

# HEATHROW AIRPORT - TERMINAL 2



## BACKGROUND

Heathrow Airport wanted to increase the capability, range and resilience of the electrical system at Terminal 2, to support the redevelopment and increasing capacity of this international airport terminal.



## SCOPE

The scope of works included the detailed design, procurement and installation of HV and DC feeder cabling, installation of new substations and the installation of new HV and DC cables.

The main items of plant and civil works that we provided included:

- Two new 33/11kV primary substations designed and installed to supply the main terminal (T2A), its satellite terminal (T2B), the multi-storey car park and all other infrastructure
- T2A main building substations – comprising seven new internal 11kV/415V substations in the main building, powering all terminal infrastructure including baggage, passport control and retail
- T2B satellite terminal substations – five internal 11kV/415V stands project; T2A has 6 x 1MVA package substations serving ten aircraft stands. T2B has 18 x 1MVA package substations serving 23 aircraft stands
- Cooling station – new 11kV substation supplying the new cooling station pumping cool air into the terminal

## CHALLENGES

Given the size and location of the project, we encountered several project challenges:

- Early Services Relocation (ESR) project involved decommissioning the existing Terminal 2 whilst moving active services for redevelopment
- Substation 260 brought up logistical issues of installing transformers close to a live runway
- Keeping the terminal cool with reliable air conditioning facilities meant a separate cooling station was required

- Logistics of working in a live operational airport; security and background checks, restrictions on workflows
- Locational issues; the Central Terminal Area (CTA) remained operational throughout the life of the project. Careful consideration was needed when planning the works to ensure that passengers using the airport remained unaffected

## ACHIEVEMENTS

We successfully delivered a complete design solution, managing all sub-contractors for a collaborative effort in works throughout Terminal 2. The key to success was a close and integral relationship with our client, understanding and meeting all agreements.

Our holistic awareness of the deliverables of each project item and network capabilities, as well as our unique insight into electrical distribution, helped foresee and solve potential issues before their effects took hold.

This resulted in new infrastructure being delivered to industry standards by an onsite team who knew and understood the operational airport environment and its requirements. The new installations are future proofed, with equipment and spare capacity available in substations to add more load to the network.

## KEY STATS

£30

million project



Future-proof design



2 new primary substations, 7 internal substations

## CONTACT

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