ESOS-ENERGY
Energy efficient solutions

Energy Audit and Survey Report

St Mary's, Great Chart

Ashford Town Parish PCC

Version Control

Author	Reviewer	Date	Version
Paul Hamley	Matt Fulford	7th February 2020	1.0

Contents

1. Executive Summary

An energy survey of St Mary's, Great Chart 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. This audit has been provided in conjunction with 2buy2, the Church of England's Parish Buying scheme provider and is subsidised from Total Gas & Power, the Parish Buying schemes principal energy suppliers.

St Mary's, Great Chart is a Grade I listed building with a Norman vestry doorposts, 13th century chancel with the remainder dating from the 14th and 15th centuries. Electricity supplied to the site and the church is heated by oil

The church has a number of ways in which is 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 (£)	Simple Payback (years)	Permission needed	CO2 saving (tonnes of CO2e/year)	£/tonne of CO2
Stop background heating	15,000	£630	Nil	immediate	None	4.02	N/A
Insulate pipework and valves in boiler room	400	£17	100	£100	List A	0.11	£931.76
Install electric fan heating curtain above porch doorway (instead of background heating)	Nil	Nil	£1,000	N/A	Faculty	Nil	N/A
Draughtproofing measures	800	£34	£100	2.98	List A/B	0.21	£465.88
Purchase a temperature datalogger	2,000	£84	£50	0.60	None	0.54	£93.18
Replace oil boiler with an electrical heating method	38,500 of oil but use £5,800 of electricity	£869	£15,000	17.26	Faculty	10.33	£1,452.09

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

Based on contracted price of 13.1142p/kWh for electricity and 4.2p/kWh of oil.

If all short term measures were implemented this would save the church £800 operating expenditure per year.

Operating costs of electric heating are equivalent to those of gas, since less preheating is required.

2. Introduction

This report is provided to the PCC of St Mary's, Great Chart to provide them with 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 Mary's, Great Chart, The Street, TN23 3AY was completed on the 10th January by Dr. Paul Hamley. Paul is an energy auditor with experience of advising churches and small businesses. He is part of the Diocesan Environment Officers Energy Group developing advice for the Church of England and authored the "Assessing Energy Use in Churches" report for Historic England. He is a CIBSE Associate member and a Chartered Scientist, with experience of the faculty process gained from chairing the building committee of a Grade I listed church.

St Mary's, Great Chart	**606207**
Gross Internal Floor Area	420 m^2
Listed Status	Grade I
Typical Congregation Size	40

The church typically used for 8.5 hours per week for the following activities

Services	3 hours per week
Meetings and Church Groups	0 hours per week
Community Use	0.3 hours per week 8 school services annually
Occasional Offices	26+ weddings 15 funerals Average 6 hours per week

Church annual use = 454 hours

Heating hours: Church = 400 formerly. 5000 from beginning of background heating, October 2019.

Estimated footfall (church only) = 9100 people

3. Energy Procurement Review

Energy bills for oil and electricity have been supplied for St Mary's, Great Chart and have been reviewed against the current market rates for energy.

The current electricity rates are:

Single / Blended Rate	13.1142p/kWh	In line with current market rates
Standing Charge	23.3263p/day	N/A

The above review has highlighted that the current rates being paid are in line or below current market levels and the organisation can be confident it is receiving good rates and should continue with their current procurement practices.

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.

The above review confirmed that the correct taxation and levy rates are being charged.

