Energy Efficiency and Zero Carbon Advice

St Matthew's Church, Wimbledon
PCC of St Matthew's Church

Author	Reviewer	Audit Date	Version
Paul Hamley	Tamsin Hockett	24th November 2022	1.0

Contents

1. Executive Summary

An energy survey of St Matthew's Church, Wimbledon was undertaken by ESOS Energy Ltd 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 Matthew's Church, Wimbledon is an unlisted modern era church dating from the 1950s which replaced a war damaged 1920's building. There is both gas and electricity supplied to the site.

The church has a number of ways in which it can become 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)
SHORT TERM						
Install LED lamps to replace floodlight and spotlight lamps	1,500	£530	£500 [access costs]	1	List A	0.3
Install door draughtproofing strips	1% 300	£106	£20	<1	List A	0.06
Install new brackets for window closure mechanisms	2% 600	£212	£500 ?	2.5	List B	0.1
Purchase some heated cushions	N/A	N/A	Unknown	N/A	None	N/A
MEDIUM TERM						
Investigate cavity wall insulation	3,000	£1,000	£18,000	18	Faculty	0.6
Install Air to Air Heat Pump System	20,000	£5,000	£74,000	15	Faculty	4.2
Install solar photovoltaic panels on south aisle roof	Up to 29,000	50% of electricity use, £2,500	£39,000 for largest system	<15	Faculty	Up to 6.1
HALL						
Replace fluorescent lighting with LED strips	Unknown	Unknown	£1,000	Unknown	List B	Unknown
Replace boiler with heat pump	Unknown	Unknown	£5,000	Unknown	Faculty	Unknown
Install solar photovoltaic panels	Up to 16,000	Up to £5,600	£29,000	5.5	Faculty	Up to 3.4

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

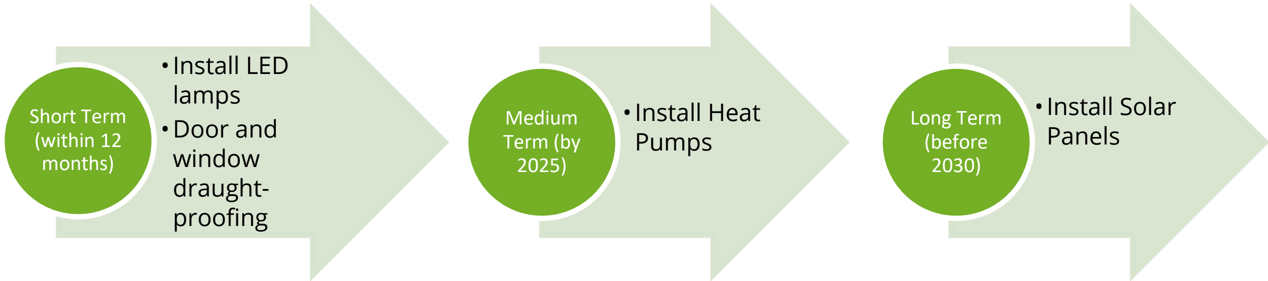
Based on current contracted prices of 35.343/kWh and 8.5963p/kWh for electricity and mains gas (for hall) respectively.

If all measures were implemented this would save the church around £5,000 per year in operating costs.

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 Matthew's Church, Wimbledon 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 with improvements in 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 Matthew's Church, Wimbledon, Durham Road, Raynes Park, SW20 0DE was completed on the 24th November 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 Eco Congregation.

The church was represented by Rev. Alastair Newman, Curate.

St Matthew's Church, Wimbledon	CHURCH	HALL
Church Code	637314	
Gross Internal Floor Area	675m^2	First floor 285m^2
Volume	7,000m^3	940m^3
Heat requirement	231kW	12kW
Listed Status	Unlisted	Unlisted

The church is typically used for 25 hours per week for the following activities:

Type of Use	Hours Per Week (Typical)	Average Number of Attendees
Services	19 hours per week	100 Sunday morning 60 Korean church Sunday/Wednesday
Church Meetings and Groups	2 hours per week	
Community Use	4 hours per week	Warm welcome space, Wednesdays
Occasional Offices	1 wedding 1 funeral	100 100

4. Energy Procurement Review

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

The current electricity rates are:

Single / Blended Rate	35.3430p/kWh
Standing Charge	49.3808p/day

Supplier Total

The current gas rates are:

Single / Blended Rate	8.5963p/kWh
Standing Charge	273p/day

Gas is supplied to the hall only.

