Press release

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Grand opening of Khan Shatyr Entertainment Center, Kazakhstan the world's tallest tensile structure

The Khan Shatyr Entertainment Center was officially opened last night in the presence of President Nazarbayev and heads of state in a grand ceremony, with a performance by the Italian tenor Andrea Bocelli, timed to coincide with the Presidents birthday and Astana Day. The Center represents a major new civic, cultural and social venue for the people of Astana, bringing together a wide range of activities within a sheltered climatic envelope that provides a comfortable environment all year round.

The tent-like, cable-net structure is located at the northern end of the new city axis and soars 150 metres from an elliptical base to form the highest peak on the Astana skyline. The building encloses an area in excess of 100,000 square metres within an ETFE dome, with dramatic views over the city and the Steppes beyond. Contained within it is an urban-scaled park, along with a wide variety of entertainment and leisure facilities, including retail, cafes, restaurants, cinemas, and flexible spaces that can accommodate a varied programme of events and exhibitions. The different levels form undulating terraces, the uppermost terrace forming a water park.

Temperatures in Astana can drop to -35 degrees Celsius in winter and climb as high as +35 degrees in summer. The three-layer ETFE envelope is designed to shelter the...
enclosed accommodation from weather extremes and to allow daylight to wash the interiors. In winter, a key challenge is to prevent the formation of ice on the inside of the envelope. This is achieved by a combination of temperature control and directing warm air currents up the inner surface of the fabric, a strategy that also prevents downdraughts. In summer, fritting on the outermost foil layer provides solar shading. Inside, low-level jets direct cool air across the space, while opening vents at the apex induce stack-effect ventilation.

"Khan Shatyr will be an important new destination for the people of Astana to enjoy at all times of the year, whatever the weather. We are delighted to celebrate its official opening today. With the Palace of Peace and Khan Shatyr, we are proud to have designed the two landmark structures for such prominent points along the city’s main axis their forms express the change of emphasis and function, from religion to entertainment, as you pass along this grand new boulevard."

Nigel Dancey, Senior Partner