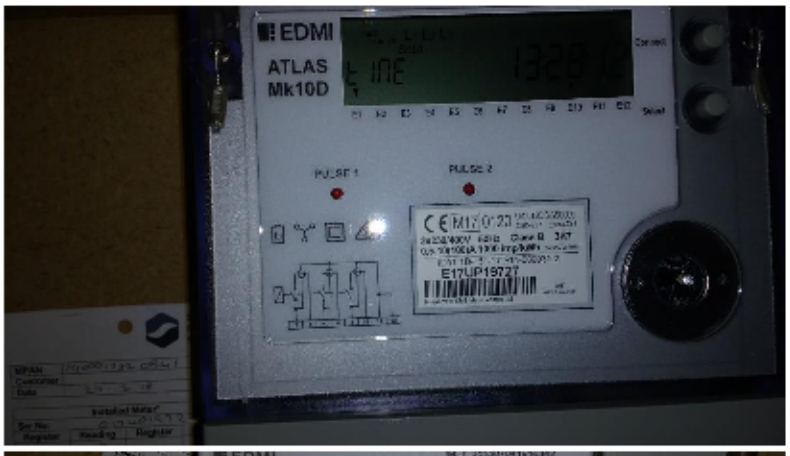
4. Energy Usage Details

4.1 Annual Consumption

St Mary's, Great Chart uses 2,600 kWh/year of electricity, costing in the region of £530 per year, and 3600 litres [39,000kWh]/year of oil, costing £1,650.

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	E17UP19727	EDMI Atlas Mk10D	Yes	Cupboard under tower stairs
Electricity	E18UP 02368	EDMI Atlas Mk7B	Yes	Cupboard under tower stairs



The electricity meter is AMR connected and as such it should be possible to obtain an energy profile for the annual energy usage.

There is a three phase supply, divided red phase (power), blue phase (power, choir), yellow phase (lighting).

Utility	Annual use/ kWh	from	to	Cost
Electricity E17UP19727	2,394	4/9/18	31/8/19	£414.76
Electricity E18UP02368	194	4/9/18	31/8/19	£112.35
Oil	38,592	12/12/18	10/12/19	£1,653.23

4.2 Energy Profiling

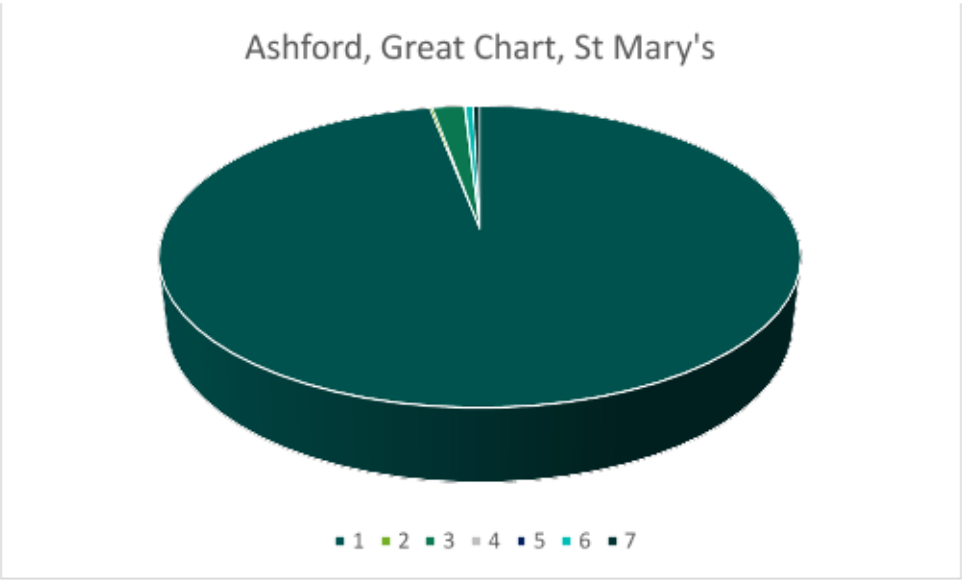
The main energy use within the church can be estimated as follows:

Service	Description	Power	Annual Use/ kWh	Estimated Proportion of Usage %
Oil heating	Grant Vortex Utility boiler	70kW	38,592	93.7%
Boiler pump	Annual use with twice weekly heating 500h	140W	70	0.2%
Lighting Nave	12 sets of three CFLs of ~25W each Spotlights 3 x 50W Spotlights halogen 2 x 100W **TOTAL**	900W 150W 200W		1.8%

	Annual use based on church use hours	1250W	750	
	Fluorescent, occasional use			
Vestry	Occasional use	58W	5	
Tower		50W	5	
Outside Floodlights & Path Lights	Supplied via Pest House meter, Christmas use only			
Hot Water	3 boils per week = 10 hours p.a.	3kW	30	0.1%
Other Small Power	Sound system	1kW	130	
	Vacuum cleaner	2kW	52	0.4%
Organ	Organ est 160 hours use annually	1kW	160	0.4%
	Clavinova	500W	20	

The estimated consumption (1222kWh) is short of the actual figure. It is based on the observation of CFL lighting and the reported hours of use of the church. If lights are on for significant extra periods, if electric portable heating has been used, or power tools for significant work, this could account for the discrepancy.

