RAC trial lights up congestion solutions

A landmark RAC trial using technology to improve the performance of traffic signals has found peak hour congestion can be considerably decreased without the need for new infrastructure.

The trial focused on the section of Orrong Road between Francisco Street and Oats Street, and was the second stage of a two-year study initiated and funded by the RAC, with the WA State Government as a key partner.

RAC General Manager Corporate Affairs, Will Golsby, said the trial successfully demonstrated improvements could be made to traffic flow along this section of Orrong Road, which also resulted in reduced delays for traffic on side roads.

“The signs are promising, and included the average vehicle queue lengths at the four intersections along the trial corridor being reduced by up to 34%, while journey times were up to 20% faster,” Mr Golsby said.

“The next step is for the State Government to increase funding for Western Australia’s Traffic Operation Centre (TOC), operated by Main Roads WA, to ensure it is now in a position to take the further step of active traffic management to improve real time road management.”

For the purpose of the trial, the traffic light cycle times, or the total time allowed for all approaches to receive a green light, were shortened by as much as 50 seconds. This, along with changes to the signal settings, made the traffic signals ‘react’ to congestion and reduced the delay for vehicles.

Using technology to test shorter traffic signal cycle times resulted in vehicles getting a green light more frequently, helping traffic to clear faster, and resulting in shorter queues.

These signal settings also resulted in up to a 10% increase in the volume of vehicles which could pass through the trial area in the peak direction of travel for typical commuting trips.

The study highlights the importance of using a type of software called micro-simulation modelling as an additional step in the traffic signal retiming process. It allows for a number of options to be tested, and achieves a better outcome for road users.

“Whilst signal timings will differ from location to location, this approach can be applied more widely to help improve traffic conditions across the network.

“By changing the way we manage systems like traffic lights we can squeeze more out of the existing infrastructure and help tackle Perth’s growing congestion problem.”

For a copy of the report, please contact the RAC media office.

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