

# Utzon Room

**Sydney Opera House**

## **Technical and Production Information Utzon Room**

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# Technical and Production Information

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## Enquiries

Venue & Event Sales

T: +61 2 9250 7393

E: [venuehire@sydneyoperahouse.com](mailto:venuehire@sydneyoperahouse.com)

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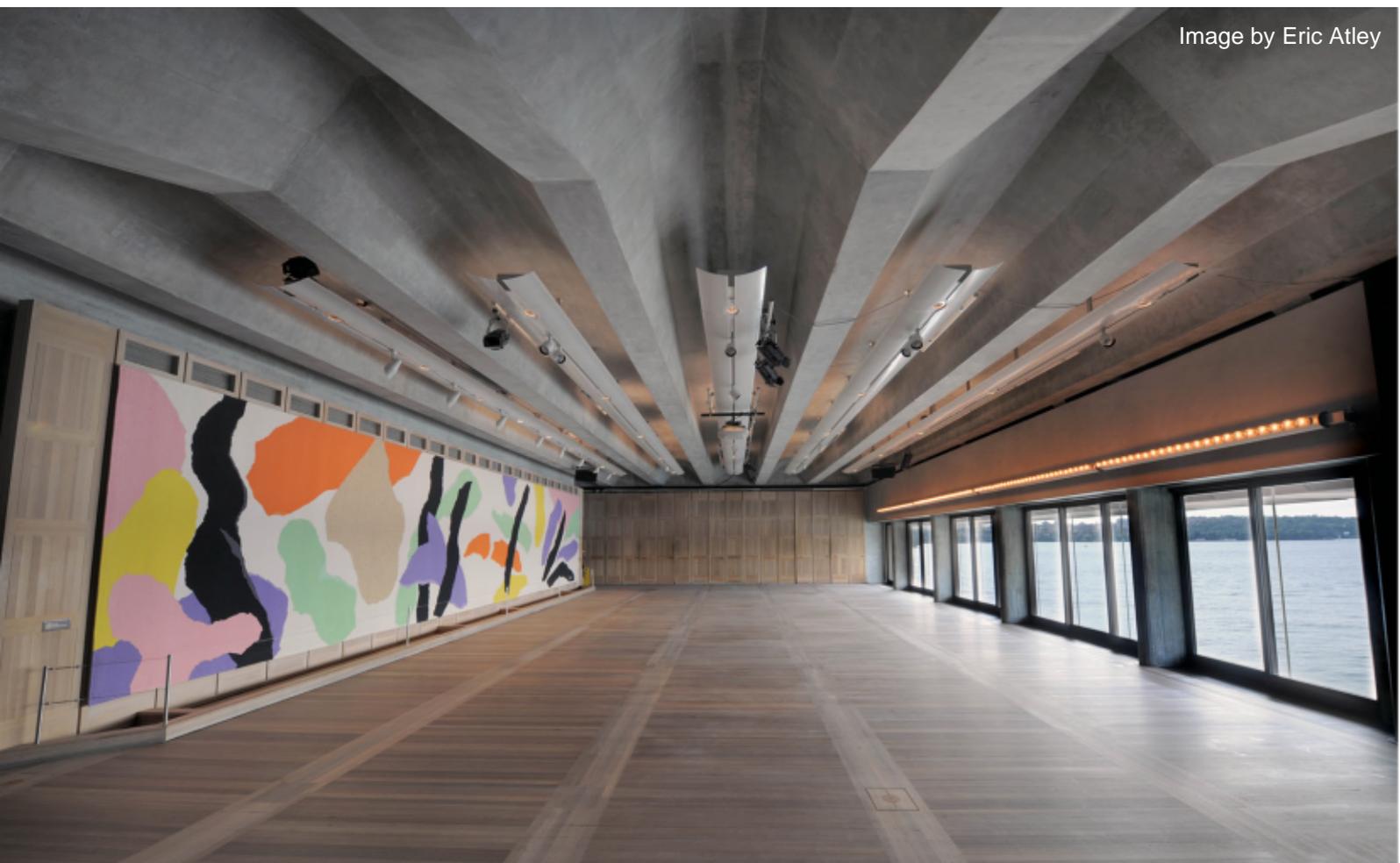


Image by Eric Atley



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# 1 Introduction

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The Utzon Room is a reception hall used for intimate performances, cocktail parties, children's shows and conferences.

The ceiling features exposed unpainted concrete folded beams, which rise from the floor at the southern end. Between the beams there are five suspended ceiling panels that conceal lighting tracks, rigging points and retractable hanging bars for lights and speakers.