Total Annual Consumption 2018-19: 2588kWh



KEY 1 Oil heating 2 Boiler pump 3 Lighting internal 4 Lighting external

5 Hot water 6 Small power 7 Organ

4.3 Energy Benchmarking

In comparison to national benchmarks for Church energy use St Mary's, Great Chart uses significantly less electricity than average for a church of this size; this, this is due to low hours of use.

	Size (m^2 GIA)	St Mary's, Great Chart use kWh/m^2	Typical Church use kWh/m^2	Efficient Church Use kWh/m^2	Variance from Typical
St Mary's, Great Chart (elec)	420	6.1	20	10	30%
St Mary's, Great Chart (heating oil)	420	85	150	80	57%
TOTAL	420	98	170	90	57%

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

[1] CofE Shrinking the Footprint – Energy Audit 2013

5. Overview – Church Use Pattern and Energy

St Mary's Church Great Chart currently has a bi-weekly use pattern; Sundays and Wednesdays.

Ashford has grown from a population of c. 63k in 1984 to around 115k presently. A major housing development of 5,750 houses over a 20 year period is under construction across land to the south of Ashford, bordering Great Chart and Kingsnorth. There have been some level of discussions within the PCC (and possibly with developers) regarding a vision for the church to be used as a community centre. The availability of funding – and any restrictions that this might come with should be discussed with the Community Management Organisation of Ashford Borough Council.

Currently, the church retains it's traditional (post reformation) arrangement of pews, with some box pews behind the choir stalls. The church is in demand for weddings particularly for its traditional appearance: removal of pews would reduce its attraction.

The PCC are considering the options for re-ordering including removal of (some) pews.

The first stage includes installation of toilets.

Re-ordering should include a thorough analysis of heating options once the vision for use of the space has been decided. It is suggested that no plans for adoption of alternative heating technology (other than possibly installing an over porch heater) are actioned before re-ordering plans are decided.

This document presents options with pros and cons for consideration.

Section 7 considers operation and maintenance of the current existing system; the Section 8 considers alternative heating options.

Installation of stackable pews as at St Michael and All Angels, Kingsnorth has been suggested – however this would be incompatible with installing underpew heating.

Overhead radiant heating could provide part of the answer – both before and after pew removal.

Underfloor heating is only suitable if it is going to be used intensively i.e. as at Willesborough with daily café (would this work at St Mary's– car parking?).

Rather than removal of pews from the nave and aisles, if the box pews and choir stall area was cleared this would give a large open useable area at the east end, which could be heated by radiant heating.

6. Energy Saving Recommendations (Electricity)

6.1 Lighting (fittings)

The lighting is the major user of electricity. Most lighting identified consists of Compact Fluorescent Lamps [CFLs]; low energy bulbs each of which are rated at around 25W.

It is recommended that when these require replacement they should be changed to LED bulbs which will consume approximately half the power per bulb.

Given that the church is considering re-ordering; the lighting should form part of the planning.

During the visit which was made from 14:00 on an overcast day, lighting levels in the church were low with the lighting on.

6.2 Lighting (control for internal lights)

The existing lighting control panel is poorly labelled. It would benefit from a laminated colour coded diagram as the current markings will wear off with use.

When church re-ordering occurs it would be expected that the new lighting controls are of a type which requires turning on manually (i.e. only if there is a need), but are fitted with a movement sensor which turn off automatically when the space is vacated.

7. Energy Saving Recommendation (Heating)

7.1 Heating System and Strategy

The church currently uses oil fired central heating to heat the church.

