



TITAN **ECO**

BOURNE HALL

Award-winning solar installation at historic Bourne Hall, Ewell

**2025
WINNER**

**BUSINESS
AWARDS UK**

Clean Energy Awards
▶ Renewable Energy Project of the Year

Titan Eco



GREATER LONDON
ENERGY EFFICIENCY AWARDS 2025

WINNER

**SMALL SCALE PROJECT
(<250K)**

WWW.ENERGYEFFICIENCYAWARDS.CO.UK

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BOURNE HALL

Where heritage meets sustainability

OVERVIEW

Bourne Hall, one of Surrey's most distinctive buildings, recently completed a comprehensive solar energy installation to align with Epsom & Ewell Borough Council's commitment to sustainability and carbon neutrality by 2035.

CHALLENGES

Due to its Grade II listed status and unique architecture featuring a circular layout and iconic central glass dome, Bourne Hall presented considerable challenges. The project required an innovative approach, balancing modern renewable technology with the need to preserve the building's historical integrity and visual aesthetics.

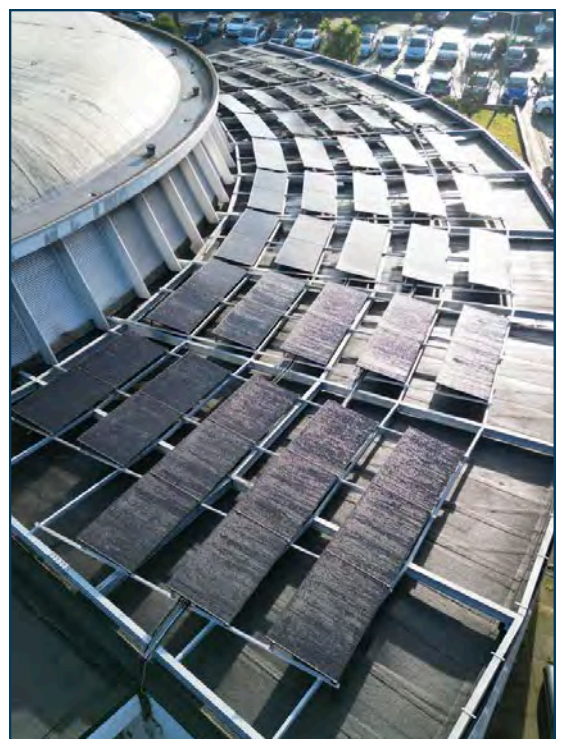
OUTCOME

Completed in December 2024, this forward-thinking project received two industry accolades: **Renewable Energy Project of the Year** at the 2025 Clean Energy Awards, and **Small Scale Project of the Year (<£250k)** at the 2025 London Energy Efficiency Awards. Both recognised Titan Eco's innovative approach and sensitive treatment of the site's historical character.

COMMUNITY VISIBILITY

The installation is not only helping reduce energy costs but also serves as a visible demonstration of the borough's commitment to sustainability.

A real-time monitoring display in the foyer provides live energy data, allowing visitors to engage with the system and learn about renewable energy in action.



PERSPECTIVE

TITAN ECO

EPSOM & EWELL BOROUGH COUNCIL



LIZ FROST

Chair of the Epsom & Ewell Borough Council
Environment Committee

"Bourne Hall is an important hub for our community, and the installation of solar panels and the development of a robust heat decarbonisation plan is just part of a series of works that will make this picturesque and historical landmark more sustainable for future generations and help continue Epsom & Ewell Borough Council's drive to be carbon neutral by 2035."

TONY FOXWELL

Senior Surveyor at Epsom & Ewell Borough
Council

"Bourne Hall is now benefiting from clean, renewable energy, significantly reducing our carbon footprint and operating costs. I want to express my sincere gratitude to the entire team at Titan Eco for their exemplary work on this project. It was a challenging site due to the complexity of the building, but Titan Eco rose to the challenge!"

IMPACT & BENEFITS

Measurable success for the environment and community



ENERGY PRODUCTION

Expected to generate ~45,000 kWh annually, significantly cutting grid electricity use.



COST SAVINGS

Estimated savings of up to £15,000 annually through reductions in electricity bills.



CLEAN ENERGY

Reduction of over 9 tonnes of CO₂ per year - equivalent to planting around 400 trees.

