



Case Study: Towards Net Zero
St John's Stoke Church, Guildford



St John's Stoke: Our Church

- Vibrant evangelical community –
“Life in all it’s fullness” to those in our parish
- Three Sunday services
- Electoral roll of 107 people
- Annual budget of around £300k
- Mixed parish including deprivation - SJCS
- Historic 14th century building – grade II*
- 1980’s community centre adjoined
- Over 500 people use our centre each week





The Next Chapter: The need

- Post Covid 2022 - started as a request for new AV equipment & lighting
- Discovered more urgent needs / projects
- Morphed into a huge buildings project

Not just a buildings project – but a church development project

Invest in useful buildings used for our mission - holistic approach

Core themes

- Environment & sustainability
- Accessibility
- Safety & security





The Next Chapter: First steps

Tip 1 – Involve the
congregation

1. Formed a project team, roles given
2. PCC terms of reference
3. Brainstormed projects & completed a brief
4. Architects' feasibility study & costings
5. Congregation involvement & feedback
6. Identified priorities & phasing developed
7. PCC sign off
8. Marketing & branding undertaken
9. Launch
10. Fundraising & permissions





The Next Chapter: Marks of Mission



Tip 2 – Have a vision & masterplan

1

Phase 1: Progressing Sustainability

Where we reduce the environmental impact of our church building and make it more welcoming, accessible, safer and warmer.

Timescale: July 2023 – July 2024

Fundraising goal: £100,000

Mark of mission: Love for God



2

Phase 2: Enabling Outreach

Where we enable our staff and Stoke Community Support mission with space and facilities and make the building more visible and accessible.

Timescale: July 2024 – July 2026

Fundraising goal: £200,000

Mark of mission: Love for Our Community & Love for Each Other



3

Phase 3: Enhancing Worship

Where there are no physical barriers to worship and facilities are designed to enable and enhance a variety of different worship styles and configurations.

Timescale: July 2026 – July 2030

Fundraising goal: £700,000

Marks of mission: Love for God & Love for Each Other



4

Phase 4: Serving our Community

Where there is welcoming, warm, accessible and comfortable space to serve and benefit our community and mission to them.

Timescale: July 2030 onwards

Marks of mission: Love for God, Each Other & Our Community.





The Next Chapter: Integrating Net Zero

Tip 3 – Integrate NZ
into everything



CHARTERED BUILDING
SERVICES ENGINEERS

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Energy Assessment Report

July 2024



Option	Recommended Measure	Potential EPC Rating	Yearly CO2 Emissions (kg.CO2/yr)	Impact to CO2 Emissions	Financial			
					Indicative Capital Costs	Indicative Running Costs	Impact to Running Costs	Payback Period
	Baseline EPC	G 183	56,367			£13,744		
1	Destratification Fans in Church	F 145	44,468	- 21 %	£9,000	£11,605	- 16 %	4.2 years
Above + 16	PV Solar Panels On Pitch Roof of Church	F 139	42,137	- 25 %	£38,250	£7,174	- 48 %	5.8 years
Above + 15	PV Solar Panels On Flat Roof of Community Centre	F 134	40,499	- 28 %	£59,625	£4,059	- 70 %	6.2 years
Above + 9	Install Air Conditioning in Community Centre Office	F 134	40,215	- 29 %	£62,625	£3,765	- 73 %	6.3 years
Above + 7	Install Split System Air Conditioning in Community Centre Hall / Reception, with Electric Radiators in Toilets	D 97	28,764	- 49 %	£79,625	£387	- 97 %	6.0 years



Net Zero Carbon Plan: Phase 2



Phase 2: Enabling Outreach is in the planning phase.
Will launch in July 2024 and run for two years.

