Holy Trinity Church, Church Road, Hartshill, Nuneaton, CV10 0LY

Heating Resilience Plan

Supporting churches on their retrofit and decarbonisation journey

THE CHURCH OF ENGLAND EDUCATION OFFICE

RAFT Retrofit Action for Tomorrow

Net Zero Carbon 2030 — Working together to care for God's creation.

Pathway to Net Zero — DIOCESE OF COVENTRY

Purpose of this plan

To provide an easy access contact sheet and source of key information should your heating fail.

To align with the Church of England's environmental ambitions.

To plan ahead and avoid putting new fossil fuel boilers into premises. This includes avoiding installing new gas boilers marketed as 'hydrogen ready'. Hydrogen is still unlikely to become a viable sustainably produced mass fuel for the UK so new hydrogen ready boilers are unlikely to ever come off gas.

To encourage people to move to point-of-use hot water. This is because the pipe runs in buildings can be very long so lots of heat is wasted just sitting within the pipes. This helps in the long term to reduce the future demand for low carbon heating and means that a church still has hot water even if their boiler has failed.

How to use guide

This guide can either be filled in by hand or filled in digitally with a pdf viewer such as Acrobat, Chrome or Microsoft Edge.

To fill in digitally, click on the fields such as the one below:

Church Version

Fill me in!

Church details

Fill in the below:

Church Name	Holy Trinity Church
Church Address	Church Road Hartshill Nuneaton
Postcode	CV10 0LY
Diocese	Coventry
Date filled in	5th October 2025
Filled in by	Jeff Robinson
Role	Project Team Member

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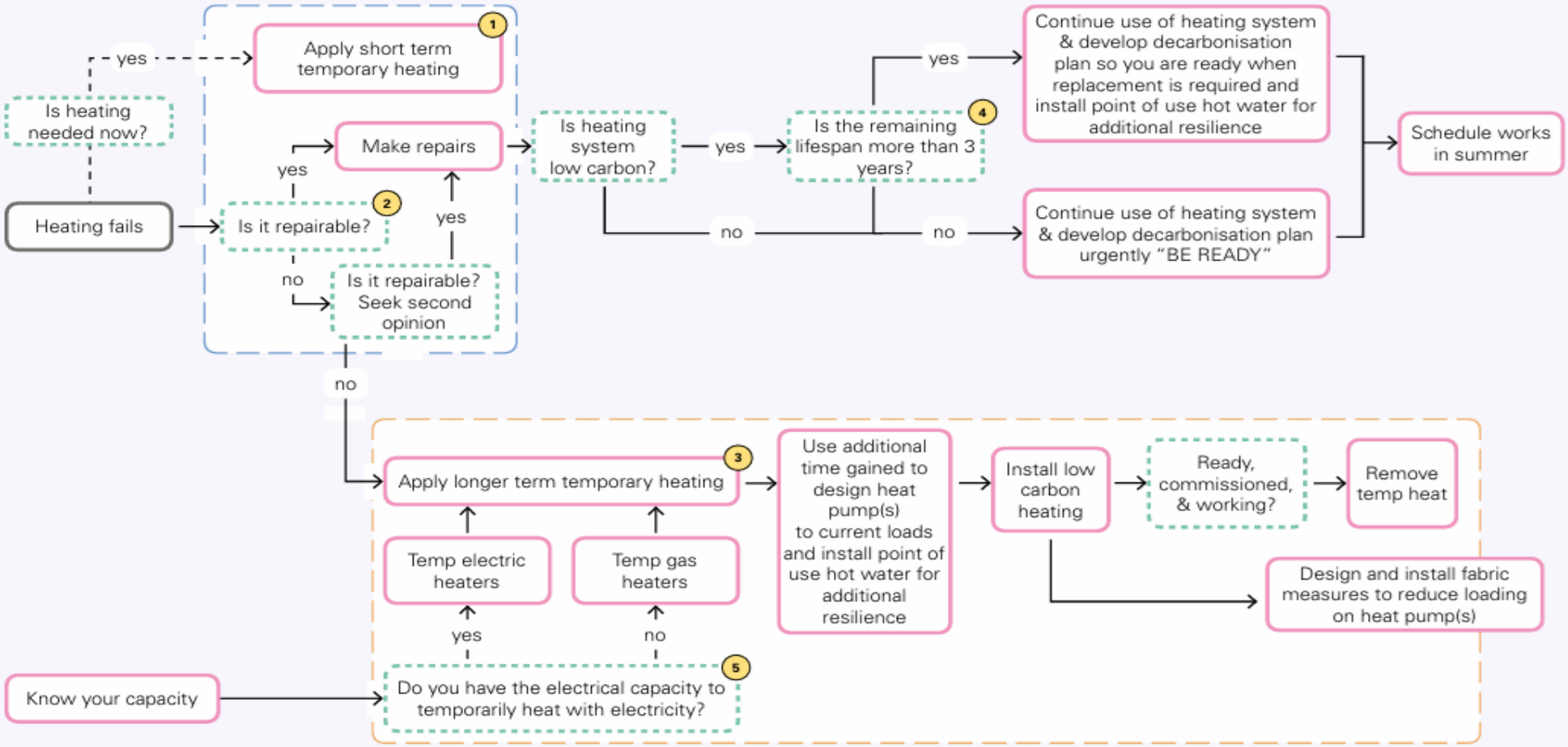