We would recommend that the church looks into 100% renewable tariffs and obtains quotations for its gas and electricity supplies from group purchasing schemes such as the Big Church Switch scheme, Charity Buying Group and the Parish Buying scheme, http://www.parishbuying.org.uk/energy-basket.

These scheme 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	20%	The organisation is understood to be a charity and therefore should be benefiting from only be charged a 5% VAT rate. A VAT declaration should be sent to the supplier to adjust this.
CCL	100% charged	As the organisation is being charged the wrong VAT rate they are also being charged CCL which should not be applied as they are a charitable organisation,

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.   This should always be done when changing supplier.

The church is a charity and therefore can claim VAT exemption status.

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

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.

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 Matthew's Church, Wimbledon used 31,440 kWh/year of electricity during 2021, costing £5,030 for the year. The hall's use of electricity and gas were not reported. The total carbon emissions associated with the church building energy use are 6.63 CO_2e tonnes/year.

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 - Heating [Left meter]	E17UP 05222	EDMI Atlas Mk10A	Yes	Vestry
Electricity – Lighting, etc [Right meter]	E17UP 17462	EDMI Atlas Mk10A	Yes	Vestry

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

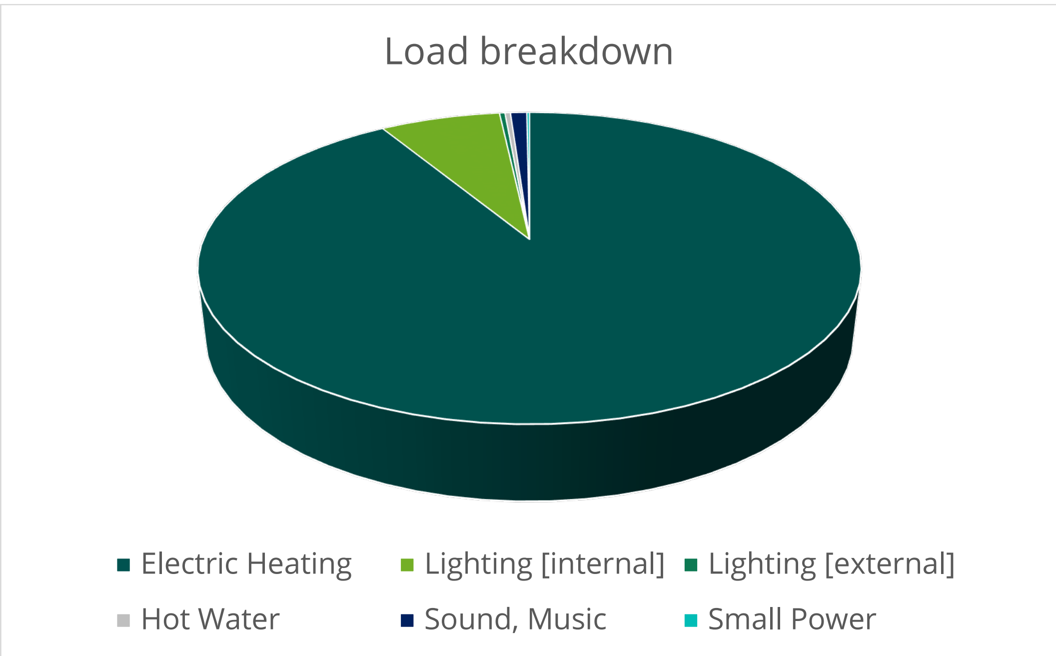
5.2 Energy Profiling

The main energy consuming plant of the church can be summarised as follows:

	Equipment	Power kW	Annual Consumption kWh	Portion
Heating [Electric]	Church – underfloor heating, installed 1970.	Thought to be 85	28, 735	91%
Lighting [Internal]	CHURCH 1,300 hours use 36 x CFL each 10W 6 up lights @ 50W 8 spotlights @ 250W 2 floodlights @ 250W Entrance lighting	 360W 300W 2000W 500W 100W = 3,260W	TOTAL 2,200	7%
Lighting [External]	6 bulkhead lights	250W	100	0.3%
Hot Water	Fixed water heater, Vestry (normally off)	3	100	0.3%
Sound, Music	Sound system Organ	0.5 1	200 100	1%
Small Power	Vacuum cleaner	1.5	50	0.15%

