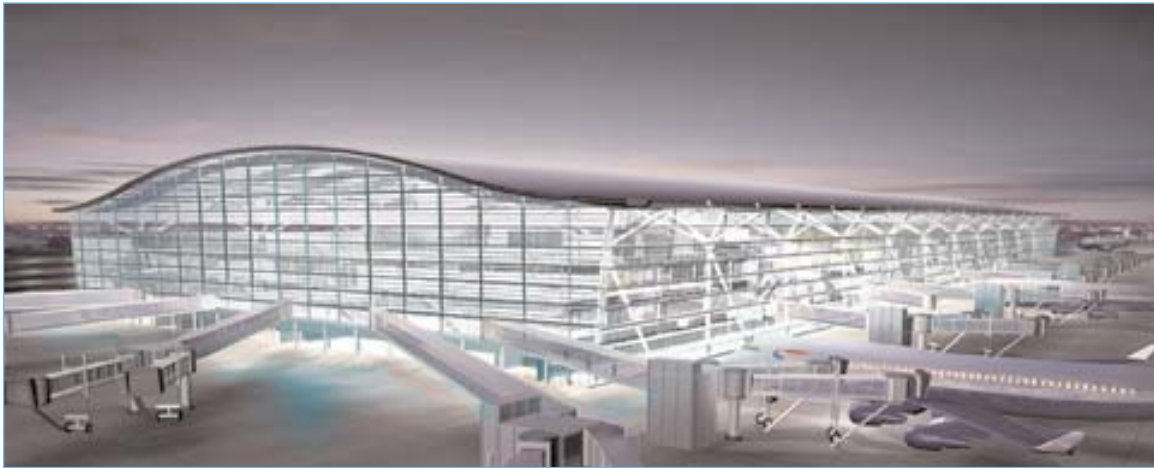


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Promat's product performance and technical support help win T5 specification



IT'S THE LARGEST construction project in Europe and one of the most challenging in the world. A site the size of Hyde Park in the middle of the world's busiest international airport, hemmed in by some of Europe's busiest roads.

Yet BAA's spectacular Heathrow Terminal 5 is making excellent progress. One reason is the involvement of Promat UK Limited, the market leader in passive fire protection.

Promat's fit and forget DURASTEEL® fire barrier and other high performance fire protection systems are being installed across the £4.2 billion development.

Specifiers and insurers know that Promat's products are tried and tested, easy to use, and tough and durable enough to be installed early in the building programme, even before the structure is watertight. And they can also count on Promat's technical expertise and support.

Passive fire protection is playing an increasingly vital role in modern construction. Built into the fabric of a building, it creates a physical barrier to contain the heat and prevent the spread of smoke and fire. This containment helps control the course of a fire and the damage it can do, giving occupants time to get out and firefighters the chance to save the building.

Promat make a broad range of high performance products, a pedigree that stretches back more than forty years. And the company is certainly being put through its paces at T5.

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Designed by the Richard Rogers Partnership, T5 is being hailed as a new landmark for London. When it opens in Spring 2008, it will be able to accommodate 30 million passengers a year. But there's far more to it than just a building. As well as the vast new terminal – which could fit 50 football pitches - and its two satellites, the project includes 47 aircraft stands, a control tower, a 4000 space multi-storey car park, a hotel, rail links, a spur road from the M25, even the diversion of two rivers.

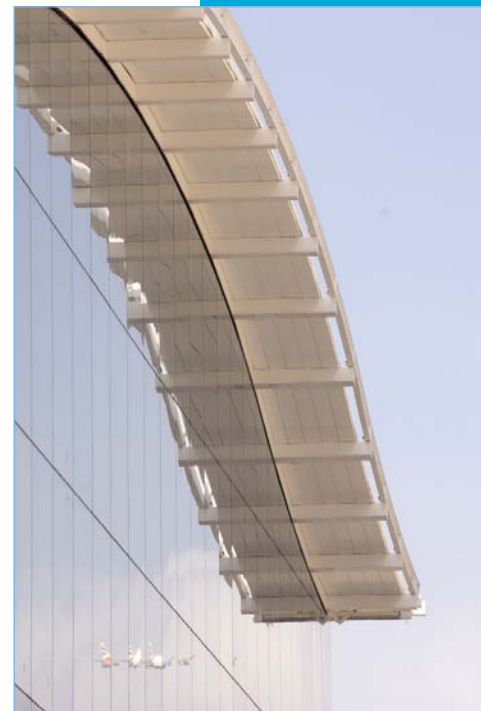
Promat's input includes the largest ever specification of DURASTEEL® fire barrier. It's being used in the main terminal building, the satellites and in the railway station – in some areas forming barriers 14m high.

