



Project:  
Heathrow T2B

Value:  
£84 million

Completion date:  
2013

Main Contractor:  
Balfour Beatty Construction

Client:  
BAA plc

Project Summary:  
The second phase of a satellite building to support Heathrow Airport's new Terminal 2. The project will deliver 10 new aircraft gates east of Terminal 1 and incorporate an underground link from the satellite to the main building of the new Terminal 2.

## Case Study Heathrow T2B

BBES uses modular manufacturing to deliver temporary energy centre at new Heathrow Terminal 2B

**Using an off-site fabrication programme that minimises waste, increases productivity, reduces labour costs air side and provides structured and detailed quality management at every stage of the construction process, Balfour Beatty Engineering Services (BBES) has completed Phase one of the mechanical and electrical services for the new Terminal 2B building at London Heathrow Airport, which represented £94 Million of works across the Balfour Beatty Group companies on the Project.**

In addition to this Balfour Beatty has secured a further £490 Million of works for phase two of Terminal 2B. The phase one works included the crucial design and construction of a Temporary Energy Centre (TEC).

A key element in the construction process was the creation of the TEC, which was to be used as the site's primary plant, providing temporary heating and cooling, together with associated electrical, power and specialist systems.

The key component in the successful delivery of the TEC was a packaged plant room that would house boilers, pumps and associated equipment, an electrical switch room, as well as a specialist systems communications room. Manufactured mechanically and electrically by BBES at its Modular Systems + facility, this allowed site construction to commence concurrently – saving 10 weeks on the project timeframe.

Using the latest lean construction methods and off-site fabrication techniques, BBES was able to deliver the completed plant room to site in three separate modules and assemble in just two working days. This was followed by the delivery of four air cooled water chillers to be installed in an external adjacent compound. These were interconnected, once on-site, with a series of pre-fabricated pump header modules.

Utilising the innovative delivery methods of Modular Systems +, BBES was able to maximise project efficiency whilst ensuring quality management was maintained throughout each process. The modular arrangement also eliminated material wastage, and provided significant cost & time benefits compared to traditional installations.



**Balfour Beatty  
Engineering Services Limited**

Unit 4, Woods Bank Estate,  
Woden Road West,  
Wednesbury, West Midlands  
WS10 7SU

Tel +44 (0)121 568 2800 Fax +44 (0)121 568 2777  
Email [enquiry@bbesl.com](mailto:enquiry@bbesl.com)

[www.bbesl.com](http://www.bbesl.com)