Six cast iron radiators were noted. Due to the size of the church, long heat up times are expected, perhaps 12 hours from 10°C to 18°C.

Until September 2019, the heating had been operated as required, probably twice per week for the Sunday services and Wednesday morning meeting and toddler group. This is reported to have needed 4 hours running before a service to achieve a comfortable temperature, three hours was insufficient. [4 hours at 1.5°C rise per hour from 12°C to 18°C is likely]

With six hours heating on both Sunday and Wednesday for 30 weeks (plus), plus 10 weddings (out of 26 for the year) this suggests 440, perhaps 500 Heating hours.

70kW (full power) x 500 hours = 35,000kWh

Oil deliveries, 2019 = 3600 litres = 38,592kWh

Since the heating season 2019-2020, the heating has been run constantly. It is assumed the thermostat is set to 14°C with an increase when the building is in use. Depending on the length

of the heating season, this will be 4000-5000 hours, i.e. a factor of ten longer. However, the boiler will (probably) only be running at part power once the operating temperature is reached.

35kW (half power) x 4000 hours = 140,000kWh

Irregular deliveries of oil means that obtaining an accurate measure of use and cost will not be possible until May 2020.

However, it is clear that it is a more expensive and carbon intensive option -comparison of figures for Ashford Kennington St Mary's which is heated throughout the week with two other oil heated churches heated only when required shows approximately 40% greater use of energy.

During the audit, temperatures were recorded as follows – they are compared with two unheated churches on cooler days.

CHURCH	DATE	pew	floor	ceiling	External wall	radiator	notes	weather
Great Chart	10/01/20	14	14	13	13	43	Set to 14	8, cloud
Ringwould	02/12/19	12.9	13.2	11.9	12.8 north 9.7 south	OFF	No heat	5, sun
Towersey	16/12/19	8.5	9.2	8.1	8.5	None	No heat	5, cloud

Use of a temperature datalogger will indicate the temperature profile within the church, how long it takes to heat and cool and help to identify colder areas.

A London church heated to 20°C takes round 24 hours to cool to 12°C. The temperature rarely falls below 10°C except in extreme weather. One might expect a rural church in an exposed location on a hill to experience lower temperatures. This means that St Mary's Great Chart will lose heat more rapidly. Adding heat to maintain 14°C means maintaining a 4 to 6°C temperature differential above where the building "wants" to be, and in windy weather the exposed location means the heating system is fighting against the constant cooling effect of the wind.

7.2 Reduce / Discontinue Background Heating

It is recommended that the church is returned to "days of use only" heating whilst it retains oil fired central heating.

It is reported that the local warden does not know how much money is being spent, and the centrally located treasurer does not know how the money is being spent.

As with most medieval churches, this church would have survived most of its life without any form of heating. The modern additional of heating is not needed to preserve the fabric but only to provide thermal comfort to occupants. The previous trend of 'conservation heating' for fabric issues is now largely considered to be unnecessary and is being avoided by the likes of National Trust and English Heritage. The only times when background heating may be required is if there are historic wall paintings or to for the preservation of large artefacts such as tapestries. The organ (and other sensitive areas such as historic papers stored in the vestry) may require some local background heating specific to that area. In general, sensitive paper records should be removed for storage in the county archive and organs can be installed with a local background tube heater such as https://www.dimplex.co.uk/product/ecot-4ft-tubular-heater-thermostat within the organ casing in order to provide the heat where it is required. The fabric is often subject to the greatest damage by humidity (which is naturally higher when the air is warmer as warmer air has greater capacity for holding more moisture), as a result of large temperature swings (from central heating systems turning on and off) and from the excessive drying out/baking of timbers where high temperature heating units have been fixed to them (such as overhead heaters fixed to timber wall plates)

Providing constant background heating to the church building as a whole at a level of 14°C is excessive and wasteful of energy. At the very least we would recommend that this background level is reduced to a maximum of 10°C and ideally avoided all together.

7.3 Boiler Timing Optimisation

The boiler is reported to need four hours running before the start of a service from cold, to reach a comfortable temperature. Experiments in the Diocese of Lichfield at over 50 churches have established that hot water radiator heating can be optimised by being switched off 45 minutes before the end of the service – the radiators remain hot for over an hour. The optimum settings could involve both earlier start and stop times.

