



## Bespoke metalwork

VAULTED METAL ceilings and stainless steel wall cladding, with impact resistance finished with anti-graffiti paint, were specified for the recently completed Peak Hour Subway at Waterloo Station, London.

The refurbishment created a modern, open space designed for increased capacity over the coming decade. The subway, which is accessed from the platforms, was originally designed to alleviate overcrowding at the main underground entrances at Waterloo Station.

### Victorian brick

SAS International's project management team worked closely with bpr architects on the design, manufacturing and installation of the architectural metalwork for the Peak Hour Subway.

Bpr architects associate director Nicholas Whiting comments: "The civil engineering involved in opening up these arches was a big challenge for the project. The lower subways of Waterloo are constructed from Victorian brick arches 3.5m thick. Once the new openings were instated we needed a bespoke cladding system that could be installed quickly and easily within tight time and budgetary constraints."

The demountable barrel vaulted ceiling along with the silver ceiling had to incorporate existing services. A bespoke design was required for the existing brick and render arched soffit of the subway, which contained congested services suspended beneath.

SAS International provided a sub grid to span beneath these services to allow the primary grid of the ceiling suspension. Twin vaults were added along the lengths of the subway to create a feature to the otherwise flat plane and to reflect the existing arches. The lighting and ceiling grids had to be co-ordinated with the structure of the lift valley to maximise ceiling heights caused by the low soffit.

Bulkheads with integrated services were installed along the perimeters in the lift valley of the subway.

### Ventilation

Stainless steel wall cladding was specified and installed throughout the walkway of the subway with stainless steel corner posts and skirting also used on the stairs. The stainless steel skirting has slotted perforations at the bottom for ventilation to otherwise damp walls. The wall panels also feature ventilation slots.

The complex wall cladding was designed and installed around recessed mounted control units, CCTV cameras and gate line attendant points. It consists of a hook-on demountable cladding on vertical pin channel supports, which allow panel access to services.

The upgrade has complemented the new automated ticket gateline, which has been installed across the main concourse's 19 platforms at Waterloo Station. In total there are over 140 automated ticket gates on the concourse and an additional 27 in the subway below. This has improved security and protected the train operating company's revenue across the station.

## Contemporary tile duo

TWO stylish new wall tile ranges have been produced by British Ceramic Tile exclusively for tile retailer Tile Giant. Floral is a range of mix and match colourways, which are equally at home in the bathroom or kitchen. The design can be used in both contemporary and traditional schemes, either on its own or teamed with its bright white high gloss partner. The textured white detail and subtle hints of lustre give an added sparkle and provide an attractive feature in any setting. The tiles are available in white, black and red in a 248x398mm size.

Microdot is a new contemporary collection offering the latest in ceramic print technology and materials, producing a surface in a range of coordinating colours. Black and white tiles can be combined for a classic look, or the red provides a vibrant scheme. They can also be combined with the feature strip for a striking and luxurious effect.

The tiles are available in white, black, metallic and red in a 248x398mm size. The complementary cased strip and inset are available in a 249x20mm and 248x398mm sizes respectively. ■



### editorial contacts

#### British Ceramic Tile

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

#### Design and Display Structures

[www.design-and-display.co.uk](http://www.design-and-display.co.uk)

#### Johnstone's

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

#### Philip Watts Design

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

#### SAS International

[www.sasint.co.uk](http://www.sasint.co.uk)