

Providing a safe atmosphere during the Blea Moor Tunnel Renewal Project

Providing a safe working environment during rail renewal activities can be a challenge, never more so than when the site is a railway tunnel in the remote North Yorkshire moors, far out of reach of any mobile phone signal!

Factair recently helped First Engineering with a track and formation renewal project in Blea Moor Tunnel. With locomotives, diggers, dozers, generators and engine powered tools, totalling up to 6,600 kW of combined engine power, all being used within such a confined space, the atmosphere would have quickly become hazardous to health. To prevent this Factair supplied a ventilation system capable of ventilating the entire 1.5 mile long tunnel.

The renewal project was planned as a 5-day (120-hour) blockade during which Factair deployed 12 of its modular fans as a system delivering a total airflow of 324 m³/s. The immense power of these fans meant they could be deployed adjacent to the portal, at one end of the tunnel, leaving both roads free for traffic with no additional equipment being required in the already busy tunnel. This was no mean feat considering Factair kept the entire column of air, which has a volume of 120,000m³ and weighs almost 143 tonnes, moving between 1.5 and 3.5 metres per second for the entire blockade!



The ventilation system was supported by Factair's engineers who performed regular atmospheric monitoring within the tunnel to check levels were within the workplace exposure limits stipulated by EH40.

For those working in particularly dusty situations, such as controlling whacker plates or auto ballasters, Factair supplied battery powered air fed respirators, which provided the users with head, ear, eye and breathing protection in one integral unit. Datalogging personal gas detectors were also supplied to key workers such as COSSs and machine drivers.

These measures helped ensure that First Engineering was able to proceed with the renewal work in a safe atmospheric environment, free from obstructions or interruptions.

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At the end of the blockade Factair presented Ian Kilpatrick from First Engineering with a detailed report on the atmospheric conditions within the tunnel. This provided a useful record confirming the effective strategy and supporting the duty of care that has been delivered by First Engineering to both its employees and subcontractors during a successful renewal project!

