churches" report for Historic England. He is a CIBSE affiliate member and a Chartered Scientist, with experience of the faculty process gained from chairing the building committee of a Grade I listed church and has been an assessor for EcoCongregation.

The church was represented by Kay Bruce and Chris, Church Wardens.

St Benedict's Church, Lowestoft	
Church Code	Unconsecrated
Gross Internal Floor Area	300 m^2
Internal Volume	900m^3
Heat requirement	25kW
Listed Status	Unlisted

The church is typically used for 40 hours per week for the following activities:

Type of Use	Hours Per Week (Typical)
Services	2 hours per week
Community Use	6 hours per week
Nursery Hire	32 hours per week

Annual Occupancy Hours: 2,100

Estimated Footfall: 12,800

4. Energy Procurement Review

Energy bills for gas and electricity have been supplied by St Benedict's Church, Lowestoft and have been reviewed against the current market rates for energy.

The current electricity rates are:

Day Rate	23.87p/kWh	Below current market rates
Night Rate	15.80p/kWh	Below current market rates
Standing Charge	39.30p/day	N/A

Supplier: EOn. Contract end date 02/11/2022

The current gas rates are:

Single / Blended Rate	3.6p/kWh	Below current market rates
Standing Charge	30p/day	N/A

The above review has highlighted that there are opportunities to gain cost savings from improved procurement of the energy supplies at this site.

We would therefore recommend that the church looks into 100% renewable tariffs and obtains quotations for its gas and electricity supplies from a group purchasing scheme offering savings due to economy of scale, such as the Charity Buying Group or Big Clean Switch.

charitiesbuyinggroup.com/services/utilities/

These schemes offers 100% renewable electricity and a proportion of renewable gas and therefore are an important part of the process of making churches more sustainable.

A review has also been carried out of the taxation and other levies which are being applied to the bills. These are:

VAT	5%	The correct VAT rate is being applied
CCL	not charged	The correct CCL rate is being applied

Whenever monthly electricity consumption exceeds 1,000kWh or gas consumption exceeds 4,397kWh (52,000kWh per annum), 20% VAT is charged unless the customer has submitted a VAT declaration form. The church is a charity and therefore can claim VAT exemption status.

This should always be done when changing supplier.

VAT declarations are available from the suppliers website and can usually be found by typing the suppliers name followed by "VAT Declaration Certificate" into most website search engines.

Excess VAT paid can be reclaimed for the past three years.

A detailed explanation is available here: https:// perfect-clarity.com/vat-on-church-utility-bills/#:~:text=There%20is%20no%20VAT%20chargeable%20on%20Church%20water%20bills

5. Energy Usage Details

5.1 Annual Consumption

St Benedict's Church, Lowestoft used 5,750 kWh/year of electricity in 2021, costing in the region of £1,500 per year, and 28,969 kWh/year of gas, costing £1,210.

This data has been taken from the annual energy invoices provided by the suppliers of the site.

Utility	Meter Serial	Type	Pulsed output	Location
Electricity – Church	17P2293970	Secure Liberty 100 Single Phase	Yes	Cabinet in disabled toilet, nursery end
Gas – Church	M016 A09351 11 A6	Itron MDA16	Yes	External gas meter cupboard, next to tower in bin compound

All the meters are AMR connected and as such an annual energy use profile for the site could be obtained from the supplier.

