

Case Study

Maintaining accident

reductions 10 years on

Background

In 2003/ 2004, Buckinghamshire County Council was seeking to make improvements to its highways as part of a casualty reduction scheme. Rural roads with tight bends and a lack of streetlighting presented challenges to drivers, particularly along major routes such as the A4128 in High Wycombe and the A413 at the Adstock Bends, to the south of Buckingham.

The council chose to improve delineation along the routes and upgraded from traditional retro-reflective road studs to Clearview's SolarLite Active Road Studs. Following installation, accident rates reduced along the route and 10 years later, when the A4128 and A413 were due for resurfacing, the council was faced with a decision; reinvest in SolarLite Active Road Studs or return to retro-reflective studs in response to a reduction in accidents.

Solution

Recognising the installation of the solar studs had a direct correlation to the reduction in accidents, Buckinghamshire County Council chose to maintain the status quo. The council opted to invest in more SolarLite Active Road Studs and continue with the improved route safety benefits and reduced accident rates.

The studs proactively emit light through an LED, unlike traditional retro-reflective road studs which rely upon the reflection of a headlight beam to be seen. This provides visibility from up to 900 metres away which is 10 times further than the traditional 90 metres of visibility provided by retro-reflective road studs. This, in turn, provides 10 times more reaction time for drivers to respond to changes in the road ahead, so a car travelling at 60mph on a road with SolarLite Active Road Studs will have more than 30 seconds to react, as opposed to just three seconds with reflectors.

Buckinghamshire County Council found the studs to be so effective that it chose to extend their use. Upon receipt of a grant from the Safer Roads Fund, the council installed more SolarLite Active Road Studs along a stretch of the A40 between Stokenchurch and High Wycombe. The road had been subject to accidents and, having been impressed with their bright, long lasting and proven performance on the A4218 and A413 (as well as other installations of solar studs within the county) the council had no hesitation in installing additional SolarLite Active Road Studs.

Key Benefits

- Enhanced road delineation for drivers creates up to 10 times increased reaction time
- No need for mains power, thus opening up use across rural roads
- Safer for motorcyclists and less prone to damage due to flush surface design
- Cost effective; operational lifespan of up to 10 years is four times longer than retro-reflectors
- Reduced maintenance reduces driver disruption and roadworker risks

