

Case study



Heathrow Terminal 1 and
Terminal 3 service subway upgrades

Heathrow T1 and T3 service subway upgrades

Who

We were awarded this essential works project by Mitie Technical Facilities/Heathrow Airport Limited as a result of our proven track record for first-class workmanship, timeliness, budget control, safety and meeting or exceeding client expectations. Our certified, specialist "confined spaces" skills set was of particular importance. We are proud to have a high number of skilled personnel, trained and qualified in the areas of expertise required to meet our clients' needs.



What

This project involved: installation of lighting and emergency lighting, throughout Heathrow Terminal 1 and Terminal 3 confined space service subway tunnels beneath the terminal buildings. In addition we were responsible for: installing new distribution boards throughout; installation of new fire doors with Salto access; improvements to safety exits; various remedial works to improve safety as highlighted by our surveys; electrical periodic testing and electrical inspection.

Why

The service tunnels are the life line for HTHW/LTHW services for two major terminals at the airport. Due to age and deterioration, safety was becoming an issue. The tunnel environment was subject to high temperatures during winter periods and water ingress during poor weather periods, creating safety issues for maintenance and operations. Due to our experience and specialist capabilities we were instructed to implement the restoration of safe working operational areas and create a safe working environment.

Where and when

During the summer of 2012 works were carried out to both land and airside service tunnels below Terminals 1 and 3 without any interruptions to airport operations. Working to a strict programme, activities were scheduled to deliver the desired outcome whilst still maintaining time, quality and cost control to the client's project brief.



The story

Service tunnels house many essential services and plant systems, from mission critical electrical looms to essential HVAC systems, chilled and high temperature hot water systems along with a multitude of unidentified power communication and data cables. It is not an easy environment to work in. But, while there is often work going on in the tunnels, the tunnel system itself no longer provided a safe working environment. Putting that right was where we came in. A key issue with the tunnels was inadequate lighting.

To provide a safer working environment for all users, we installed over 2.5km of temporary lighting, immediately providing a safer environment, giving all users of the service subway safe access while maintaining assets within all zones.

Access to the tunnel system is restricted and controlled by a tier system of access rights operated through the electronic Salto access system ensuring only personnel with the appropriate qualifications and certification could attain access. We were easily able to create an appropriate project team using our fully qualified ESR Mod 1 and 2 electricians and operatives holding HAL confined space and breathing apparatus licences, as well as providing confined space AP's.

Having established a safe working environment, our teams installed 1,230m of lighting below Terminal 1 and a further 1,590m of lighting below Terminal 3, involving the installation and trunking of around 3km of cable and associated containment. This work also involved installation of new emergency lighting and essential services as well as remedial improvements where safety issues were highlighted by our surveys. These aspects were enhanced by the installation of ten new distribution boards and we carried out periodic testing throughout.

In addition, we removed aging confined space fire doors and installed new units throughout. Redundant plant and equipment was removed and replaced, with all replacement items complying with current regulations, and we added access control features to ensure confined space control was maintained.

Outcome

The immediate impression is one of transformation, from a dark, untidy, hazardous, high risk area to a well-maintained, well-lit, organised and safe environment with secure boundaries and improved lighting, exits. We've created an environment that is easier and safer to work in, this allows work to be carried out with greater efficiency which will in turn deliver financial savings to HAL. Most importantly, anyone working in the tunnels will get home safely.



All home safe On time In budget Regulations met Satisfied client

Project data

Planning

- Create a dedicated team with all the necessary confined space and related qualifications and approvals
- Risk assessment, full H&S plan and documentation
- Parts and components specification
- Detailed project schedule
- Working under CDM regulations

Procurement

- Saving through cost effective resourcing
- Cost effective savings through recycling

Implementation

- Delivery controlled and maintained through staged planning to ensure deliverables
- Handover stages and project closures agreed to programme
- Project handover and associated integration compliant to programme

Outcome benefits

- Design solution has, and provides, a proven annual cost saving
- Pre-planned maintenance downtime resulting in reduced disruption to others needing to access the tunnel system

Your next project

We hope that this brief case study has shown you some of our skills, experience and client/results focussed approach. As you approach your next project requiring building services resources we hope you will consider Freemantle as a key contractor.

When you involve us you effectively increase the size of your own workforce as we become a part of your team. Your objectives become our objectives, ensuring your project is a success.

If we can be of any assistance please contact me, Richard Freemantle, to arrange a free, no obligation, informal chat regarding our services. You can reach me on 020 8564 8217 or e-mail me at richard@freemantle.co.uk

I look forward to hearing from you.

Regards

Richard Freemantle

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