

National Highways NEAR Schemes



Background

The highways environment is high risk and those companies with personnel operating within it recognise that solutions that protect their workforce and their on-site assets are critical both for their teams' personal safety and for their business operations. In addition, solutions to issues such as stopped vehicles on the motorway network, which create a potentially fatal hazard for the occupants and other members of the traveling public, and the provision of traffic information, are invaluable.

The Clearway inView Highway Technology Tower has been deployed across a number of National Highways' NEAR (National Emergency Area Retrofit) Schemes over the past 2 years to support the safety of our roadworkers and road users.

Solution

The inView CCTV Tower was developed for the security sector 10 years ago where they are used widely for the security and protection of property and assets. Clearway saw the opportunity to further develop this mobile, solar-powered security solution and bring a more intelligence-based version to the UK Highways market, recognising the environment is very different to where the towers had been deployed historically, accessibility being one of the key differences and a known challenge in the highways sector.



Key Benefits

- £Millions saved
- Habitats protected
- Disruption minimised
- NSI monitoring



Clearway has added several options to its CCTV tower, including video-based Stopped Vehicle Detection, ANPR, traffic monitoring, vehicle count and classification, PPE monitoring and compliance, littering/fly tipping detection and air quality monitoring. This provides a solution to protecting roadworkers, on-site assets and road users, whilst also providing data, especially in traditionally technology barren/dark areas of the network. In many cases, an off-grid solution is required so sustainable technology using renewable energy sources was a key objective for the 'new' inView Highway Technology Tower.

The tower is a solar, wind and battery powered solution that requires no cabling in the verges, no vegetation clearance and minimal traffic management which also solves the problem of small installation windows - road operators such as National Highways want to minimise disruption to road users and the risk congestion brings to the motorway network.

As the solution was traditionally built for security, it continues to deliver in this area as the towers are used to secure compounds and monitor activity in traffic management areas.

The wider benefits include:

- Reduction in installation and removal costs of a temporary CCTV system - no ducting, no fibre cabling, no risk of cable strikes and no 10-12-week traffic management programme.
- A renewable energy solution that can be used in a temporary, safety critical environment.
- Enhanced and improved customer (road user) service through temporary (road) works.
- Provision of a mobile application for onsite traffic management staff to reduce maintenance visits.
- Access to the mobile application for Traffic Safety Control Officers (TSCOs).

The towers can be delivered and located quickly and remotely configured (4G connectivity), to provide instant CCTV, Stopped Vehicle Detection, ANPR, traffic monitoring, alarm systems, PPE monitoring and compliance, littering/fly tipping detection and air quality monitoring, it significantly reduces the dangers of having operatives on live carriageways. This is a key benefit and driver behind the nationwide roll-out of our solution.

The towers are also supported by our 24/7/365 NSI Gold Cat II Alarm Receiving Centre (ARC) and/or monitored by a client's monitoring station.

Clearway has taken a traditional CCTV security solution and further developed it for the highways market, providing security and improved safety for roadworkers and road users, whilst also delivering valuable information to road operators and maintainers.

200 towers 

150+ miles of the SRN



Outcome

Contractors working on the NEAR schemes needed a mobile, temporary and sustainable solution for monitoring accidents, incidents and breakdowns, the inView Highway Technology Tower delivered that solution along with improved security. The use of the towers provided the following benefits:

- Enhanced and improved customer service through temporary works
- Reduced roadworker exposure to risk through a rapidly deployable solution
- Reduction in maintenance visits as the camera technology can also be used by onsite traffic management staff to monitor and remotely view the site using a mobile application
- A cableless solution as they use solar/wind power
- Cost savings - as the towers are fully mobile and rapidly deployable, for a project comprising over 50 towers at 500m intervals, for example, it saves many weeks of preparatory work on site that a temporary fixed solution requires. The financial savings using our approach are in the £m's on a project of this size.

Installing the Clearway inView Highway Technology Towers has saved time and money on a number of NEAR schemes (M62, M1, M3, M25, M5, M4, M2...) and reduced risk and disruption.

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