Purchasing of a temperature datalogger will allow the time for the church to heat (in different weather conditions) to be understood, as well as the time to switch off to be optimised. This would require someone with a computer to plug in the device and download the readings.

A suitable model retailing for around £40 is https://www.lascarelectronics.com/easylog-data-logger-el-usb-1/

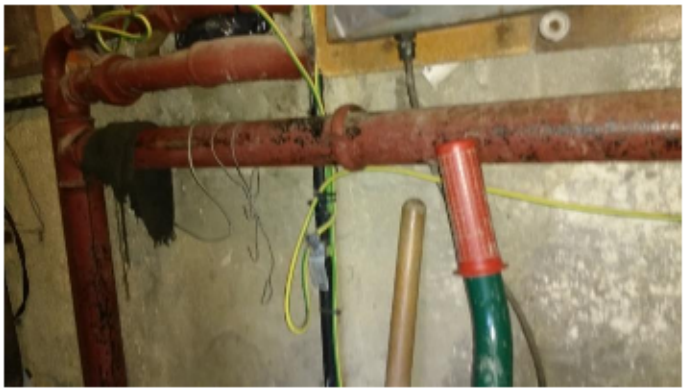
7.4 Magnetic Particle Filter

The boiler did not appear to be fitted with a magnetic particle filter as illustrated below. This apparatus catches any rust or metal particles and prevents them being deposited on the boiler heat exchanger. They should be installed if it is planned to continue using the water heating systems long term. Corrosion inhibitor should also be added to the system when your boilers are serviced annually.

7.5 Insulation of Pipework and Fittings

Insulate exposed pipework and fittings around boilers and tanks

These exposed areas of pipework contribute significantly to wasted heat loss from the system. The exposed hot surfaces also represent a health and safety risk of burns for those working in the area.



It is recommended that these areas of exposed pipework and fittings are insulated with bespoke made flexible insulation jackets. These wrap around the various elements but can be removed and then replaced for any servicing activities.

A free survey and quotation for the supply and installation of insulation of pipework fittings can be arranged through ESOS Energy Ltd (contact Adrian Newton 0117 9309689, adrian@esos-energy.com).

8. Alternative Heating Systems

A church with low hours of use per week will always fall back to "base" temperature between heating events (it may take around 24 hours for the temperature to fall). A system which can heat rapidly, without sending most of the heat to the ceiling first, and in addition can be configured to heat small areas independently for small services or midweek meetings will be more efficient than one which seeks to heat up the whole volume.

8.1 Use of Electric Radiant Panels for Heating Specific Areas only

For areas of the church without pews which need heating; the rear circulation area, the chancel, chapels; heat can be provided either by electric convector heaters (which lose heat to the ceiling), or electric radiant heating. This may be delivered using ceramic bar heaters, which emit some visible radiation as a red glow, or rectangular far infrared heaters which emit only heat. A further option is underfloor heating (section 8.4).

Much of the ceiling of the aisles is comprised of closely spaced beams with no location for radiant panels between the beams. This indicates either mounting radiant panels on the walls, or using chandelier type heating.

Far infrared panels come in three types, low surface temperature designed for ground level installation and safe for schools (55°C) and hospitals (42°C), medium temperature, and high temperature at 150°C designed for installation under high ceilings. In churches they have been successfully installed under ceilings, often in aisles between the beams. Normally available in white, they can be sourced in other colours including marching to stonework or brickwork, or decorated. https://www.suryaheating.co.uk/custom-image-heating-panels.html

Suitable electric panel heaters would be far infrared panels such as https://www.warm4less.com/product/63/1200-watt-platinum-white- . These can be purchased widely and fitted by any competent electrician. It is recommended that they are fitted with a time delay switch such as https://www.danlers.co.uk/time-lag-switches/77-products/time-lag-switches/multi-selectable-time-lag-switch/159-tlsw-ms so they can not be left on accidently after use.

Costs are £350-500 wall mounted and £500-700 ceiling mounted.

