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# Optimised lights

In September my team are at the JCT symposium along with many other traffic signal experts. As one of the largest Highway Authorities in the UK it is important to us that we share our latest work as well as getting to see what others are doing.

WORDS BY **GLYNN BARTON**

**A**t the Symposium this year the Head of Network Performance in my Directorate, Helen Cansick and three of my Network Managers will speak about some of the work we are doing with our traffic signals to support Healthy Streets. Long gone are the days where we just looked at moving tin boxes along roads, now we are trying to improve journeys and streets for all road users, especially those who chose to use sustainable modes.

Our first presentation looks at how we can use traffic signals to make the capital healthier. The Mayor’s Transport strategy sets out a clear direction to improve the quality of streets in London and, in doing so, improve the health of Londoners. We will talk about the role that London’s urban

traffic control system can play in enabling this vision and outlined an innovative trial that has taken place on Putney High Street (one of the worst roads for pollution in London) to directly tackle poor air quality through a very different approach to traffic management. Although still in the early stages of being able to quantify the air quality results, the trial had a positive effect on this busy high street with a lot less queueing traffic and a really positive effect on bus journey times. We’re currently looking to run the trial again in different locations to test the theory some more.

## Time saving

Secondly we’ll speak about saving time for bus passengers, pedestrians and cyclists in London. This is a key part of Transport for London’s scorecard this year as one of

the metrics which measures our success in delivering the Mayor’s plans for healthier streets achieved through how effectively we manage our traffic signal timings. Of our 6,300 traffic signals, 75 per cent of them are on our UTC SCOOT system and using the latest technologies we can focus traffic signal timing plans to assist specific modes depending on the specific demands at a junction. Our Network Managers review 1,200 traffic signals per year and it is through these reviews that we are working towards our target of saving 15,000 passenger hours this financial year.

As we work to rebalance the network for Healthy Streets some of the tools that we can use are:

**Call Cancel:** we know that 85 per cent of pedestrians cross before the green man signal has appeared. Using sensors the ▶

traffic signals can be alerted if this has happened and will cancel the green man stage. Last year Call Cancel was added to another 70 sites, saving an average of two minutes per bus per location as well as reducing the waiting time for pedestrians subsequently arriving at the site.

**Differential Bus Priority:** a step ahead of bus priority at traffic signals that we've been using for over 30 years, this only prioritises late running buses. It is delivering bus benefits of two to five seconds per bus per junction and works much more effectively at busy junctions than the old technology. We are using this at 120 locations in London with more planned to be implemented through the year.

**Green Man Authority:** a signalling technique currently where the signals show a green signal for pedestrians continuously, until vehicular traffic is detected, at which time the pedestrians are stopped on a red signal, and vehicles are given a green light to proceed. Although this can only be used at limited

pedestrian dominant locations it proves to be very beneficial and something that we are looking into using more. Pedestrian and Cycle SCOOT use detectors specific to those modes to allow us to give more green signal time to them if the demand is needed.

### Optimisation

Looking to the future we have recently awarded a contract to Siemens Mobility for our brand new Real Time Optimiser (RTO) that will eventually replace our current UTC System. RTO will give us the ability to be nimble in response to the variety of operational challenges we face, as well as in striving to deliver TfL policy.

As well as this we are always looking at innovative solutions for using traffic signals

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to help manage disruption to the network.

Our Lane Rental scheme was introduced on June 2012 and applies to the most traffic sensitive locations and the most traffic sensitive times of day. It is applicable to 56 per cent of the Transport for London Road Network and is in place to incentivise works promoters to minimise their highway occupation at the busiest times of day by

applying a daily charge.

### Savings

Using the money that we collect through the scheme, we are able to fund projects and initiatives to improve disruption around roadworks. One such project was to trial Remote Access Portable Traffic Signals. These allow, for the first time, for us to connect temporary traffic signals to our UTC system, meaning that we can set and alter the timings as needed, depending on demand and network conditions.

Sixteen sites were initially trialled around London with average of 594 hours use per location. By having these under our UTC control rather than the standard local control, we saved £235,000 in vehicle delay. The success of this trial means that we can now offer this as a business as usual option for both our own works and for those of Utility Companies.

More information about Transport for London's Lane Rental Funding can be found online at [tiny.cc/tfl-lane](http://tiny.cc/tfl-lane).

We often invite other authorities from around the world to come and see us at work, in fact at the start of the summer we hosted Andy Street the Mayor of West Midlands, along with our own Mayor of London Sadiq Khan, to see our Control Centre in action. We shared our knowledge on the event coordination lessons we learnt during the 2012 Olympics as Birmingham start preparations for the 2020 Commonwealth Games.

■ The JCT Traffic Signals Symposium is supported by SMART Highways and editor Paul Hutton will be moderating one of the sessions at the event. The Symposium takes place on 12 and 13 September in Nottingham.

### Green Man Authority is a tool for better managing pedestrian crossings and traffic flow



Mayor of London Sadiq Khan and West Midlands Mayor Andy Street on a tour of TfL's Control Centre. Photo: Transport for London

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