

SUNDERLAND AQUATIC CENTRE

KALZIP LIMITED



Over 6,000 square metres of Kalzip aluminium standing seam sheets, a similar quantity of Kalzip aluminium structural decking and an impressive array of Kalzip fabrications (all materials PVF² / PPC colour coated to Matt Lilac 59BB63/066) were specified by Red Box Architecture for Sunderland City Council's striking new £20 million Sunderland Aquatic Centre. Built by Balfour Beatty Construction, the long, flattened tubular shaped aquatic centre houses NE England's largest and Olympic-sized pool.

“The near coastal location, highly demanding internal environment and ovoid profile meant the building’s outer material had to have proven resistance to the elements whilst at the same time being flexible for shaping,” said Red Box’s technical associate, Stephen Wilson.

“Specially coloured Kalzip was chosen for the external skin which encloses a super-insulated and vapour sealed roofing build-up. We are hoping the building will achieve a BREEAM ‘Excellent’ rating.”

Web-perforated Kalzip aluminium structural decking was specified for the main pool hall to successfully control the significant acoustic problems that invariably affect swimming pools. Supported on 15 pairs of gracefully curved glulam beams that span 52 metres over the pool, the decking sheets themselves span 7.5 metres between the beams with a central support.

SIAC Construction (UK) Ltd installed the Kalzip roofing and decking sheets and all the Kalzip fabrications that include large curved flashings at each end of the building and a series of feature ‘portholes’ which provide louvered ventilation to the plant room areas. They also installed the Kalzip TPO secret gutter system which runs along the roof’s length.

Red Box Architecture was appointed as the architect and lead consultant for the design and construction of Sunderland Aquatic Centre with a brief to create a regional facility accessible to all whilst being a landmark building for the people of Sunderland. In doing so, Red Box Architecture has created one of the country’s most environmentally friendly swimming pool complexes - and one that achieves an excellent carbon footprint.

To help avoid thermal problems, the rainwater collection system was kept external to the building by enclosing it in contrastingly coloured feature ribs along the building shell. All the rainwater is collected from the roof and channelled into a 70,000 litre underground tank before being filtered for re-use in the centre’s pools.

Located right next to Sunderland Football Club's Stadium of Light, the Sunderland Aquatic Centre boasts a 10-lane 50 x 25 metres competition swimming pool with seating for over 750 spectators, a 25 metre diving pool with various height diving boards and a Wellness Centre.



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