Annual site lighting and power consumption, 2021: 2,705kWh Sum of estimates: 2,750kWh

Annual site electric heating consumption, 2021: 28,735kWh



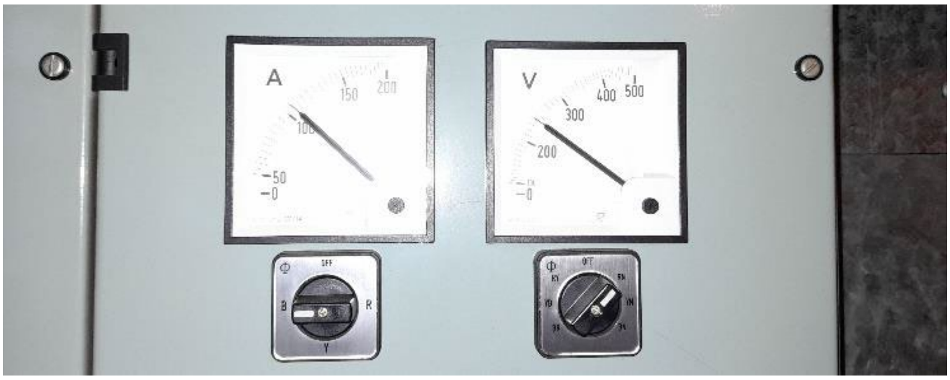
As can been seen from this data, the heating makes up by far the largest proportion of the energy usage on site. The other significant load is lighting.

The church is seated using moveable chairs, mostly located above the underfloor heating area.

6. Efficient / Low Carbon Heating Strategy

6.1 Underfloor Heating Performance

The church is heated by underfloor heating. Labels adjacent to the meters indicate that each phase controls a separate area with the following currents drawn; Red 76A, Yellow 144A, Blue 132A. This totals 352A indicating an 84.5kW load.



The front left area of the nave was not being heated with the above current drawn.

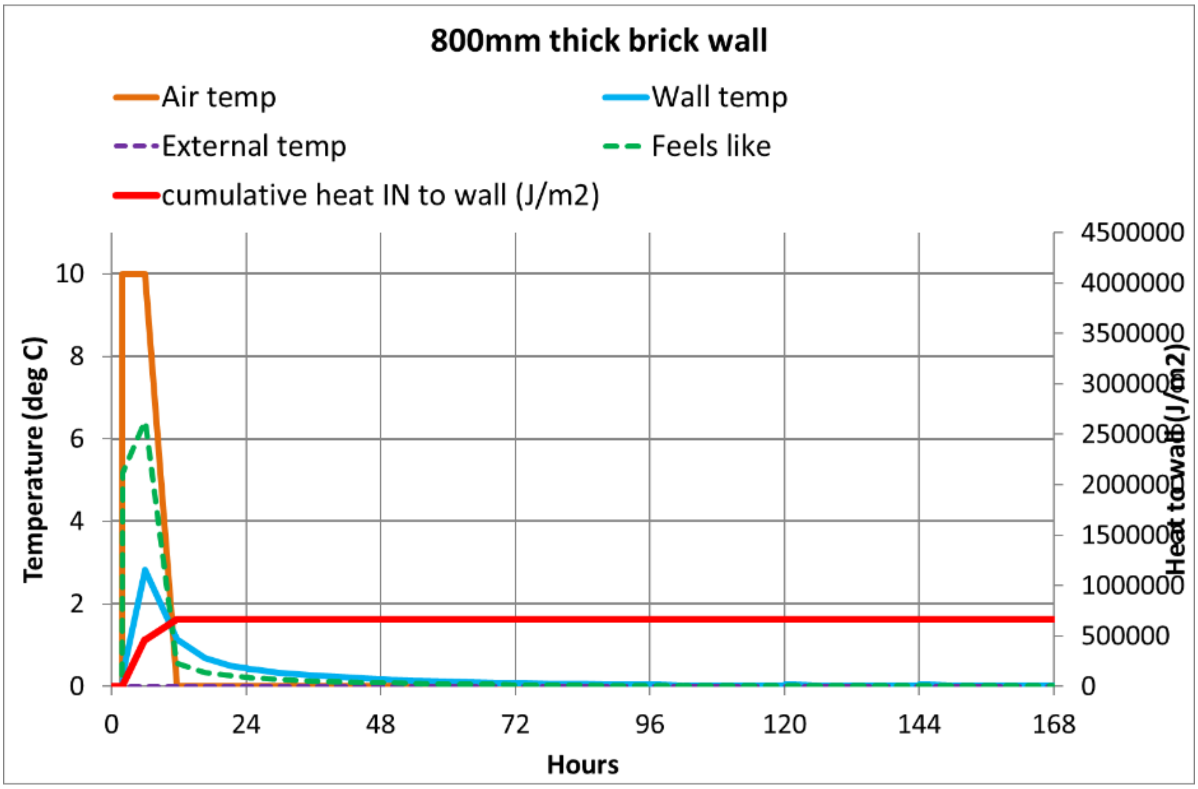
An infra red camera was used to investigate the extent of the underfloor heating. In the first image, the heating is uniform across the west end of the nave, but the north east portion was not heated. 110A was initially drawn, but the system appeared to trip when attempts were made to turn all areas on the manual setting. Floor temperatures were 25 to 30^{o}C.

