

# Sunstone provides Balfour Beatty with roadworks surveillance via Solar Powered IP CCTV Systems

Customer: Balfour Beatty  
Region: South



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Using Sunstone's SICS units the highways main contractor has achieved surveillance coverage for a section of roadworks approx. 3km long without the need for ground works, cable runs or additional road closures. Balfour Beatty's road works and highways experience includes specialising in various fields such as road design, construction, asset management and providing maintenance. They offer a range of services from design, build, finance and operate to smart motorway schemes. They have long established relationships with the Department for Transport, Highways England, Transport Scotland, the Welsh Assembly Government and many local authorities.

## Key Features



### Versatile and Effective

*Our technologies have been developed to ensure your site is secured using the most advanced security systems available on the market.*



### Connected

*We can stream live surveillance to any monitoring centre via 4G, Wireless Networks and Satellite.*



### Simple to Deploy

*Our systems have been designed to be easy to deploy, commission and used by your teams in under one hour.*



### Environmentally Friendly

*Our range of technologies can help deliver significant improvements to the environment. They provide clean energy, are zero emissions and reduce your CO2 footprint.*

Balfour Beatty were awarded the project to make highway improvements to a section of the A2 in Kent. Sunstone were asked to provide surveillance for the section of carriageway with images being relayed back to a control room within the works compound. The most important factors for the client at brief stage were:

- Monitoring of the cameras
- PTZ function to be able to investigate an incident if required
- Best possible image quality day and night
- Ideally 500m centres for each unit

The Solar IP CCTV System (SICS) unit is powered entirely by renewable energy all year round and requires no ground works or infrastructure in place to deliver HD quality images. Built upon the company's core principle of developing solar powered game-changing security and communications technology, the SICS is ideally suited for highways security and is recommended by Highways England as a "business as usual product."

The project start date was during the lockdown period of the Covid-19 pandemic. Despite disruption in supply chain services and staff re-allocation, Sunstone were able to deliver five SICS units to the Balfour Beatty Compound during April and May 2020 in time for the roadworks commencing. Not restricted by power or cable needs, the units are designed to be deployed and streaming live within minutes of positioning. Sunstone provided training to the Balfour Beatty operational team to allow them to deploy and commission the units themselves reducing the number of operatives on the highway and significantly reducing road closure time.

The SICS unit delivers images back to the onsite monitoring team via a 3G/4G connection with high-level encryption. They can also operate on a wireless point to point or point to multi-point wireless mesh. Each unit is installed with a Tether Box, these link into an online viewing portal providing a very user-friendly tool to access images without the need for an additional VMS platform. Each user can be provided with full or restricted access to the cameras via password and there is a clear audit trail for any data captured.

Due to the distance between each camera Sunstone selected the Nautilus camera supplied by CBC UK. The camera not only offers exceptional HD image quality over a significant distance, it also operates with a low power draw making it ideal for a solar powered solution. Night-time images are also extremely clear as the cameras have long range Infrared and white light options which can be controlled remotely by an approved operator.

Sunstone CEO Paul Schelhaas said 'Sunstone is committed to advancing robust, smarter surveillance and communications solutions, powered by renewable energy. It makes business sense for companies like Balfour Beatty not to be limited by cabled power sources and data lines, and our solutions enable businesses to reduce their carbon footprint'.

## Project Results



### Versatile and Effective

*The integration of the Nautilus PTZ camera in five locations have provided high quality surveillance on the highway over 3km.*



### Connected

*All stakeholders can dial in and check the status of the SICS systems and view cameras and traffic flows*



### Simple to Deploy

*5 SICS systems have been deployed alongside the A2 highway and redeployed as the scheme changes.*



### Environmentally Friendly

*1083kWh of clean and renewable energy generated in 8 months.*

Of the SICS he said 'the SICS is perfect for use on Highways and proven to save money against alternative solutions. We are delighted that Highways England have approved this product for use on the UK's road infrastructure and to be working with Balfour Beatty, such a key player in this sector. We will be trialling a Stopped Vehicle Detection solution on this site in the next few weeks to further enhance our technology.

The feedback from the Balfour Beatty project team on both the image quality provided and ease of use has been incredibly positive. One of the biggest advantages on a project like this has been the fact that the client operating team can deploy and reposition the units whenever they require without the presence of the Sunstone team reducing road closure time, reducing the health and safety risk onsite and allowing complete client autonomy.

Darren Lindsay, Construction Manager at Balfour Beatty said "We have been extremely pleased with the surveillance units provided by Sunstone Systems, the picture quality from the cameras is excellent with crystal clear images for incident investigation when required. Our monitoring team and stakeholders have found the Tether software easy to use both to view and control the cameras. The use of renewable energy solutions is always of interest to us and this solution provides us with the image quality we require whilst being powered by solar. A huge advantage with these units is that after a very brief training session from the Sunstone team in our compound our engineers were able to deploy and commission the units themselves within a few hours.



This means that we can plan the installation in with our own work plans and road closures. We will also be able to reposition the units ourselves as the works progress." At a time where businesses look to cut their carbon footprint, Balfour Beatty leads the way in the Highways industry by using the SICS – a zero-emissions solution. At the time of writing the units have been fully operational with camera operators continuously working the PTZ functions for over 3 months, operating entirely on solar energy with no need for recharging or physical visits to the units. Sunstone's remote health check software allows for power monitoring to take place offsite and any issues that may arise can be addressed before surveillance images are lost.