



# Denham Solar Bus Shelter

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Case Study





Marlec Engineering is the UK's longest-established renewable energy company, manufacturing wind and solar solutions for off-grid power.

Since 1978, our systems have provided reliable, sustainable energy for Railways, Highways, Telecoms, Marine, Leisure industries, Town & Parish Councils. Our solar solutions are designed for durability, efficiency, and easy installation.

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## Case Study



Denham is a historic village in the south of Buckinghamshire, England. The Denham Parish Council has served its community for over 130 years, maintaining the village's character, supporting residents, and prioritising safety.

Today, the council is committed to becoming a net-zero community. While continuing to provide traditional brick-built bus shelters to preserve urban standards and conservation values, the council also recognised the opportunity to improve safety, sustainability, and public confidence.

### Client need

- A reliable, maintenance-free solar lighting system
- Cost certainty with no hidden expenses
- Off-grid operation to reflect environmental commitment
- Quick, disruption-free installation
- Improved safety for residents at night

## The Challenge

Denham Parish Council faced several difficulties in addressing the safety and usability of its bus shelters:

- Low visibility at night, leaving residents dependent on mobile phones for light
- Increased risk of crime due to poorly lit waiting areas
- Vandalism and damage to bus shelters
- Anti-social behaviour within the shelters
- Instances of inappropriate use, including misuse as a toilet
- Concerns for families and lone travellers after dark
- Difficulty for bus drivers in spotting passengers in unlit shelters
- Restrictions on digging or civil works within pavements

## Solution

Marlec delivered an easy-to-install, fully off-grid solar system to provide dependable year-round lighting. The solution included:

- **LC101 Controller** – An intelligent, plug-and-play unit enabling custom lighting schedules
- **LED Shelter Lights** – High-efficiency LEDs are activated via a PIR sensor when someone enters the shelter
- **Solar Panels** – Roof-mounted for optimal energy generation
- **AGM Batteries** – Durable storage for consistent, reliable performance
- **Pre-configured Cabling** – Quick installation with minimal disruption

This cost-effective solution removed the need for a mains connection, cutting both installation costs and long-term maintenance requirements.



## The Results

- Bus shelters are fully illuminated with evenly distributed lighting
- Seasonal schedules optimised for shorter winter days
- Vandal-resistant light and secure battery housing
- Residents report greater confidence and safety while waiting
- Improved visibility for bus drivers at night





Discover how Marlec's renewable solutions can enhance your sustainability efforts.

Get in touch today

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