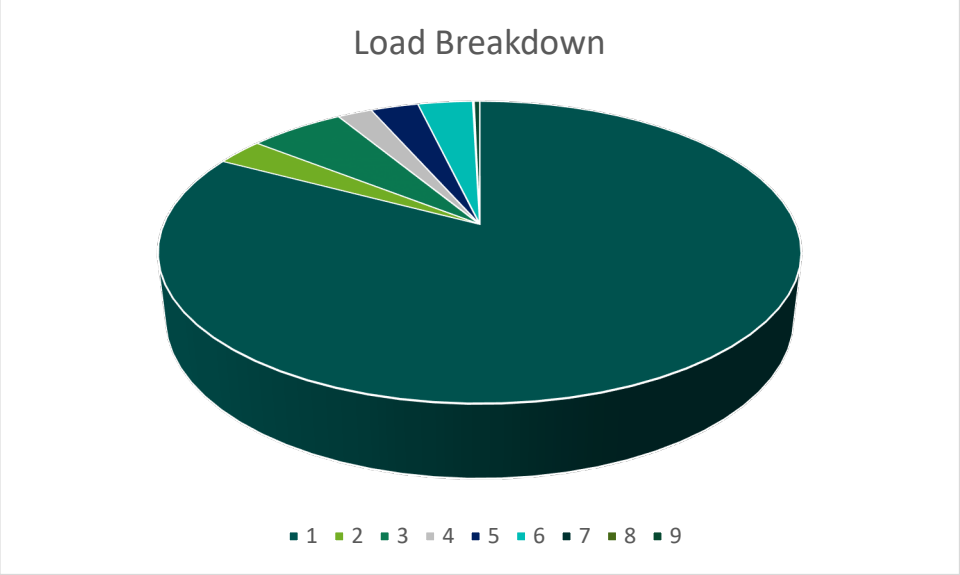
5.2 Energy Profiling

The main energy consuming plant can be summarised as follows:

	Equipment	Power kW	Annual Consumption kWh	Portion
Heating [Gas]	2 x wall mounted external flue direct gas heaters including 2 x XN45TV M5010 1 x Drugasar Hot Water boiler, Chaffoteau et Maury Brittony IIT		 28,000 969 TOTAL 28,969	83.4%
Heating [Electric]	Radiant quartz tube heaters, 4 units in entrance foyer Portable convector heater(rarely used)	11 3	980 20 TOTAL 1000	2.9%
Lighting [Internal]	Fluorescent tubes, T8 x 6ft length units, total no.13 x70W T8 x 4ft length units, total no.14 x58W T8 x 3ft length units, total no. 2 x 40W T8 x 2ft length units, total no. 4 x 20W Bulkhead lights 5 x large, 50W Bulkhead lights 4 x small, 40W Pendant, 60W	TOTAL 3300W	TOTAL 2,000	5.8%
Lighting [External]	6 bulkhead lights, On daily from dusk to sunrise (average 10 hours daily)	0.2	730	2.1%
Hot Water	Kettle Urn, weekly use Heatrae Sadia Express 7 litre, kitchen Heatrae Sadia Multipoint 30 litre, in store (normally off)	3 2 3 3	300 100 350 20 TOTAL 870	2.5%
Kitchen	Microwave Fridges (on constantly) 2 cookers (5 hours/week) Extraction fan	1 0.2 3 + 3 0.2	130 600 400 20 TOTAL 1150	3.3%
Office	Photocopier Shredder	0.5 0.2	10 1	0.03%
Sound, Music	Sound system	0.2	20	0.06%
Small Power	Vacuum cleaner Sewing group, twice monthly:	1.5	100	

	8 sewing machines x 200w 2 irons x 1kW	1.6 2	10 10	 0.3%

Annual electricity consumption, 2021 = 5,751kW



KEY *1 Gas heating* *2 Electric Heating* *3 Lighting internal* *4 Lighting external*
5 Hot water *6 Kitchen* *7 Office* *8 Sound, music* *9 Small power*

As can been seen from this data, the heating makes up by far the largest proportion of the energy usage on site. The other significant load are lighting, hot water and kitchen.

5.3 Energy Benchmarking

In comparison to national benchmarks for church energy use[1] St Benedict's Church, Lowestoft uses 1% more electricity and 35% less heating energy than average for a church of this size.

