

Buildings and Energy

Transforming our Church to Net Zero



Background



St John's Parish Church in Crowthorne is a large, Victorian Church. It opened in 1872. A Hall was added to the side in the 1960's and extended in the 1980's.

As well as being used for worship, it is well used by the community for activities such as Line Dancing, Bridge Club and baby and toddler groups. We have about eight large

concerts every year and the annual Crowthorne Remembrance Service is held in the Church.

The need for change

The Church of England has recognised that our churches generate a huge amount of carbon, and is actively encouraging churches to consider reducing our carbon footprint. At St John's we currently have two gas boilers in the Church and another in the Hall. We generate 9 tonnes of CO₂ every year.

Our Mission

Our Church Mission calls on us to care for people and for the planet, so at the beginning of 2024 we applied for some funds from the Oxford Diocese to help us look at Net Zero options. It was a toe in the water – a tiny step, a small seed. We got the funds and engaged a heating engineer who came up with options for the Church and the Hall.

The Church Hall

This was straightforward. The recommended solution was Air Source Heat Pumps, warm air blowers in the Hall, Church Office, Meeting Room and Vestibule, plus electric radiators in the toilets, all supported by Solar Panels on the flat roof of our hall, and battery storage. Double Glazing was not considered cost effective as the hall is not used continuously. We accepted these recommendations.

The Church

This was more difficult. The options were Radiant Heaters mounted high in the Nave, or Air Source Heat Pumps and warm air blowers. We were not sure which way to go.

Fortunately the Diocese recognised our progress and gave us an additional grant to investigate further. Our heating engineer explored the Radiant Heater option. We would have needed to upgrade our 3 phase 100 amp supply to 200 amp. SSEN, our electricity

supplier would charge us £500 per month as a standing charge. This option was not viable. That left only one option, Air Source Heat Pumps and warm air.

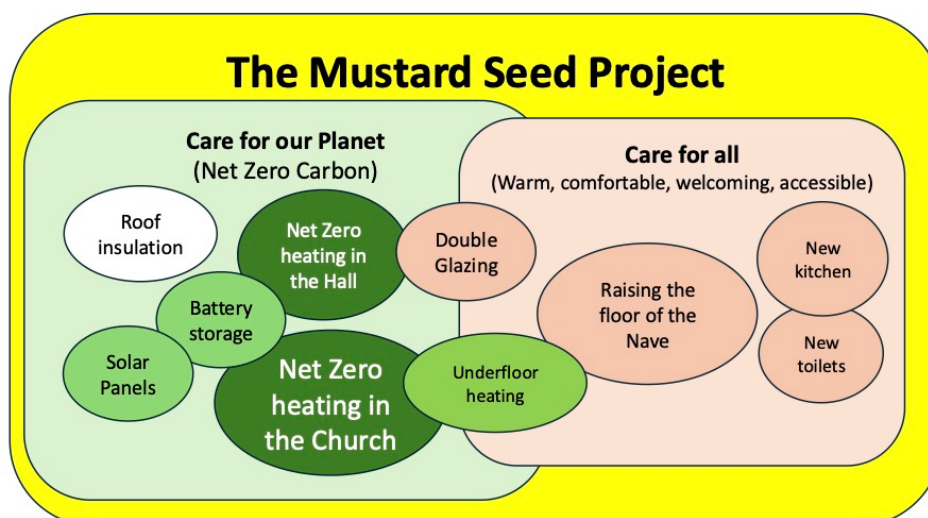
Then, our vicar, thinking about our care for people, suggested we might raise the floor of the Church to achieve level access from the Hall and into the Sanctuary. We then considered an underfloor heating system.

And so, we engaged an architect, who has worked on draft plans to look at the feasibility and cost of raising the whole floor of the church and installing underfloor heating, powered by Air Source Heat Pumps and hot water circulation.

The project has been like a tiny mustard seed, which has been nurtured and cared for. It has grown into a transformational vision. We are now looking at modernising the ageing toilets, upgrading our kitchen and installing double glazing to create a warm, comfortable, welcoming and accessible space which we can use to show God's love for all and God's love for the planet.

Project Scope

The current project scope is shown below. We decided against roof insulation as the payback period was too long.



Current Situation

Our heating engineer is drawing up tender packages for the Hall. Our architect is preparing alternative designs for the Church covering two types of construction and two heating systems (underfloor and hot air), before preparing plans for the modernising of the toilets and kitchen. We are currently consulting Church and Hall users to get their thoughts on our plans. The Diocese will visit in early November to discuss the plans with us and work out the way forward.

Project Manager – do get in touch if you would like to know more.

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