

Case Study

A78 Fairlie traffic lights

saving lives



Installation helps reduce traffic speed through Fairlie, Scotland

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 house inhabitant and causing a large amount of damage and disruption.

The local community were extremely concerned about road safety within the village and campaigned for improvements to be made. As a result, Transport Scotland instructed their operating company for the South West Unit, Scotland TranServ to carry out a number of traffic surveys.

Evidence taken from the surveys identified that there were persistent and regular behaviour issues of drivers passing through the village in excess of the 30mph speed limit.

“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.”

Neil Greig, Institute of Advanced Motorists, their Policy and Research Director

A number of traffic calming solutions were put in place. On the outer approaches to the village vehicle activated signs were erected, as well as new road markings including: dragon's teeth, speed limit roundels and 'SLOW' markings. The 'SLOW' markings on red surface dressing patches were also repeated at strategic locations through the town.

Even with these measures in operation, ongoing surveys showed that a significant proportion of vehicles within the village itself were still travelling in excess of the 30mph limit, with various locations running at an average of between 34 and 36mph.

These survey figures demonstrated that additional and innovative safety measures would be required to further improve the safety of this section of the busy A78 through the village of Fairlie.

Key Benefits ▼

- Improved road safety through the village
- Change in driver behaviour with slower speeds encouraged
- Quicker installation times meaning less disruption to road users and village inhabitants

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Solution

Scotland TranServ engaged in discussions with Clearview on new ideas on how to introduce greater change in driver behaviour, with the aim of further reductions in the average speed through the village.

As a result they agreed to invest an innovative scheme, the first of its kind in the United Kingdom, to use the existing traffic signals in the centre of the village to help slow down speeding drivers.

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 the traffic signals to slow down road users who persisted in driving in excess of the 30mph speed limit by stopping them on purpose at the signalised junction which acts to steady their progress through the village.

Approaching vehicle speeds are calculated using two Clearview M100 magnetometer wireless vehicle sensors spaced at between 136m and 144m from the stop line in both directions.

One of the advantages of this wireless detection technology is that it eliminated the need for 280 metres of costly ducting and trenching that would also have had an adverse impact on traffic congestion and disruption in the village for civil works that would have taken a number of weeks to complete and would have weakened the integrity of the road surface on this heavily used route.

"We are delighted to be the first in Scotland to introduce these vital road safety measures on the A78 within the south west trunk road network. The safety of motorists and pedestrians is of the upmost priority and Scotland TranServ is pleased to have worked with Clearview Intelligence to develop this concept to improve road safety within local communities in which we live, visit and work.."

**Vincent Tait, Road Safety Manager for Scotland
TranServ**

The vehicle speed is wirelessly relayed to the traffic signals and if speeds are recognised as being above 30mph then the signals are programmed to turn to red, thus stopping the speeding traffic and increasing overall journey time through the village.

Clearview also worked on the complex operational configurations to ensure that the traffic lights change to red in a safe and timely manner, and not in any way that could be dangerous to the road or pedestrian users of the junction.

Speed activated signs are also on prominent display on the approach to the junction, with additional offside secondary signal heads fitted. Existing road markings were refreshed and the road surface upgraded with a high friction surface dressing.

Therefore rather than opt for the more obvious 'big stick' approach of the installation of speed enforcement cameras, the scheme is aimed solely at positively influencing driver behaviour and is more of a 'carrot' for speed compliance. This idea has already been used to good effect in some European countries such as France, Portugal and Spain.

