

# EPSOM PLAYHOUSE

## EPSOM & EWELL BOROUGH COUNCIL



### INTRODUCTION

Epsom Playhouse – a much-loved theatre and local cultural landmark – installed a rooftop solar PV system with battery storage, in alignment with Epsom & Ewell Borough Council’s commitment to be carbon neutral by 2035 under its Epsom & Ewell Borough Council Climate Change Action Plan.

The installation has helped the venue to cut energy costs, strengthen energy resilience and reduce its environmental impact - and was later recognised with a commendation at the **Regional Energy Efficiency Awards**.

“ The impact of the solar installation has been remarkable. Epsom Playhouse is now benefitting from clean renewable energy, significantly reducing our carbon footprint and operating costs by around a third. I want to express my sincere gratitude to the entire team at TitanEco for their exemplary work on this project. I recommend TitanEco to any organisation seeking a top-tier solar PV installation partner.

**Tony Foxwell** - Senior Surveyor at Epsom & Ewell Borough Council

ANNUAL OUTPUT

 **34,000**

kWh CLEAN ENERGY

ANNUAL REDUCTION

 **9**

TONNES OF CO<sub>2</sub>

ANNUAL SAVINGS

 **£13,000**

ELECTRICITY & EXPORT



## IMPLEMENTATION

- **Assessment:** Site survey and structural evaluation to identify optimal array placement.
- **System design:** Detailed layout and performance modelling to maximise yield.
- **Mounting system:** Installation of pitched and flat roof mounting structures.
- **Solar panels & optimisers:** Secure integration of 90 × all-black panels with dual optimisers.
- **Battery storage:** Integration of two Tesla Powerwalls for flexible energy use.
- **Pigeon-proofing:** Application of our premium pigeon-proofing system, SolaSkirt®, for protection and enhanced aesthetics.
- **Integration:** Seamless connection of inverter, optimisers and monitoring systems.
- **Commissioning:** Final testing to ensure safe, reliable system performance.

## SYSTEM COMPONENTS

- ✓ **Solar panels:** 90 × 430 W Jinko all-black panels (38.7 kWp) - delivering high output and efficiency.
- ✓ **Inverter & optimisers:** SolarEdge SE-33K inverter paired with SolarEdge P950 optimisers - for efficient energy conversion and panel-level performance monitoring.
- ✓ **Mounting system:** K2 pitched roof mounting system and Van Der Valk Pro flat roof mounting - providing a stable platform with strong load distribution and weather resilience.
- ✓ **Battery storage:** 2 × Tesla Powerwall units (27 kWh storage) - capturing excess solar energy to maximise efficiency, enable export to the grid and provide back-up power.
- ✓ **Pigeon-proofing:** Our premium SolaSkirt® system - for discreet protection with an architectural finish.
- ✓ **Monitoring:** A small display screen was installed in the foyer, showing live data from the SolarEdge monitoring platform.

## OUTCOMES

The solar system generates around 34,000 kWh of clean energy each year, cutting Epsom Playhouse's reliance on the grid and saving an estimated £13,000 annually. Battery storage strengthens energy security and flexibility, while SolaSkirt® protects the system and enhances its appearance.

Together, these measures support the Council's environmental goals and deliver lasting operational and financial benefits.

