



- > COLAS UK
- > BIRMINGHAM
- > JUNE 2015

Highways England Off-Site VMS Installation

Colas developed an innovative approach to installing Variable Message Signs (VMS) onto gantries in a warehouse, prior to the gantries being installed on the road.

We were the first company to offer the Highways Agency (now Highways England) these off-site installations, which provide a safe, cost-efficient technique for meeting our target installation times.



The Need

One example of a project that benefited from onsite installation was the Birmingham Box Managed Motorway project on the M42, which required the installation of AMI and MS4 message signs onto motorway Gantries.

We collaborated with the various stakeholders to deliver our VMS to a local warehouse where the gantries were being stored. We then installed these signs onto the gantries within this warehouse before being secured for transit on the back of a transport vehicle.

Once Traffic Management had been arranged for the installation of the gantries, the transport vehicle travelled to site, parking in an Emergency Refuge Area (ERA). The gantries, together with the attached VMS were then installed in position on the M42.



- > Installation of up to two and a half times more VMS per shift
- > Work carried out with delays of just half an hour for road users, avoiding full road closures in both directions
- > Improved safety as engineers work no more than eight metres from the ground, rather than fifteen when on-site

Our Approach

Colas's approach provided many efficiencies for the installation of our signs. As our VMS were installed off-site, there was no requirement for Traffic Management, except for the final installation of the gantries, which could be installed using a rolling road block. This involved using the

police to slow traffic further down the carriageway while the gantry was lifted and secured in place. This meant that the traffic was only affected for around half an hour, compared to the full closure of the motorway in both directions that would be necessary for on-site installations of VMS.

Our approach therefore reduced disruption to the public and ensured a more cost-efficient service. We were also able to install a greater number of signs in a single shift by working away from the roadside.

Associated Benefits

During a typical night shift on motorways we would have five hours on site, allowing a maximum of either two MS4s or eight AMIs. Yet with installations in a warehouse a typical shift would involve nine hours, or up to five MS4s or twenty AMIs. This increased efficiency is possible as there is no need to wait for the deployment of Traffic Management and less time spent rigging and de-rigging plant.

By installing the AMIs and MS4s within a warehouse, we also mitigated the risk of cancelling work due to adverse weather conditions. The weather can curtail any planned works on highways equipment, and due to its unpredictability often causes substantial disruption for any schemes. As our work was carried out internally, weather would not affect our installations. While the issue of weather conditions could not be eliminated entirely as the gantries were installed externally, our solution ensured an improved reliability, allowing the programme of works to be followed.

Our off-site installations also improved the working conditions for our engineers. Work could be carried out during normal working hours, improving visibility and reducing the risk of fatigue.

The requirement of working from height was also reduced, as the height itself was less than if completing the installation on the roadside. Normally, when MS4s are installed on the roadside engineers must work fifteen metres above ground level. However, off-site installations reduce this to just eight metres. This improved the safety of our employees, removing or mitigating associated risks.

Using off-site installations also offers an environmental benefit. Roadside installations require prolonged use of a MEWP to reach the gantries, whereas our alternative approach allows for the use of mobile scaffolding. This, along with less travel to and from site, decreases the carbon footprint of the works.



Colas Limited

☎ 01342 711 000

✉ info@colas.co.uk

🌐 www.colas.co.uk



UNITED KINGDOM