	Size (m^2 GIA)	Annual Energy Usage (kWh)	Actual kWh/m^2	Benchmark kWh/m^2	Variance from Benchmark
St Benedict's Church, Lowestoft (elec)	300	5,750	19.2	19	+1%
St Benedict's Church, Lowestoft (gas)	300	29.000	96.6	148	-35%
TOTAL	300	34,750	115.8	167	-31%

There is currently no benchmark data available which takes hours of use and footfall into account.

[1] CofE Shrinking the Footprint – Energy Audit 2013

6. Efficient / Low Carbon Heating Strategy

The energy used for heating a church typically makes up around 80% to 90% of the overall energy consumption. Heating also often uses gas or oil as its primary fuel, these are fossil fuels with high carbon emissions and little opportunity to decarbonise in the future. Electricity currently has carbon emissions of around the same level as mains gas but the carbon emissions associated with electricity are reducing rapidly as the UK builds more renewable energy and decommissions its remaining coal fired power stations. Mains gas does have some potential to reduce its carbon content through the use of bio gas and hydrogen but these are less developed solutions and will be unable to deliver 'zero carbon mains gas'. It is therefore important to review and plan to increase efficiency and reduce carbon intensity. One way to achieve this is to consider a transition to electrical heating which represents a more efficient and comfortable solution for churches.

Currently the heating is provided by a mixture of gas and electric heating.

- The main hall is heated by wall mounted direct gas heaters
- The entrance area is heated by four high level wall mounted radiant quartz heaters
- The small hall and office are heated by fan assisted electric radiators.

Above: main hall, in use by a nursery each morning and two afternoons per week.

There are two direct gas external flue heaters on the left hand wall.

Above: The entrance area, heated by radiant quartz heaters, two of which can be seen on the upper walls.

Above, the small hall dates from 2007 and is well insulated.

Insulation is installed in the roof space above the main hall. It was not possible to verify the depth fitted.

Heating is by two varieties of direct gas heater, with flues through the wall.

This locations are suitable for installation of small Air to Air Heat Pumps with external units powering internal units each side of the wall, with minimum pipework.

6.1 Building Heat Requirement Estimate

The Centre for Sustainable Energy model[2] can be used to estimate heat load for the building.

Heat Load (kW) = Volume V (m^3) x Insulation Factor

Insulation Factors

Poorly insulated	0.033kW/m^3
Well insulated	0.0022kW/m^3
Insulated to 2010 regulations	0.0013kW/m^3

Room	Volume m^3	Insulation Factor kW/m^3	Heat Required kW
Main Hall & nursery area, kitchen loft insulation, uninsulated cavity walls no windows to main hall	536	0.0028	18
Entrance area	173	0.0028	5
Small Hall (built 2007) Well insulated, double glazed, suspended ceiling	184	0.0018	3

2 www.cse.org.uk/local-energy/download/estimating-the-heat-demand-of-a-hypothetical-community-building-79

6.2 Main Hall Heating Strategy

Electric heating can be more environmentally friendly than gas when a 100% renewable supplier is chosen, or when it is generated on site by solar power.

Direct electric heating, by radiant panel, tube or convector delivers 1kW of heat for every 1kW of power used. Heat Pumps can provide between 2.5 and 5 times the amount of heat which they consume in electricity.