6.1 Heating Regime

A discussion was held about the heating regime. Underfloor heating systems raise temperature slowly, so require suitable preheating time. Heat will still be lost constantly through the building fabric if they are run continuously. The high electricity cost per kWh encourages frugality in heating.

The following graphs were provided by Phil Hemsley to the Church Energy Advisor's Network in 2021. They show that for an uninsulated building, one heating episode per week uses considerably less energy than providing "background" or low level constant heating. Whilst background heating requires less time to raise temperature from , say 14ºC to 18ºC than from 10ºC, more heat is lost from constant heating than is expended from one rise from 10 to 18ºC.

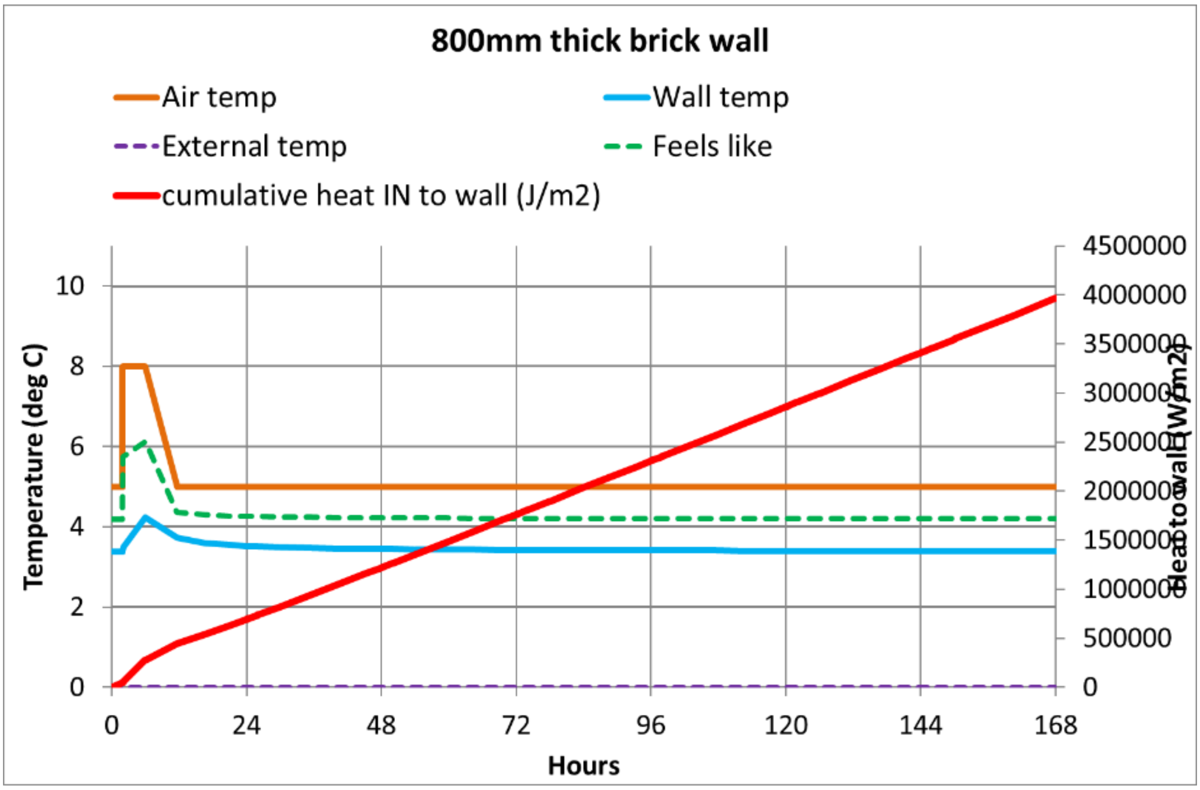
Where possible, grouping use of the building in one "block" of hours or days will allow for lower energy expenditure. Meetings of short duration (with small numbers of people) should ideally be held in spaces which are easier to heat, such as the chapel.



