



CASE STUDY



Hanson Aggregates UK is part of the Heidelberg Cement Group, a global market leader in the production and distribution of aggregates - crushed rock, sand and gravel - for a variety of uses in the construction industry.

The company's flagship quarry at Whatley, Somerset, spans more than 2.3 sq.km, from which some six million tonnes of carboniferous limestone are produced annually.

Whatley, Hanson's largest quarry, is central to the company's wider operations, supplying aggregates for the production at other company sites of added-value construction materials such as cement and asphalt.

avoira
fluent in technology



Business Needs

Whatley Quarry's existing analogue radio system had reached end of life and Justin Collis, Area Operations Manager, needed a secure, modern, reliable and robust digital two-way radio solution.

This would enable more effective management of security, health and safety operations across a vast site which suffered from radio deadspots and interference. It also had no mobile reception and needed a way to make telephone calls in an emergency.

Tasked with designing and implementing a highly resilient solution, Avoira's engineers faced quite a test, as Justin Collis acknowledges. "The quarry is 1.8km long, 1.3km wide and 120m deep so that presented considerable challenges."

Justin Collis added to that challenge, further requiring GPS tracking in order to locate and ensure the safety of the 120 machine operators, groundworkers and rail operations workers. He also required a future-proofed solution, offering lone-worker functionality and the ability to integrate IP CCTV cameras.

Our Solution

Our team recommended Motorola Solutions' MOTOTRBO Radio System integrated with the IP-based control room solution, TRBOnet.

Site-wide coverage from a remote location, with a mast and antennas directing a signal to all parts of the quarry, would deliver site-wide coverage. We further specified a wireless point-to-point system to feed the signal back to TRBOnet on the main server, thereby integrating voice and data communications to enable MOTOTRBO System to overcome the site's physical barriers.

To meet tracking requirements, we recommended deployment of GPS-enabled Motorola DP4401E handsets and in-cab DM4401E portable radios. For key managers who require access to external communications via MOTOTRBO's telephone interconnect functionality we specified DP4801E handsets.

These models also supported requirements for lone working and man down functions, whilst enabling automatic escalation of alarms in an emergency or lone worker/man down event.

Justin Collis was impressed with our consultancy services and, confident our flexible, feature-rich solution would deliver, gave the green light. "The consultation went really well. Avoira's Dave Jessop brought down experts in certain fields. I have a historical radio background, quite techy, and he brought the right audience to the table so they were able to answer the questions I had."

Business Benefits

"Avoira's solution delivers massive health and safety benefits," reports Justin Collis. "If there's a man down or other alert we can quickly bring it up on CCTV. We also have lone worker functionality should we need it."

Automatically generated reports provide audit trails. "Through TRBOnet I can see where every radio is, its status and speed. If a dumper has been somewhere too long, I can challenge it. If something happens overnight, I can replay the last 24 hours and track radio movements."

He concludes: "Avoira has repeatedly provided service excellence. Through listening to my business requirements, building a system, installation, additional equipment hire or technical query, the team never fails to deliver."

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