

## Theatre Royal, Glasgow

Complete	Area	Client	Architect
2015	UK Scotland	Scottish Opera	Page Park Architects

Home of the Scottish Opera, the Theatre Royal is Glasgow's oldest theatre. It was originally opened in 1867, which also makes it the longest-running theatre in Scotland.

This lottery funded project included remodelling and refurbishment of the original category A listed auditorium and construction of a new foyer to provide a more accessible and welcoming experience for the theatre's visitors.

Within the striking new extension there is a new box office and cafe area, education space and heritage exhibition space. Complementing the foyer's hospitality areas, there is also an external roof terrace that provides panoramic views across the city.

The project has been recognised with a number of honours including a Design Award from the Glasgow Institute of Architects and an RIAS Culture award.



Theatre Royal, Glasgow © Andrew Lee

## Services provided

The brief included demolition of the former Café Royal building at the north west corner annex. This increased the amount of public space to the front of the historic venue, making room for the new extension. Among the main acoustic considerations for the scheme were:

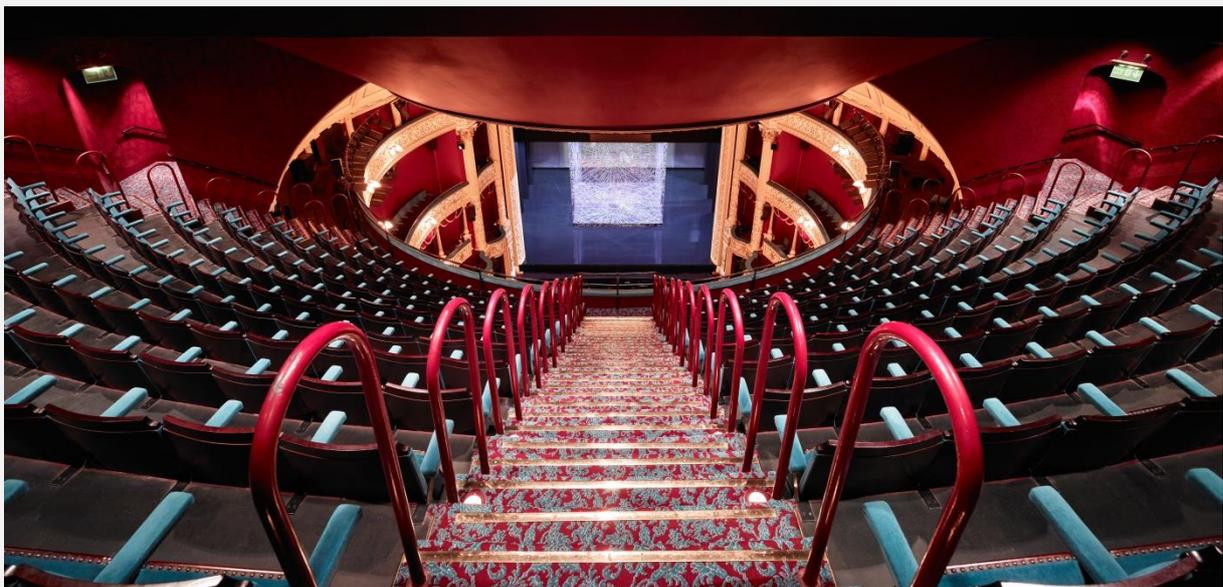
- effects of the demolition on the retained portion of the listed building and the surrounding area
- sound insulation against external sources of noise, including the SPT subway line which runs under the theatre
- sound insulation between internal spaces
- acoustics within spaces
- noise and vibration from building services
- Computer modelling of the loudness and intelligibility of the PA/VA system.

## Special acoustic features

A major focus of the project was to improve the audience's journey "from street to seat". Scottish Opera also wanted the new foyer extension to become an art form which opened up the 19<sup>th</sup> Century theatre to new audiences and improved accessibility for disabled visitors.

For sustainability, natural ventilation of the foyer was required, with the air passively introduced into the space via attenuated airways built into the facade fin construction. The airways were designed to allow fresh air to be drawn into the space, but minimise road traffic noise ingress, and event noise egress. Acoustic auralisations were presented to the client to achieve a consensus on appropriate criteria for noise ingress to the space, and to inform the optimum levels of attenuation to be provided by this system.

The resulting design for the foyer accommodation was a large volume space which required appropriate acoustic treatment to control reverberant noise levels, whilst maintaining an acoustically vibrant environment. A detailed 3D acoustic model of the atrium and connecting spaces was created to assess speech intelligibility of the PA/VA system.



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