The floor and northern wall are made of Australian southern blue gum timber with a traditional Scandinavian soap and kaolin wash finish.

The centre section of the northern wall can be tracked forward to reveal a small service area behind or pushed back to increase area in the venue.

The eastern wall features over-sized glazing offering spectacular views across Farm Cove and Sydney Harbour. The windows are fitted with remotely controlled blinds.

The centrepiece of the venue is the brilliantly coloured wool tapestry on the western wall, designed by Jørn Utzon.

It is intended that this document is read in conjunction with the SOH Event Guide.

## 1.1 List of Acronyms

BOH	Back of House
CP	Central Passage
FOH	Front of House
GPO	General Power Outlet
GR	Green Room
LD	Loading Dock
SM	Stage Manager
SOH	Sydney Opera House
SWL	Safe Working Load
UR	Utzon Room



## 2 Risk Management

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In NSW, if you conduct a business or undertaking, you are legally obliged to manage certain risks. You must:

- Identify and eliminate risks to health and safety, or, if that is not practicable, then minimise those risks so far as is reasonably practicable; and
- Ensure the health and safety of your own workers, AS WELL AS ensure that other workers' or persons' safety is not put at risk by work carried out as part of your business or undertaking.

Work health and safety obligations in NSW are non-transferable and concurrent. This means that:

- Each business or person with safety obligations must comply with their WHS requirements; and
- If more than one business or person has a duty under the law, then they must comply to the extent that they can influence or control the safety matter

Please refer to the SOH Event Guide.

### 2.1 Emergency Egress

Appropriate egress must be maintained at all times in the north-western corner of the venue.

Any plans to leave equipment or set in this area must be controlled through the Risk Assessment process prior to bump-in.



### 3 Protection of Venue Surfaces

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Appropriate measures must be taken to ensure the protection of all SOH building fabrics and surfaces, including wood, granite, glass, ceramics, concrete, and bronze.

Due to the exceptional significance of the materials and finishes used in the Utzon Room there are some activities that are not permitted:

- Tape of any kind on venue surfaces, including the floor
- Fog, smoke, or haze generating equipment
- Pyrotechnics of any type
- Smoking of any substance
- Naked flames (including candles)
- Cooking (some food preparation is allowed behind the movable wall)
- Fixings or decorations of any type attached to the walls, tapestry, floor, or ceiling

Special care must be taken, especially at bump-in / out when transporting equipment across the venue floor. Due to the un-treated finish, the floors are easily marked, and protection must be considered for all activities.

You must provide suitable rubber pads, plywood sheets or plastic to protect all building surfaces including but not limited to floors, walls, chairs, and ceilings.

Damage to venue surfaces may result in incurred repair costs.

#### 3.1 Tapestry

The Jørn Utzon-designed tapestry "*Homage to Carl Philipp Emanuel Bach*," featured on the western wall of the venue, is an exceptionally significant artwork. The tapestry plays an important role in the architectural significance of the room, and it may not be removed, nor may anything be attached to it or its frame.

It is critical that the tapestry be protected from damage. Any identified risks specific to your event need to be addressed in your Risk Assessment and all necessary measures must be put in place to ensure the artwork is not damaged.

The tapestry should ideally be incorporated as a feature of the room; however, it may not be considered appropriate for all events or there may be occasions where there is a risk of damage that cannot otherwise be avoided. In these situations, the tapestry may be covered for the event either by hanging drapes or freestanding screens, at a cost to the hirer.

#### 3.2 Air Conditioning Vents

There are two main areas of venting for air-conditioning in the venue:

- Above the entire width of the tapestry (clean air in)
- At the foot of all the windows (return air out)

These vents must be kept clear of equipment at all times to allow sufficient airflow in the venue.



## 4 Venue Access

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Route from the main SOH Loading Dock (LD) to the venue:

- LD to Goods Lifts 13 / 18
- Goods Lifts 13 / 18 to Central Passage (CP)
- CP to Goods Lift 15
- Goods Lift 15 to venue

The Utzon Room (UR) is located on the first floor of the building. SOH staff will assist to unload equipment from the main SOH Loading Dock.

Goods Lift 15 leads directly into the northwest corner of the venue.

Larger items are required to be carried into the venue up 30 stairs via the Box Office foyer and down six steps through the venue entrance doors (standard double door size).

