

Clapham Junction Station

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Power upgrade at Clapham Junction drives better access solution

Tens of thousands of passengers who use Clapham Junction Station every day benefit from better access, less congestion and improved facilities following completion of our comprehensive Access for All scheme. The installation of 9 new stand-alone lift structures, raised access decking, and stairs, demanded an increase to the station's power supplies and the project included a comprehensive power upgrade and associated upgrade to all services and lighting. The second phase of works was to create a new station entrance and drop off point in the former Brighton Buildings off St. John's Hill.



To ensure the seamless transition from construction to operational phases of the lifts, the M&E aspects of the project were at the fore of our meticulous planning activities including:

- Provision of new substation and sub-main distribution to all platforms
- Relocation of existing lighting, power, CIS, PA/VA, fire alarm, CCTV, help points, TFL information screens and Telecoms to facilitate the installation of the new structures
- Installation of new lighting, power, PA/VA, CIS, fire alarm and CCTV to new structures
- Upgrading of existing CCTV and PA control centres



Understanding our customer's risk and opportunity

Clapham Junction Station has extremely restricted access and the works on the narrow busy operational platforms were successfully delivered whilst maintaining a 'Business as Usual' policy for railway customers, staff and passengers.

TOP: Upgrading works

MIDDLE: New lifts linking with staircases

BOTTOM: Enhanced platform access

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Mike Sandy, Programme Manager Network Rail:

“
All works were ahead of schedule and we even found time to safely assist our colleagues on an adjacent site by lifting in equipment for them. This is truly excellent teamwork and a high quality product that we are all proud of.
”



TOP: New lift installations

BOTTOM: Improved access to platforms

Logistics to and from the platform work sites were intensely complex and “Thinking outside the Box” was essential to overcome the challenges. Access routes, loading restrictions on existing structures, methods and timeslots for equipment, materials and waste associated with hand excavation work and hand demolition required meticulous planning. A “just-in-time” delivery process was utilized for sequential delivery of the modular steel structures, staircases, walkways and precast modular lift shafts.

The project team held early and meaningful discussions with Network Rail and the Train Operators to agree how the works could be safely undertaken without the need to shut platforms. Regular meetings and workshops were held to determine the logistics of moving plant and material across the station to the worksites. Polybridges were used to transfer piling plant, mini-excavators, dumpers, MEWP’s and ‘spider’ cranes across tracks to each of the islands to undertake the works. Successful, efficient erection of the steelwork for the finger structures and lift shafts was completed during regular possessions using ‘spider cranes’ to ensure no interference to the operational railway and a fully operational station opened to passengers at the end of each shift.

During the works upon exposure of the main containment routes, there were numerous unidentified cables that needed to be diverted to facilitate construction of the scheme. We engaged specialist contractors to survey each cable and produce a schedule identifying those that required diversion and those that were in fact redundant and could be removed. The diversion works were then planned and implemented with no disruption to the station.

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Creating value partnerships

Network Rail delivered the project on behalf of the DfT with Osborne as Principal Contractor. With Clapham being such a key railway hub the project team set out to be different from the outset and a true voluntary collaborative partnership was employed. The determination and bond demonstrated between Network Rail, Osborne and the Train Operating Company's personnel was key to the successful delivery of this project within such a busy and constrained operational environment for all parties and stakeholders involved.

The project triggered a measurable change in people's behaviours. The 'Can Do' attitude recognised the value that all parties can bring to a successful project outcome, an important stepping stone to creating future benefits for passengers through efficient working alliances between Network Rail and its supplier partners:

Embedding Sustainability

The collaborative project team set themselves the target to deliver this challenging project at Britain's Busiest Station by ensuring minimal impact on the environment and minimal, disruption to rail services, customers and the travelling public.

The permanent works were designed to minimise site work wherever possible with many elements being pre-cast or pre-assembled off site prior to delivery. The steel staircases and walkways were pre-assembled in modular units requiring the minimum of site connection to complete the installation. For construction of the lift shafts, precast concrete panels 8m high, 3m wide and 14 tonnes in weight, were lifted across 6 sets of tracks and erected complete with post-tensioned joints and roof caps.



TOP: Lift installations to inter-connect platforms

BOTTOM: Station refurbishment