Another option would be to use radiant (glowing) heating elements – these normally look unsightly when hung from ceilings or attached to walls, but have been successfully deployed in churches hung from chandeliers, where they can be combined with lighting if desired.

This might be a suitable option for St Mary's, given the ceiling structure and offering the potential for removing some of or all the pews either initially or at a later date.

The image below is from St Catherine's, Faversham, which is heated solely by chandelier mounted radiant heaters suspended from arch centres. Costs are approximately £500 per 1kW element.

Ten chandeliers with 6 elements each installed up to the choir stalls area would provide 60kW of heat at a capital cost of around £30,000.

8.2 Under Pew heating

Under pew electric heating should be considered for areas which will retain pews. Although electricity is currently more expensive that gas per kWh, this form of heating requires little preheating time and delivers heat directly to the congregation. There are 44 sets of pews currently, with two heaters in the central nave longer pews giving 64 in total, a heat output of up to 32kW for a cost in the order of £10,000

Heaters with an output of 400W seem to be more suitable than 500W models according to reports from different churches. Often, two of the smaller units are used for nave pews with one unit in shorter pews as often found in aisles.

One option is the "Cooltouch" pews which are produced in longer length models.

https://www.cooltouchheaters.co.uk/

The under pew heaters below have been recently installed at St Andrews Church, Chedworth, Gloucestershire, GL54 4AJ. The church is open in daylight hours so can be viewed at any time.

8.3 Overdoor Air Heaters

In order to achieve a sense of a 'warm welcome' into the church an over door air heater could be provided. This would also help to provide warmth to the rear of the church. Such an over door unit should be sized to cover the whole width of the door and it is suggested the BN Thermic 860 model would be quite suitable. This has a 6kW output

The installation would be: Install a BN Thermic 860 Overdoor Fan heater above the main entrance door wired in with a BN Thermic CS-7 control switch. The unit requires single phase power. All new cabling to be run in FP200 Gold.

8.4 Under Floor heating

The possibility of installation of underfloor heating to the body of the church was mentioned.

This would require removal of pews and lifting of the tiled floor. It is not believed that there is a vault underneath. Underfloor heating would raise the floor level by 150-200mm (unless suitable excavation is performed).

Churches with underfloor heating installed have a regular use pattern, such as St Mary the Virgin, Ashford which hosts an arts venue and St Mary the Virgin, Willesborough, Ashford which hosts a café every morning. Systems take a long time to warm up and have higher energy uses (c. 100,000kWh p.a.), so they are only really suitable for a regularly used building.

The current use hours do not suggest it is a suitable location for underfloor heating, however this option should be considered as part of the re-ordering discussion if it is felt that the new housing development will transform the use of the building in the future.

This is an expensive option, costing in the region of £1000/m^2.

8.5 Heat Pumps

Should an underfloor heating system be selected, it should be run using a heat pump rather than an oil boiler.

For optimum efficiency, they deliver low grade heat (warm water) at a constant rate, so are suited to regularly / constantly used buildings where the temperature is maintained. Therefore, they would be compatible with constant or regular heating.

Air Source Heat Pumps [ASHPs] consume electricity, but deliver between 2.5 and 4 times the amount of heat in kWh that they consume. Heat pumps work by circulating refrigeration fluid and taking heat from a reservoir (the air or ground) and upgrading it (the fluid gets hot when compressed – in the building. When it evaporates it cools, and warms up again in contact with the external heat supply, air or ground. The Coefficient of Performance (COP) relates the amount of heat energy delivered to the electricity used. It is normally between 2 and 4.

ASHP systems are often less efficient than this when the air temperature is cold and when they are heating a building from cold. There are technical difficulties with heating a poorly insulated and less than airtight building with a heat pump especially from a cold base. A move to ASHP powered central heating would allow for 100% renewable heating if electricity is procured from a 100% renewable source (including Parish Buying), or from onsite generation. For St Mary's, with oil fired heating delivering 39,000kWh of heat annually, a COP of 3 would require 13,000kWh of electricity to drive it; 15,600kWh at COP 2.5.

