

# CASE STUDY

## Riverside Museum, Glasgow



Photography courtesy of Jim Dunn, Glasgow Museum and Art Galleries



### PRODUCTS USED

FactoryClad 32

### PROJECT

Riverside Museum, Glasgow

### CLIENT

Glasgow City Council

### ARCHITECT

Zaha Hadid

### MAIN CONTRACTOR

BAM Construction Ltd

### SPECIALIST ROOFING CONTRACTOR

Varla (UK) Limited

### COMPLETION DATE

June 2011

### KNAUF INSULATION PROJECT MANAGER

Craig O'Donnell

"With this challenging build the only way we could get a truly accurate U-value was to create a three-dimensional model. Knauf Insulation was the only manufacturer that could offer us a three-dimensional calculation service".

"As this is such a difficult specification we became a very demanding customer, requesting different calculations for all our options. Each time we were met with a quick and efficient response – their technical performance was second to none."

Clare Huber, Varla (UK) Limited



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## CHALLENGE

The much acclaimed architect Zaha Hadid created the design for the Riverside Museum, which has already been dubbed 'Glasgow's Guggenheim'.

The new riverside Museum provides an exciting new home for Glasgow's transport collection. The development has a riverside location on a site where the River Clyde meets Glasgow's other main river the Kelvin, and is adjacent to Glasgow Harbour.

The dynamic new Riverside Museum displays Glasgow's rich industrial heritage, which stems from the River Clyde. The Tall Ship is berthed alongside the Museum, creating a fantastic experience in this stunning setting.

The brief for design and build roofing specialist Varla (UK) Limited was to find a flexible insulation that could meet the demanding U - value of 0.20 W/m<sup>2</sup>K that was continuous over both the walls and the complex 18,000 square metre

roof. The Glasgow Museum of Transport is a complex, heavily engineered design and is the first major UK project for the renowned architect Zaha Hadid.

Specialist Roofing contractor, Varla (UK) Limited started the search for a suitable material by contacting many insulation suppliers and holding supplier seminars at Varla's Chester offices, challenging suppliers to propose a solution to meet the demanding specification for this unique project.

## SOLUTION

Varla (UK) Limited chose to use Knauf Insulation's FactoryClad 32, a flexible insulation that meets the demanding U-value of 0.20 W/m<sup>2</sup>K across both the roof and walls.

Rigid foam boards were ruled out early on, as they could not be fitted to the building's complex curves. There was also a limited cladding zone that could not be altered. Many types of insulation were considered, but glass mineral wool roll provided the best thermal efficiency. The key to Knauf Insulation's products

being specified on this project was its ability to provide in-depth technical support, including complex three-dimensional heat flow modelling calculations. This allowed Knauf Insulation to produce a solution that met all of Varla's insulation requirements by using a double layer of 100mm FactoryClad 32. This is a flexible, lightweight roll of resilient glass mineral wool with exceptionally high tear strength and a thermal conductivity of just 0.032 W/mK.

In addition, FactoryClad is ideal for limiting the spread of fire since it holds a Euroclass classification A1 for non-combustibility and will not burn. Nor will it give off toxic smoke or suddenly ignite in a fire due to 'flashover'. For public buildings such as this, superior fire performance is crucial.

Once Varla (UK) Limited had decided on Knauf Insulation, it leaned on them heavily for technical support, utilising the unique 3D heat loss calculation support service, which ensured the correct product thickness was specified to meet the demanding project requirements.

### Knauf Insulation

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