

Case Study

Key role in one of the greatest motorway pilot schemes of all time

Flagship motorway scheme uses Peek systems to keep the traffic flowing



Background

One of the most important challenges for the Highways Agency is the management of Britain's motorways to improve traffic flows, reduce congestion, cut travel times and maintain better local air quality. But as traffic volumes increase, the Agency is constantly looking for more economical, effective and sustainable methods of managing the country's motorways.

In 2005, it devised an Active Traffic Management scheme (now called Managed Motorway schemes), a pilot of which was introduced on the M42 (between junctions 3a and 7); Peek and its state of the art traffic management solutions played a major role in the scheme. This scheme was to become one of the most important benchmarks in the history of Britain's motorways.

Solution

The M42 scheme is based on the need to keep traffic flowing. Using sensors on the carriageway, traffic speeds and volumes are monitored so that congestion can be accurately measured. As congestion levels rise, the HATMS (Highways Agency Traffic Management System) located within the West Midlands Regional Control Centre will assess the incoming sensor data and will control the speed of traffic along this managed motorway section by automatically setting mandatory (red-ring) speed limits that are displayed on the gantries above the carriageways. The police back this up by enforcing the speed limits, to ensure a high level of compliance which in turn then enables the safety and journey time reliability benefits. This is achieved by using Peek's HADECS or Highway Agency Digital Enforcement Cameras System.

Behind the scenes, Peek also provided a Hard Shoulder Management (HSM) control system for the M42 pilot and developed the software for the operators so that, in times of congestion or in the wake of an accident, they can use it to open up the hard shoulder as an additional running lane. The software for this pilot was based on a similar application on the A38M where the number of running lanes in or out of the city of Birmingham could be adjusted between four and two lanes.

Outcome

It's estimated that, thanks to the Highways Agency's Active Traffic Management scheme and Peek's technological input, there has been a 22% improvement in the reliability of journey times on this stretch of the M42. Congestion has been reduced and, crucially, journeys on this stretch of motorway have been made safer: There has been a marked reduction in the number of accidents which have fallen from an average of 5.1 a month to 1.8 a month.

If there should be some kind of incident, the use of CCTV allows the operator to verify this and respond appropriately and more quickly. The chances of secondary collisions are also reduced, through the provision of MIDAS/queue protection.

The Managed Motorways system can also be used to manage traffic around an incident; once the signs and signals are set to alert drivers, they can be directed around the scene by the opening and closing of the appropriate running lanes.

The completion of the M42 pilot Managed Motorways system – in conjunction with Peek – has been so successful that it has now been rolled out to other stretches of motorway, such as the M6 (junction 4-5) and M6 (junction 8-10A).

Not only that, this pilot scheme has already earned a major place in British transport history: the Automobile Association lists it amongst the top ten key developments in the entire history of the UK motorway system.



About Peek

Peek is a leading supplier of intelligent transport solutions. For more than 30 years, the firm has been providing advanced traffic control products and systems, management and maintenance services for both the urban and highways markets.

Peek's established and proven portfolio includes traffic management systems incorporating SCOOT, highway congestion management and enforcement systems, vehicle detection systems, exterior lighting, as well as supervisory and communications systems. Peek is ISO 9001:2008 and ISO 14001:2004 certified.

With headquarters in Basingstoke, Hampshire, Peek employs more than 500 staff throughout the UK. Peek is part of the Infra and Traffic division of Imtech NV, a global technology services provider based in the Netherlands.

For more information, visit www.peek.co.uk



Peek Traffic Limited, Hazelwood House, Lime Tree Way
Chineham Business Park, Basingstoke, Hampshire, RG24 8WZ
Tel: +44 (0) 1256 891800 Fax: +44 (0) 1256 891870
Email: sales@peek.co.uk

Imtech profile

Imtech N.V. is a European technical services provider in the fields of electrical engineering, ICT and mechanical engineering. With approximately 23,000 employees, Imtech achieves annual revenue of more than 4.3 billion euro. Imtech holds strong positions in the buildings, industry and infrastructure/traffic markets in Europe and in the global marine market. Imtech offers added value in the form of integrated and multidisciplinary total solutions that lead to better business processes and more efficiency for customers and the customers they, in their turn, serve. Imtech shares are listed on the Euronext Stock Exchange Amsterdam, where Imtech is included in the Midcap Index. Imtech shares are also included in the Dow Jones STOXX 600 index.

© March 2011 v.1 Peek Traffic Limited. All rights reserved.

www.peek.co.uk