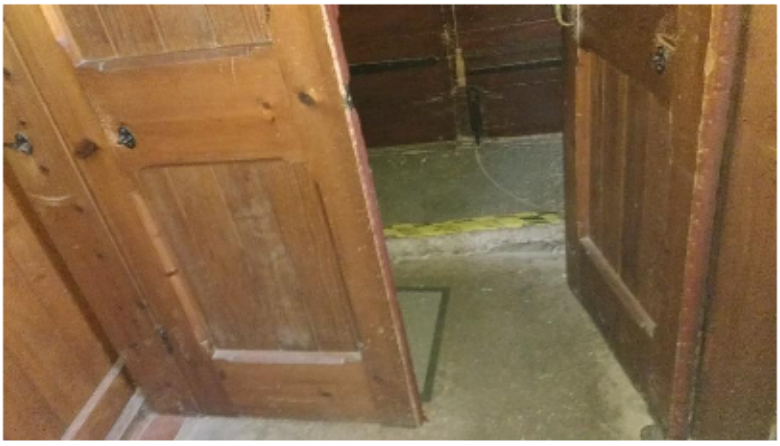
This needs to be compared with an estimate for direct electric heating of 20-30,000kWh – requiring less preheating than space heating and (for under pew heaters) delivering heat close to

where it is needed. Direct heating also allows for specific zones to be heated – ASHP driven central heating will still heat the whole building with heat rising to the ceiling.

Costs of a heat pump in the 50kW range are about £40,000. The pump, looking like an air conditioning unit requires a well ventilated location, possibly in the boiler room with extra ventilation ducts or louvres, or part of the roof removed.

9. Energy Saving Measures (Building Fabric)

9.1 Draught Proofing to Doors



There are a number of external timber doors in the building. These should be kept maintained and draught proofed where possible to prevent cold air from coming into the church around the side and base of these doors.

Where a timber door closes against a timber frame it is recommended that draught proofing is fitted. A product called QuattroSeal (see link below) is often used in heritage environments to provide appropriate draught proofing. http://www.theenergysavers.co.uk/application/files/1714/7197/4194/National_Trust_Case_Study.pdf. Note this cannot be used where the timber door closes directly against a stone surround.

Other simple measures such as using a small fridge magnet painted black over the large keyhole or the use of 'sausage dog' type draught excluders at the base of little used doors can prove to be very effective. Doors should be reviewed in daylight and gaps where the light shines through sealed or filled in whatever the most appropriate way is for the specific door.

9.2 Closed Door Policy

The main entry doors in the porch should be kept closed in cold or windy weather and quickly closed behind the congregation by your friendly welcome team!

10. Other Recommendations

Repair damaged tower stonework and any other stonework or pointing which may be causing water ingress at the same time. [Water ingress into a building resulting in damp results in higher energy bills as a damp wall conducts a greater amount of heat].

Repair broken path lighting

11. 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	No –visible roof
Battery Storage	No – no viable PV
Wind	No – no suitable land away from buildings
Micro-Hydro	No – no water course
Solar Thermal	No – insufficient hot water need
Ground Source Heat Pump	No – archaeology in ground and radiator system
Air Source Heat Pump	Potential, see Section 8.5
Biomass	No – not enough heating load as well as air quality issues

The low height of the south chapel roof exposes the south aspect of the chancel roof to view. Thus, there is no suitable location for solar panels on the church roof except for a very small array on the flat tower roof.

12. Funding Sources

There are a variety of charitable grants for churches undertaking works and a comprehensive list of available grants is available at https://www.parishresources.org.uk/wp-content/uploads/Charitable-Grants-for-Churches-Nov-2019.pdf

13. 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.

14. Report Circulation

In addition to the PCC, this report is also sent to:

1. Your DAC secretary and your DEO, because
    - They maybe be able to offer you help and support with implementing your audit
    - They want to look across all the audits in your diocese to learn what the most common recommendations are.
2. Catherine Ross, the officer in the Cathedral and Church Buildings team centrally who leads on the environment, who wants to learn from all the audits across the country. She will be identifying cost-effective actions churches like yours might be able to make.