Above, one heating episode

Below, background heating

.



Paper by James Sheehan: https://www.cibsejournal.com/general/tidings-of-comfort-and-joy-cost-efficient-church-heating/

6.3 Heated Cushions

For extra heat during the coldest periods, for those who feel the cold, and to reduce heating needs at each end of the heating season, heated cushions can be used.

Most are now familiar with the concept of heated seats within cars; the same solution is also used in some outdoor venues such as alfresco dining and sports stadiums. These provide a heated cushion to sit on: the direct warmth from the contact areas provides a degree of comfort even when the surrounding space is cold. This can be a useful solution for churches which only have chairs (having removed pews) and/or for small congregations where there are few other alternatives.

There are a variety of heated seat cushions on the market. Some are directly plugged into a power socket (similar to an electric blanket). Others have battery packs, which can be charged and then connected to a seat pad. This makes them more flexible and avoids trailing leads. The more advanced products have a pressure sensor which means heat is only provided when someone is sitting on the cushion. Heated pads for 'benches' can also be used to heat a pew or could even be adapted to form a heated kneeler for the communion rail.

It is recommended that the church consider purchasing a set of heated cushions to provide heating for those who most feel the cold, and to be used for services in the unheated chapel.

A case study of a church using heated cushions is available at https://www.churchofengland.org/about/environment-and-climate-change/towards-net-zero-carbon-case-studies/marown-church-tries-new

7. Future Heating Options

7.1 Options Overview

The church is currently seated using moveable chairs and is heated using electric underfloor heating. This is found to be expensive to run, costing £1,300 in January 2022. The church was designed with a wet underfloor heating system in 1950, the present system was installed on top of the failed system c. 1970.

It is recommended that the church investigate installers of Air to Air Heat Pump Systems [AASHP] for future installation. These give 4 kWh of heat per 1kWh of electricity used. There would however be a need for preheating as it is a space heating system. Internal fan units would need locations around the perimeter. The external unit, probably a large unit, could be located to the north of the north aisle in the area shielded from view by the substation building.

Other forms of heat pump would require installation of a wet radiator system and incur longer heating times. A heat pump could be connected to the underfloor system (one example is St Mary's, Ashford town centre), but this should only be done if the (50 year old) underfloor system can be guaranteed a reasonable term life expectancy. Air to Air offers faster heat up, providing that it can be configured to blow the warm air across the floor slab first.

7.2 Air to Air Source Heat Pumps

Air-to-Air Source Heat Pumps (AASHP) work by having an external unit which sucks air in and extracts the heat from it. The pumps concentrate this heat and put it into a refrigeration gas (in the same way as a fridge or freezer works). This refrigeration gas is then piped inside the building in a small pipe where is it then allowed to expand in an internal unit with a fan. This heat is then blown out into the space. This system is identical to an air conditioning system, but it works in reverse to heat the space. As warm air is blown into the space this type of system can heat spaces from cold relatively quickly. Air-to-Air Source Heat Pumps provide around 4.5 units of heat for every 1 unit of electricity used in the heat pump; they therefore have a Coefficient of Performance (CoP) of 4.5.

The Centre for Sustainable Energy model[1] can be used to estimate heat load for the building.

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

<u>Insulation Factors</u>

Condition	Factor kW/m^3
Poorly insulated with open or broken windows, draughty doors (add 5%)	0.034
Poorly insulated (assume no interventions)	0.033
Some insulating features	Estimate value
Well insulated	0.022
Insulated to 2010 regulations	0.013

Area	Volume m^3	Insulation Factor kW/m^3	Heat Required (Space heating) kW
Church total	7,000	0.033	231
Nave, aisles, chancel	5,000	0.033	165
Hall First floor	940	0.013	12

The electric underfloor heating in the church was observed to draw 110 Amps, giving a 26kW output when half was operative – this was confirmed using an infra red camera. Delivering heat directly underneath the congregation requires less input than space heating (where heat rises to the ceiling first).

