



Sustainability

## Case study

### Ice Arena

Sheffield

**Architect:** BDP

**Main contractor:** HBG Construction  
(leader on design & build contract)

**Cladding contractor:** European  
Roofing Ltd.

**System manufacturer:** Euroclad and  
Corus Panels & Profiles

**System type:** Built-up

**Profile reference:** Concealed fix

**Colorcoat® product:** HPS200® (roof and  
partial wall covering)



Goosewing Grey



*Image courtesy of Euroclad*

## The Brief

IceSheffield is one of the largest ice arenas in the UK. Containing two Olympic-sized ice rinks, one for performance and another for recreational use, this £15.7 million venue was established with the vision of becoming the leading European centre for “ice excellence”.

The design and construction of this building posed considerable challenges. Firstly, architects BDP had to arrive at a clear-span structure to accommodate the ice rinks and surrounding audience seating. Also, the acoustics within such a large space of hard reflective surfaces needed to be carefully engineered. Finally, the centre had to adhere to the strictest air-tightness standards to preserve the unique temperature and humidity levels required by a building of this type.



*Image courtesy of Euroclad*

## The building

IceSheffield is a twin-span, barrel-vaulted building with a large audience capacity. The performance ice rink is surrounded by seating for 1,500 spectators, while both rinks (or “pads”) are overlooked by a bar and restaurant. The centre also contains a dance studio, skaters’ cafe, and dedicated accommodation for instructors and coaches.

Ice rinks must be carefully sealed because their ambient temperature is generally cooler and dryer inside than outside. The architects and contractors had to work hard, therefore, to prevent warm, moist air from penetrating the skin of the building - were this to happen, condensation and “fogging” may occur, resulting in dripping on the ice.

“The risk of condensation is high as any moisture will condense onto the cool surfaces of the structure and drip onto the ice, ruining its quality and surface finish. A major concern is the control of any air flow through the structure - especially the ingress of warm, moist air from the outside”, commented project architect Chris Green.

After an extensive period of research, the construction team and BDP selected Colorcoat HPS200® pre-finished steel from Corus because it is the most robust and durable pre-finished steel product on the market, offering unrivalled performance.

The Confidex® Guarantee covers Colorcoat HPS200® for a period of 30 years, and with appropriate maintenance and over-painting after the expiry of the guarantee, the product will last a further 30 years.



Image courtesy of Euroclad

Since it opened in May 2003, IceSheffield has become popular both locally and nationally. Now home to four ice hockey teams, playing to a packed schedule, the venue has also hosted national events such as the British Figure and Dance Championships.

**“Colorcoat HPS200® was chosen for its combination of value, longevity and colour choice,”** Chris Green, project architect.

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