INSTALLATION

Our approach to this project combined technical expertise with heritage preservation, ensuring a seamlessly integrated solar system.

CUSTOM STEEL FRAMEWORK

A bespoke steel framework was designed, manufactured and installed by WC Evans & Sons Ltd to evenly distribute the weight of the solar panels across the roof. This provided a stable base and ensured seamless integration with minimal visual impact.

SOLAR PANELS

The system features 116 DMEGC 450W all-black bifacial solar panels, chosen for their high efficiency and sleek, unobtrusive design. The panels were strategically positioned to maximise energy capture while blending seamlessly with Bourne Hall's aesthetic.

INVERTER TECHNOLOGY

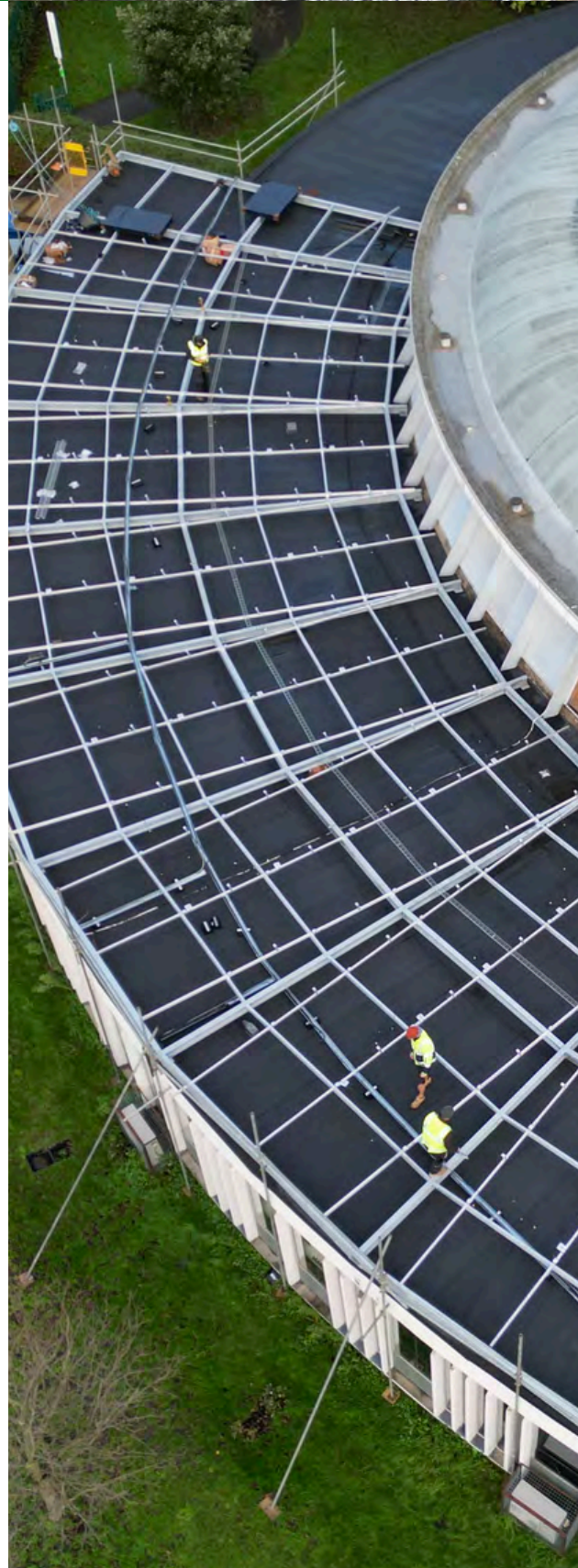
A SolarEdge 50kW Synergy Inverter was installed to convert the generated DC electricity into usable AC power. This high-performance inverter ensures optimal energy conversion, contributing to the building's long-term sustainability goals.

PERFORMANCE OPTIMISERS

To further enhance efficiency, 59 SolarEdge S1000 dual optimisers were integrated into the system. These devices help maximise energy output, mitigate shading effects, and enable real-time panel-level monitoring, ensuring ongoing peak performance.

INTERACTIVE MONITORING DISPLAY

A real-time digital display was installed in the foyer to provide live updates on the system's energy generation and performance. This feature allows visitors and staff to engage with the installation, fostering awareness of the benefits of renewable energy.



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TITAN ECO



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