Heating Resilience Plan

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1. Know your Short Term Heating Options

Note preferred short term heater type below.

- Room by room fans
- Room by room radiant
- Temporary Boiler
- Other

Room Fans

Enter contact details for local tool hire suppliers that stock heaters.

	Option 1	Option 2	Option 3
Company name	Jewsons	Huws Gray Plant & Tool	Plantool Hire
Address	Greenmoor Road Nuneaton	Weddington Road, Nuneaton	Unit 1, Liberty Way, Nuneaton
Postcode	CV10 7DL	CV10 0AX	CV11 6RZ
Phone	02476 383 684	02476 372737	02476 381503
Website	jewson.co.uk	huwsgrayplantandtoolhir	hirecentres.com

If your school has plenty of unused electrical capacity, electric plug in heaters can be used temporarily. This is a more straightforward option than installing a temporary boiler in the short term but will be more expensive to run. If your school does not have spare electrical capacity, a temporary gas boiler can be used. This will need to be located close to the plant room and be more complex and costly to fit.

2. Have your Contacts Ready

Who should be called out to repair heating system / assess options for long term heating?

Enter contact details for local heating engineers.

	Option 1	Option 2	Option 3
Contact Name	Maintenance Team		
Company	Palmers Plumbing		
Phone	02476 329870		
Email	info@palmers.ltd		

Who else should be contacted for assistance in a heating failure?

Enter contact details for local authority and Diocese Estates Officer here.

	Local authority estates	Diocese estates officer
Contact Name	N/A	Chris Evans
Phone		02476 521 351
Email		Chris.Evans@Coventry.Anglican.org

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3. Know your long term temporary heating options

If you need temporary heat for a long time, it may be more economical to rent a temporary boiler, even if you have the capacity to heat the school with electricity. Refer to the contact details in section 1 for enquiries.

Note preferred long term heater type here

- Room by room fans
- Room by room radiant
- Temporary Boiler
- Other

Move to Community Center

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4. Remaining lifespan

Estimate the remaining lifespan of the boiler. You may want to ask your heating engineer this. Include notes about the condition of the boiler and any comments or concerns about how it is functioning.

How long does the current heating system have left? (Condition, reliability, availability of spare parts, lead time for spare parts, capacity)

Remaining Lifespan (years)	Notes
Less than five years	Our heating engineer is finding it more and more difficult to find parts that need replacing. We currently have to run the heating for most days in order to improve the chance that the boiler will turn on when required by the time control.

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5. Capacity

What is the current electrical loading and capacity of the school?