- A12. If you have internet connection, install a HIVE- or NEST-type heating controller, to better control heating.**
- A programmable NEST system will be installed for both the centre and hall heating systems. Heating in the centre will be controlled and scheduled only for when the rooms are in use and at a max of 18 degrees C. Override controls will be disabled in the building and the building is kept at 12 degrees C.
- B7. Install TRVs on radiators in meeting rooms & offices, to allow you to control them individually & B8. Consider under-pew electric heaters and/or infra-red radiant panel heaters**
- As the staff office is one of the most frequently used parts of the centre, when extended and refitted it will be heated with infrared ceiling heaters on a smart controlled thermostat allowing individual room control.
- B12. Get your energy supplier to install a smart meter, to better measure the energy you use.**
- Smart meters will be installed with our new three phase power supply, which will enable the installation of a large solar panel array and larger scale renewable heating for the church and community centre in the future.
- C8. Install solar PV, if you have an appropriate roof and use sufficient daytime electricity in the summer.**
- We have a large area of suitable south facing roofing on the church building, much of it which is out of view. We are planning to install a minimum of a 40kw system with a battery storage solution for better utilisation.
- A10. Also, think about your church grounds. Is there an area where you could let vegetation or a tree grow?**
- The Eco Church group has further plans to implement wild flower areas and re-wilding parts of the site.

In addition to these aspects we are also completing the following works as part of Phase 2: Enabling Outreach which will improve our sustainability and reduce our carbon footprint:

- Improve our accessibility, welcome and enhance our heritage**
- By installing an additional path from Lido Road to the side of the community centre to enable easier disabled and pedal cycle access, supporting accessibility and sustainability.
 - By installing architectural lighting to make our building and signage more visible in the community and enhance the architecture and heritage of the building thereby reducing hard security flood lighting in favour of softer building lighting, reducing energy usage and making it better for wildlife.
- Improve the safety, security and user experience of our building**
- By installing low-level path lighting around the premises for better visibility to improve safety and aesthetic illumination and reduce energy used in security lighting.
 - By repositioning bike storage and installing a bike shelter to better encourage environmentally friendly transport.
 - By installing new, welcoming front doors to the community centre, which will be double glazed and better insulated.

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Phase 1: Progressing Sustainability

Where we reduce the environmental impact of our church building and make it more welcoming, accessible, safer and warmer.

July 2023 – July 2024
£100,000 required

Including
£54,000
of grants

£135,000
raised!



