

Qatar National Convention Centre

Complete	Area	Client	Architect
2011	Middle East	Qatar Foundation via Halcrow and Theatre Consultants	RHWL

Qatar National Convention Centre is located on the campus of the Qatar Foundation in Doha. It is the largest exhibition centre in the Middle East.

Facilities at the centre include a 2,500 seat Lyric theatre with variable acoustics, a 500 seat recital hall for chamber music and speech – also with variable acoustics- and a multi-purpose hall that can accommodate up to 4,000 delegates for conferences or concerts.

The building features a large rectangular glass façade, 250 m wide by five storeys high. A unique structure inspired by the Sidra, the national tree of Qatar, supports a roof canopy that extends out over a public plaza and a large reception that spans the full height and width of the building.

Winner of a host of awards including the Middle East’s Leading Exhibition and Convention Centre and the Middle East’s Best Events Venue, the development has also been recognised with a LEED gold certification for its sustainability credentials.



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Services provided

Sandy Brown was engaged to provide the acoustic design and construction supervision. Our services covered:

- finishes within performance and other spaces to optimise room acoustics
- control of noise break in
- environmental noise emissions
- service penetrations and cross-talk
- building services noise and vibration.

Special acoustic features

Extensive computer modelling was used to develop the room shapes and finish specifications for the lyric theatre and recital hall. A key design consideration was to ensure audiences the rooms provided an enveloping acoustic to make people feel part of a show. To achieve this the room shaping was designed to provide the audience with early sound reflections from surfaces above and to the sides of them as well as the sound that comes at them directly from the stage.

Sound diffusing finishes were specified to help minimise colouration and provide a smooth time distribution of reflected sound over as large an audience area as possible.

Another important factor in the design was the space that would be occupied by the performers themselves. The shape of these spaces is significant, as if the area is too wide or too deep then the musicians, front rows of the audience and, perhaps more importantly, the conductor will hear too long a delay between the sounds made by the musicians nearest them and farthest from them. This would have an obvious effect on the ensemble of an orchestra.

Our design looked to provide a reasonable amount of space for the musicians and ensure that sound reflective surfaces were located at an appropriate height above them. Perforated timber acoustically absorbent treatments were specified along with timber panelling within the stage shell to provide the required acoustic conditions.