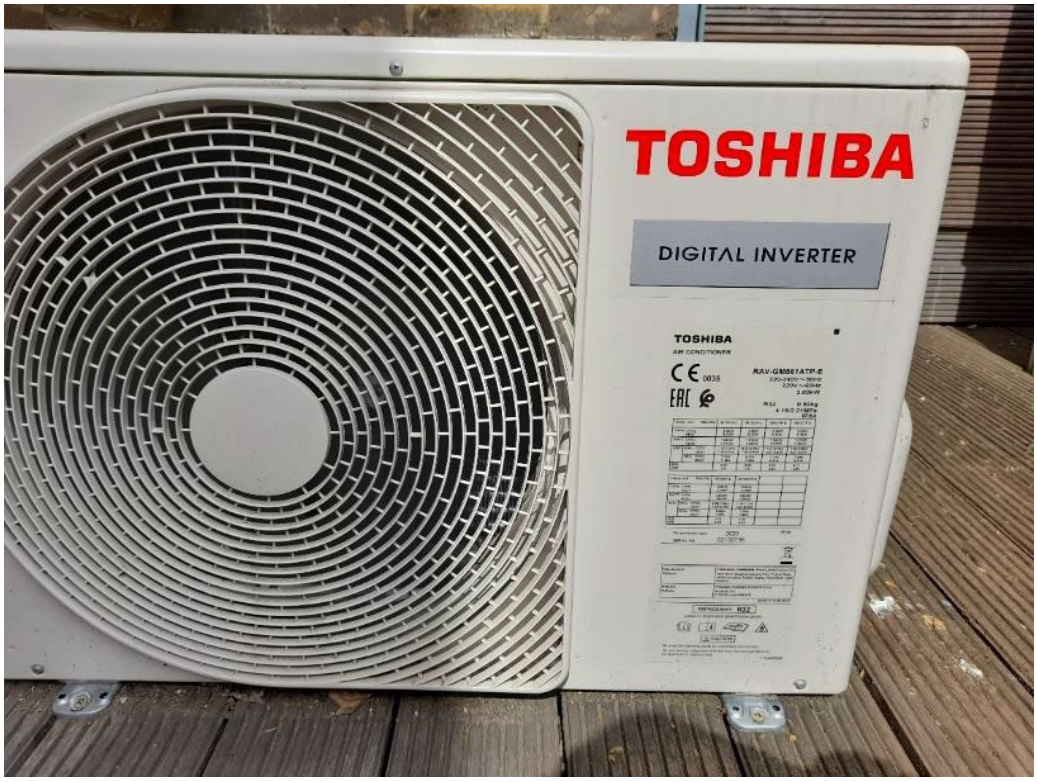
Where a building is used occasionally (such as a once per week church), the lower capital costs usually mean that a direct electric method such as under pew heating (requiring little preheating) is most cost effective. For this church which is seated with moveable chairs and in use as a nursery during most of the week, the heating will be required regularly. Thus a heat pump which offers greater heat then the electricity consumed is recommended.

6.3 Air to Air Source Heat Pumps Overview

Air to Air Source heat pumps require internal fan units, blowing warm air, connected to external units – they do not require radiators. Systems provide summer cooling as well as winter heating and can deliver up to 4 to 5 times the amount of heat which they consume in electricity.

It is probable that the heat requirements of the main hall end of the building can be met by two or three units located in the same positions as the existing heaters.

Four of the units below supply one floor of an office of area 165m^2, which is similar to the total of the main hall, toilets, nursery office and kitchen areas. This gives a heating capacity of 21kW for an electrical load of around 1.5kW. The CoP is between 3.2 and 3.9 depending on the type of internal unit chosen.



There are a wide variety of internal units for ceiling, high wall and low wall mounting.

6.4 Air to Air Source Heat Pumps Costs

Pumps to supply 18kW of heat (with capital cost estimated at £450 per kW output: £8,100) would deliver the same amount of heat annually, 28,000kWh, as the current system.

Costs may be less as only direct connections through the wall between external and internal units are likely, minimising piping costs.

The units would require 1,555 hours of operation at full power to deliver the same amount of heat annually.

Operating at a Coefficient of Performance of 4, an 18kW heat output requires 4.5kW of electricity supply.

4.5kW x 1,555 hours = 7,000kWh electricity used annually.

At current costs (mostly at day rate due to the nursery times of use) of 23.87p/kWh, annual cost = £1,671

Air to Air source heat pumps do not require water radiators. An external unit can be connected through the wall, using the existing flue ducts to internal fan units to directly replace the present gas heaters.