Our building Energy Issues

Current usage	Church	Centre
Gas	88000	25000
Electricity	3700	16200

Church uses 3.5x gas
than the centre



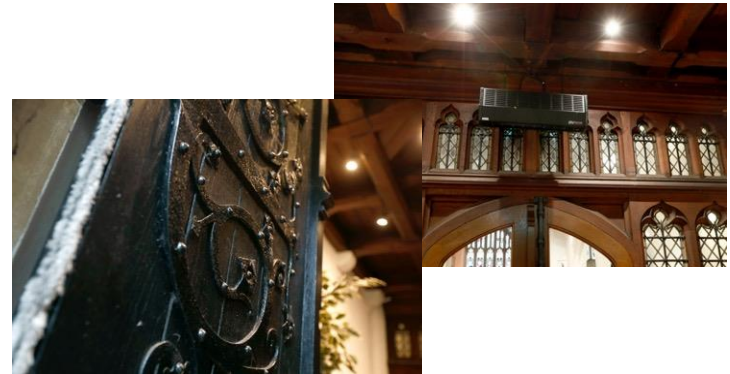


Phase 1: Sustainability

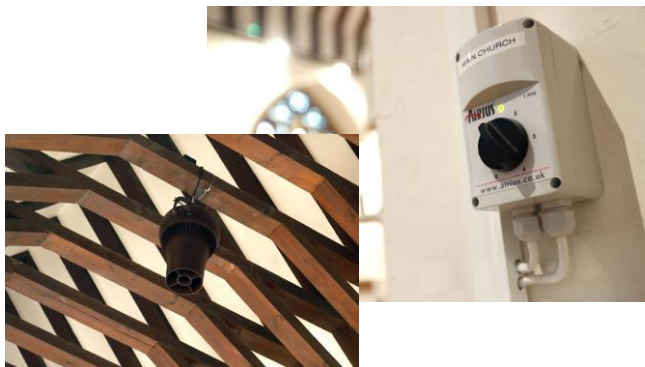
New heating system



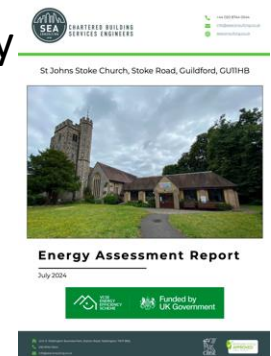
Draught proofing & air curtain



Destratification fans



Independent energy
Assessment report





Phase 1: Accessibility, welcome & heritage

Tip 4 – Think about
funding impact areas

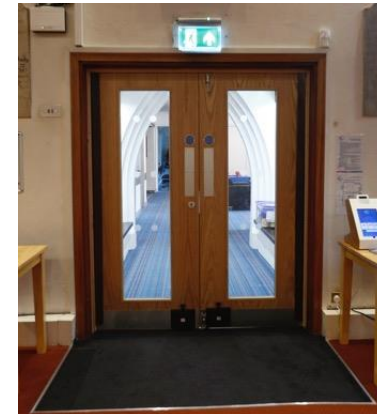
Internal tower doors



Secondary glazing



Internal link doors





Phase 1: Safety, security & user experience

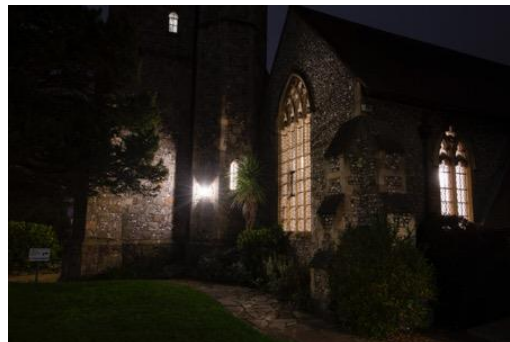
Fire detection & alarm



Fire doors



Exterior tower lighting



Acoustic paneling





Phase 1: Workspaces & Meeting rooms

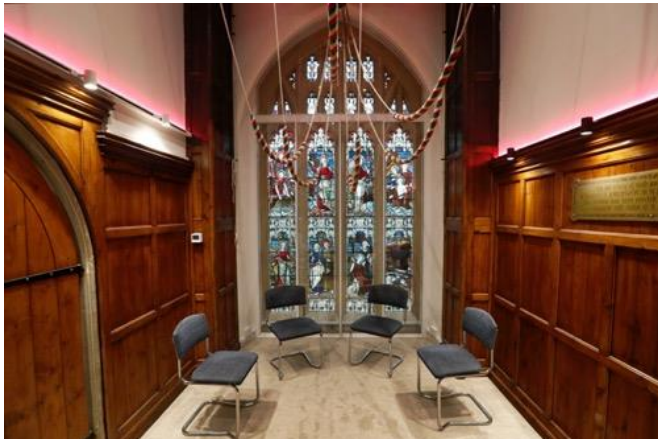
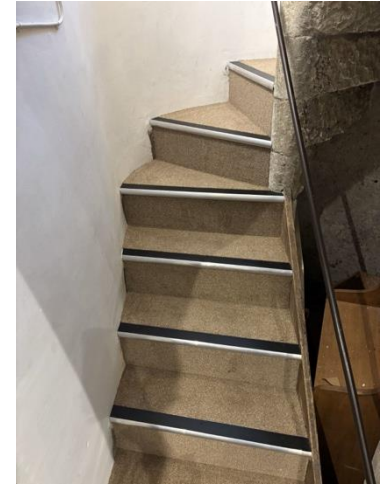
Vestry





