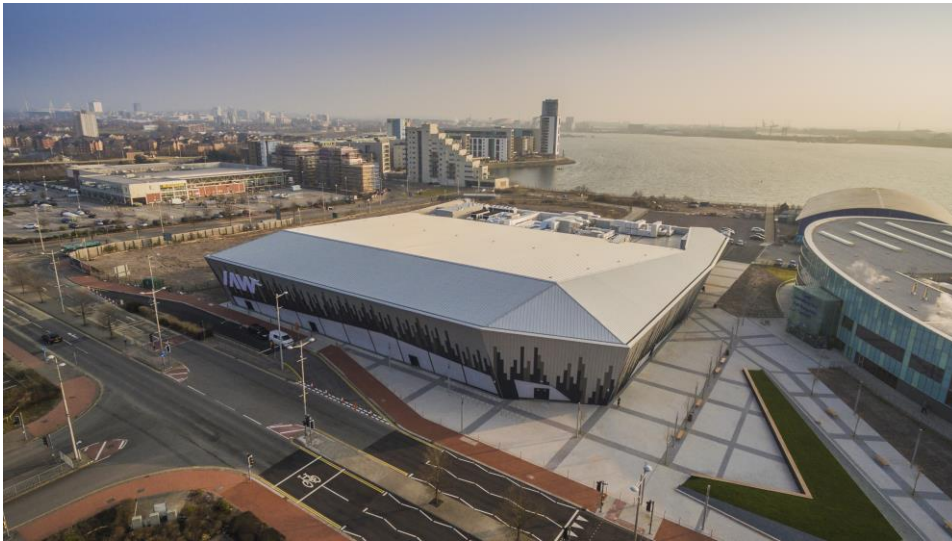


ICE ARENA WALES, CARDIFF BAY
EUROCLAD LIMITED



Cutting-edge UK manufacturing maintains Euroclad's position at the forefront of the metal roofing and cladding industry, with innovation leading to the ongoing development of products, including Elite Systems, SF500 and Vieo. These high performance systems and showcase external products have been used to achieve an attractive, striking exterior building design at the new home of ice sports in Wales.

The 6000 square metre Ice Arena Wales was built in the popular Cardiff Bay area of the vibrant Welsh capital, working to a design that aspired to create a world-class sports arena, boasting two ice pads and seating for 3000 spectators, with the long-term capability of facilitating world and European standard events.

This aspiration was not only achieved but exceeded, aided considerably by the willingness for all construction partners to cooperate, with the aim of achieving the best possible solution. The arena opened in time for the Cardiff Devils home game against Belfast Giants in March 2016.

There were a number of challenges to overcome from the outset, primarily the choice of roof and wall products to achieve the aesthetics. It was important that the chosen solution would sit comfortably on such a high profile sporting building. Euroclad's Vieo wall profile was chosen to help deliver the sleek, modern and unique aesthetic experience that stood out among other world-class venues. The functional needs of the building also presented an unprecedented series of challenges, driven by the internal operational environment of the Ice Arena, specifically temperature control and noise regulation.

Ultimately, the building called for an exemplar building envelope solution that delivered superior thermal insulation and acoustic reduction, which met the requirements of customers, local planning and building regulatory standards. The combined acoustic and thermal specification of the building envelope was met by the Vieo wall construction and the secret fix SF500 roof, supplied as a version of Elite System 3, a defined roof system with specified performance and a system guarantee. To meet the combined requirements, Euroclad supplied attractive, high performance systems for the roof and walls of the building.

A bespoke build-up was developed which required an insulation product that could be installed on all elevations. Specified and installed as part of the roof and wall systems, the insulation needed to be of single density with a high compressive strength, without being too dense, to avoid any potential for interference with the acoustics. Through consultation with Knauf Insulation's technical support team, a bespoke product was developed to deliver a thermal conductivity of 0.036 W/mK.



This unique product was developed within Euroclad's timescales, managing to meet the stringent project specifications, even with a variety of acoustic and thermal testing included as part of the product development. The resultant engineered roof and wall systems were enhanced versions of well-established Euroclad assemblies, which outperformed the acoustic requirement laid out by the design teams.

