# **Case study**



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## Riverwalk incorporates high specification Schöck Isokorb

London's three historic embankments – Chelsea, Victoria and Albert – are currently being transformed as part of a regeneration scheme that will replace many of the outdated buildings which have characterised these areas for so long. The result will see the development of new homes, promenades and parks – and one of these commanding new developments, on the north bank of the Thames, is the stunning Riverwalk, at Millbank, designed by Stanton Williams.

Riverwalk features two organically shaped buildings of 7 and 17 storeys, connected by a central podium and incorporating 116 high specification one, two, three and four bedroom apartments, plus penthouses. The design focus is on light, space and service, as well as exceptional views across the River Thames. Extensive planting on roofs, balconies and terraces, most significantly on the first floor podium terrace, also contribute to a substantial improvement in the green footprint and biodiversity of the site.

Aesthetically the buildings are enhanced further by horizontal bands of limestone on the curving facades between the glazing and ceramic panels, with the stonework wrapping around the lower parts of the balconies to create a continuous organic shape. The balconies vary in depth and this in turn provides the outer façade with a sense of depth, along with natural solar shading.

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With such a high specification development it is not surprising to find that enormous consideration was given to the avoidance of the thermal bridging at the critical balcony connections; and the structural thermal break module specified throughout is the latest generation Isokorb type KXT from market leaders Schöck.

The type KXT – for concrete-to-concrete applications – offers such a high level of insulation that the Passivhaus Institute in Darmstadt has awarded the product with the "low thermal bridge construction" certificate and confirmed its suitability even for passivhaus construction.

A major reason for the superior performance of the Isokorb type KXT is the thickness of the insulation body. This is increased from the standard 80mm thick to 120mm, providing an even more efficient solution. The KXT not only improves thermal insulation performance by up to 30% in comparison to to the standard range, it also improves impact sound insulation by around 50% as well. High quality stainless steel bars with improved tensile strength is an integral part of the unit and while the same load-bearing capacity is maintained, there is a smaller rod diameter and therefore a reduction in the thermally conducting cross-section, resulting in a further increase in the heat insulation performance.

A further reason for the superior performance of the Isokorb type KXT is the HTE module, a pressure bearing block made of steel fibre reinforced highperformance concrete with Kronolith, a titanium ore aggregate from Kronos Titan. The unit offers architects and engineers a variety of design options and there is even the capability to construct stepped height balconies, with increased fire protection also taken into account, as the HTE module offers fireresistance class F 120.

Schöck, is a specialist in the provision of advanced solutions for thermal energy structural insulation and best known for its range of structural thermal break units. It is a range which allows connections to be made between concrete-toconcrete, concrete-to-steel and steel-to-steel and all units meet full compliance

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with the relevant building regulations, while also providing BBA Certification and LABC Registration. The requirement described in BRE IP1/06 – a document cited in Building Regulations Approved Documents Part L1 and L2 and Section 6 in Scotland – states that the temperature factor used to indicate condensation risk ( $f_{RSI}$ ) must be greater than, or equal to, 0.75 for residential buildings and this is easily met by incorporating the Isokorb.

In addition, there is also compliance with the Government Standard Assessment Procedure, SAP 2012, concerning  $CO_2$  emissions from buildings and respectively heat losses through non-repeating thermal bridges. Here, the lambda values of the Schöck Isokorb enable energy loss in various connective situations to be reduced by as much as 84% to 91%.

For your free copy of the Schöck Specifiers Guide and / or **the new** Thermal Bridging Guide – contact the company on 01865 290 890 or visit <u>www.schoeck.co.uk</u>

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### 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.

## Images: Courtesy of Redleaf



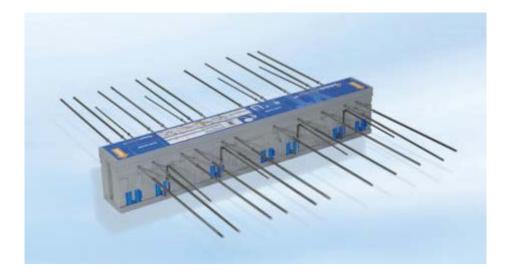
Riverwalk features two organically shaped buildings of 7 and 17 storeys



Exceptional views across the River Thames



The balconies help to create a continuous organic shape



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