6.5 Heating Strategy for Other Areas

- The entrance area can continue to be heated by radiant heating if this is considered effective.
- The small hall can continue with a fan assisted radiator, or an additional Air to Air Source Heat Pump can be installed at the same time. This would be worthwhile if the room is to be used frequently as there would be lower operating costs than for direct electric heating. This is a recent construction with good levels of insulation and double glazing, so only a small output heat pump would be required.
- The Office is understood to be in irregular use. Heating is best provided by a low capital cost solution such as use of a portable fan heater as at present.

7. Energy Saving Recommendations

In addition to having a revised heating strategy there are also a number of other measures that can be taken to reduce the amount of energy used within the church.

7.1 New LED Lighting

The lighting is provided mostly by fluorescent tubes of between 40 and 70W power each.

In the medium term, it is recommended that these are all replaced in one operation by LED strip lighting installed by contractor (since the Fluorescent fittings are bulky and wiring at height will be involved). This operation should aim at halving the power output and hence power consumption by the lighting.

Care should be taken to ensure that the LED units are not high power, since there are very powerful LED strip lights available which would *increase* energy use

Any LED light should come with branded chips and drivers and offer a 5 year warranty. An example of such a range of fittings is available from http://www.qvisled.com/

Capital cost: 30 units, 1.5 metre, 30W each = £2,600

7.2 Lighting Controls (Internal)

Areas such as toilets which are frequently used by children are recommended to be fitted with presence detectors.

It is recommended that a motion sensor is installed on these specific lighting circuits so that the lights come on only when movement is detected in the space and turn off approximately two minutes after the last movement has been detected (note that the duration of the time lag after which the light goes off needs to be consider alongside the type of light that is fitted. LED lights are much more suited to being switched off after only a short duration than some fluorescent lights). These movement sensors (commonly called PIRs) also have light sensors integrated into them so they can be used to make sure that the light does not come on if there is already sufficient daylight in the space.

Your existing electrician or any NICEIC registered electrical contractor can install PIR sensors onto existing lighting circuits. This can be carried out without significant disruption to the use of the space.

7.3 External Lighting Controls

The external bulkhead lights are reported to be on throughout the night from dusk to dawn. The surrounding of the church does not appear to include a footpath and it does not appear to be a heritage building. Security lighting can be provided by presence detectors. Should the building façade facing the road need to be lit, this is recommended to be only until 11pm.

For efficient operation and to reduce light pollution and nuisance to neighbours it is generally recommended that external lighting is turned off between 11pm and 6am unless required for specific purposes.

It is therefore recommended that PIR presence detector controllers for the lights are installed so they are only activated when people are present.

Your existing electrician or any NICEIC registered electrical contractor can install PIR sensors onto existing lighting circuits. This can be carried out without significant disruption to the use of the space.

7.4 Timers on Fuse Spurs to Water Heaters

The church is provided with three water heaters

1 30 litre electric water heater in the store room.
This is normally turned off. It is recommended that it is kept off.

2 7 litre electric water heater in the kitchen.
The above heaters keep a tank full of water hot at all times when switched on. Although the tank is insulated, the copper entry and exit pipes are not; these will lose as much heat as a 100W light bulb. If switched on constantly, that is around 900kWh per year, costing £180 per heater annually. Furthermore, only half of the tank volume can be obtained hot at once – by the time half the tank has been emptied, its place is filled by cold water, so the second half of the tank full is lukewarm and a delay is necessary for it to heat up.

3 Brittony IIT gas water heater
When the gas heaters are replaced, the gas water heater should be disconnected and the site disconnected from the gas mains, avoiding standing charges.
Hot water is recommended to be provided by a point of use heater in the kitchen, which only supplies water as required – but can supply as much as necessary.
An alternative is to fit the kitchen water heaters with a 24 hour/7 day timeclock to replace the fused spur switch. An example of such a unit would be a TimeGuard FST77. They should be set up with times to match the times that the building is occupied and this will prevent the standing losses from the unit wasting energy during periods when the building is not occupied.
Such units can be purchased at any electrical wholesaler and fitted by your existing electrician or any NICEIC registered electrical contractor.

