



Design & Display GRP Structures

case study: Siobhan Davies Dance Studio



STUDIO DANCES UNDER THE MOONLIGHT WITH DESIGN & DISPLAY

The architect had created a unique visual image with the roof of renowned Siobhan Davies Dance Company's new studio. This phenomenal, arching structure was to give the impression that the studio was directly under the sky. But, until GRP experts Design & Display came to its attention, actually producing the design seemed an unachievable target.

Brief

Design & Display had the challenge of producing a highly complex, interweaving ribbon-like structure for the roof of the new Siobhan Davies Dance Studio. An intense design, it posed substantial problems for traditional materials – requiring the unique versatility of GRP, coupled with the company's expert skills.

It had to replicate the architect's vision of a wave like image, that gave the impression that the dancers within were directly under the sky and allow natural light into the building. However, it also had to ensure that dancers were not distracted by this light.

Solution

The company proved the immense versatility of GRP by designing, constructing and installing the truly creative, yet practical composite roof, which featured entwining curves throughout the ceiling.

Utilising GRP, Design & Display created five identical large shell structures using a series of moulds. This formed the essential element of the roof's construction and allowed for a recurring, complex and curvaceous design.

To accommodate the dancer's intense requirements the acoustic ceiling, also by Design & Display in computer

calculated plywood strips, allowed for a studio space that is, in places, 5.5 metres high – thanks to the concave nature of the structure.

Between the wave-like segments, vertical roof lights with Okalux™ light diffusing glass, bring to the studio soft, reflective light, but without putting off the dancers. This created a desirable and naturally calm atmosphere throughout the internal surroundings.

Benefits

By using Design & Display's expertise to provide a 'one stop' package, the architect avoided the usual difficulties associated with coordinating a number of contractors required to create a composite roof. This left the architect free to focus on developing the overall scheme whilst Design & Display handled the resulting interfaces with their usual efficiency.

When comparing materials in the market it was clear GRP would deliver the most desirable aesthetic appearance. The lightweight modular construction reduced labour and transportation costs and, coupled with GRP's low-energy fabrication, the final installation provided an environmentally friendly solution.

Client:

Siobhan Davies Dance Studio

Architects:

Sarah Wigglesworth Architects

Project:

Siobhan Davies Dance Studio

Products:

Design, manufacture and installation of complex composite roof

Project Duration:

1 year

“In realising our vision of a swaying and billowing roof form, Design & Display provided the answer to all our problems. Taking responsibility for the entire package from structure to finishes, they were able to offer a range of imaginative technical solutions in an open and collaborative process. It was a pleasure to work with the skilled professionals at Design & Display in their unique and unusual area of expertise. We would not hesitate to recommend them to other members of the building industry for appropriate projects.”

Sarah Wigglesworth Architects
www.swarch.co.uk