

zeta

Specialist Lighting

BEAR Scotland, Perth

BEAR Scotland is a leading infrastructure management and maintenance organisation with responsibility for maintaining Scotland's trunk road network in the North East and North West. The company selected Zeta Specialist Lighting's Solar LED Brick to illuminate a cycle path adjacent to the A9, north of Perth, a project it was managing for its client Transport Scotland.

The Challenge



A cyclist fatality on the A9 dual carriageway highlighted a pressing requirement to illuminate the adjacent 1.5 km long cycle path, to encourage more people to use it during the hours of darkness. In consultation with the local council, BEAR Scotland looked for a solution that would enhance security and improve visibility for cyclists and pedestrians in the evenings and early mornings.

Ensuring the safety of drivers was of paramount importance. BEAR Scotland didn't want to install lighting that could potentially distract drivers on that stretch of the A9, solar studs or cat's eyes for example, could be mistaken as an extra lane.

As the cycle path is sited in a rural location, it was essential that the lighting was not intrusive, which ruled out street lighting. There were also additional cost implications associated with laying the infrastructure for an on-grid solution. BEAR Scotland also wished to avoid painting white lines as it's a shared facility remote from the carriageway and this would also present an ongoing maintenance requirement.

The Solution

BEAR Scotland visited Zeta at Traffex and saw the Zeta Solar LED Brick, an off-grid LED solution that produces effective, even illumination, is waterproof, shock and pressure resistant.

Widely used for pathways and exterior wall lighting, this energy-saving, easy to install and maintenance free solution uses super capacitor technology to store the sun's energy during the day, even during cloudy days, providing efficient, effective light output during the hours of darkness. The solar energy stored powers the LEDs for over twelve hours per charge and the Solar LED Brick lights up automatically at dusk and switches off at dawn.



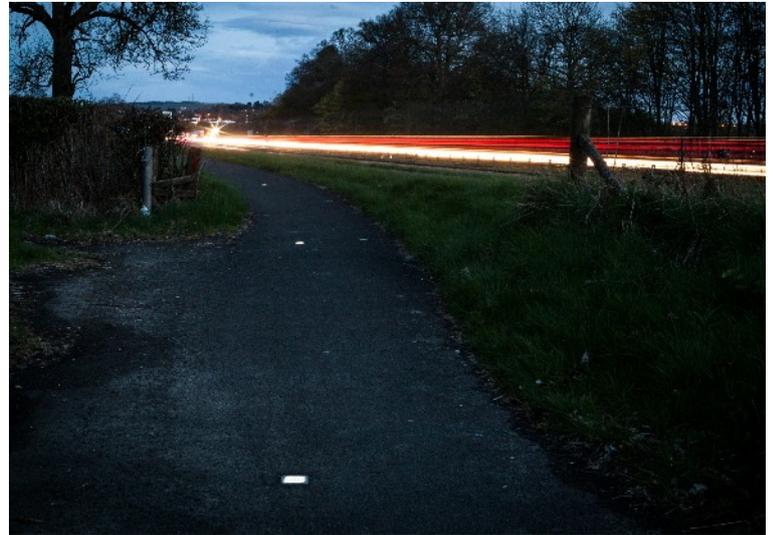
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Key Benefits

BEAR Scotland installed the Zeta Solar LED Bricks along the centre of the path at 18 metre intervals where there were no hazards, and at nine metre intervals at give way points. IP68 rated, Zeta's Solar LED Bricks are waterproof, shock resistant and pressure resistant.

One of the biggest benefits is that the Solar LED Bricks sit flush along the path, unlike cat's eyes which sit proud on the surface; meaning there are no bumps, which eliminates the risk of cyclists hitting them with tyres or pedestrians tripping over.



Compared with traditional lighting, Zeta's Solar LED Bricks delivered a cost-efficient, long-term sustainable solution. The overall environmental impact of solar-powered lighting is much lower than a mains-powered solution. Both the cost and time associated with installation is also significantly less; running costs are zero, and as the typical lifetime of the LEDs is 39,500 hours, there is no requirement for ongoing maintenance.

The even illumination provided along the path is not intrusive in this rural setting nor does it distract other road users, instead it delivers targeted light in an area previously unlit, thus enhancing the safety of local residents using it during the hours of darkness.



“High level lighting was not suitable in this area, the Zeta Solar LED Brick provided us with an idea solution for this unique requirement. There is no other product like it. We are also considering other locations where we can install Solar LED Bricks to provide illumination.”

Eric Hill, Senior Engineer Road Safety, BEAR Scotland North West Unit

Solution

- Zeta Solar LED Brick