

 **Liverpool Street Station Platform Extension GRIP 5-8 Design & Build**

**Circa £12m**  
/ Project Value

**April 2020**  
/ Project Commenced

**Ongoing**  
/ Project Completed

**MTR Corporation Limited**  
/ Client

### Project Introduction

Our client, MTR Corporation Limited, required a contractor to design and build extensions to platforms 16 and 17 and to take platform 18 out of use as an operational platform at London's Liverpool Street Station to increase capacity for their new 205m Full Length Units (FLU) trains. Our client is working to a strict deadline driven by the introduction of the new FLU trains on the network. Together the target is completion by 10 May 2021. The works briefly include modifications to track, platforms, signalling, S&T and associated infrastructure to support these changes.

### The Objective

Liverpool Street Station is one of London's busiest train stations. The key project deliverable is to complete the platform extensions and associated works by 31<sup>st</sup> May 2021 to ensure our client can fully introduce and operate their new rolling stock.

This involves the management and interface of multiple contractors to deliver specialist activities such as modular platform extensions, slab track installation, roof mounted OLE and multidisciplinary design.

The key challenge is to complete the works within limited access opportunities available.

*"This is a complex multi-disciplinary project and is one of the most challenging that we have been involved in. The project team have developed key client and subcontractor relationships and we are delivering a quality product for our valued client, MTR Corporation Limited."*

Shane O'Halloran  
Managing Director  
BCM Construction Ltd

**The Deliverables:**

- Site Surveys
- Site Set Up and Enabling Works
- Material Deliveries
- Management of access and possessions
- Installation of IVES slab track system
- Installation of new S&C and Permanent Way Modifications
- Installation of TSP Platform Extension Access
- OLE Modifications
- S&T Modifications
- M&E Installations
- Civil Works installations
- Decommissioning Platform 18
- Testing and Commissioning

**The Challenges:**

- Must meet client programme end date with minimal access
- Multidisciplinary design development
- Innovative solutions

**The Solutions:**

As a company we have implemented a joint programme between our client and all subcontractors involved. A 10 week lookahead process has been put in place to ensure that all parties are aware of the works taking place and resources can be allocated efficiently reducing the risk of programme failure. To do this efficiently, a shared planner has been employed to collate all information from all parties. A realistic view on contingency is included in the programme for example, we have not over allocated activities in possessions.

Because of this the programme has been allocated a 10% float with the support from our client due to the float being a risk mitigation to the end date.

To lead the integrated GRIP 5 Detailed design process, we have appointed new GRIP 5 designers, Arup, with Industry specialists also inputting their knowledge into the design process:

- Rhomberg Sersa for the IVES Slab track design.
- OSL for SSI Design, Resonate for IECC Scalable design
- Systra for modular platform structure design.

The innovative use of the IVES slab track system with integrated modular platform system is unique to this project, introducing significant cost savings for our client.

**Outputs and Benefits**

**Managing Subcontractors:** Multiple contractors have been involved in this project including specialist contractors whose help made this project possible. As such, we have developed collaborative relationships with shared pain/gain in our contracts to promote positive working relationships.

**Programme Management:** A strict deadline from our Client has promoted our company to employ innovative programme management processes to ensure that programme risk is reduced and managed through mitigation and float management.

**Client Relationship:** This project has promoted a new client relationship with MTR Corporation Limited, which we hope to build and develop moving forward. We have been able to align our values and capability with MTR to deliver exceptional service and stronger relations.

