



SAMSON MOTOR ENGINEERS CASE STUDY

PROJECT OVERVIEW

Samson Motor Engineers is an independent motor engineering and servicing workshop on Ferndown Industrial Estate in Wimborne, Dorset. With ramps, compressors and diagnostic equipment drawing power throughout the working day, the garage partnered with DES Renewables to install a 15 kWp rooftop solar PV system that offsets that demand at source.

Samson Motor Engineers commissioned DES Renewables to install a 15 kWp rooftop solar PV system, connected into the workshop's existing three-phase commercial supply. The project ran over roughly three months, covering design, the DNO application, planning and commissioning, with the Electrical Installation Certificate issued on 2 April 2024.

PROJECT DETAILS

Company Name: Samson Motor Engineers
Location: 1a Cobham Road, Ferndown Industrial
Estate, Wimborne, Dorset BH21 7PE
Solar System Capacity: 15 kWp
Installation Type: Rooftop solar PV on a three-
phase commercial supply
Project Timeline: Around three months from
design to commissioning, certified 2 April 2024





OBJECTIVES

Reduce electricity costs

- Offset the workshop's heavy daytime electrical demand with power generated on site
- Reduce running costs for ramps, compressors and diagnostic equipment
- Integrate cleanly with the garage's existing three-phase commercial supply
- Cut reliance on grid electricity and lower the business's carbon footprint
-



BESPOKE ASSESSMENT AND DESIGN

INITIAL ASSESSMENT

DES Renewable Energy conducted a comprehensive assessment of roof space, structural considerations, sun exposure, and interlocking constraints. This ensured optimal placement and system sizing to maximise energy production and long-term reliability.

PERMITTING AND APPROVALS

DES Renewable Energy ensured compliance with building regulations, electrical standards, and industry best practices. All necessary permits and approvals were obtained to guarantee a fully compliant and safe installation.



SYSTEM DESIGN

The 15 kWp rooftop array was connected into the workshop's three-phase commercial supply (TN-C-S earthing) via a 25 mm supply from an 80 A switched fused isolator at the incoming position. The PV circuit is wired in 6 mm five-core H07 cable on cable tray and protected by a C32A three-phase MCB.



+44 1202 985888



www.desrenewables.com



info@desrenewables.com

INSTALLATION AND COMPLETION

INSTALLATION AND COMMISSIONING

The installation was carried out with minimal disruption to the day-to-day site operations. Panels were securely mounted, connected to the inverter, and integrated with the existing electrical system. Comprehensive testing and commissioning verified the system's performance, functionality, and safety.

WHERE DES RENEWABLE ENERGY ADDS VALUE:

From initial assessment to completed commissioning, DES Renewable Energy provides a turnkey solution that ensures optimal energy generation, regulatory compliance, and sustainable operational savings.



+44 1202 985888



www.desrenewables.com



info@desrenewables.com

AT A GLANCE

- 15 kWp rooftop solar PV system
- Independent motor engineering and servicing workshop, Wimborne
- Connected into the workshop's three-phase commercial supply (TN-C-S earthing)
- 25 mm supply from an 80 A switched fused isolator at the incoming position
- PV circuit in 6 mm five-core H07 cable on cable tray, protected by a C32A three-phase MCB
- Measured Z_e 0.180 ohms, prospective fault current 1.107 kA, PV circuit Z_s 0.25 ohms
- Electrical Installation Certificate issued 2 April 2024
-



BENEFITS

- Energy Cost Reduction: solar generation offsets the workshop's demand exactly when ramps, compressors and diagnostics are in use
- Environmental Impact: on-site renewable generation reduces the garage's carbon footprint
- Financial Returns: lower electricity costs support the long-term running of the business
- Compliant Installation: delivered by an MCS and NAPIT certified installer, with the Electrical Installation Certificate issued 2 April 2024
-



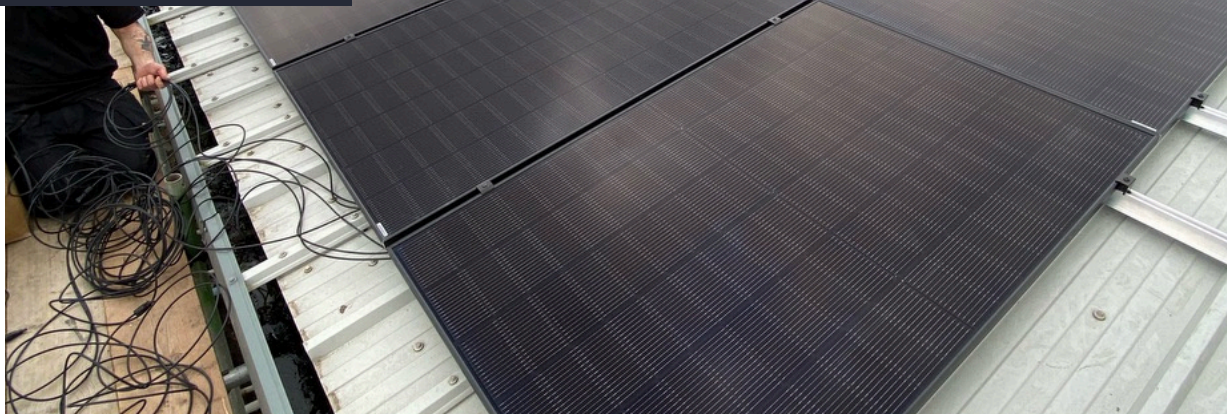
+44 1202 985888



www.desrenewables.com



info@desrenewables.com



OUR ACCREDITATIONS

We are MCS Certified which guarantees that our installations have been designed, installed, and commissioned to the highest standard using only MCS certified products.

We are also NAPIT Certified which confirms that we are certified to install and self-certify all of our electrical installations. We also comply with the Renewable Energy Consumer Code (RECC).



Electrical Safety
Register