

“Safety for both road users and our workforce are paramount, so when HW Martin and WJ came to us with the idea of implementing Stopped Vehicle Detection on this scheme, we were really excited by the opportunity.”

Mark Rainbow

Traffic and Logistics Manager
Octavius

Case Study

A46 Binley Junction Improvements NavTech Radar trial for stranded vehicles

PROJECT	A46 Binley Junction Improvement
CUSTOMER	National Highways
LOCATION	Binley, Coventry
CONTRACT	Delivery Integration Partnership
COMPLETION	2022





Need

Stranded vehicles in major road works are a hazard and must be identified and recovered quickly. Up until recently identification has relied on constant monitoring of CCTV cameras to spot the issue and instigate the recovery. A costly method which can be subject to human error and difficult in poor visibility.

Now, new radar sensor technology has been developed to scan and detect stranded vehicles. After successful roll out on motorways and major A roads, WJ Group recognised the potential benefits it could bring to temporary traffic management. Teaming up with TJ Martin and NavTech Radar they approached National Highways, and Octavius to trial the NavTech ClearWay radar on the A46 Project at Binley in Coventry.

The A46 is a busy strategic link between the East and West Midlands and experiences high traffic levels and congestion. Keeping traffic moving smoothly through the roadworks was a priority for continued safe operation of the road network. The trial went ahead.

Solution

The technology analyses traffic behaviour in real time using high-resolution radar sensors which scan 360° and can detect stopped vehicles across multiple lanes within 10 seconds. The system immediately sends a communication alert with a live feed from the closest camera to verify and locate the vehicle. This alert triggers the camera's pan, tilt and zoom enabling the operator to quickly focus on the incident, access the need and instigate support and recovery.

NavTech have refined the technology for temporary schemes. Now the on-site traffic safety control officer is contacted not the regional control centre, and the system can be rapidly recalibrated when the road layout changes and works areas can be zoned out, reducing false alerts from site vehicles.

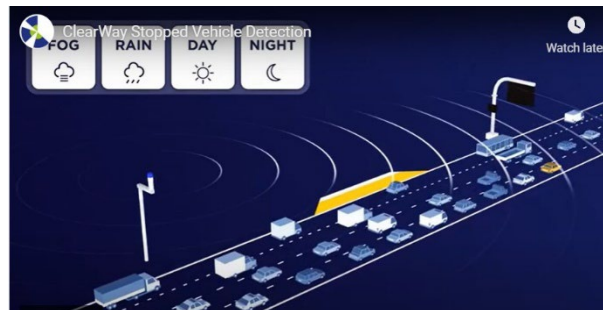


Figure 1 - Navtech promotional image

Outcome

The trial has been a success with an average of 10-15 vehicles recovered each month. The six radars needed for the project, are cost-comparable to traditional 24-hour manned CCTV surveillance but with advantages. Response times have been faster, and detection more reliable because the fully automated system operates in all weather conditions day, and night.

Compared to traditional methods this has undoubtedly increased safety and is a promising way forward for all future temporary road schemes.

Building upon the initial trial, new detection features will be integrated such as wrong way; debris; Friend or Foe incursion; pedestrian; and vehicle classification. The next phase of improvements will also include capability to link with Variable Message Signs (VMS) to give automated advance notice to drivers of any hazards in real-time.

The technology is set to be a game changer for safety on road projects.