Phase 1: Workspaces & Meeting rooms

Bell ringing chamber





Phase 1: Additional works

Public access defibrillator



Repairs



Door woodwork



Emergency lighting & exit signage

External lighting - vestry & chapel





Phase 1: In Figures

Over 20+ trades used for works	Over 60+ days of work on site	5 expert reports provided
3 architects meetings	12 List B applications granted & completed	6 faculties granted & completed
3 Next Chapter events	12 Next Chapter meetings	8 Next Chapter team members



Phase 1: Funding

Tip 5 – Engage early
with funders



Nias Wheatley Trust



Surrey Churches
Preservation Trust



Cllr Fiona Davidson
Council or community
fund





Phase 2: Enabling Outreach

Tip 6 – Be flexible & adapt
if opportunities arise

Where we enable our staff and St John's Community
Support mission with space and facilities and make the
building more visible and accessible.

Autumn 2024 – Autumn 2026
£200,000 required

Buildings that enable love for our community

Where there is warm, accessible, comfortable and welcoming
space for the benefit of the community.

£232,968
funding

£45,896
donations



Phase 2: Sustainability

Tip 7 – Seek permissions
early & use experts



Solar PV & battery



Air conditioning



Three phase power upgrade

£144,900
of
funding



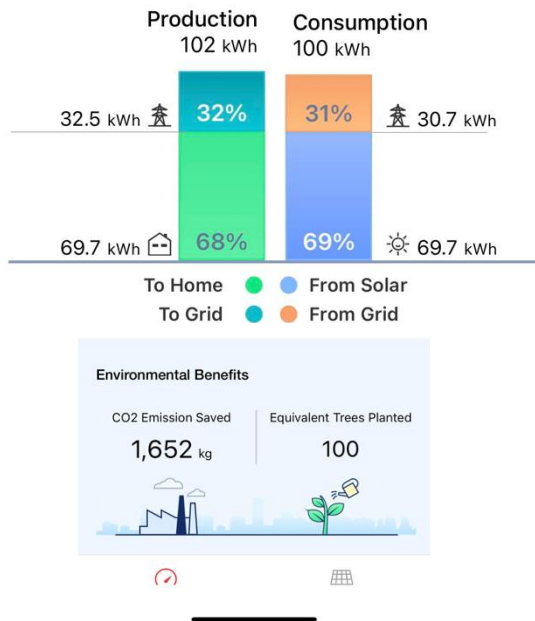
Funded by
UK Government



Phase 2: Completed

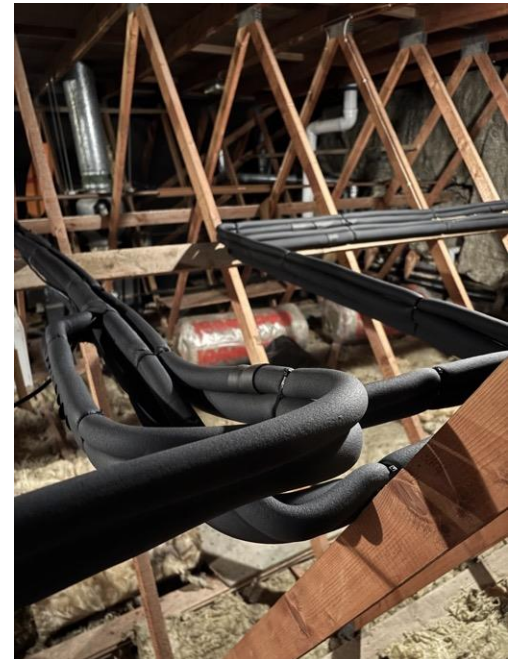
VCSE grant

- Solar PV array & battery storage



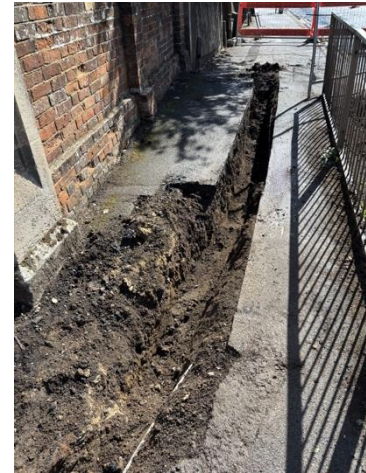


Phase 2: Completed





Phase 2: Completed





Phase 2: Energy Efficiency Upgrades

1. Secondary glazing in church
2. External centre doors & window
3. Internal centre doors
4. LED / PIR lighting upgrades
5. Bell tower insulation installation
6. Gas cooker switched to electric