Lift Dimensions		
Goods Lifts 13 / 18	Width	1.31m
	Height	2.45m
	Length	2.71m
	Door Opening	1.29m W x 2.20m H
	Max Capacity	2,500kg
Goods Lift 15	Width	1.58m
	Height	2.38m
	Length	2.87m
	Door Opening	1.39m W x 2.09m H
	Max Capacity	1,300kg

If equipment is portable and LD entry not required, the venue is easily accessible via Stage Door, where your SM will meet and assist you:

- Stage Door to Goods Lift 15
- Goods Lift 15 to venue



## 5 Venue Dimensions

Dimension	Details	Distance
Width East / West	Concrete window beam to tapestry railing (floor level)	9.10m
	Overhang incandescent globes* to tapestry railing	8.70m
Length North / South	Movable wall retracted	22.0m
	Movable wall extended half	20.5m
	Movable wall extended fully	19.3m
Height from Floor	Underside of concrete overhang (over windows)	2.11m
	Underside of concrete beams (at full height)	3.46m
	Fire sprinkler heads on suspended ceiling panels	3.52m
	Underside of suspended ceiling panel	3.57m

\*Exclusion allowances must be made around the incandescent globes as they are easily damaged.

Dimensions are approximate and critical measurements should be confirmed on-site.

### 5.1 Floor Description

Surface*	Southern blue gum timber flooring with a soap and kaolin wash finish
Venue Rake	0 degrees (flat)
Max Loading	5kPa (500kg/m <sup>2</sup> ) – distributed
	3kN (300kg) – concentrated

\*Anchoring of any equipment into the floor surface is not permitted

### 5.2 Venue Plans

Venue plans are available at [sydneyoperahouse.com](http://sydneyoperahouse.com)

Scale plans can be requested through SOH Event Operations as PDFs or as Vectorworks files. Email [techspec@sydneyoperahouse.com](mailto:techspec@sydneyoperahouse.com) or through your SOH Production Manager.

Uncontrolled copies can be found in the appendices of this document.

### 5.3 Venue Capacity

The maximum capacity of the venue (including all working staff) without any seating and movable wall retracted is 300. Arrangements must be made to switch the air-conditioning to high when numbers exceed 200.



## 6 Staging

### 6.1 Rigging Points

Any rigging in the venue must be performed by a qualified rigger and only the rated rigging points may be used. It is not possible to anchor equipment or scenery into any of the building surfaces (see Protection of Venue Surfaces).

When the rigging points are used, the adjacent retractable hanging bar(s) may not be used.

SOH do not stock rigging attachments and must be brought in or hired at your cost.

Rigging Points	
Type of Rigging Point	12mm Ferrule
SWL Per Point	80kg
Number of Points	Ten (two per ceiling panel)
Point Locations	One at either end of the suspended ceiling panels

### 6.2 Retractable Hanging Bars

The suspended ceiling panels house 48 separate retractable hanging bars, which are generally used for additional lighting or speaker placements.

Retractable Hanging Bars	
Arrangement	Eight bars per ceiling panel (doubled for centre panel)
SWL Per Bar*	40kg/m
Bar Size	1.5m long, 48mm in diameter

\*Assuming that the adjacent rigging points are not being used

### 6.3 Movable Wall

Centrally positioned at the northern end of the venue is a 4.3m wide section of wall that can be tracked forward into the space to reveal a catering / storage area behind.

The wall can be locked into two positions when extended:

- Half extended (1.5m from the main wall)
- Fully extended (2.7m from the main wall)

Facilities behind include a sink with running water and a GPO.

