

# MERSEY TUNNEL LEAKY FEEDER

## Project Summary

**Client:** ADCOMMS

**Timescales:** December 2013 – June 2014

**Linbrooke Disciplines:** Telecoms

**Linbrooke Services Utilised:** Survey, Install

## Customer Objective

To install a global system for mobile communications – railway (GSM-R) leaky feeder system throughout the Mersey tunnel network in order to provide Merseyrail with a seamless link-up of communications between tunnel and over-ground GSM-R coverage.

## Project Overview

Due to the GSM-R system becoming an international standard for wireless communications and railway applications, Linbrooke Services were selected to install the system throughout the Mersey Tunnel Network. The project had an extremely challenging 6 month timeframe and focused primarily on the installation of almost 15km of wireless infrastructure.

*“As a project delivered under challenging circumstances, Linbrooke performed admirably and ensured the delivery was both successful and on time.”*

– Nick Peters, Construction Manager

## Linbrooke Project Scope

With the vast majority of works being delivered at height, Linbrooke employed various methods to gain access to the working levels. This included the undertaking of methodology/risk assessments as well as the application of a VolkerRail gamma elevating platform which allowed six men the space to work simultaneously.

Providing a full turnkey delivery in GRIP 5-7 telecoms works, the Linbrooke scope included:

- Installation of 11km of leaky feeder
- Installation of DISAC fibre cable
- Installation and testing of 6km of power cable
- Testing, splicing and termination of fibre cables
- Installation of fibre optic joints
- Installation of bundled fibre to pre-installed repeaters
- Installation of 24 indoor antennas
- Installation of 8 GSM-R handover antennas
- The connecting of all assets

The challenging working environment also saw our installation teams contending with varying tunnel designs and constructions - including Victorian brick twin bore systems and smaller, single bore versions from the 1970's.

## Benefits of working with Linbrooke

Utilising an effective and collaborative approach with all involved parties – including MerseyRail and VolkerRail, Linbrooke uncompromisingly adhered to our 'right first time', quality driven ethos. With all of our works being carried out in limited 4 hour night time possessions, we were able to successfully minimise disruption to the MerseyRail network.

To ensure successful project delivery, we consistently provide:

- A strong, detailed understanding of the technical scope
- A full delivery of telecomms, signalling, power, civils and track which ensures multidisciplinary efficiency
- An impeccable health and safety record
- The ability to adjust to project alterations rapidly – and provide alternative solutions when required
- A highly skilled and experienced work force
- Strong relationships with a number of industry experts