Therefore, a heat pump of 165 kW output would be required for the church.

AASHPs require the installation of external units which look like air conditioning modules in well ventilated external locations. These external units will need an electricity supply and pipework running from them to the heating system. They will also need a drain nearby as the back of the

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

units can build up moisture, which condenses and sometimes freezes on the coils. The larger units do create some low-level noise and therefore the location and baffling of the units may need to be considered carefully.

Examples of external units for ASHP comprising of three smaller 3kW units (output 10kW each) and two larger 10kW units (output 37.5kW each).

Internal units come in a variety of styles. The most appropriate internal units for most churches are floor mounted units which look very similar to a fan convector heater.

FTXM-R - Wall mount air conditioning unit

Attractive, wall mounted design with perfect indoor air quality. 2 area motion detection sensor: air flow is sent to a zone other than where the person is located at that moment; if no people are detected, the unit will automatically switch over to the energy-efficient setting.

FVXM - Floor Mount Air Conditioning Unit

Designed to fit rooms of any size and shape, it blends well with the interior due to the new design which incorporates more flowing lines and softer edges. These units are ideal when it is not possible to fit a high level wall mount unit for aesthetic or practical reasons.

They are suitable for a wide range of applications including domestic, small to medium offices and commercial uses.

All these units do have a fan element within them and therefore a small amount of fan noise is emitted. This tends to be less than a fan convector heater on a boiler-based system and similar to the noise from a fridge or freezer. Air conditioning units are commonplace in hotel rooms, indicating that the noise is low enough even to be suitable for sleeping environments.

A case study of a church which has installed such a solution is available at [5. Air-source heat pumps at Hethel Church - All Saints Church, Hethel - A Church Near You]

External units would need to be found locations which were non viewable or hidden in some way, but need to be well ventilated for this method to be viable.

A location hidden by the electricity sub station to the north of the church appears feasible (behind the structure partially hidden by the wooden fence in the image below).

8.3 Air to Air Source Heat Pumps Costs

Pumps to supply 165kW of heat have a capital cost estimated at £450 per kW output: £74,250.

Operating at a Coefficient of Performance of 4.5, an 165kW heat output requires 36kW of electricity supply.

36kW x 25 hours/week x 30 weeks = 27,000kWh electricity used annually.

This is very close to the present heating electricity consumption. There is potential for it to be less: the underfloor system appears to have a 50kW load when all of it is operating. The space heating model assumes hot air will rise to the ceiling from radiators first and partially cool before heat is provided at congregation level. If heat pump fans blow air across the floor surface first, then this will require a lower heat output system giving lower capital and operating costs.

8. Energy Saving Recommendations - Equipment

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.

8.1 New LED Lighting

The lighting makes up a relatively small proportion of the electricity used within the church.

The majority of the lighting is provided by 36 chandelier mounted Compact Fluorescent Lamps [CFLs] of 9 or 11W each.

There are two floodlights in the chancel and a further two in the chapel which take R7S fittings (118mm long) halogen bulbs of 250W each. These can be replaced by an LED lamp rated at 20W. (Search for R7s 118mm LED lamps). Note that the "fatter" 30W LED units of this length will not fit in the luminaire, but there are some lamps with off centre end caps designed to fit.

Changing to LED lamps of approximately half the power requirement will save an estimated 1,500kWh out of 2,200kWh present lighting load.

The four assorted spotlights in the chapel should also be changed for LED units.

There are a vast number of specifications of LED lights on the market but it is recommended that 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/

8.2 Lighting Controls (Internal)

The church is usually open during the day. Fitting a presence detector would allow a selected set of lights to illuminate when visitors arrive (perhaps a lamp in the foyer and the rear pair of nave chandeliers, rewired to this circuit).

9. Energy Saving Recommendations – Building Fabric

9.1 Draught Proof External Doors

The church is fitted with wooden doors closing onto wooden frames. These appear to be well fitting but would benefit from the addition of draughtproofing strips where possible. The gaps are fairly small, so self-adhesive rubber strips can be tried. NB: these come in different thicknesses so the gaps should be measured first.