7.5 Draught Proof External Doors

It is understood that one of the duplicate doors under the tower is to be bricked up as it is superfluous. All doors will benefit from draughtproofing which can be provided relatively cheaply using E or P cross section self-adhesive rubber strips, well-fitting brush strips under or “sausage dog” bead / pea gravel filled bags.

Where there are problems with water entering under doors, installing an upstand strip is recommended (i.e. a metal or rubber strip rising 5 to 8mm to prevent water ingress).

7.6 Secondary Glazing

Many of the windows are double glazed.

Where there are still single glazed windows present, a cost effective solution is to use “seasonal” double glazing film. This is cheap, and cheerful. The cheerful part is provided by the fun of installing it – it is a two person job !

7.7 Cavity Wall Insulation

The majority of the building is constructed with stretcher bond brickwork with an internal cavity.

The small hall constructed in 2007 will be built to recent regulations incorporating cavity wall insulation [CWI]. It is unclear if the original building has CWI. There are no indications of retrofitting (brown studs low in the walls). The rear flat roof portion, late 1980’s may have CWI.

This information may be accessible from architect’s drawings which should be available.

The tower is constructed with Flemish bond brickwork for greater strength. Lack of a cavity is not really an issue here as this is peripheral to the building and it hosts a rarely used staircase.

Prior to the early 1990’s, building regulations did not require walls to be fully insulated and therefore it is likely that there is no insulation present in the original hall and perhaps the 1980 flat roof portion, but it could be added through injecting it into the cavity walls.

It is recommended that cavity wall insulation is considered and added to the walls where appropriate. A survey to check the width of the cavity, exposure of the wall and condition of the cavity should be carried out by a CIGA approved installer who will then be able to provide you with a quotation to undertake the works. Installing cavity wall insulation will help to reduce heat loss and improve the comfort of the space, but needs to be considered alongside other control measures such as room sensors to ensure that the space does not over heat because of the additional insulation.

NB: if Air to Air heat pumps are installed, they usually provide cooling too.

8. Saving Recommendations (Water)

8.1 Tap Flow Regulators

The over provision of water for hand washing is not only a source of excessive water use, but in the case of hot water, it is also a source of wasted energy in the heating that has to go into providing the hot water. This is recommended where there is regular use by children.

The flow rate of the taps can be easily regulated by fitting flow regulators within the taps. It is recommended that flow regulators such as those manufactured by neoperl (http://www.neoperl.net/en/) are fitted into all the viable hand wash basin taps to save on both water and heating of the hot water.

These regulators can be self-installed or by any good facilities staff.

8.2 Detergents for Cold Water Hand washing

Use of cold water for hand washing can be just as effective as using hot.

https://www.nhs.uk/news/lifestyle-and-exercise/cold-water-just-as-good-as-hot-for-handwashing/

9. Other Recommendations

9.1 Electric Vehicle Charging Points

The church has a car park serves the church and hall. In order to make a visible statement on the churches mission of stewardship and to facilitate more sustainable transport choices by those both visiting the church and using the hall, the church may wish to consider installing an electric vehicle charging point, probably on the side of the church hall to allow visitors to charge their electric car. This may be useful to nursery staff.

Installing a unit such as a Rolec Securi-Charge http://www.rolecserv.com/ev-charging/news/view/Robust-EV-Charging-With-Rolecs-SecuriCharge-EV-Wall-Unit-Coin-Token-PAYG would allow the organisation control over who is allowed to use the unit with a key operated system. Or given the type of use of the building and control over the usage of the car park as a whole a simple 32 amp type 2 wall pod type charger may be most suitable and these are widely available through many suppliers such as http://www.rolecserv.com/ev-charging/product/EV-Charging-Points-For-The-Home.

Because of the nursery located within the building, the church can be considered as a place of work and as such installation grants are available through the work place charging scheme https://www.gov.uk/government/publications/workplace-charging-scheme-guidance-for-applicants-installers-and-manufacturers which will fund 75% of the installation cost up to £500.