This section may be challenging to fill in but it is important to source the full information.
The electrical capacity and electrical use of the school defines whether it is viable for the school to use electricity for its temporary heating as heating/ hot water generally accounts for over double a schools energy use. It also defines whether the school would require an upgrade to move to low carbon heating.

School DNO	National Grid Electricity Distribution		
	Electric Meter 1	**Electric Meter 2**	**Electric Meter 3**
MPAN	S0180100100022490030		
No. Phases[a]	1 phase		
Amps per phase[b]	Ranging 6A to 32A		
Agreed capacity[c]	100A		
Peak load[d]	56.71 (80% rule)		
DNO notes[e]	We have sufficient capacity - using 80% rule - for ~9kW of additional electrical heating. We have sufficient capacity to run a medium sized heat pump		

a) Schools are normally 3 phase or 1 phase. Look at your incoming electrical cable (the large cable that runs into your electricity meter). If there is a plastic box (this contains fuses) at the top of it with a number '3x' or '4x' on it, or you can see three separate boxes it is likely 3 phase. Ask your school electrician if you are unsure or contact your DNO. You will need to provide a photo of your meter and incomer and the relevant Meter Point Administration No (MPAN).

b) On the fuse box at the top of the incoming cable there are often numbers embossed for the number of amps, normally 80A, 100A, 200A or 300A. Write this number in the box or ask your electrician or DNO (you may need to email a photo along with the school address and MPAN to your DNO.

c) Contact your DNO for this information if you do not have a record already.

d) If you have a certain type of meter, your DNO or energy provider can give you this information. Otherwise you will need a peak load survey.

e) Speak with you DNO about how much spare capacity your school has, and whether you could use temporary electric heating if required. Ask whether the school is likely to require an upgrade if it were to move to using a heat pump or electric heating (note a heat pump uses about 1/3 of the electricity per unit of heat created than direct electric heaters such as fans). Include notes on this sheet for future reference.

The next step – A Resilient Building Heating Plan

Introduction

In the context of heating a church building, resilience refers to the ability of the heating system -and the church's overall energy strategy - to withstand disruptions, adapt to changing conditions, and continue functioning effectively.

Our church lacks insulation and is used intermittently, which makes it particularly susceptible to heating difficulties. By implementing a resilient heating plan, we can safeguard the continuity of worship, community gatherings, and pastoral support - even during harsh weather or unexpected disruptions.

In short, resilience means being prepared, being flexible, and being future proof. Here's why it matters:

Comfort and Usage

- Our church is large and poorly insulated, making it hard to heat efficiently.
- A resilience plan helps tailor heating to actual usage patterns - e.g., occasional services vs. daily community use - avoiding waste and discomfort.

Environmental Impact

- Heating accounts for the majority of our church's energy use and carbon emissions.
- The plan supports the Church of England's Net Zero Carbon by 2030 goals by replacing our gas fired heating system with lower-emission alternatives like infrared heaters and electric under-pew systems.

Preservation of Historic Fabric

- Inappropriate heating could damage our church organ.
- A resilience plan helps balance warmth with conservation, avoiding costly repairs.

Strategic Planning

- Assessment of current systems and energy use.
- Identification of heat loss sources.
- Evaluation of future heating needs and ideal low-carbon upgrades.
- Barriers to implementation (e.g., funding, building constraints).

Key Dimensions of Heating Resilience

- **Operational Continuity:** Ensuring our church remains usable and comfortable during cold weather, even if the primary heating system fails.
- **Adaptability:** Being able to adjust heating strategies based on changing usage patterns, energy prices, or climate conditions.
- **Sustainability:** Incorporating low-carbon or renewable energy sources that reduce dependency on fossil fuels and support long-term viability.
- **Risk Management:** Identifying vulnerabilities and planning for contingencies like portable heaters or alternative venues.

Practical Reliability

- **Contingency Planning:** It answers the question, *"What will we do if the heating fails?"* - vital for hosting regular services, events, or vulnerable visitors.
- **Emergency Options:** Identifies backup solutions like portable heaters or alternative spaces to maintain operations during outages.

