

# FAYRE FIELDS

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# MATTWELL HOMES



## INTRODUCTION

Mattwell Homes – a Surrey-based developer recognised for building homes that combine character with forward-thinking technology – integrated renewable energy into its five-property development in Loxwood. Each home was designed to blend distinctive architectural features with modern energy performance, giving homeowners a space that is both beautifully crafted and future-ready.

Titan Eco was appointed to design and install bespoke solar PV systems for each property, ensuring every home benefits from efficient on-site generation. The project reflects Mattwell's commitment to design excellence and sustainability, showing how renewable technology enhances the appeal and performance of high-quality new-build housing.

## SYSTEM COMPONENTS

- ✓ **Solar panels:** 37 × DMEGC 450 W All-Black modules (16.65 kWp) across five houses – high efficiency panels with a clean aesthetic, from a Tier-1 manufacturer.
- ✓ **Inverter:** A mix of 2 × Solis 2.5 kW, 2 × Solis 3 kW and 1 × Solis 3.68 kW single-phase inverters – ensuring each system was optimally matched to its generation capacity for reliable performance and efficient power conversion.
- ✓ **Mounting system:** GSE in-roof framework – providing a watertight, flush-fit design that delivers a visually appealing aesthetic that has the potential to enhance property value.



# IMPLEMENTATION

- Assessment & design:** Working from Mattwell's architectural plans, the five individual PV systems were modelled to meet SAP requirements and comply with DNO limits. Array layouts were then developed to optimise orientation, and visual balance, and inverters were selected to ensure consistent performance and regulatory compliance across all properties.
- Installation:** The GSE in-roof mounting systems were installed during the roofing phase, allowing the solar panels to sit flush within the roofline and preserve the development's clean, coordinated aesthetic. Electrical containment, cable routes and inverter locations were planned in collaboration with the site contractor to ensure safe integration with the building fabric, efficient cable management and straightforward long-term maintenance access.
- Commissioning:** The inverters were fed into the fuse boards and the systems tested and commissioned. We then generated the MCS certificates, notified the DNO and building control, and provided a handover pack for each property, including system documentation, and warranty information.



# OUTCOMES

Collectively, the five solar PV systems provide a total capacity of 16.65 kWp, generating around 15,800 kWh of clean electricity each year and reducing carbon emissions by approximately 7 tonnes.

The in-roof mounting and high-efficiency modules ensure long-term performance with minimal maintenance, preserving the clean architectural lines of the development while providing lasting value for future homeowners through lower running costs and dependable on-site renewable power.

By integrating solar technology from the outset, Mattwell Homes has strengthened the sustainability and appeal of this development – showing how well-designed renewable systems can add lasting environmental and operational value to new-build housing.

ANNUAL OUTPUT

 **15,800**

kWh CLEAN ENERGY

ANNUAL REDUCTION

 **7**

TONNES OF CO<sub>2</sub>

ANNUAL EQUIVALENT

 **300**

TREES PLANTED