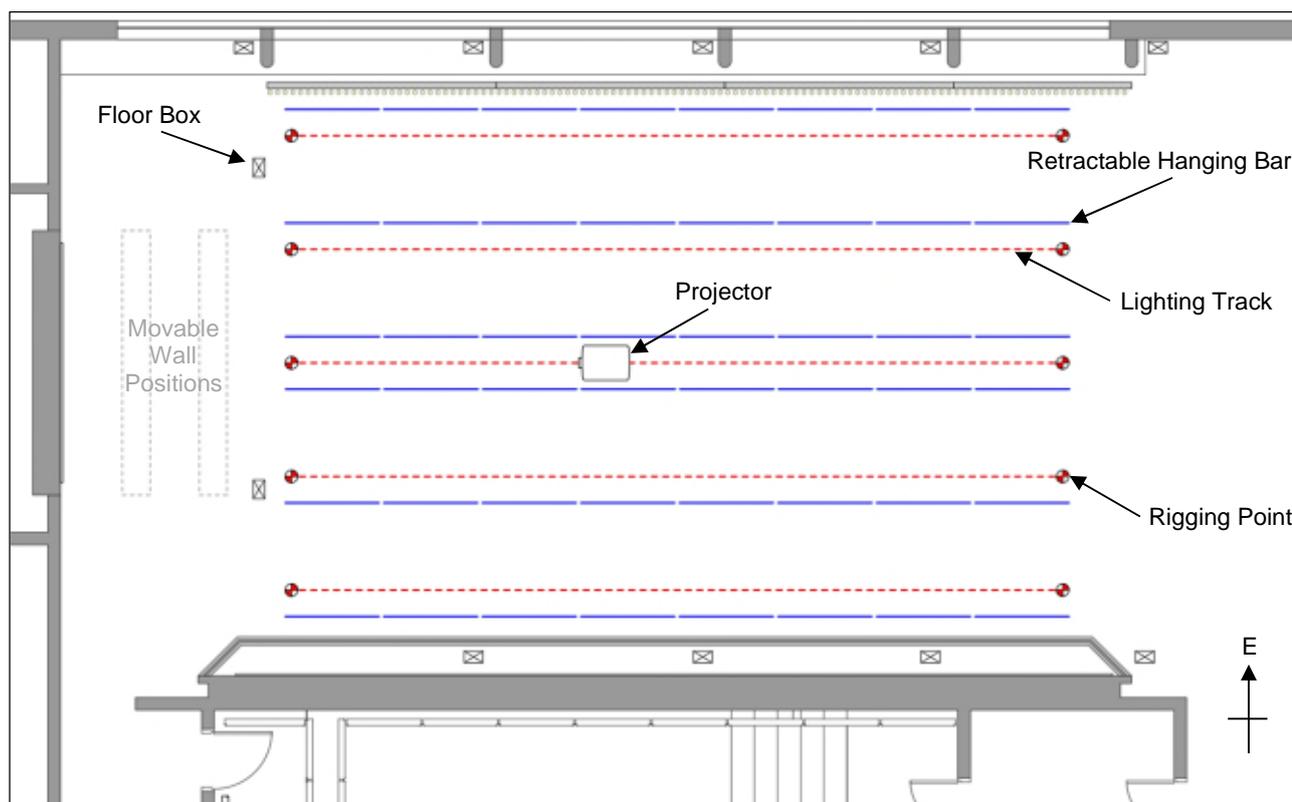
### 6.4 Window Blinds

The venue windows are equipped with retractable roller blinds concealed in the window head assembly, with separate control stations fitted into the returns at each end of the tapestry wall.

The blinds have an auto-lower function over-night, and any equipment left beneath them must first be authorised so that the auto-lower can be disabled.



## 6.5 Venue Rig Plan



## 6.6 Standard Staging Equipment

The following equipment is included within the venue hire costs:

Element	Equipment	Allocation	Details
General Furniture	Chair	212	Frederica Trinidad
	Portable Timber Screens	6	Southern blue gum timber 0.8m W x 2.0m H
	Black Screen	4	1m / 2m High
Wardrobe	Wardrobe Rack (large)	1	In dressing room

### 6.6.1 Venue Chairs

Frederica Trinidad designer chairs are included in venue rental costs, however the labour to set and remove them is charged for.

The maximum audience seating for theatre style events is 212. When used in this way, chairs must be locked together.



## 6.7 Additional Staging Equipment

The following equipment can be utilised by your production at an additional cost:

Element	Equipment	Details
Rostrum	Megadeck 1.2 x 2.4m	Carpeted
	Megadeck 1.0 x 2.0m	
	Megadeck 1.0 x 1.0m	
	Megadeck Legs	200 / 400 / 600 / 800mm
Floor Covering	Black Carpet	
	Vinyl	Black or White
	Sprung Dance Floor	
General Furniture	Card Table	830 x 830mm Square Top
	Trestle Table	1800 x 750 Top, Various Colours
	Cabaret Table	600mm or 900mm Round Top
	Vinyl Chair	Black, Padded
Orchestral Furniture	Padded Orchestral Chairs	Height Adjustable
	Music Stands	
	Conductors Stand	
	Base Spike Board	
	Cello Riser	
	Push-up Drapes on Poles	Black, Various sizes
	2m Book Flat Masking	Black or Grey, Padded
	1.3m Book Flat Masking	Black, Padded
	Mini Quad Truss	100mm, various lengths
	Tri Truss	Various lengths
Box Truss	Various lengths	

### 6.7.1 Pianos

Piano hire and tuning costs are not included in venue rental.

Due to the limited access, there are also additional costs associated in transporting pianos to and from the venue through an external piano moving company.



## **7 Lighting**

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### **7.1 Standard Lighting Equipment**

The following equipment is included within the venue hire costs.

#### **7.1.1 Control**

The venue lighting is normally controlled by a Clipsal C-Bus system with separate control stations fitted into the returns at each end of the tapestry wall.

