

St Peter Mancroft — pioneering the way



Nick Jackson doing a radio interview on the roof of the church

On Thursday 14th March reporters from the local press, radio and TV all descended on the church, to hear the story of Mancroft's eco-project. BBC Radio Norfolk broadcast live from the church soon after 10.00am, and Anglia TV did some filming for a future news feature. A press photographer also got some shots for the EDP and Evening News, and a pre-recorded interview was done for 'Greatest Hits Radio'.



BBC Radio Norfolk live on air from the church



Liz Humphries (Diocesan Communications Manager), Suzi Ashcroft (Mancroft Comms Officer) and Barbara Bryant (Diocesan Environment Officer)



Anglia TV filming in the Earth Chapel

This Mancroft project is being managed, on behalf of the PCC, by **Nicholas Vanburgh Ltd**. The solar panels and batteries are being fitted by **Impact Services**. The air-source heat pumps are being installed by **The Big Heat Pump Company**. The re-lighting of the church is being undertaken by **Enlightened**. Other contractors involved in the project are **Norwich Electrical Co. Ltd** and **KGB Commercial Heating**.

SPM St Peter Mancroft
Norwich



2024 Church Eco-Project

After years of planning a major project is taking place at St Peter Mancroft in 2024, aimed at making the church building carbon-neutral.

In February 2020 the Church of England set an ambitious target to reach net zero carbon for all its buildings by 2030, and the Mancroft project is part of this bigger change. The work here is in many ways pioneering, and will hopefully be an encouragement to other churches in the Diocese and across the country.

There are three elements to the whole project: solar panels, air-source heat pumps, and a new LED lighting system. Different contractors are being engaged for each part of the



Contractors from local business Impact Services preparing the South aisle roof for the solar panels

project, drawing on cutting-edge expertise. The programme of works is being overseen by Mancroft's Fabric Officer, Nicholas Jackson.

No public money is being used to pay for this project. Instead, a generous bequest received in 2023 has provided the core funding, and grants have been secured from the Church of England's 'Demonstrator' fund, the Benefact Trust, and the Norwich Freeman's Charity.

The work will be completed by Summer 2024, and is due to be showcased across the Church of England as an encouragement to other churches.



Head Verger Chris Sanham with the information boards at the West End of the church



@StPeterMancroft

www.stpetermancroft.org.uk

What is happening? Solar Panels and Batteries

The first part of the project has been the installation in March of an array of 48 solar panels on the South Aisle roof. A test panel was in place throughout the past six months, and permission for the entire array was granted from both the City Council and the Diocese ready for an early 2024 start.

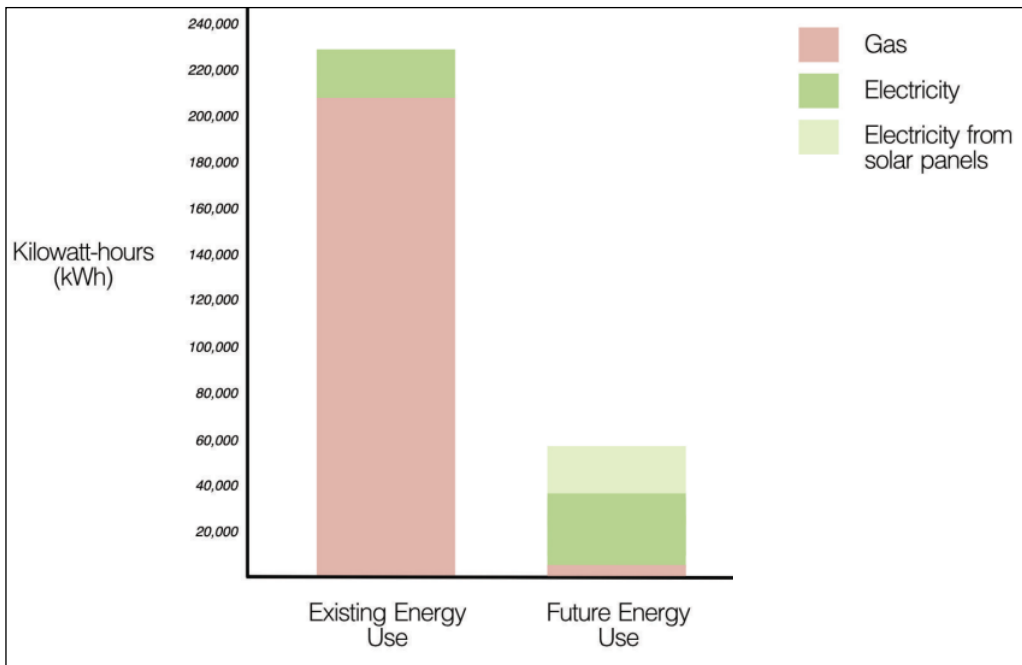
As a Grade I listed medieval church, great care has been taken to minimise the impact on the architectural integrity of the building. The panels are being fitted using a clamping method, so the entire process is entirely reversible. The solar panels will not be visible from ground level near the church, and fleeting glimpses of the array from further away on Theatre Street will mostly be obscured by trees.

