DES
RENEWABLE ENERGY

DUMPTON SCHOOL WIMBORNE

PROJECT OVERVIEW

Dumpton School, located just a mile from Wimborne, Dorset, is a co-educational day school for children aged 2 to 13. The school is set within a beautiful 26-acre campus that features a blend of historic and modern facilities.

In March 2023 the school commissioned a report from Low Carbon Dorset to review their carbon footprint. The PV array was one of the recommendations to work towards our net zero ambitions. Financial constraints during the original construction of the sports hall meant the solar PV was not installed in 2019. Grant income was made available to us which meant the project was economically viable. The Dumpton School met with 4 companies and obtained quotes from each. These were assessed by Low Carbon Dorset and DES Renewable Energy were easily the best option. From a personal point of view DES were the easiest to deal and very professional.

This case study highlights the planning, installation, and positive impact of the solar PV system on the school's operations and sustainability targets

DUMPTON SCHOOL
WIMBORNE

PROJECT DETAILS

Company Name: Dumpton School
Location: Wimborne
Solar System Capacity: 113.75kWp
Installation Type: Rooftop solar panels
Project Timeline: 3 months (from design, DNO application, planning to commissioning)

OBJECTIVES

Reduce electricity costs

By generating renewable energy onsite, Dumpton School aimed to reduce its reliance on grid electricity and lower its operational expenses.

Environmental sustainability

The installation of a solar system aligned with Dumpton School's sustainability goals, allowing them to reduce their carbon emissions and showcase their commitment to environmental responsibility.

Long-term financial returns

The school's energy costs rose significantly as a result of the Ukraine conflict. They wanted to reduce their exposure to these geo-political issues. It has been the ambition of the school to move towards net zero as quickly as possible but the combination of sharp price increases and the support from Low Carbon Dorset enabled the project move further up the school's development plan.

BESPOKE ASSESSMENT AND DESIGN

INITIAL ASSESSMENT

Dumpton School engaged DES Renewable Energy to conduct a comprehensive assessment of their energy consumption, available rooftop space, and sun exposure. This assessment helped determine the optimal system size and design.

PERMITTING AND APPROVALS

DES Renewable Energy are a Micro Generation Certification Scheme (MCS) approved installer and NAPIT accredited Electrical Contractor. They obtained the necessary Distribution Network Operator (DNO) approval, permits, and ensured compliance with building codes and regulations.

SYSTEM DESIGN

Based on the assessments, DES Renewable Energy designed a 250 x 455w system. The designs considered factors such as roof load capacity from the commissioned structural engineers report, shading analysis, and electrical integration with the existing infrastructure.

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INSTALLATION AND COMPLETION

INSTALLATION PROCESS:

The installation team carefully mounted the solar panels on the Dumpton School's rooftop, ensuring proper alignment and structural integrity. The panels were connected to central inverters and integrated with the existing electrical infrastructure.

WHERE DES RENEWABLE ENERGY ADDS VALUE:

Thorough Assessment

A comprehensive energy assessment and detailed site analysis are crucial to determine the optimum system design and accurately forecast energy production.

Collaboration with Experts

Partnering with an experienced solar energy installer such as DES Renewables, ensures a smooth installation process, adherence to regulations, and maximum energy generation.

TESTING AND COMMISSIONING:

Once the installation was complete, comprehensive testing and commissioning were carried out to verify the system's performance, safety, and functionality. This involved conducting thorough inspections, system monitoring setup, and electrical connectivity tests.

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AT A GLANCE

- Thorough consultation and customer engagement
- 250 x 455w system
- System generating an average of 114,797kWh of clean energy annually
- Combined 29 tons of CO2 emissions reduced per year
- Combined equivalent of planting 5,613 trees annually

TESTIMONIAL

We were extremely happy with the professional manner we were dealt with from initial consultation/quote to installation. Nothing was too much trouble and any issues were handled in a professional manner by Jason and Jack on site. Most important for us was that the project was started and finished on time. We were very impressed with the groundwork team who left the site exactly how they found it which was really appreciated. I would fully endorse and recommend DES for future projects and would happily provide references.

JUSTIN PERRY
Dumpton School, Wimborne

Energy Cost Reduction:
The solar system generates an average of 114,797kWh of clean energy annually, offsetting a significant portion of Dumpton School's electricity consumption. This led to a substantial reduction in energy costs, resulting in estimated savings of £30,000-£60,000 per year.

Public Image and Stakeholder Engagement:
The installation of a commercial solar system boosted Dumpton School's public image as an environmentally responsible school. It resonated positively with staff, pupils and parents, demonstrating the School's commitment to sustainable practices.

Financial Returns:
Dumpton School weighed up the upfront costs vs electricity bills and voted to move forwards with the solar system installation to become energy self-sufficient and beyond the payback period be in net profit. Additionally, the school will benefit from net metering, allowing them to sell excess electricity back to the grid and further enhance their financial returns.

Environmental Impact:
By adopting solar energy, Dumpton School contributed to environmental sustainability. The solar system is estimated to reduce carbon dioxide emissions by approximately 29 metric tons per year, equivalent to planting 5,613 trees annually.

DES
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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).

MCS

RECC
RENEWABLE ENERGY CONSUMER CODE

NAPIT

iwa
DEPOSIT & GUARANTEE PROTECTION

City & Guilds

Electrical Safety Register

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