

## Case Study

No long diversions  
after magnetometers  
used on MIDAS sites



Magnetometers are used to remove the need for long and costly diversion routes on the A14.

### Background

The A14 is part of the UK's strategic road network and is a critical route for access to the East of England as well as for freight traffic as they head to and from the continent. The road runs through Highways England's East Area (formally Areas 6 and 8) and has been undergoing maintenance and improvement works. This work has been led by Kier Highways, supported by their key infrastructure partner MWay Comms.

Along the A14, the MIDAS system in operation relied on inductive loops as the way of vehicle detection. These existing loops were all defective and required replacing across all lanes.

The challenge was that the loop installation would require a complete closure of that section of the road, resulting in a major diversionary route needing to be put in place. This would have potentially caused over an hour of additional journey times for the road users.

### Key Benefits

- Removes the need and costs of full carriageway closures per site
- Removing long diversion times means reduced customer impact
- Increased efficiency of programme delivery creates savings of £30k
- Improvement in delivery times compared to traditional installation method for inductive loops
- Fully compatible with existing MIDAS infrastructure and technology
- Reduced future maintenance or re-installation requirements compared to inductive loops

The resultant traffic disruption and additional journey times presented a significant customer impact for Highways England, so Kier and MWay Comms looked for alternative solutions to avoid such disruption.

### Solution

MWay Comms have worked with Clearview Intelligence over a number of years, so when they were approached by Kier about the diversionary challenges being faced, they were quick to suggest using M100 wireless vehicle detection as a viable alternative to inductive loops.

M100 magnetometers are small sensors placed in the centre of a lane to detect passing vehicles and communicate wirelessly into the MIDAS Outstation. This means the sensors are not in the wearing course of the road. MWay Comms were able to very quickly (approximately 15 mins per stud) install all the necessary studs, along with roadside access points and repeater units across the ten sites. Efficiencies in the solution delivery also included the pre-build of an alternative bracket for the pole mounts resulting in a further £30k worth of savings.

Importantly, because the studs are individually installed it meant the work only required single lane closures. This removed the need for full road closures and the associated costs of having large diversions in place, solving Highways England's customer experience challenge.

The data produced by the magnetometers was then checked and verified against historical inductive loop data and calibrated to be highly accurate, meeting the needs of the A14 MIDAS system.

*"Using Clearview's M100 magnetometers enabled the project team to exceed Highways England three key imperatives. Roadworker safety was enhanced by reducing the amount of traffic management and construction works. Removing the need for over an hour of diversion mitigated the impact on the customer, and using alternative equipment and delivery methods that decreased programme needs yielded an efficiency of thirty thousand pounds. This was a great solution to a difficult MIDAS problem."*

**Lee Day**

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