A78 FAIRLIE TRAFFIC LIGHTS SAVING LIVES

BACKGROUND

On the 14th February 2013, a Heavy Goods Vehicle crashed into a residential property close to the existing signalised junction on the busy A78 in the village of Fairlie, North Ayrshire, tragically killing the inhabitant of the property and causing substantial damage and disruption on local roads.

As a result of this fatality and an ongoing campaign by Fairlie residents for road safety improvements, Transport Scotland and their operating partner for the South West region, Scotland TranServ, conducted a series of traffic surveys which showed frequent occurrences of unsafe driving behaviour and speeding.

Various traffic calming solutions were put in place, including vehicle activated signs on the approach to the village and new road markings such as dragon’s teeth, speed limit roundels and ‘SLOW’ markings. However, follow-up surveys showed that a significant proportion of vehicles were still travelling in excess of the 30mph limit within the village itself.

FIRST USE

Clearview Intelligence worked with TranServ to develop an innovative scheme which would use the existing traffic signals in the village to help slow down speeding drivers. Rather than opt for the more obvious ‘big stick’ approach of speed enforcement cameras, the scheme aims to positively influence driving behaviour and acts as a ‘carrot’ for speed compliance. This concept has already been used successfully in countries such as France, Portugal and Spain.

APPLICATION

The design, managed and implemented by Clearview, with supply chain partners Dynniq Group and Coeval Ltd, incorporated the use of advanced wireless vehicle speed detection, vehicle speed activated signs and existing traffic signals to slow down road users by intentionally stopping them at the signalised junction.

A key challenge was to design the complex operational configurations to ensure that the traffic lights change to red in a safe and timely manner without creating additional dangers for road users or pedestrians at the junction.

Approaching vehicle speeds are calculated using pairs of wireless vehicle sensors upstream of the stop line in both directions. The vehicle speed is relayed to the traffic signals and if speeds are above the set threshold then the traffic signals are programmed to turn to red, thus stopping the speeding traffic and increasing their overall journey time through the village.

BENEFITS

The use of wireless detection technology eliminated the need for costly ducting and trenching that would have had an adverse impact on traffic congestion and caused disruption in the village and could have weakened the integrity of the road surface on this heavily used route. The innovative approach seeks to foster a change in driver behaviour rather than implement enforcement measures for speed reduction.

Vincent Tait, Road Safety Manager for Scotland TranServ said: “We are delighted to be the first in Scotland to introduce these vital road safety measures.”

Policy and Research Director at the Institute of Advanced Motorists, Neil Greig, commented: “Law abiding drivers have nothing to fear from this system. It also offers the opportunity to penalise speeders quickly and fairly. If nothing is gained by speeding, then that can only help reinforce the safety message.”

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