

MARSHALL-TUFFLEX HELPS TO KEEP STANSTED TUNNEL'S LIGHTING UPGRADE PROJECT ON TRACK

When the lighting and power supply within the Stansted Tunnel needed upgrading, Marshall-Tufflex was the only company able to supply Network Rail's specified Class 1 GRP cable tray system and meet the tight deadlines J Murphy & Sons has to complete the work.

Opened in 1991 and covering around 1.8km, Stansted Tunnel serves the single, bi-directional track that provides the only rail route in and out of Stansted Airport. A crucial element of the tunnel is the lighting system which caters for safe passenger evacuation in an emergency and provides light for maintenance teams in the tunnel.

Ad hoc repairs and replacements have been carried out to the lighting, but after 30 years of water ingress and general wear and tear, it was clear that it was no longer possible to cost-effectively sustain the lighting by simply replacing the degraded or life expired parts. As a result, J Murphy & Sons was awarded the contract to replace the entire lighting, lighting support systems and power supplies for the tunnel.

The upgrade project involves the installation of a new GRP handrail with integral lighting running along the tunnel wall and the steel walkway, emergency lighting and supporting electrical supplies and Marshall-Tufflex's GRP cable management system. Timings are critical to the upgrade as work is being carried out to a strict schedule between January 2022 and January 2023, with line closures being restricted to Friday and Saturday nights.

"We had four 50 hour possessions during January and March 2022 which was part of the enabling works and helped us to ensure the project could be completed by the financial year end 2022/2023," explains Craig Anger, Contracts Engineering Manager, at J Murphy & Sons. "However, when we came to price the GRP tray according to the specification, we found that the nominated supplier had long lead times on its products and wasn't able to meet our allocated possession dates in January 2022."

J Murphy and Sons went back to the market and contacted a number of other manufacturers to source a perforated GRP tray but they were unable to meet the possession times against the signed off product specification for the tunnel works. The cable trays had to meet Class 1 fire rating in order to maintain a certain level of fire resistance, whilst still maintaining the integrity of the cabling. In addition to being suitable for the environment, the cable management systems also needed to have a minimum design life of 25 years.



Marshall-Tufflex was the only company able to provide GRP cable management products that met the specific requirements and the tight installation deadlines. The company's GRP cable trays are lightweight, long lasting and provide high levels of fire and corrosion resistance, making them ideal for challenging rail environments. Furthermore, Marshall-Tufflex is registered with the RISQS Railway Industry Supplier Qualification scheme.

During the January 2022 possessions, J Murphy and Sons removed and replaced 1,800m of handrail and installed 1,800m of Marshall-Tufflex's GRP cable trays. These trays require fewer components and feature interlocking and self-adjusting couplings which made them quick and easy to assemble and install. 45 degree bends have accommodated changes in level around recesses in the tunnel wall, enabling the tray to run down and underneath the walkway rather than straight across where it would cause a trip hazard.

Craig further explained: "Barry Roberts, Marshall-Tufflex's National Specification Manager provided us with all the datasheets including fire test documentation which was a big bonus as Network Rail could see that the products have undergone all the relevant tests. The team at Marshall-Tufflex provided excellent support and ensured all products were delivered to site to meet our strict schedule. This has helped us to keep on track to complete the final cabling installation and commissioning during our January 2023 possession."

The lighting upgrade project is due for completion in January 2023, by which time J Murphy and Sons will have installed 1,800m of Marshall-Tufflex's GRP cable management system to house the cabling for the new handrail with integral lighting, all during limited weekend possessions in January 2022 and January 2023.



Visit www.marshall-tufflex.com to find out more about GRP Cable Management

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