Purpose and Scope

Purpose: To ensure sustainable, safe, and effective heating for Holy Trinity Church, supporting worship, community use, and that heritage preservation is in line with the Church of England's Net Zero Carbon commitment

Scope: Main church building

Current Heating Audit

- **System**: Gas boiler and radiators
- **Fuel source**: Gas
- **Areas heated**: Main church building
- **Annual energy cost**: ~£1,900
- **Known issues**: Uneven heating, high bills - system needs to be on for considerable time before the building volume is brought to an acceptable temperature, current system's age and reliability

Building Fabric Assessment

- **Walls**: Granite rubble with red brick, blue brick and sandstone dressings. The walls are uninsulated
- **Roof**: Plain-clay tile roof has stone-coped gable parapets. The roof is uninsulated
- **Windows**: Stained glass, single-glazed by Hardman. Hardman stained glass is highly significant in British and international ecclesiastical art, renowned for its craftsmanship, historical value, and association with Gothic Revival architecture
- **Draughts**: Not a significant factor
- **Damp**: None
- **Overall Volume for space heating**: Our church's dimensions are ~ 25.5m long, 13.2m wide and 7.6m high, giving a total volume of ~2,500m^3

Heating Strategy

- **Overall:** Change from space heating entire volume of church building to a system designed to heat the people where they sit
- **Zoned heating**: Dividing the building into separate areas - or "zones" - that can be heated independently based on usage, need, or occupancy
- **Technology options**: These include carpeting strategic areas, underpew heaters, personal heated pads, portable electric heaters for events
- **Long-term**: Consider air-source heat pump if feasible

More Than Just A Heating Project

This upgrade is part of a wider regeneration project aimed at securing the church's long-term future and expanding its role as a hub for local engagement.

We want to open up the church building and grounds to community led activities, to include community garden and heritage centre, and ensure accessibility and comfort for all users, including those with mobility challenges.

Additional Resiliences

For our church project, resilience goes far beyond just keeping the building warm. Here are other resiliences we considered - each one helps future-proof our efforts and protects our community:

Technical Resilience

- Robust systems that can handle wear, faults, and power fluctuations.
- Backup heating options (e.g., portable units or zoned heating).
- Smart controls and remote monitoring to detect issues early.

Environmental Resilience

- Use low-carbon technologies that adapt to changing climate policies.
- Plan for extreme weather events – Intense rainfall, flooding, cold snaps, heatwaves.

Financial Resilience

- Diversify funding sources: church funds, grants, donations, community fundraising.
- Build in contingency budgets for unexpected costs.
- Choose systems with low long-term maintenance costs.

Operational Resilience

- Train volunteers to manage and troubleshoot systems.
- Provide procedures for outages, maintenance, and emergencies.
- Schedule regular reviews and updates to our heating strategy.

Heritage Resilience

- Respect and protect listed building status and historic features.
- Use reversible or non-invasive heating methods.
- Consult conservation officers to avoid delays or compliance issues.

Community Resilience

- Engage our congregation and local community in planning and fundraising.
- Ensure the building remains usable for pastoral care, outreach, and events, even during disruptions.
- Promote shared ownership of sustainability goals.

Environmental and Heritage Considerations

- **Listing status**: Holy Trinity is a Grade II listed building. Official Name: Church of the Holy Trinity; Date Listed: 30 March 1988; Historic England Entry ID: 1365167; Architect: T.L. Walker; Construction Period: 1841–1848; Style: Neo-Norman, built with Hartshill granite rubble, red and blue brick, and sandstone dressings.
- **Significance**: The interior was redecorated in 1939 and 1948 by N.F. Cachemaille-Day, a prominent 20th-century church architect, known for modernist and Expressionist designs, often embracing the Liturgical Movement.
- **Permissions**: Faculty approval is required for system changes
- **Alignment**: Plan supports Church of England's Heating Resilience guidance

Financial Planning

- **Budget range:** Our church's range for this project is £50k to £100k
- **Potential funding sources**:

  Our church may be eligible for funding from national and local grant schemes focused on sustainability, heritage conservation, and community support - especially through the Church of England's Net Zero Carbon Programme, Coventry Diocesan Board of Finance Grants and trusts like Benefact and Garfield Weston.