9.2 Windows

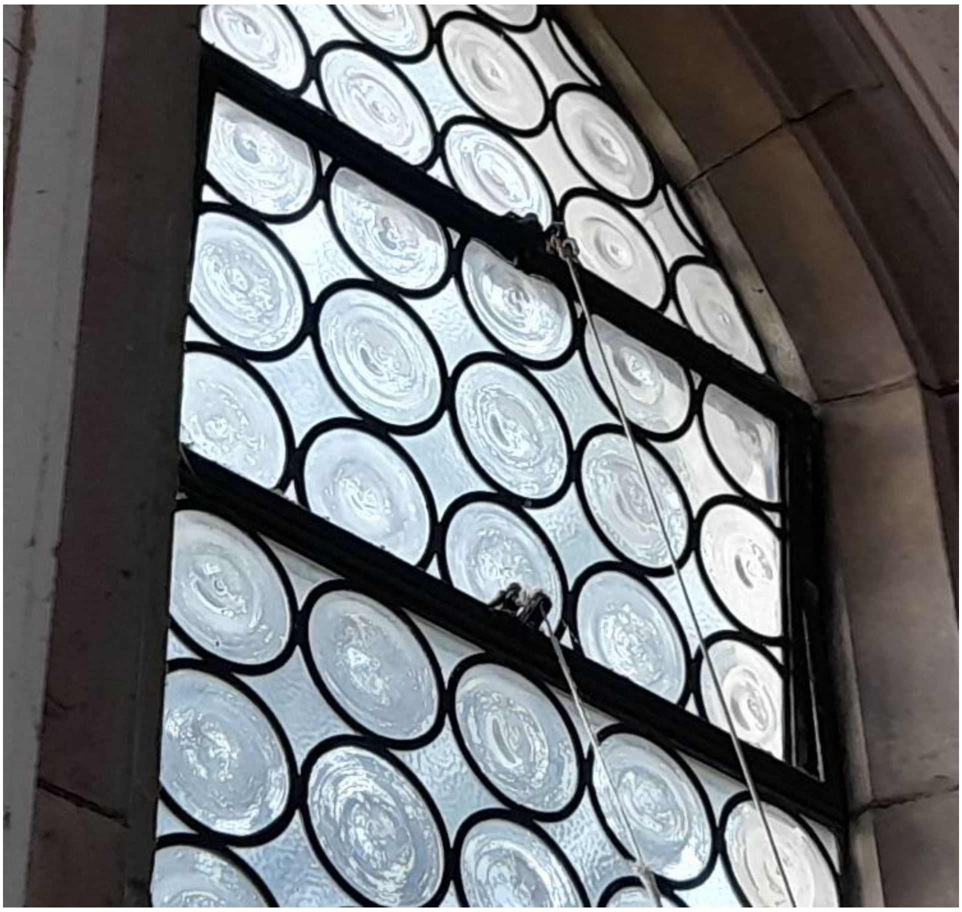
The church is fitted with several opening window panels which rotate around central hinges.

These are actuated using cords but with a pulley located very close to the window. To close the window fully, the pulley is located too close to the window, resulting in a pull at an angle, downwards rather than inwards, so requiring greater force. This often leads to broken cords including at high level in the apse where a window cannot be closed.

It is recommended that the pulleys are remounted on brackets (say 5cm long) away from the window frame to ensure that the cord always pulls at right angles to the frame. This work should also involve maintenance and any de-rusting of the windows which may be necessary.

Where windows are not to be opened for a medium to long period, black plasticene can be used to temporarily fill the gaps.


This window on the north side of the chancel and this window in the south aisle will not close as the cord has broken. The vertical cord cannot exert sufficient horizontal force.



The lower mechanism does not allow the window to be fully closed.

9.3 Cavity Wall Insulation

The majority of the church building is constructed with stretcher bond brickwork which suggests that an internal cavity is present. With the current low hours of use of the building, installing insulation is not worthwhile, but would become so if hours of use increase.

The wall area of the building is approximately 650m2; a capital cost estimate is £16,250.

10. Hall Recommendations

10.1 Temperature and Heating

The hall first floor is managed and used by the church. It includes the Curate's Office; in use on 5 days per week for up to 40 hours, a medium sized hireable hall and a kitchen.

The building is modern, fitted with double glazed windows throughout (15mm air gap), double glazed skylights which serve to minimise the amount of lighting required, and will be fitted with insulation to current standards. As a result, several building users are observed to open windows during booking.

It is recommended that the heating timings and thermostat settings are reduced to control excessive heat.

A temperature monitor could be purchased and used to understand the temperature within the hall and how this varies during a week with heating timing and hall use.

10.2 Lighting

The hall is lit by 12 fluorescent tubes, probably of 70W load each. The foyer, kitchen and toilets are fitted with (mostly) 58W tubes.

