

CASE STUDY

SMP Alliance NEAR Project – Wireless CCTV Installation October 2023

Introduction

Our Project, J32 to 35A package of the M1 National Emergency Areas Retrofit (NEAR) scheme comprises the retrofitting of existing Smart Motorways with 13 Emergency Areas (EAs) alongside the provision of additional Variable Mandatory Speed (VMS) equipment, modification to Stopped Vehicle Detection (SVD) system and provision of Closed-Circuit Television (CCTV) coverage.

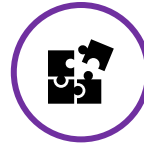
This case study describes an innovative alternative solution to the installation of traditional wired temporary cameras used for traffic monitoring, which has delivered estimated financial savings of circa £600k.





Overview

- To improve road safety and protect the work force, a temporary CCTV system is required to manage and monitor live traffic .
- In order to achieve this, the team have worked to find a sustainable, safe and cost effective solution as an alternative to the traditional approach which involves installing concrete foundations, ducting and cables.
- The chosen solution has delivered estimated savings of around £600k.
- The learning has been shared widely so that others can learn from the approach taken on this Project.



Challenges

- The traditional method comprises a loop of wired cameras connected with cables for signal transmission.
- This requires excavations at each site for the foundations for the camera towers, involving site clearance and ongoing maintenance of the ducting and cabling.
- Above ground ducting, significant lengths of cabling and a power source, all typically installed via overnight lane closures, are also required. This comes at a significant cost and increased risk to the work force from working at night, next to a high-speed road.

“Installing a truly wireless system has many benefits; from a significant reduction in working behind a temporary traffic management system at night, thereby, removing exposure to those significant hazards”.

Dale Flower

Project Lead—NEAR North

Costain



Action Taken

The NEAR Project team have taken an innovative approach and have installed a wireless system (pictured above) which has significant benefits, described below. The learning from this has been widely shared and is published in the December Highways Safety Hub newsletter.

Results

The benefits of this approach to CCTV installation has delivered many benefits and these are listed below

This wireless system installation has delivered an estimated cost saving of around £600K. The estimated cost savings are based on limited night work, less plant required, reduced lane closures and no requirement for built foundations, cables and ducting.

Other benefits include

- reduced risks associated with people and plant interface (PPI);
- reduced safety risks from less time spent working at night behind traffic management
- electrical risks are reduced as the voltages used are lower
- reduced need for maintenance of cables and ducts,
- eliminating the risk from the construction activities such as pouring concrete and striking live cables (as no excavations or cables are required).
- Additionally, using support mats made from recycled plastics for the camera foundations delivers a reduction in habitat disturbance, resources required and associated carbon emissions.
- The wireless technology ensured the works did not enter into areas outside the project boundary when connecting the camera system loop.



Contact:
Name
Jennifer Gibson 07052 112359



Email:
Jennifer.gibson@smpalliance.com

home
safe
and well

- No fuel or mains connection is required to power the cameras. Additionally, these cameras are equipped with a motion detector device, only recording when motion is detected.
- No requirement for plant other than a small HIAB for the camera installation.

Evidence of sharing

- Communications email w/c 20 November
- HSH Newsletter December 23