



A14 Team Lights Up with Sunshine as Standard

The Highways England A14 Cambridge to Huntingdon improvement scheme has become the first UK project to switch to temporary lighting powered by sunshine in preference to diesel. The A14 Integrated Delivery Team (IDT), working on behalf of Highways England, is currently the largest user in the country of year-round temporary solar trailer lights.

Using temporary solar lighting wherever possible will save the A14 project more than 1,000 tonnes of CO₂ over the course of construction, contributing significantly to Highways England's environmental impact goals and supporting its commitment to source all project electricity from 100% renewable sources.

Carbon Savings

A total of 24 Prolectric ProLight solar lighting towers have now been deployed at the three compounds along the construction route between Cambridge and Huntingdon, illuminating site operations and helping to protect worker safety. As a result, a saving of 264,000kgs of CO₂, 98,800 litres of diesel, and £80,454 of manpower costs have been achieved in the past 12 months.



Highways England Project Director David Bray said:

“Highways England’s environmental strategy seeks to help protect, manage and enhance the quality of the surrounding environment.

“The use of Prolectric solar powered lights on the project is an excellent innovative approach by the A14 Integrated delivery team. The use of renewable power sources on the A14 scheme helps us to work in greater harmony with the environment.”

Like for Like Performance

The Prolectric ProLight provides reliable year-round solar-powered temporary lighting, offering ‘like-for-like’ performance as an alternative to diesel, with powerful LED illumination. The trailer-mounted battery capacity has been developed to be three times that of any other temporary solar trailer lights, so that even on winter days with 16 hours of darkness, the unit operates consistently and reliably.

Trials of a ProLight solar lighting tower were initially conducted on the Brampton compound in March 2016, to assess the potential use of solar power as an alternative to conventional diesel-generator lights. Following a successful evaluation, the A14 IDT bought a further six units.



Now a total of 24 ProLights are deployed on the project in preference to diesel-powered lighting wherever possible.

Diesel and Manpower Savings

Vinny McCabe Senior Works Manager for Section 3 said:

“Since the initial trials, our use of the ProLights has increased and we are now able to remove diesel lights wherever we can. We are using ProLights to illuminate two newly-constructed permanent roundabouts, enabling works traffic movements and site safety until permanent street lighting is introduced. Further lights are illuminating temporary bridges and laydown areas to enable safe loading and offloading of construction materials.

“Using the lights has saved hugely on our diesel costs and just as important have been the savings in manpower. The ProLights operate automatically, so we have saved the costs of paying two workers to return to a diesel light and switch it off in the morning and on again at night, especially at weekends.

“Without diesel, there is no danger of an environmental impact through spills and no need to move temporary lights away from sensitive areas such as watercourses, before refuelling.”





All ProLight solar units used on the A14 have been fitted with an upgrade that enables the works team to power 1800w hand tools with the solar energy generated and stored in the light's battery system. The enhancement has increased the team's ability to reduce carbon impact, as well as removing the noise and fumes of diesel generators.

Fitted with a micro-controller and GPS, the 'smart' technology of the ProLights enables on and off times to be controlled automatically, while power usage and carbon savings data can be monitored and recorded via a web portal.

Remote Monitoring and Control

Although all customers have real-time web access to a Remote Monitoring Service, Prolectric can also provide daily monitoring and control to optimise the performance of each unit, as well as regular reports of a range of performance data including carbon savings.

Eric Milne, Section 2 Senior Works Manager, was involved in the early trials and has continue to use the lights: "The great thing about Prolectric's ProLights is that we haven't had to touch them since they were delivered," he said: "If we want to change the on/off setting we can simply call Prolectric and they will adjust the time setting using their portal. It makes sense for us to use our site resources elsewhere and let Prolectric manage the lights for us and ensure we get optimal usage from them."

The A14 is the UK's biggest road construction project with a £1.5bn budget to upgrade 21 miles of trunk road between Cambridge and Huntingdon. A 2,000-strong construction team is at work with a target for completion in December 2020.

A14 Integrated Delivery Team

Prolectric ProLight Solar Tower

vs.

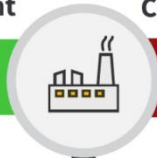
Diesel Tower

A14 Project - 2017/18

Brampton, Swavesey and Ermine Street Compounds
24 x ProLight Solar Tower Lights used during 2017/2018

Carbon Emissions - ProLight

Zero

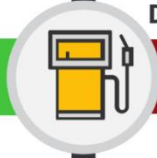


Carbon Emissions - Diesel Tower

Up to **264,000 Kg**

Diesel Usage - ProLight

Zero

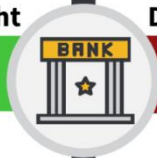


Diesel Usage - Diesel Tower

Up to **98,600 Litres**

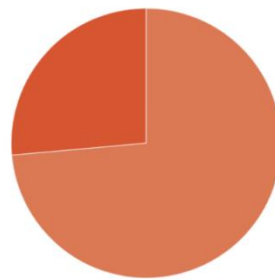
Diesel and Manpower Costs - ProLight

Zero



Diesel and Manpower Costs - Diesel Tower

£ 80,454



● Diesel Costs £ 59,192 ● Manpower Costs £ 21,262



For more information about ProLight and ProTemp solar lighting from Prolectric visit www.prolectric.co.uk or contact chris.williams@prolectric.co.uk.

About Prolectric

Prolectric is a specialist manufacturer and expert provider of solar lighting and wind power technologies, based in Clevedon, Somerset, UK.

We were the first company to introduce permanent solar-only street lights to the UK market in 2011 and now, with more than 3,000 units installed nationally, we are the clear market leaders. Permanent and temporary solutions are offered for hire or purchase to customers in infrastructure and construction projects, as well as for outdoor events.

We are committed to developing our specialist knowledge in design, manufacturing and performance to deliver well-engineered, robust and reliable solutions that provide real and measurable cost and operating efficiency benefits to our customers, as well as making a positive contribution to a better environment.