



Multiphase ADS reduces average queue lengths at temporary traffic lights by 50%. The only system in the UK that has been independently modelled.

The challenge

Temporary roadworks – planned or unplanned - have a reputation for causing congestion. Unpopular with road users who believe them to be poorly managed and responsible for longer journey times, they risk damaging the reputation of the local authority, utility provider or traffic management company overseeing them.

The problem is worse in areas with a tidal flow of traffic, for instance into and out of cities where volumes of traffic peak in one direction and then ebb away before building in the opposite direction in the early evening.

With hundreds of temporary traffic lights in operation on the UK's roads at any one time, and with traffic volumes continuing to grow, local authorities and traffic management companies were keen to find a solution that could quickly and effectively discharge queues as they began to build and could facilitate 2, 3 and 4 way control.

Find out more about [Multiphase ADS](#), email: hire@srl.co.uk or call 0808 2818 775

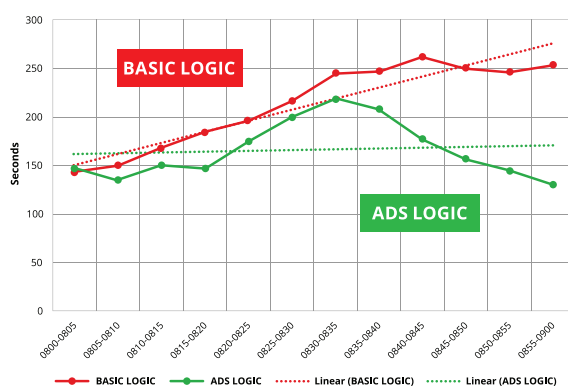


The solution

Basic logic systems don't cater for varying levels of traffic at temporary traffic lights. This often causes queues, especially on intersections where the volume of traffic from one direction is particularly heavy. So, SRL worked hard to develop a new product that minimises driver frustration by rebalancing queue lengths and reduces journey times during peak traffic flow.

The **Multiphase ADS** went into development in spring 2020 and by autumn the same year it was ready to go live on the UK road network. It works by connecting a high accuracy radar detector (which collects vital data about real time traffic volumes and speeds at the roadside) to temporary traffic lights using a clever algorithm that adjusts the green time at traffic lights for optimum traffic management.

A graph showing the reduction in journey time using Multiphase ADS



The busier the road, the greater the benefit from using this unique technology, which also takes into account site-specific factors like HGV lag.

SRL's Multiphase ADS is especially effective in areas with tidal traffic flow because of its ability to reduce the build-up of traffic moving in a single direction. Once peak flow has diminished and congestion eases, this dynamic system adjusts the green time to reflect the quieter traffic conditions.

BRYAN G HALL
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

Study conducted by IRConsultancy/Bryan G Hall is available in full on request.

The benefits

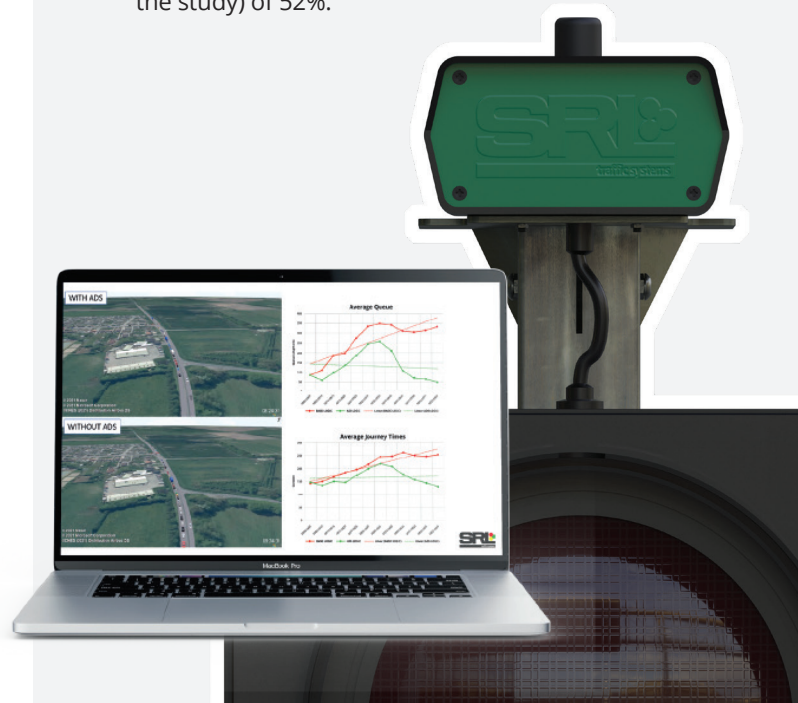
Confident in the ability of our product to reduce congestion we looked to substantiate our in-house findings, so we asked independent consultants and industry experts at IRConsultancy/Bryan G Hall to conduct an objective study of the system using traffic flow data and Vissim, in a highly saturated tidal flow location in Yorkshire.

The results exceeded even our high expectations:

Benefits for road users

Over a one hour period at the test junction with 3 way control, the impact of replacing basic logic with SRL's Multiphase ADS was:

- ✓ **Reduction in average queue length of 50%.**
- ✓ Reduction in maximum queue length of 29%.
- ✓ Reduction in average journey time at the junction of 22%.
- ✓ **Reduction in average journey time during peak flow** (between 8.40am and 9.00am across all routes) increases to 40%.
- ✓ Reduction in journey time for the route with the highest flow of traffic (North to South in the study) of 52%.



One of a kind

SRL's innovative Multiphase ADS provides a genuine solution to the problem of congestion around temporary road works. Not only does it reduce queue lengths and journey times, it is the only product available on the market whose impact has also been independently modelled and it is the only product able to offer 2, 3 and 4 way control.

