



CASE STUDY

Solar Installation at Water Eaton Church, Milton Keynes

the **greenway**
Solar

OVERVIEW

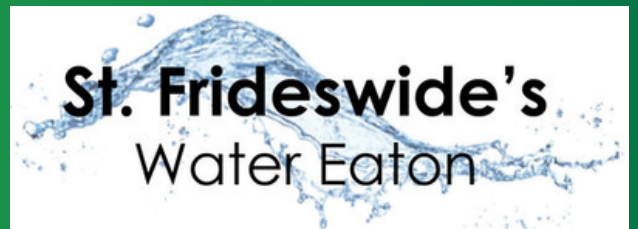


Water Eaton Church Centre in Bletchley, Milton Keynes, teamed up with The Green Way Solar to install a bespoke solar and battery solution that would cut energy bills, future-proof the building, and keep essential services running no matter what. We installed 30x Eurener Nexa 500W panels paired with a Tesla Powerwall 3 and Gateway on the upper balcony inside the church.

The church plays a vital role in its community, not just as a place of worship but also as the base for a busy Foodbank and a variety of local groups. The energy system had to be resilient, smart, and respectful of the building's multi-use nature.

THE CHALLENGE

Water Eaton Church Centre was looking to get on the front foot with their energy strategy. With 10,547kWh of annual electricity usage and an 8kW air source heat pump being installed, their demand was only going one way: up. At the same time, they had freezers supporting the Foodbank that simply couldn't afford to lose power, not even briefly. And like many community buildings, they were working to tight budgets, so cutting operational costs was critical. The church needed a reliable, green energy solution that would reduce grid reliance, support backup in the event of outages, and lower their long term running costs.



OUR SOLUTION

We designed and delivered a 15kWp solar PV system backed up with Tesla battery storage, giving the church the flexibility and resilience it needed. The bifacial panels made the most of the available roof space, and the Tesla Powerwall 3 allowed us to store excess energy for evening use or in the event of a power cut, crucial for protecting the Foodbank's stock.

Before any kit went on site, we carried out a full structural assessment to ensure the roof could safely support the system. Our install team worked cleanly and efficiently to fit the panels, run the electricals, and install the battery with minimal disruption to church activities, no mean feat in a building that's always in use.

RESULTS

This system now provides up to 44% of the building's annual energy needs directly through solar generation, with another 28% supplied via the battery, massively reducing the church's reliance on the grid.

The result? A smarter, greener building that's cheaper to run, more resilient, and better prepared for the future. Real time performance monitoring and automated alerts mean they can track savings and system performance easily, and respond fast if anything needs attention, aiding compliance and optimising energy efficiency.

**Carbon
Emissions**

↓ 94%

**Renewable
Energy
Consumption**

↑ 72%

Through meticulous planning and skilled execution, The Green Way Solar successfully completed the solar PV

installation at Water Eaton Church. The system now generates clean, renewable energy, helping to reduce electricity costs while supporting the church's commitment to environmental stewardship. Despite the unique challenges of working on a historic and active place of worship, the project was delivered on time and within budget, with minimal disruption to church activities. The church has expressed strong satisfaction with the system's performance and the professionalism demonstrated throughout the installation process.

To address the specific challenges of the Water Eaton Church installation, The Green Way Solar adopted a methodical and safety-first approach. A comprehensive structural assessment was carried out to confirm the roof's load-bearing capacity prior to installing the solar panels, string inverters, surge protectors, circuit breakers, disconnect switches, and monitoring systems. This careful preparation ensured both optimal energy generation and complete system safety.

Advanced monitoring equipment and performance dashboards with automated reporting were implemented to provide insight into the system's efficiency, reliability, and financial return. Real time fault detection and instant alert notifications enabled immediate troubleshooting, while continued compliance with grid regulations was ensured by monitoring power quality, voltage stability, and reactive power levels.

WHY CHOOSE THE GREEN WAY SOLAR?

Our work on the Water Eaton Church project demonstrates our ability to deliver sustainable, high-quality solar solutions that assist property owners in achieving their energy efficiency and environmental objectives. With a focus on innovative system design, efficient installation, and dependable long-term performance, we helped Water Eaton Church become a leading example of sustainability within community and faith-based buildings.

CONCLUSION

The solar PV installation at Water Eaton Church highlights The Green Way Solar's commitment to providing premium renewable energy solutions. By addressing structural, logistical, and regulatory challenges head-on, we delivered a sustainable and cost-effective energy system tailored to the specific requirements of the church. This project further showcases our expertise in managing complex solar installations while ensuring safety, efficiency, and lasting value for our clients.