  Here's a breakdown of key funding opportunities for heating upgrades in churches:

Church of England Net Zero Carbon Programme

- **Total funding available**: £30 million (2024–2025)
- **What it covers**:
  - Free or subsidised **energy audits** (already undertaken in 2023)
  - Grants for **LED lighting, pew heaters, insulation**, and electric supply upgrades
  - **Stage 1 Preparatory Grants** for professional support
  - **Stage 2 Capital Grants** covering up to 25% of project costs
  - **Match-funding campaigns** via platforms like *Give A Little*

Coventry Diocesan Board of Finance Grants

Buildings (BF): This grant is for repairs and improvements, making church buildings fit for 21st century mission and ministry - Up to 50% of the total project cost can be granted, up to a maximum grant of £10,000

Net Zero (NZ): This fund is for works which will allow a church to enable and enhance mission and ministry, whilst implementing a demonstrable reduction in their carbon footprint - Up to 50% of the total project cost can be granted, up to a maximum grant of £25,000

Net Zero Quick Win (NZQW): This is for low cost items or simple works that would reduce the carbon footprint of church buildings - Up to 50% of the total project cost can be granted, up to a maximum grant of £1,500

Other Funding From the Diocese of Coventry

- Together for Change has a small grants scheme for community transformation projects.
- Buildings for Mission Fund, which gives grants to small repair or improvement projects up to £10k, and funded by the Church Commissioners for 2024-2025.
- The Parish Resources website has funding guides and lists of grant-making organisations which parishes can apply to.

- The Churchcare website gives guidance on the major national funding bodies for works to church buildings, and on funds available from the national church.
- The Warwickshire and Coventry Historic Churches Trust provides grants to historic churches across Coventry and Warwickshire.
- Warwickshire and Solihull CAVA (Community and Volunteer Action) have many funding resources on their website, you can also sign up to a fundraising newsletter.
- The Allchurches Trust provide grants to churches of all denominations

Heritage and Community Grant Funders

These organisations support heating upgrades as part of broader conservation or community engagement:

Funder	Focus	Typical Grant Amount
Benefact Trust	Christian organisations & community support	£5,000–£50,000
Garfield Weston Foundation	Heritage, faith, and community buildings	£10,000–£100,000
Historic England	Listed building repairs & conservation	Varies by project
Department for Culture, Media and Sport	Historic places of worship	Project-based funding
Laing Family Trusts	Evangelical faith & poverty relief	£2,000–£20,000

National Lottery

Heritage Fund – Places of Worship; Grants from £10,000 to £10million are available through the National Lottery Heritage Grants programme to support communities caring for places of worship of all faiths.

Estimated costs

£340k, inclusive of VAT and contingency

We are planning to break the entire project into four distinct phases and these will be detailed in the four faculties requested.

Splitting our project into phases gives us control, flexibility, and momentum, while reducing risk and making funding more achievable. Here's why phasing matters:

Manageable Workload

- Tackling everything at once can be overwhelming. Phasing lets us focus on one piece of the project at a time.

Easier Funding

- Many grants only cover specific elements (e.g. LED lighting or under-pew heaters).
- Phased projects allow us to apply for multiple funding streams over time, each tailored to a specific stage.

Better Planning and Evaluation

- We can test and learn from early phases before scaling up.
- For example, trialling in one zone before committing to the whole building.

Minimised Disruption

- We have regular services and additional events. Phasing helps avoid full closures or major interruptions.

Align with Net Zero Goals

- We can start with quick wins while planning longer-term upgrades

Adaptability

- Energy prices, technology, and regulations change. Phasing lets us adjust our strategy as new options emerge.

