Active Traffic Management – Control System

Since 2003, SEA has been working in partnership with the Highways Agency and WSP, as consultants for the M42 Active Traffic Management (ATM) - Control System.

This system is key for the successful introduction of innovative traffic management schemes, which provide a managed and controlled environment on motorways currently experiencing regular congestion.

The aim is to improve traffic flow by making the best use of the existing motorway network, employing a range of proven technologies, processes and procedures, in an innovative mix to delivery safe and reliable journeys to road users. The ATM Pilot Project ran on the M42 near Birmingham, between Junctions 3A (M40) and 7 (M6).

SEA was the ATM Control System Design Authority, responsible for its specification, and managing the work of Serco Integrated Transport as the developer. The system is safety related and uses the widely adopted IEC 61508 standard to SIL 1.

The ATM Control System provides operators with the ability to open the hard shoulder as a running lane, use CCTV to monitor the state of the road, automatically be alerted to traffic incidents, and set signs and signals in a way that will maintain safety and offer drivers reliable journey times.

SEA has written and presented papers on the ATM Control System at the IEE’s Road Transport Information and Control (RTIC) conference 2004 and the 2005 Intelligent Transport Systems World Congress in San Francisco.

“The M25 Controlled Motorways and M42 Active Traffic Management pilots have proven successful at smoothing traffic flows and reducing congestion at hot spots on the network. The success of these schemes has led to a programme of Managed Motorway schemes to be rolled-out across the network in coming years.”

(Transport Research Laboratory, Report to Parliament (TRL) (ETM 07))