

An aerial night photograph of Clacton-on-Sea, showing a coastal cycle path illuminated by a series of warm white lights. The path runs along the coast, separating a residential area from the sea. In the background, a large town is visible with its lights reflecting on the water. The foreground shows a residential neighborhood with houses and streets also lit up.

Case Study | Clacton-on-Sea

Off-Grid street lighting installation on coastal cycle path
Powered by 100% clean, green renewable energy

Customer

Essex Highways

Project

Install Off-Grid street lighting along 1 km upgraded coastal path

Location

Clacton-on-Sea to Jaywick Sands, UK

Product

Kight KV-2 Off-Grid Street Light. 100% renewable energy powered hybrid wind and solar powered

Duration

Installation completed in one week with no requirement for cabling, trenches or connections

Key Facts

- 32no off-grid streetlights
- Total distance 1km
- 100% renewable energy
- No 'back-up' grid connection
- Energy saving 50,800 Kwh over lifecycle
- co2 saving -9,800 kg over lifecycle
- Installation time of columns - 5 days



The Challenge

Essex Highways wished to install a sustainable, eco-friendly and reliable permanent lighting solution for its new cycling path, part of the South East Enterprise Partnership funded Essex Pedal Power Scheme. The project aims were to reduce overall environmental impact and minimise maintenance costs whilst providing value for money.

The Solution

Kight's Off-Grid hybrid wind and solar street lighting was chosen because its advanced technology provides reliable year-round lighting in all UK conditions. The customer was impressed with the specially designed proprietary battery technology which enables simultaneous dual input from solar and wind power, with no loss of efficiency in freezing temperatures and a life expectancy in excess of 25 years. On-grid alternatives would have been much more expensive to install, requiring 1km of connecting trenches and a similar quantity of cabling, plus grid connections.

The Result

The upgraded walking route enables cyclists and walkers to take a well-lit safer, traffic-free direct route between Clacton-on-Sea and Jaywick Sands. The maintenance free Kight Off-Grid solution boasts zero running costs and stepped programmable lighting levels that are remotely adjusted and monitored via the custom client dashboard.

Energy savings: 100% powered by wind and solar, the energy savings over the 20 year minimum lifespan are estimated to amount to 50,800 Kwh, compared to using a traditional on-grid lighting scheme.

Carbon emission savings: in excess of 9,800 kg over 20 years.

Why Kight Off-Grid?

Essex Council wanted “*state of the art specialist solar and wind powered lanterns which harness the wild nature of the site to power themselves*”.

“Active Travel is better for the environment, better for people’s health, reduces congestion and avoids creating pollution. Providing access to sustainable forms of transport is a key part of Essex County Council’s ambitions for climate action and our wish to provide people with alternative ways to travel.”

- Lee Scott, Essex County Councillor responsible for highways maintenance and sustainable transport.