Budget Breakdown

Phase 1: Asbestos and structural surveys; digital church drawings; planning permission for Men's Shed and its subsequent installation; removal of wet system and storage heaters; all electrical works, installation of underpew heating and infrared heating at front of church; installation of internet and heating control system; plastering works; crack stitching and repair of other cracks, Installation of wheelchair access; and carpet at front of church and main isle. Costing ~ £129k

Phase 2: All glazing works; underpew heating for back of church; move font; install two new rooms below balcony; and re-establish entry and install new wheelchair ramp to side door. Costing ~ £93k

Phase 3: Install combined infrared and light units in 2 new rooms; decorating the church and vestry, repair wood block flooring in the nave; carpets for new rooms, Heritage Zone and isles; and fit out Heritage zone and two new rooms. Costing ~ £47k

Phase 4: Repositioning headstones; upgrade guttering and downpipes; formation of a community garden; and quinquennial works. Costing ~ £71k

Implementation Timeline

Timings are highly dependent upon gaining external funding, and agreement of faculties. Timings shown below once the green light is given to commence our works.

- Phase 1: 0 to 4 months
- Phase 2: 4 to 7 months
- Phase 3: 7 to 12 months
- Phase 4: 12 to 24 months

Different Scenarios and How Our Plans May Be Impacted with an All Electric Heating System

Scenarios	How we would cope
1. Area power outage before or during an event	We would be without any direct heating. If the power outage is brief, the personal heated pads - charged in advance - may offer limited warmth for the congregation. However, if electricity remains unavailable for an extended period, these pads would be our only source of heat. Under such conditions, it's likely we would cancel the service. The same approach would apply to those wishing to use the two additional rooms—the 'Schools Room' and the 'Church Room'—which are being created beneath the balcony.

2. Localised power outage (church building only) before or during an event	Largely as outlined above in scenario 1, with the key difference being that we would relocate our traditional Sunday services to the adjoining Community Centre. This building operates independently with its own gas and electricity supplies, as well as a functioning heating system. Since we already use the space for post-service refreshments, transitioning the service itself into this venue would be a straightforward and practical adjustment. For any additional services, we would plan to supplement our heating by bringing in hired equipment. These temporary heaters would be used alongside the personal heated pads to provide a more comfortable environment for the congregation. The same approach would apply to those planning to use the two additional rooms. If those spaces have not already been allocated, their meeting could instead be accommodated in the Community Centre.
3. One of the ring mains dedicated to the underpew heaters is not available.	We're allocating the 40 under-pew heaters across two separate ring mains. Typically, we plan to use just 20 heaters during most services—10 positioned on each side of the church. Should one circuit fail, the other 20 heaters will remain operational, offering adequate warmth for over 90% of our gatherings. Additionally, personal heated pads will be available to enhance comfort as needed. The same approach would apply to larger services, where we have the flexibility to bring in hired heating equipment as needed. Should those measures prove insufficient, we have the fallback option of relocating the service to the Community Centre, which offers reliable heating and utilities. This does not impact the two newly created rooms.
4. A small number of the under-pew heaters are no longer functioning and will need to be replaced.	We have enough under-pew heaters to meet the majority of our heating needs. Personal heated pads are also available to provide additional warmth. If necessary, we retain the option to bring in hired heating equipment to further support comfort.
5. The infrared heaters are unable to deliver adequate warmth.	The infrared heaters are positioned outside the main body of the church and are located in areas without pews. If these heaters prove insufficient, we will supplement the heating by installing additional pew heaters beneath the seating in those areas or by introducing other suitable heating solutions as needed.
6. No electricity available to the 'new' rooms.	If heating is unavailable in one room but it is in the other, which is not being used - users could simply switch rooms. If the alternative room is also unavailable, and heated spaces are accessible in the Community Centre, the meeting could be relocated there. In any scenario where no heated rooms are available, we retain the option to bring in hired heating equipment to ensure comfort.