10. Renewable Energy Potential

The potential for the generation of renewable energy on site has been reviewed and the viability noted.

Renewable Energy Type	Viable
Solar PV	Yes
Battery Storage	Future
Wind	No – no suitable land away from buildings
Micro-Hydro	No – no water course
Solar Thermal	No – insufficient hot water need
Biomass	No – not enough heating load as well as air quality issues
Air Source Heat Pump	No – no radiator system
Ground Source Heat Pump	No – no radiator system
Air to Air Source Heat Pumps	Yes

10.1 Solar Photovoltaic Panels

The roof offers a total area of around 300m^2. The main ridge is oriented north – south. The eastern third of the roof is flat. It could host panels positioned at the optimum angle to the sun, but would be in shade during most afternoons.

Assuming that the maximum amount of roof space could be, and was used for panels, the following formula calculates annual generation.

Annual Generation (kWh) = Area x 0.15kWp/m^2 x 1000kWh/kWp x Orientation Factor x Overshading Factor

Roof Section	Area/m2	Orientation factor	Shading factor	Annual Generation, kWh
Main Hall	100	0.75	1	11,250
Small hall	20	0.75	1	2,250
Flat roof	80	1 (if optimised)	0.8	9,600
Total	200			23,100

This is the maximum likely figure, which may be reduced by factors such as the weight of panels (due to roof strength), access walkway space. The ability of the roof structure to support the extra load should be discussed with the church's inspecting architect.

This is much greater than the church centre's annual recent electricity use (5,750kWh in 2021).

If a heat pump were installed, this would require extra power, about 7,000kWh.

The total requirement is therefore around 13,000kWh.

With no Feed in Tariff, a system should be sized for site needs and not any larger. Needing 56% of the maximum possible installation provides optimism that this roof could generate enough for future site needs.

There would be excess generation in the summer (unless an air to air heat pump is installed and is used regularly for cooling), and grid electricity would be required during winter. The system should be specified for future addition of a battery, when battery costs reduce, as this would extend system usefulness into the evening.

Battery Storage is not strictly a renewable energy solution but provides a means of storing energy generated from solar PV on site to be able to be used at peak times or later into the day when the PV is no longer generating. It therefore extends the usefulness of the existing PV system. This is a new but fast-growing technology.

Using average 2019 installation costs (£1,450 per kWpeak); an optimal sized 13kWpeak system would cost £18,850.

Sources: Tables H3 & H4, SAP 2009, http://www.bre.co.uk/filelibrary/SAP/2009/SAp-2009_9-90.pdf

11. Funding Sources

There are a variety of charitable grants for churches undertaking works and a comprehensive list of available grants is available at www.parishresources.org.uk/resources-for-treasurers/funding/

This includes a 77 page guide to funders and their criteria:

https://www.parishresources.org.uk/wp-content/uploads/Charitable-Grants-for-Churches-Jan-2020.pdf .

12. Faculty Requirements

It must be noted that all works intended to be undertaken should be discussed with the DAC at the Diocese.

Throughout this report we have indicated our view on what category of permission may be needed to undertake the work. This is for guidance only and must be checked prior to proceeding as views of different DACs can differ.

Under the new faculty rules;

List A is for more minor work which can be undertaken without the need for consultation and would include changing of light bulbs within existing fittings, repair and maintenance works to heating and electrical systems and repairs to the building which do not affect the historic fabric.

List B is for works which can be undertaken without a faculty but must be consulted on with permission sought from the Archdeacon through the DAC. This includes works of adaptation (but not substantial addition or replacement) of heating and electrical systems and also the replacement of existing boilers so long at the same pipe work, fuel source and flues are used. It can also be used to replace heating controls.

All other works will be subject to a full faculty.

Works which affect the external appearance of the church will also require planning permission (but not listed building consent) from the local authority and this will be required for items such as PV installations.