



CASE STUDY – BIRMINGHAM NEW STREET AREA RESIGNALLING PHASE 7

CLIENT – SIEMENS MOBILITY LIMITED

LOCATION – BIRMINGHAM

DURATION – 3 YEARS



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Scope of Works

The Birmingham New Street Area Resignalling Scheme is a Network Rail funded signalling renewal scheme with associated track and enhancement works. The scheme will renew the signalling equipment & system controlled by the existing Birmingham New Street Power Signal Box. Birmingham New Street handles approximately 80 per cent of the daily total services to Birmingham, including long distance trains from Euston to the north, services from the south and the south-west to Scotland, Newcastle and Manchester/Liverpool and the east-west services to the East Midlands, East Anglia and North, West and South Wales. The station serves over 31 million people every year and is a key central hub for both national and regional services. The frequency of equipment usage is now deemed beyond what the system was designed for. Some of the New Street PSB signalling equipment was commissioned in 1966 and will be over 50 years old by time of its renewal. The system is now managing levels of traffic which were unimaginable when the system was commissioned.

Project In Numbers

- FSPs (Functional Supply Points) – 31
- Feeders - 11
- Auxilliary/Principal Supply Points – 4
- DNO Supplies – 1

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Our Solution

As part of the BNSAR Phase 7 works, a revised signalling power system was implemented, necessitating the establishment of new Principal Supply Points (PSP) at Curzon Street (Proof House) and Monument Lane to support a new 650V signalling power feeder arrangement through Birmingham New Street to provide a more stable and reliable power supply. In addition, the existing 650V signalling power feeders from Aston PSP (to Duddeston) and Stechford PSP towards Birmingham New Street were modified. Further modifications were also made to the 650V signalling power feeders supplied by Selly Oak PSP and Smethwick Rolfe Street PSP towards Monument Lane (Birmingham New Street) to ensure full implementation of Automatic Reconfigurable Signalling (ARS) throughout. This meant that this significantly reduced any downtime through engineering faults and improved operation efficiency for the Birmingham central area.

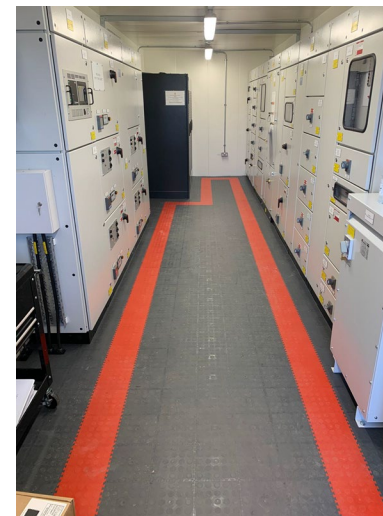
The delivery strategy for this project involved energising the first FSPs from Proof House PSP by Christmas 2021. Following this initial commissioning, efforts focused on extending the 650V power through new FSPs and REBs, with the ultimate goal of commissioning a fully auto-reconfigurable 650V power architecture on both sides of Birmingham New Street Station. Additionally, Kent PHK successfully upgraded the bonding network throughout Birmingham New Street Station, implemented REB domestic supplies, managed distribution network operator (DNO) supplies, and providing alarm and indication for an improved monitoring system for Network Rail.

Our Standards

At the forefront of our business is a commitment to sustainability and corporate social responsibility, highlighted recently in the completion of our new head office which has been designed and built to be a sustainable building for the future. We are constantly working on ways to reduce and minimise our carbon footprint, and many of our employees have been involved in a series of fundraising events for local and national charities.

Our Team

One of the fundamental principles of the business is an investment to selecting and retaining a dedicated and professional workforce, both by supporting apprenticeships and encouraging career enhancement within the company.



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Outcome

Upon the successful completion of the project involving the installation of four new Power Supply Points (PSPs), the following positive outcomes can be highlighted:

- 1. On-Time Delivery:** The project was completed within the agreed timeframe, ensuring that operational milestones were maintained without delays. This demonstrates efficient project management and effective coordination between all stakeholders through regular communication with the client and Network Rail.
- 2. Adherence to Budget:** The project was completed within the allocated budget, showcasing cost control and the ability to manage resources effectively. This contributes to the financial success of the project and enhances future trust in the project management team's capabilities.
- 3. Collaborative Success:** The project was delivered through strong collaboration with Siemens Mobility Ltd, Network Rail and other contractors. This teamwork fostered knowledge sharing from previous phases of Birmingham New Street Phases 4, 5, and 6, problem-solving, and leveraging on each others expertise, ensuring a smoother project flow and more effective outcomes.



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