



## Elisabeth Murdoch Hall

# Architectural and Acoustic Specifications

The vision for Elisabeth Murdoch Hall was developed in 2005 with the completion of the Recital Hall Brief which was informed by extensive industry consultation. The Design Team, led by Melbourne-based architect, Ian McDougall of Ashton Raggatt McDougall (ARM) and UK-based Acoustic Engineer, Raf Orłowski of Arup Acoustics, have designed a Hall that delivers the visions and aspirations of the Recital Hall Brief.

Elisabeth Murdoch Hall has been planned and designed specifically for the presentation and furtherance of fine music in a dedicated, purpose-built centre that will allow the freedom of expression in the best possible form. Elisabeth Murdoch Hall's unique design is intimate, acoustically excellent and features state-of-the-art facilities enabling it to respond to the range of music-making that defines Melbourne's vibrant music culture.

Elisabeth Murdoch Hall will provide an ideal instrument for the performance of chamber music and jazz to world and new music to chamber opera, with the capacity to record every concert sound and vision.

Ian McDougall (ARM) writes:

*"We too searched for a meaningful architectural response to classical and acoustic music performance in the 21st century. Surprisingly we began with the shoe-box – the shape that the experts say guarantees/predicts acoustic perfection. Once adopted, the formal issue becomes a non-battle. We escape the desperate attempt to deny the box. Instead, the resolution of the Hall becomes one of the creation of room-ness, a remarkable room of spectacle, surface and sound."*

### Architectural Description

Elisabeth Murdoch Hall is a modified shoebox shaped hall based on the classic proportions of the Vienna Musikvereinsaal. The auditorium has a raked stalls level, a single rear circle and unique, split level side circle wings.

### Acoustic Isolation Description

The building site is located adjacent to a busy intersection and tramway. To reduce low-frequency noise, the auditorium is completely isolated from the ground and the surrounding building structure. It is enclosed in a 250mm thick concrete box, which is mounted on 38 large steel spring bearing units.

## **Auditorium**

FORM: Modified shoebox

SEATING: 1000 seats - Stalls 712, Circle 288

LENGTH: 24m Stage edge to rear wall, 28m to rear Balcony wall

WIDTH: 20m stalls, 16m between side balcony fronts

HEIGHT: 16m Stalls to ceiling

STALLS RAKE: 8°

WALLS/CEILING: Laminated plywood timber panels (40kg/m<sup>2</sup>) Australian plantation

Hoop Pine timber

FLOORS: Timber

## **Stage**

STAGE AREA: 135m<sup>2</sup>

WITH STAGE EXTENSION: 51m<sup>2</sup> (3m deep)

STAGE HEIGHT: 1000mm

DOWNSTAGE WIDTH: 17m

UPSTAGE WIDTH: 14m

DEPTH: 9m

STAGE CEILING HEIGHT: Stepped – 6m, 9.5m and 13m

STAGE FLOOR CONSTRUCTION: Timber

## **Acoustic description**

ROOM VOLUME: 9000m<sup>3</sup>

VOLUME/SEAT: 9m<sup>3</sup>

REVERBERATION TIME (RT): 1.6 - 1.8sec

BASS RISE: 110-120%

EARLY DECAY TIME (EDT): 85-100% RT

LATERAL ENERGY FRACTION (LEF): >0.15 in centre of main stalls seating

CLARITY (C80): -1.5 < C80 < 1.5

LOUDNESS (G): >0 dB

STAGE SUPPORT: -13, G < -10