It is recommended that these are planned to be replaced by suitable LED strip lighting (which will reduce load to 20-30W per lamp).

10.3 Future Heating

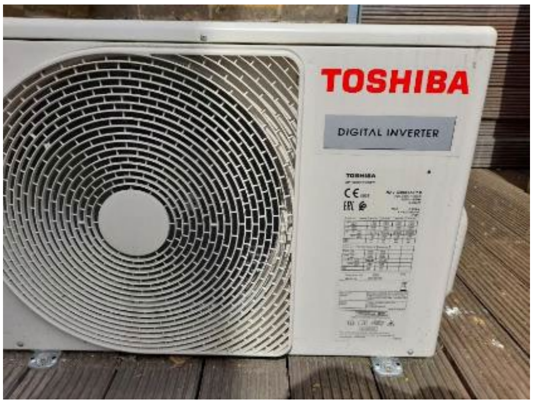
The hall is currently heated by a gas boiler, located in an equipment cupboard accessed from within a storage cupboard at the side of the main hall. It could not be accessed due to the volume of items in the store.

It is recommended that the church research Air Source Heat Pump installers and develop a plan and funding for replacement of this boiler when it becomes necessary. Moving to an electric powered heat pump would allow for a contribution to be made from solar panels, but also a system should be installed which provides for cooling – solar PV powered cooling in summer would be desirable and would increase the hire-ability of the hall.

An Air to water system would retain the existing radiator and pipework network. There are a few, small radiators in the hall (which reflects an insulated modern building). If these are of insufficient size to work with a heat pump (at lower water temperature), then an Air to Air system is necessary (requiring new heat emitters). This has approximately 40% higher efficiency than air to water.

Which system is the better option depends on a combination of operating and capital costs.

Both systems would require installation of external units. This could either be one large (double post box) sized unit – this would require location in the nearest parking space as the other external space on the east of the hall is the nursery play area. Alternatively, a series of small units (similar to the image below) might be attached to the west façade of the building at high level, and plumbed in to the boiler area which is on that side.



11. Other Recommendations

11.1 Electric Vehicle Charging Points

The church has a small car park between the church and the frequently used church 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 or staff to charge their electric car.

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.

12. 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, church and hall
Battery Storage	Future potential
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	Yes for hall
Ground Source Heat Pump	No – no radiator network, hours of use low
Air to Air Source Heat Pump	Future potential for church

12.1 Solar Photovoltaic Panels

The south aisle and nave roof is visible from the street, but the church is unlisted, so Planning Permission may be obtained. The electric underfloor heating is mostly used during conditions of lower light levels in winter, and a large solar array would be required to power this – which would then generate far in excess of what is required in summer. Replacement of electric underfloor heating by an AASHP system would cut heating electricity consumption by a factor of around four. With no Feed in Tariff now available it is recommended that solar panels are not fitted to the church unless a heat pump system is installed in future. If so, they should be sized appropriately, once the new electricity consumption over winter is known.

For the hall, the nursery occupying the whole of the ground floor has a separate electricity account. A small solar PV array could be installed sufficient to power the office on the first floor which is in use during the working week for much of the day, plus contribute to lighting for the regularly used hireable hall. Electricity consumption is unknown.

The church roof offers a maximum area of around 200m^2 and the hall of 150m^2.

Panels generate around 0.15kWpeak/m^2. A 1kWpeak system can generate up to 1000kWh annually.

Assuming that the maximum amount of roof space is 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	Useable area / m^2	System Size / kW peak	Orientation factor	Shading factor	Annual Generation, kWh
Church	200	30	180 degrees / 40^0 0.99	1	29,000
Hall	150	22	270 degrees / 30^o 0.8	0.9	16,000

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

The maximum potential generation is by the church is similar to its annual consumption, 31,440kWh in 2021. The majority of use is in the heating season between October and April, accounting for 90% of use and occurs when solar PV generation would be the least. It is recommended that the church does not plan to install solar panels until decisions are made regarding heat pumps. If heat pumps are installed; then once their electricity consumption is understood, solar PV systems can be sized appropriately.

The hall system should be specified for future addition of a battery, when battery costs reduce, as this would extend the 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 2019 installation costs for simple access roofs (£1,300 per kWpeak);

a 30 kWpeak system would cost £39,000.

a 22 kWpeak system would cost £29,250.

13. 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 .

14. 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.