

Case Study

Maintaining road safety

10 years on with active road studs

Background

Located about two miles north of Newport, the A467 is an unlit dual carriageway between Pontymister and Bassaleg which provides a key route from the north to and from the M4 and the city. The road had previously used active solar powered road studs, instead of traditional retro-reflective road studs, to provide enhanced delineation and safety, particularly on the bends and junction.

However approximately 10 years after their initial installation some of the studs had reached the end of their working life and the road was scheduled for resurfacing improvements. Newport City Council were faced with the decision; delineate the road with less effective retro-reflective studs or maintain the safety features by reinstalling new solar powered road studs.

Solution

Clearview Intelligence flush road studs were deployed for this project run by Balfour Beatty Mott MacDonald, due to their proven track record of reducing night time accidents by over 70% and their nonintrusive nature and use of solar power, therefore not requiring power infrastructure which was perfect for the locality.

The SolarLite flush road studs use 'smart' technology which stores solar energy during the day. Built-in Light Emitting Diodes automatically illuminate from dusk to dawn, marking the road by up to 900 metres in advance, providing drivers with up to ten times more time to react to the layout of the road ahead.

"The SolarLite Active Road Studs offer improved delineation of the road layout and even in varying conditions, such as rain and fog, the studs remain more visible than traditional retro-reflective studs. This delivers enhanced safety benefits for drivers which we were eager to maintain through like-for-like replacements during the resurfacing works." **Lee Benham, Assistant Systems Engineer at Newport City Council**

Solution

Having previously experienced the benefits of solar powered road studs, including an operational life span of approximately 10 years, Newport City Council opted for a like-for-like replacement. Clearview's SolarLite Active Road Studs were chosen as they are the only Active Road Stud product which is Type Approved to Highways England standards.

The studs are proven for effectiveness in delineation, longevity and resilience. Unlike retro-reflective studs, which are reliant upon the beam of a headlight to be seen up to 90 metres away, the SolarLite Active Studs proactively emit light through an LED that is visible from 900 metres. By offering ten times more visibility, the studs provide ten times more reaction time compared to retro-reflective studs. This means a vehicle travelling at 60 mph has more than 30 seconds to respond to changes in the road compared to the 3.2 seconds offered by retro-reflective studs.

The studs are also visible in all driving conditions, including rain and fog when effective delineation is of upmost importance. Having been satisfied with the previous performance of active solar road studs, Newport City Council chose to invest in maintaining the status quo and the associated safety benefits for drivers.

Key Benefits

- Ten times more visibility and reaction time compared to retro-reflective studs
- Operational lifespan of up to 10 years – up to four times longer than reflective studs
- Flush to the road surface – safer for motorcyclists and less prone to damage from vehicles
- Visible in all weather conditions including rain and fog
- Solar powered – no need for mains power