



Theatre Royal, Glasgow

Architect: Gray and Dick Ltd
Client: Sir Robert Mcalpine

The recent £11.5m project at Glasgow's Theatre Royal has been designed to improve theatre experience and accentuate the beauty of Scotland's cultural venue; the extension features Glazing Vision's xVent hinged rooflights, which provide smoke ventilation as well as enhanced lighting.

The venue holds pride of place as the flagship of operatic music and ballet; since opening in 1867, it has remained one of the finest establishments for hosting a variety of world-class entertainment. The unique venue is one of nine grade 1 listed theatres in England, and therefore plays an important role in Scotland's history.

The enticing social space has been created for visitors to congregate and consists of a new entrance, spacious foyer, bars and an accompanying roof-terrace with City views. Additional lifts have also been provided in order to improve access to the varying levels encompassing the auditorium.

[Safety Concerns for the new extension](#)

As well as addressing the spacial and aesthetic benefits of the new extension, appropriate safety features were a key factor in the building specification. During the occurrence of two tragic fires, lives were lost and the building was destroyed so full provision for incorporating safety measures into the new space was of primary concern.

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The Scottish Government in 'The Practical Fire Safety Guidance for Places of Entertainment and Assembly', state that "fire and smoke spread by convection is the most dangerous and causes the major proportion of injuries and death."

The importance of smoke vent systems is addressed as "providing a pathway for the spread of heat and smoke...to prevent potential spread between departments."

Providing maximum fire safety protection

In order to meet these requirements, Glazing Vision were approached to provide their CE approved xVent hinged smoke ventilation rooflights or Automatic Opening Vent (AOV).

Tested and certified to BS EN 12101-2:2003, the xVent was the most practical solution for ensuring the extended area was installed with the appropriate fire safety equipment whilst meeting the visual demands of the new interior.

The rooflights are connected to the fire alarm system upon installation, which when triggered, automatically opens the vents to 140 degrees for effective smoke ventilation. This means that in the unfortunate event of a fire, the xVent is able to aid smoke out of the building quickly, with the AOV system opening in less than a minute.

Whilst primarily a fire safety product, Glazing Vision's xVent provides the additional benefit of being able to function as a day to day roof vent and can be opened up to 45 degrees at the touch of a button.



Smoke vent systems for functionality and aesthetics

Typically, fire safety products such as smoke vent rooflights are specified for functionality reasons; as a result, the actuators may perform well but tend to look obstructive. Glazing Vision's xVents hide the rooflight mechanisms within the framework in order to achieve a minimal finish, which in this project, worked perfectly for creating large amounts of light and space over the theatre's main stairwell.

Two xVent units were craned five stories up and installed adjacent to one another; this achieved the required internal opening area for smoke evacuation specified in the build. The elliptical shape of the staircase beneath the rooflights was formed via the internal finishes.



The brief was achieved and rooflights installed using Glazing Vision's high level of technical expertise. The xVent product ensures as much unobstructed light is able to enter the foyer as possible, whilst reducing the risk of smoke inhalation in the event of an emergency.

Overall there has been careful collaboration of both traditional and modern designs; the newly revealed space beautifully complements the original renaissance architecture of Scotland's past. Ultimately the extension will enable visitors to further appreciate and enjoy what the cultural theatre has to offer.

Find out more about Glazing Vision's xVents, or book a CPD.

