

# Case study



01/03/2014

For immediate release

## **Schöck meets unusual demands at Bermondsey Spa**

The regeneration of the Bermondsey Spa area, in south London, is a multi-award winning scheme, involving fifteen key sites across a 50-acre area and is resulting in over 2,000 new homes, health centres, offices and shops. A recently completed phase, just off the Jamaica Road, involves four buildings up to ten storeys high. These are post-tensioned concrete frames and 220mm deep, two-way post-tensioned flat slabs.

With concrete having such a high thermal conductivity, the prevention of thermal bridging at connectivity points is critical if government standards are to be met. Regulations insist that there must be a major reduction in local heat loss and CO<sub>2</sub> emissions, but there are other factors too. If low internal temperatures around the thermal bridge are below the dew point, condensation will form and this can lead to structural integrity problems with absorbent materials. It also encourages mould growth, which has serious implications for building occupants and may cause medical conditions such as respiratory problems and dermatitis.

The design of these latest four blocks is particularly unusual in that some of the residential units are conventionally insulated on the outside, but others insulated on the inside. This form of internal insulation has the peculiarity of needing thermal breaks not only at the balconies, but also around the perimeter of the

inner slab, due to the thermal bridge created by the break in the internal insulation at these points. Left untreated, these large thermal bridges result in an unacceptably high loss of energy and risk of damage.

Schöck and post-tensioning specialists Freyssinet, considered using the type Q Isokorb for concrete-to-concrete connectivity. However, this is not a product that incorporates the required nominal restraint for such an application and the Schöck UK design team involved their French colleagues.

In France, internal insulation is the most common form of construction and a special Isokorb derivative, Rutherma DF, has been developed for such situations. The Rutherma DF incorporates Schöck technology found in the Isokorb range of thermal breaks, and has a technical certification issued by the French Centre Scientifique et Technique du Bâtiment (CSTB). It has a high density insulation body and uses reinforcement bars with standard and stainless steel welded together. The stainless steel guaranteeing corrosion protection and reducing the thermal conductivity of the bars.

Fire protection is a crucial consideration concerning the inner envelope of the building, and the Rutherma DF range has been tested and certified by the CSTB, up to a rating of REI120 (Resistance, Entegrity, Insulation). Other thermal bridging requirements on the project involve the reinforced concrete external balconies and walkways, which are separated from the PT slabs by Schöck Isokorb type Q thermal break modules.

In addition to the special capabilities of the Rutherma, the conventional UK Isokorb range allows connections to be made between concrete-to-concrete, concrete-to-steel and steel-to-steel – and it also provides BBA Certification and LABC Registration. The range also comfortably exceeds the UK regulation (BRE IP1/06), which requires that the temperature factor used to indicate condensation risk ( $f_{RSI}$ ), must be greater than, or equal to, 0.75 for residential and public buildings.

*For your free copy of the Schöck Specifiers Guide and / or the Technical Guide contact the company on 01865 290 890 or visit [www.schoeck.co.uk](http://www.schoeck.co.uk)*

- Ends –

<b><u>Project Team</u></b>	
Architect:	Levitt Bernstein
Client:	The Hyde Group
Principal Contractor:	Willmott Dixon
Structural Engineer:	Clancy
Frame Contractor:	Mitchellson
Post-tensioning Contractor:	Freyssinet Ltd

## **Notes to the editor**

### **A leading European supplier**

Schöck has grown to become Europe's leading supplier of innovative structural load bearing insulation products. The main product is the Schöck Isokorb – a thermal break for various types of cantilever constructions in new buildings and for renovation. Its headquarters are at Baden-Baden in southern Germany and there are subsidiary companies in Great Britain, France, Austria, Switzerland, Italy the Netherlands, Belgium, Poland, Hungary, Russia, Japan, Canada and the USA. Sales teams and partners operate in many other European countries and also Australia and South Korea. Schöck is committed to providing the highest level of technical back up and comprehensive customer service to the construction industry.

## Pics



*The Rotherma product*



*A recently completed phase*

**Press Contact for Schöck Ltd:**

Michael Revans Communications

47 Barn Rise, Wembley Park,

HA9 9NH

tel: 020 8904 9733

e: [michael.revans1@btinternet.com](mailto:michael.revans1@btinternet.com)