The use of alternative constructions and materials, combined with tried-and-tested products and systems, has identified a new way to construct these systems should exceptional thermal or acoustic performance be required. The supply chain worked together closely to transform the challenging design brief into reality. An example of this collaborative approach can be seen in the way that the roof and wall systems were developed, with valuable input from all parties, which resulted in a new system that:

- Achieved the demanding performance requirements;
- Could be manufactured efficiently;
- Could be practically installed;
- Did not compromise the desired visual appeal.

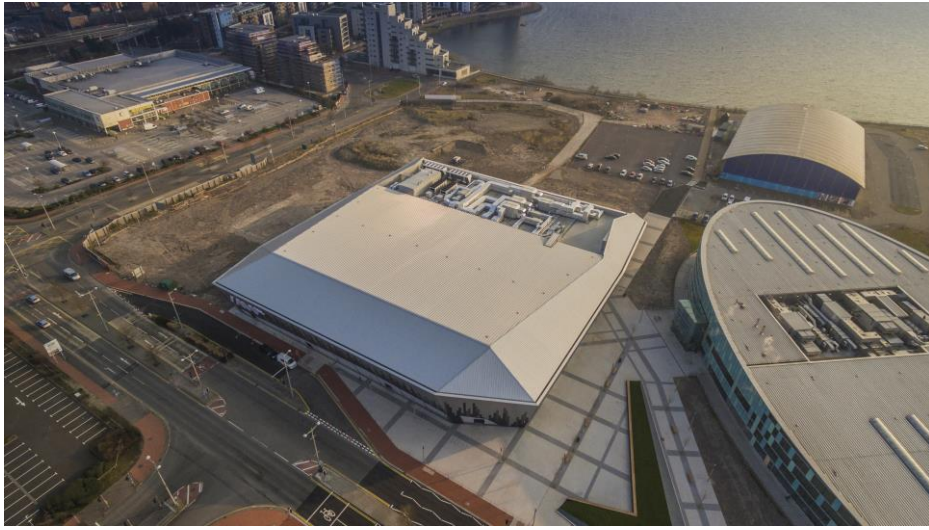
Specialist contractor Massey Cladding Solutions installed the roof and walls and managing director, Ray Massey, commented: “After designing the roof and walling systems, Euroclad supplied us with the insulation materials we required – I was very impressed with the laboratory tested products, as they met our brief accurately.”

The Vio walls of the Ice Arena Wales were manufactured from Colorcoat Prisma in Silver Metallic, Grey Aluminium and Anthracite; a solution that provided the building with diverse, complementary colours that define and enhance the distinct aesthetic design.

The Secret Fix SF500 roof was manufactured from Colorcoat HPS200 Ultra pre-finished steel in Goosewing Grey; a solution that complemented the distinct wall aesthetics, whilst also providing superior durability and corrosion protection for the harsher external rooftop environment.

The option to use Colorcoat pre-finished steel products in collaboration with Euroclad as a supply chain partner of Tata Steel ensured superior, tried-and-tested performance, which has been achieved through decades of collaborative testing and joint product development to meet a wide range of specifications. Colorcoat pre-finished steel forms the backbone to many Elite Systems with Colorcoat HPS200 Ultra and Colorcoat Prisma pre-finished steels being the only steel materials that can be used to manufacture the outer sheets of most Elite Systems.

Elite Systems offer a 25-year system guarantee, which covers the entire package of components that are either manufactured by Euroclad or sourced from the leading manufacturers of construction products. This all combines to add peace of mind for the entire roof and wall systems. This guarantee is underpinned by the Confidex Guarantee from Tata Steel for Colorcoat Prisma® and Colorcoat HPS200 Ultra®. This offers a guarantee directly from Tata Steel to the building owner for the performance of Colorcoat HPS200 Ultra® and Colorcoat Prisma®, when used in a conventional external building envelope application.



This case study effectively shines a light on some of the great strengths and key benefits of working with Euroclad. The project demonstrates the wide choice of products, the willingness and ability to work closely with the supply chain, and the flexibility to supply standard and augmented systems to suit aesthetics and performance requirements.

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