The panels will generate an estimated 17,000 kWh of electricity each year. There will also be six electrical storage batteries,



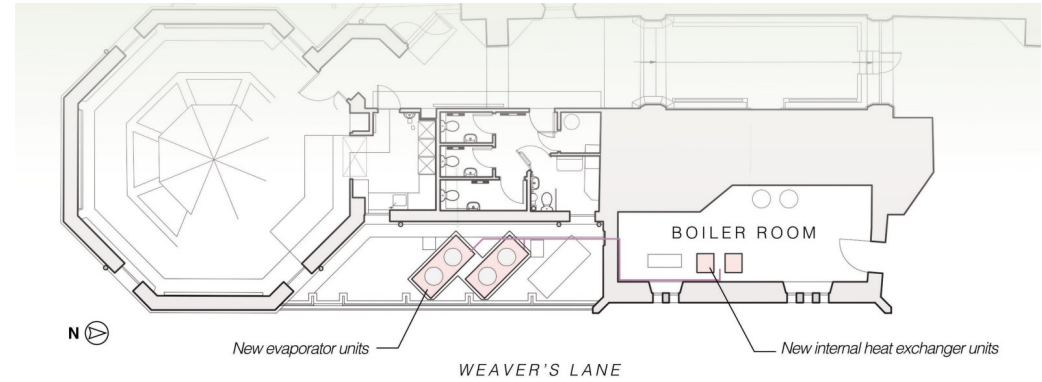
Trial solar panel on the South aisle roof

allowing solar power generated by day to be stored safely and then used to light the church at night. The batteries will also allow short bursts of electricity to be drawn at a higher current than the solar panels are generating. They will also be configured to act as an emergency lighting power supply.



Church energy use will be dramatically changed once the whole project is completed

What is happening? Air Source Heat Pumps



An air source heat pump acts like an air conditioning unit but in reverse. Heat from the air outside is transferred by a heat pump to a refrigerant in the heating system, which is then compressed to increase the warmth running through the heating system. The compressor uses only a quarter of the energy of direct heating. This will allow a good level of base heating to be sustained at the church throughout the colder months.

In previous years the gas usage of the church building has been equivalent to

about 20 houses, but this will be reduced by about 95%, as the two new market-leading Ochsner Air 41 heat pumps will be powered by electricity.

The pumps themselves will be located in the small gravelled area outside the Octagon toilets, bordering Weaver's Lane. This will minimise any visual impact, and mean the pumps will not be heard from the church. The internal heat exchange units will be located in the existing adjacent boiler room, which is beneath the Lower Sacristy.

What is happening? New Lighting System

The current lighting system, which uses inefficient high-pressure sodium lamps, was installed in the early 1980s. Although it's served the church remarkably well it is now showing its age. The lamps are bulky, make a poor quality yellow colour of light, and take some time to warm up to full brightness. In addition, replacing blown bulbs is a major challenge.

Substantial improvements in LED lighting technology have allowed for a complete re-lighting of the church. This will in a sense complete the 2018 reordering of the front of the church, which has allowed

flexible use of the space for events and services. The new light fittings will be fully dimmable and much more flexible. Some additional lights will improve the visibility of important features in the church, such as the medieval angel roof, the 15th century font canopy, the striking late 20th century Collins organ at the West End, and the ringing display in the South-West corner.

Replacing the old sodium lamps with LED lighting is expected to save around 18,000 kWh of electricity use each year, equivalent to the electricity usage of seven typical 3-bedroom houses.