

Using digital technology to enhance traditional traffic management provision

A taper strike on the A45 Chowns Mill Improvement Scheme which took out 50 cones and eight sequential lamps, was detected, assessed and reinstated in less than an hour thanks to the implementation of digital technology into the temporary traffic management plans.



The Challenge

Chevron TM are contracted by Highways England to provide temporary traffic management for the A45 Chowns Mill Roundabout Improvement Scheme. Pre-COVID-19, the TTM requirement was to accommodate existing capacity by installing narrow lanes on all dual carriageway approaches to the roundabout. With reduced traffic volumes during lockdown, an alternative TTM design was proposed which was to change from four narrow lanes to three permanent lane closures to increase the working area.

To support this alternative design and ensure that the safety of road workers and road users was not compromised, Chevron TM recommended using the HRS Intellicone Smart Taper as an enhanced safety measure. This provides an additional layer of digital protection to road workers and the general public while the closures are in place.

The Incident

On 11 February 2021, a taper strike occurred on A45 Eastbound taper. Thanks to the deployment of the Intellicone Smart Taper technology, the TSCO received an immediate alert, advising him of the time, exact location and damage caused by the strike. 50 cones and eight sequential lamps were removed by the strike which left the approach to the lane closure vulnerable to an incursion. With debris strewn across the carriageway, there was also a significant risk to road users.

Highways England A45 Chowns Mill Highways

Within seven minutes of the alert and working on the information provided by the Intellicone Smart Taper, the TSCO had deployed an IPV and arranged for a cross-load of cones from the IPV to the maintenance vehicle to take place at a safe location prior to deploying into a live lane.

Within 20 minutes of the strike, the IPV was operating in the live lane, protecting workers while the process of clearing the debris and reinstating the taper was underway. It took just 58 minutes to clear the carriageway and reinstate the taper following the strike.

“The taper strike on the A45 Chowns Mill Roundabout had the potential to cause accidents and injury to road workers and road users. We were able to minimise this risk dramatically thanks to the Intellicone Smart Taper which allowed us to detect, access and reinstate the traffic management system without delay. For me, it was digital technology at its best and confirms that the Intellicone Smart Taper should be used on every taper as a matter of course.”

**Matt Morphet, Chief Operating Officer —
Chevron TM**



11 February 2021

- 15.11** Taper strike occurs
- 15.11** TSCO receives alert advising of location and damaged caused by strike
- 15.12** TSCO deploys maintenance crew to taper
- 15.14** Maintenance crew requests IPV to support reinstatement of taper
- 15.20** IPV and Maintenance meet to cross-load cones to replace damaged cones
- 15.29** IPV cover deployed in live lane to allow taper reinstatement to commence
- 16.08** Taper secured and fully operational
- 16.09** IPV and Maintenance crew leave site

Only 58 minutes from taper strike to reinstatement

In Comparison

Without the use of Intellicone Smart Taper, it is possible that this strike could have remained undetected for up to two hours depending on the timing of the last maintenance drive through. Given the impact of the strike and the debris strewn across the lanes, the risk to worker and public safety would have been severely compromised. The clear-up and reinstallation process would also be much slower causing further disruption to road users.

About HRS Intellicone Smart Taper

The award-winning Intellicone Smart Taper is a digital work zone safety system which provides real-time warnings of taper strikes and incursions, allowing traffic management teams to respond quickly and effectively. It provides a digital layer of protection which improves road worker and road user safety and can minimise delays in the installation of traffic management systems. The automated system can improve control room operations, increase operational efficiency and ultimately save lives.