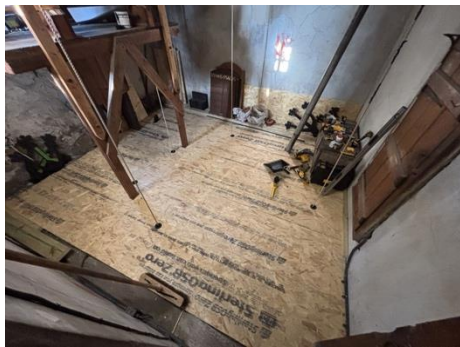
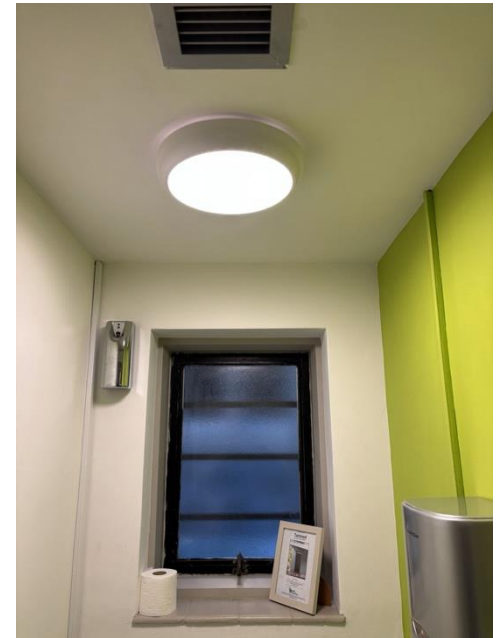
**£38,729
funding**



**£30,246
raised**



Phase 2: Completed





Phase 2: Accessibility, welcome & user experience

Tip 8 – Network &
be bold and ask!





Phase 2: So far...



Cllr Fiona Davidson
Councillor or community
fund



Tip 9 – Use multiple
funding sources & blend



Nias Wheatley Trust

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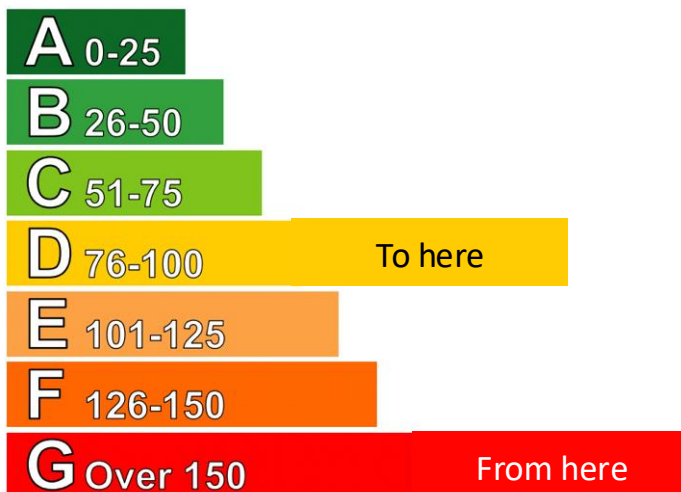




Net Zero: So far...

- Using 1/3rd less gas in the church to heat – combination of new boilers, energy efficiency measures and heating spaces individually
- Gas supply in the community centre no longer used
- Solar PV to date generating an average of 40% of power utilized for the whole site

Community Centre



Tip 10 – Use skills & support available

