



# Church Heating Options

Finding cost effective and efficient heating solutions for your church presents unique technical and aesthetic considerations. This tool presents and compares information about common heat systems and sources for church buildings.

Heating system	Blankets, hot water bottles	Heated pew/chair cushions	Under pew radiant/convective heaters	Radiant wall/ceiling heaters	Under-floor heating	Radiators (wet or dry)
Cost to install	0 - £	£	£ £	£ £ £	£ £ £	£ £
Cost to run	0 - £	£	£ £	£ £	£ £	£ £
Ease to install	Hot water bottles require a kettle to fill each time used	Recharge via USB wall plug between uses, or fixed wire installation	Fix to underside of pew or floor,	Mount to wall/ceiling	Floor will need to be lifted. Electricity supply upgrade may be required	Fix to wall. 'Wet' radiators will require piping
Permissions required	None	List B/Faculty (depending if fixed wire or not)	Faculty, possibly external* (if pews of significance)	Faculty, possibly external*	Faculty, possibly external*	Faculty, possibly external*
Net zero impact	Very low carbon, especially if blankets sourced within parish rather than bought	Low carbon. Cushions use rechargeable batteries/mains electricity	Low carbon, particularly if using green electricity and/or solar energy	Low carbon, particularly if using green electricity and/or solar energy	Low-high carbon depending on heat source (electric/ gas/heat pump etc.)	Low-high carbon depending on heat source (electric/ gas/heat pump etc.)
Suitable for	All building types, churches used less frequently, churches with limited grid supply	Churches with pews or chairs, flexibly-used spaces, churches with limited grid supply	Churches with pews, churches which want/need to minimise visible changes	Most building types, dependant on heritage/aesthetic considerations	Churches without underground archaeological constraints, churches lifting floor anyway	Most building types, dependant on heritage/aesthetic considerations
Longevity (approx.)	HW bottles 2-3 years	5-10 years	25 years	30-50 years	50 years	10-20 years
Works well with	Low 'background' heat sources e.g. heat-pumps, halo heaters	Low 'background' heat sources e.g. heat-pumps, halo heaters	Low 'background' heat sources e.g. heat-pumps, halo heaters	Direct 'people-heaters' e.g. heated pew cushions may offset potential lower background temp	'People-heaters'/ another heating system e.g. radiant panels, to offset lower background temp	Direct 'people-heaters' e.g. heated pew cushions may allow reduction in thermostat temp
Heating source	N/A; hot water from kettle	Mains electric/solar	Mains electric/solar	Mains electric/solar	Mains electric/boiler/ solar/heat pump	Mains electric/boiler/ solar/heat pump

\*For listed churches and churches in conservation areas, consultation may be required with the Local Planning Authority, Historic England, and/or national amenity societies

Heating source	Gas boiler (replacement)	Ground-source heat pump	Electric boiler	Oil boiler (replacement)	Solar PV	Biomass boiler	Air-source heat pump
Cost to install	££	£££££	££ - ££££	££	£££	£££	£££
Cost to run	££	££	££££ - £££££	££	0 - £	££	££
Ease to install	Direct replacement often relatively simple	Invasive, extensive groundwork needed	Electricity supply may need upgrading	Direct replacement often relatively simple	Electricity supply may need upgrading	Storage space for fuel may need to be built	Electricity supply may need upgrading
Permissions required	Faculty	Faculty, possibly external*	Faculty	Faculty	Faculty, possibly external*	Faculty, possibly external*	Faculty, possibly external*
Net zero impact	High carbon. Seek to offset carbon footprint (e.g. tree planting, energy production)	Low carbon. Very high efficiency, produces no direct emissions	Low carbon, especially if paired with solar panels or green tariff. High efficiency	High carbon. Seek to offset carbon footprint (e.g. tree planting, energy production)	Low carbon. Generate emission-free power which can also be fed back to the grid	Lower carbon. Fuel comes from a renewable source	Low carbon. Very high efficiency and produces no direct emissions
Suitable for	Churches with an existing gas boiler and no viable alternative options	Churches with outdoor space and no archaeological constraints, churches used regularly	Smaller churches, churches generating power	Churches with an existing oil boiler and no viable alternative options	Churches with a structurally sound roof, churches with consistent daytime use	Rural/off-grid churches with large storage space and ability to put in regular maintenance	Churches used regularly, small churches or churches with smaller rooms/dividable spaces
Longevity (approx.)	10-15 years	15-20 years	15-20 years	15-20 years	25-30 years	15-20 years	20-25 years
Works well with	'People-heaters' e.g. heated pew cushions may allow thermostat temp. reduction	'People-heaters' e.g. heated pew cushions may offset lower background temp	Solar PV to generate power and reduce running costs	'People-heaters' e.g. heated pew cushions may allow thermostat temp. reduction	'People-heaters' e.g. heated pew cushions may allow thermostat temp. reduction	'People-heaters' may allow thermostat temperature reduction	'People-heaters' e.g. heated pew cushions may offset potential lower background temp
Heating systems	Radiators, underfloor heating	Radiators, underfloor heating	Radiators, underfloor heating	Radiators, underfloor heating	Radiant heaters, underfloor, under-pew, dry radiators	Radiators, underfloor heating	Radiators, underfloor heating

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# We're here to help!

For support with your church building or building projects please contact the Church Buildings Officers


 [cbo@sheffield.anglican.org](mailto:cbo@sheffield.anglican.org)

## Additional Resources


Information on grant funding and link to grants mailer:

 [Grants | The Diocese of Sheffield](#)

Church of England faculty rules:

 [How we manage our buildings | The Church of England](#)

Church of England heating guidance (including options appraisal):

 [Heating | The Church of England](#)

Church of England energy footprint tool:

 [Energy Footprint Tool | The Church of England](#)



## Further Information

Further information and support can also be found on the Diocese's website:

 [Net Zero | The Diocese of Sheffield](#)

 [Generosity & Giving | The Diocese of Sheffield](#)

 [Church Buildings | The Diocese of Sheffield](#)



*Disclaimer: this document is intended as a summary of available information and a tool to support discussion and options appraisals. Nothing in this document constitutes advice of any kind, including financial. Consult your QI and the DAC on any proposed changes to your building.*