

Sydney Opera House



The Sydney Opera House is a multi-venue performing arts centre in Sydney, Australia. Located on the foreshore of Sydney Harbour, it is widely regarded as one of the world's most famous and distinctive buildings and a masterpiece of 20th-century architecture.[3][4]

Designed by Danish architect Jørn Utzon, but completed by an Australian architectural team headed by Peter Hall, the building was formally opened by Queen Elizabeth II on 20 October 1973,[5] 16 years after Utzon's 1957 selection as winner of an international design competition. The Government of New South Wales, led by the premier, Joseph Cahill, authorised work to begin in 1958 with Utzon directing construction. The government's decision to build Utzon's design is often overshadowed by circumstances that followed, including cost and scheduling overruns as well as the architect's ultimate resignation.[6]

DESCRIPTION OF SYDNEY OPERA HOUSE

Description

The facility features a modern expressionist design, with a series of large precast concrete "shells", [14] each composed of sections of a sphere of 75.2 metres (246 ft 8.6 in) radius, [15] forming the roofs of the structure, set on a monumental podium. The building covers 1.8 hectares (4.4 acres) of land and is 183 m (600 ft) long and 120 m (394 ft) wide at its widest point. It is supported on 588 concrete piers sunk as much as 25 m (82 ft) below sea level. The highest roof point is 67 metres above sea-level which is the same height as that of a 22-storey

building. The roof is made of 2,194 pre-cast concrete sections, which weigh up to 15 tonnes each.[16]

Although the roof structures are commonly referred to as "shells" (as in this article), they are precast concrete panels supported by precast concrete ribs, not shells in a strictly structural sense.[17] Though the shells appear uniformly white from a distance, they actually feature a subtle chevron pattern composed of 1,056,006 tiles in two colours: glossy white and matte cream. The tiles were manufactured by the Swedish company Höganäs AB which generally produced stoneware tiles for the paper-mill industry.[18]

Apart from the tile of the shells and the glass curtain walls of the foyer spaces, the building's exterior is largely clad with aggregate panels composed of pink granite quarried at Tarana. Significant interior surface treatments also include off-form concrete, Australian white birch plywood supplied from Wauchope in northern New South Wales, and brush box glulam.[19]

Significant changes to Utzon's design

The major hall, which was originally to be a multipurpose opera/concert hall, became solely a concert hall, called the Concert Hall. The minor hall, originally for stage productions only, incorporated opera and ballet functions and was called the Opera Theatre, later renamed the Joan Sutherland Theatre. As a result, the Joan Sutherland Theatre is inadequate to stage large-scale opera and ballet. A theatre, a cinema and a library were also added. These were later changed to two live drama theatres and a smaller theatre "in the round". These now comprise the Drama Theatre, the Playhouse and the Studio respectively. These changes were primarily because of inadequacies in the original competition brief, which did not make it adequately clear how the Opera House was to be used. The layout of the interiors was changed, and the stage machinery, already designed and fitted inside the major hall, was pulled out and largely thrown away, as detailed in the 1968 BBC TV documentary *Autopsy on a Dream*, which "chronicles the full spectrum of controversy surrounding the construction of the Sydney Opera House".[52]

Externally, the cladding to the podium and the paving (the podium was originally not to be clad down to the water, but to be left open).

Utzon's plywood corridor designs, and his acoustic and seating designs for the interior of both major halls, were scrapped completely. His design for the Concert Hall was rejected as it only seated 2000, which was considered insufficient.[38] Utzon employed the acoustic consultant Lothar Cremer, and his designs for the major halls were later modelled and found to be very good. The subsequent Todd, Hall and Littlemore versions of both major halls have some problems with acoustics, particularly for the performing musicians. The orchestra pit in the Joan Sutherland Theatre is cramped and dangerous to musicians' hearing.[53] The Concert Hall has a very high roof, leading to a lack of early reflections onstage—perspex rings (the "acoustic

clouds") hanging over the stage were added shortly before opening in an (unsuccessful) attempt to address this problem.

PERFORMANCE VENUES AND FACILITIES

facilities

The Sydney Opera House includes a number of performance venues:[20]

Concert Hall: With 2,679 seats, the home of the Sydney Symphony Orchestra and used by a large number of other concert presenters. It contains the Sydney Opera House Grand Organ, the largest mechanical tracker action organ in the world, with over 10,000 pipes.[21]

Joan Sutherland Theatre: A proscenium theatre with 1,507 seats,[22] the Sydney home of Opera Australia and The Australian Ballet. Until 17 October 2012 it was known as the Opera Theatre.[23][24]

Drama Theatre: A proscenium theatre with 544 seats, used by the Sydney Theatre Company and other dance and theatrical presenters. Playhouse: A non-proscenium end-stage theatre with 398 seats.

Studio: A flexible space with 280 permanent seats (some of which can be folded up) and a maximum capacity of 400, depending on configuration.

Utzon Room: A small multi-purpose venue for parties, corporate functions and small productions (such as chamber music performances).

Yallamundi Rooms: A function space hosting up to 400 people, often used for weddings or business conferences.

ORIGINS OF THE PROJECT

History

Planning began in the late 1940s when Eugene Goossens, the Director of the New South Wales State Conservatorium of Music, lobbied for a suitable venue for large theatrical productions. The normal venue for such productions, the Sydney Town Hall, was not considered large enough. By 1954 Goossens succeeded in gaining the support of New South Wales Premier Joseph Cahill, who called for designs for a dedicated opera house. It was also Goossens who insisted that Bennelong Point be the site: Cahill had wanted it to be on or near Wynyard Railway Station in the northwest of the central business district.[25]