

# ESSENDINE PRIMARY

## WESTMINSTER, LONDON



## INTRODUCTION

Essendine Primary School has a longstanding commitment to sustainability, demonstrated through various projects, including a new scooter park, encouraging active travel and reduced car use. Supported by Westminster City Council's Clean Air fund, these past initiatives have helped create a greener, healthier environment for pupils.

As part of this continued commitment, Essendine was selected as one of 38 schools to receive funding through London's Greener Schools programme – an initiative helping schools cut energy costs and carbon emissions.

With this funding, the school commissioned a 22.05 kWp rooftop solar PV system, which Titan Eco designed and installed, enabling the school to generate clean electricity on-site, lowering their running costs, and further strengthening their environmental credentials.

## SYSTEM COMPONENTS

- ✓ **Solar panels:** 49 x 450W (22kWp) low carbon, fully traceable JA Solar panels.
- ✓ **Inverter:** Solis 3-phase 20kWp inverter - providing conversion efficiency of up to 98.7 %, and real-time performance tracking and analysis.
- ✓ **Mounting system:** Renusol Hook & Rail mounting system - German-engineered and widely trusted across the UK solar industry for its strength, safety and structural integrity, paired with BBA-certified Genius InterFlash for integrated weatherproofing.
- ✓ **Pigeon-proofing:** Titan Eco's premium pigeon proofing system, SolaSkirt® - preventing nesting birds, to maintain system performance - and hiding rails and wires, preserving the visual appearance of the array.





*Solar panels on school rooftops mean energy bills are cut and money can be invested directly into improving young people's education while helping to tackle climate change for the next generation.*

**Michael Shanks** - Energy Minister






## OUTCOMES

The completed 22.05 kWp solar PV system now supplies a significant portion of Essendine Primary School's daytime electricity demand, reducing energy costs and cutting carbon emissions by around 4.5 tonnes per year.

By lowering operational costs, the installation allows more of the school's budget to be directed towards educational priorities while providing pupils with a visible, hands-on example of renewable energy in action.

Delivered through the Greener Schools initiative, the project demonstrates how targeted investment can help schools operate more efficiently and contribute to the city's net-zero ambitions.

## IMPLEMENTATION

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**Assessment:** A full roof and structural survey was completed to assess shading, roof loading, and electrical infrastructure.
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**System design:** The array layout and electrical configuration were modelled to maximise generation, efficiency, and compliance with building and electrical standards.
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**Mounting system:** Renusol Hook & Rail mounting system was installed, with Genius Interflash at each hook position, for a reliable, long-term, watertight seal.
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**Installation:** 49 × JA Solar modules were mounted and DC cabling was routed to the inverter. The system was commissioned, with Solis monitoring enabled to track power generation and performance.
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**Pigeon-proofing:** Our flagship pigeon-proofing system, SolaSkirt®, was installed around the array to prevent nesting and preserve both the appearance and performance of the solar installation.



ANNUAL OUTPUT



**17,366**

kWh CLEAN ENERGY

ANNUAL REDUCTION



**3.9**

TONNES OF CO<sub>2</sub>

ANNUAL SAVINGS



**£4,300**

ELECTRICITY & EXPORT



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