7. External control of the heating system is not currently possible.	The heating system would remain controllable via the on-site control panel within the building.
8. The heating system cannot be managed via the control panel.	We will be using SMART-controlled electric sockets, each equipped with a manual override. This means that even if the control panel becomes unavailable, the heating system can still be operated manually.
9. Our current plans do not deliver enough heat to maintain a comfortable temperature for individuals seated in the space.	Our plans incorporate additional SMART-controlled electric sockets, allowing us to install extra heating units retrospectively if needed. In the short term, while awaiting the installation of this equipment, we will use hired heating units to supplement the existing system.
10. There are currently no plans to provide heating in the Heritage Zone.	We need to carefully consider the impact this will have on the Heritage Zone during the winter months. The Heritage Zone may become noticeably colder, potentially affecting its usability for visitors, volunteers, or any planned activities. The absence of background warmth in the Heritage Zone could limit its appeal and accessibility during colder periods. We could choose not to use the space during these times. We retain the option to bring in hired heating to ensure comfort.
11. When the entire building is needed, the Heritage Zone may be used to provide additional seating capacity.	The same as in scenario 9 above.
12. The personal heated seats have not yet recharged and are currently unavailable for use.	We are confident that, in most situations, the underpew heating will offer sufficient warmth. If additional heating is needed, we have the flexibility to supplement with hired equipment to maintain a comfortable environment.
13. Electricity typically costs more than gas or oil, making it a less economical option for large buildings like churches that are used intermittently.	Operating electric heating systems continuously to maintain a comfortable environment can place significant pressure on budgets, especially during the colder winter months. Our current plans reflect the existing usage pattern, where heating is required intermittently for relatively short durations—typically under 90 minutes per service. However, the design allows for future adaptability, supporting a transition to more frequent use of the church throughout the week. Should demand increase, we also have the option to significantly boost our electrical capacity by upgrading to a three-phase supply if necessary.

14. We may not have sufficient capacity to run the entire church in all current circumstances.	For our 'Standard Service', we calculate that we would use 15.53kW (less than 23kW) and 80.55 (80% rule and less than 100A). For the 'Large Service', we would use 18.69kW (less than 23kW) and 97.34A (80% rule and close to 100A). For 'Week Day' usage, we would use 8.59kW (less than 23kW) and 44.74A (80% rule and less than 100A). For 'Worst Case' (a large service held at night with the library open), we would use 25.13kW (more than 23kW) and 127.76A (80% rule and more than 100A). If it was felt we were running too close to maximum demand, we calculate items that could be safely switched off would use 7.46kW and 35.73A (80% rule) So, if these items were to be controlled, then the Worst Case would be reduced to 25.13 – 7.46 = 17.67kW (less than 23kW) and 127.76 – 35.73 = 91.02 A (80% rule and less than 100A)
15. Electric heating systems, such as infrared or radiant panels, often struggle to effectively warm large, poorly insulated spaces.	Heat distribution can be uneven, leaving some zones cold and uncomfortable. The actions we would take are the same as in scenario 14 above.
16. Electric heating systems are entirely dependent on a stable power supply. Any outages could leave the church without heat.	We believe that backup systems should be considered. Photovoltaic (PV) cells combined with battery storage can help mitigate power outages and reduce reliance on the grid, but they may not fully replace electric heating for a church—especially during winter. Contingency plans may be needed for critical events or services.
17. Electric heating contributes to lower carbon emissions only when powered by renewable energy sources.	Green electricity is energy produced from renewable sources that emit little to no carbon emissions. It can be accessed through several means: • Green energy tariffs offered by our utility provider, which we currently use and intend to continue; • On-site solar generation, using photovoltaic panels—subject to planning approval; • Community energy schemes, which invest in and support local renewable energy projects.
18. Electric heating systems, unlike gas-based alternatives, may respond more slowly during sudden drops in temperature.	Since our approach focuses on warming individuals at their seating areas rather than heating the entire building, the need for rapid temperature increases is less critical. From our visits to other churches using similar heating systems, we've found that the equipment we are planning to install effectively provides localised warmth—even on the coldest days—and typically achieve the desired comfort level within 30 minutes.