



Leading UK engineering company deploys MOTOTRBO™ IP Site Connect and R7 digital radios at Scottish wind farm: mission-critical communications during construction enhance worker safety and productivity

Jones Bros Civil Engineering UK: North Kyle Wind Farm

Jones Bros is one of the UK's leading civil engineering contractors, with a wealth of experience across a broad range of sectors, including highways, flood and marine defence, waste management and renewable energy. From applying the latest civil engineering techniques to minimising the environmental impact of its work, Jones Bros is a leader in progressive engineering. The firm was awarded the contract to construct the North Kyle Wind Farm in East Ayrshire, a 49-turbine wind farm with the capacity to power more than 160,000 households. Jones Bros is responsible for the construction works, including reinforced concrete foundations for the turbines and installation of approximately 430,000 metres of cabling, as well as creating 24km of new access tracks and roads and upgrading a further 20km to allow for turbine and transformer delivery. The company has its own concrete batching plant facility at the site, recycling materials wherever possible.



Customers

- Jones Bros Civil Engineering UK
- North Kyle Wind Farm

Partners

- Airsys Communications Technology Ltd (Distributor)
- OS Comms (Reseller)

Industry

Engineering

Solutions

- MOTOTRBO IP Site Connect
- 2 x MOTOTRBO SLR 5500 repeaters
- 60 x MOTOTRBO R7 portable two-way radios
- Accessories: 6-way multi-chargers and spare batteries
- TRBOnet™ Enterprise



MOTOROLA SOLUTIONS

Challenge

North Kyle Wind Farm is set deep in the Scottish mountains and there is no, or very limited, mobile phone coverage. When Jones Bros first went on-site to start the construction works, it had a basic competitor radio system that delivered very limited signal. However, in heavy construction, worker safety is paramount, especially in view of the remote location of the wind farm. Therefore, Jones Bros needed reliable communications across the whole 14km site, with robust, rugged radios and the added functionality of individual radio GPS tracking, emergency calling, voice recording and data history, if needed. OS Comms conducted a full site survey and decided a MOTOTRBO system with R7 radios and TRBOnet Enterprise would be the best solution. As Robert Evans, Account Manager at OS Comms, commented: "We managed a rapid deployment in a very challenging environment and terrain; there was some trial and error to get the system working optimally, but we're happy to take on these sorts of unconventional, challenging projects and are working more and more in the civil engineering and renewable energy sectors. We also provided TRBOnet training and will provide ongoing maintenance and support."

Solution

OS Comms set up two SLR 5500 repeaters with a four-stack antenna in the main on-site office, to deliver reliable radio coverage across the area. The repeaters have been configured in IP Site Connect mode, to enable connectivity with the TRBOnet Enterprise software installed on the on-site computer. This computer operates on a 4G router and is linked to the Jones Bros system at the main compound, about 5 miles away. Jones Bros currently uses TRBOnet predominantly for GPS tracking; however, it is aware that TRBOnet also offers voice recording and data history, if needed.

Jones Bros is deploying a growing number of R7 radios, as the site develops and expands. Each user – from management to subcontractors – is equipped with a radio with its own individual ID. Regular users and managers have named radios with screens that feature a toughened large 2.4 inch display, so they can immediately identify the caller. The radios are robust, rugged and suitable for the harsh working environment, with AI-backed noise suppression audio and long battery life, to easily last the usual 10-hour shifts. Hundreds of calls are made daily over the four site-wide channels, with each user being allocated a preferred channel during any set period.

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“Radio is our main form of communication on-site and we were struggling with the previous basic radio system. OS Comms got in touch and, following a detailed site inspection and successful trials, they deployed our MOTOTRBO IP Site Connect system. We've now got reliable communications across our whole site and we can accurately pinpoint each user location, thanks to the GPS functionality, which saves valuable time if we need to respond to an incident. The R7 radios are robust and easy to use, with long battery life and great audio. We operate in a challenging environment, but this system works really well for us.

– Dylan Morrison, Sub-Agent,
Jones Bros Civil Engineering UK



Benefits

Jones Bros relies on these mission-critical communications to ensure all workers across the site can communicate clearly; and with the GPS tracking, the system meets their needs with regards to worker safety. Users praise the ease of use and robustness of the R7s as well as their audio quality, saying they can always hear clearly, even when travelling in noisy vehicles. Beyond enhancing safety, these reliable communications are boosting productivity and efficiency.

Looking forward, Jones Bros is aware of the further functionality the system could deliver in terms of lone worker, Fall Alert, dispatch, messaging and event logging, for example, and could introduce some of these features in the future. Indeed, the deployment has been such a success that Jones Bros may look at introducing this type of system at other similar sites; and, as Jones Bros finalises its construction work, the wind farm already has a future-proof communications system in place ready for the company coming on-site next to install and maintain the wind turbines.



Benefits

- Reliable, site-wide mission-critical communications
- Technology suited to the harsh construction environment
- Enhanced worker productivity and efficiency
- Improved worker and lone worker safety with accurate GPS tracking





To learn more, visit:
www.motorolasolutions.com



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