Durasteel is a sheeting made from a core of composite fibre cement sandwiched between mechanically-bonded steel facings. Renowned for its impact resistance, it's light, durable, and can cope with up to 360 minutes' exposure to fire. While subjected to fire conditions, DURASTEEL® will withstand spray from firefighters or sprinklers. Previously it has been used on jobs such as the British Library, Canary Wharf and Jubilee Line Extension and for clients including the Ministry of Defence. Installation is also underway at Multiplex's massive new shopping centre development at White City, West London.

At T5 Promat supplied 60,000m² of DURASTEEL® in 9.5mm sheet for insulated fire barrier. It features prominently below apron level, lining the tunnel-like service corridors, the cavernous baggage handling areas, lift pits, workshops and plant rooms. Indeed, continuous barriers of silver DURASTEEL®, punctuated by apertures for doors and services, provide a purposeful presence throughout all these areas.

DURASTEEL® barrier easily met the specification for 120 minutes' fire resistance. But that's not the only reason it was chosen. The system was installed well before the dry envelope stage, so it had to be exceptionally tough and durable.

"Before the roof went on, rain water was running down the DURASTEEL® walls for months on end without any detrimental effect on the integrity of the product," says Peter Sandals, site agent for Essex-based R&S Fire & Security Ltd, the specialist sub-contractor responsible for its installation.



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Mace Solutions - the fixed price service provider within Mace Infrastructure Sector - are the package contractor responsible for the design and construction of the compartment walls below the main terminal.

The company says: "The system selection process identified DURASTEEL® as the most appropriate partitioning material based on the fire rating, its durability and ability to withstand the environmental conditions that exist during the early phases of construction."

And the architects working in partnership with Mace Solutions, Bryden Wood Associates, cite Promat's technical expertise in helping to develop the specification, including wind loadings for the tall barriers and developing systems such as barriers with a plasterboard facing for office areas.

DURASTEEL®'s high impact resistance was another key factor. "The barriers must withstand the impact of trolleys and baggage systems," says project architect Dan Cunliffe. "DURASTEEL® was the best product for the project, based on its versatility across a wide range of performance and other functional criteria."

The DURASTEEL® walls were constructed from pre-cut kits fabricated in R&S's factory in Essex and delivered in meticulously labeled, pre-assembled kit form. They are installed section by section using scissor lifts.

John Allsop, the senior site agent for R&S, says: "DURASTEEL® is as easy to install as plasterboard, but of course it's far more durable and robust."

In typical applications at T5, two layers of DURASTEEL® are set on steel channel tracks, sandwiching mineral wool between them. Steel studs located at 1.2m centres are used to fix the sheets to fillets and horizontal framing members. The barriers have movement joints of +30mm and -100mm.

R&S has 40 fitters and labourers working at T5. It began installing the DURASTEEL® in July 2004 and its work on the main terminal will be complete by the year-end. At which point, work will start on the first satellite building, T5B, where 800m² of DURASTEEL® is to be installed. It's also being used in the new railway station.

"We have a close association with both Promat UK and MACE Solutions," says R&S Group's managing director Colin Bland. "This unique relationship has ensured that delivery of the contract has run smoothly and efficiently for the client BAA. It's on time, within budget and in accordance with the T5 project principles."

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Alongside DURASTEEL® significant quantities of other Promat products are being used at T5. They include VERMICULUX®, SUPALUX®, MONOLUX® and PROMATECT® 250 high performance fire protection boards – and DURASTEEL® doors. Applications range from protecting structural steelwork in the satellite building to providing ceilings to airside cores, and cavity barriers inside the new control tower.

Promat UK Limited is owned by Etex, a European building materials group with centres in more than 30 countries, forming a global network of specific knowledge concerning fire protection and high temperature insulation.

Its 'Passive Fire Protection Handbook' has become the generic reference for one-stop passive fire protection while a new website www.promat.co.uk provides an up-to-the-minute guide on products and services.

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