There are eight fixed and eight programmable lighting pre-sets (programming incurs labour charges). The fixed pre-sets control the house lights and include day and night settings.

The programming is performed at a touch screen in the AV equipment rack at the northern end of the venue.

For theatrical presentations where a stage lighting control system is required, a portable lighting desk can be installed at a cost (see additional equipment).

#### **7.1.2 Power**

All general and dimmed electrical power supplies are 240v AC at 50Hz.

Standard 10A power outlets are positioned around the outside edges of the venue inside 14 of the floor boxes (see Venue Rig Plan). Floor boxes contain a mixture of standard GPOs (white), dedicated Sound / AV power (green), and patch outlets from the dimmer room (black).

A number of 10A power outlets for catering use are located at the northern end of the venue behind the moveable wall.

There are three installed dimmer room 3-phase outlets, and one installed outlet in the venue situated within the northern wall.

There is also a 100A Powerlock supply (415V AC) available, with associated labour costs to set-up and remove 3-phase distribution. Due to limitations in the venue if using Powerlock, power usage must be managed.

#### **7.1.3 Dimmers**

All fluorescent and low voltage down lights have DALI dimming control in the respective transformers and ballasts.

The main dimmer racks are Clipsal C-Bus Professional Series with a total of 24 dimmers, each fitted with 16A circuit breakers. These dimmers operate in response to both C-Bus and DMX signals.

Additional 12-way 10A portable dimmers can be added to the system, however these dimmers will operate in response to DMX signals only. Power for these dimmers is not available when the additional 100A supply is used.

#### **7.1.4 Lighting Patch Panel**

A lighting patch panel with 144 captive patch leads is located one floor beneath the venue. It has 120 patch leads from the suspended ceiling panels, six from above the northern wall and 18 from the floor traps.



The patch leads have the option to plug into five of the fixed dimmers (dimmers 20 - 24), three GPOs, or any of up to three 12-way portable dimmer racks that can be installed adjacent to the patch panel.

### 7.1.5 DMX Distribution Network

A DMX patch panel is located adjacent to the lighting patch panel. This panel can receive a DMX signal from the main AV rack at the northern end of the venue, as well as from 12 of the floor traps, allowing flexibility for the location of a lighting desk.

The panel will also distribute a DMX signal to outlets located in the 12 floor boxes above the northern wall and each of the ceiling panels. From this panel the DMX signal is also distributed to the fixed dimmer system.

A Jands DD8 8-way DMX-512 splitter is installed within the rack. Patch cables are included.

### 7.1.6 Lighting Positions

Area	Type	Details
Suspended Ceiling Panels	Lighting Tracks	<p>One 3-circuit track is built into the full-length centre of each of the five ceiling panels</p> <p>Each circuit has its own dimmer (15 dimmers in all)</p> <p>One track on the western panel is also used for the special lighting on the tapestry, which cannot be re-focused elsewhere</p>
	Hanging Bars	<p>The outer sides of each ceiling panel have eight individual retractable hanging bars</p> <p>Hanging bars are 1.5m long and 48mm in diameter</p> <p>SWL of each bar is 40kg/m (assuming that adjacent rigging ferrules are not being used)</p> <p>Each hanging bar has six patch outlets</p> <p>Each ceiling panel has 24 patch outlets</p> <p>The centre bar outlets are duplicated four times; the other outlets are duplicated twice</p>
Northern Wall		<p>The northern wall has five individual pull-out hanging bars measuring 1.8m long and 48mm in diameter</p> <p>SWL of each bar is 40kg/m</p> <p>Each bar has six patch outlets</p> <p>The same six patch outlets are duplicated for each bar</p>
Floor Trap Patch Outlets		<p>12 of the floor traps (located at the sides of the room) have two patch outlets in each</p> <p>The traps at the northern end have individual outlets; the traps at the southern end have outlets linked from side to side</p> <p>This gives a total of 18 patch outlets on the floor</p> <p>A standard 10A power outlet is also located in each of the traps</p>



### 7.1.7 House Lights

The house lights consist of a range of warm white fixtures integrated into the walls, ceiling, and floor of the venue.

Fixture Type	Details
Tapestry Spotlights	Eight spotlights on the western lighting track that can be faded up / down
Ceiling Panel Downlights	Main method of house lights, can be operated in zone control and faded up / down
Incandescent Globes	Uncovered incandescent filament bulbs, can be faded up / down
Ceiling Panel Fluorescents	Concealed above suspended ceiling panels, either on / off
Rib LED Up-lights	Small floor mounted RGB lights at the southern end for lighting the architectural ribs, can be faded up / down
Rib Under-Floor Fluorescents	Concealed beneath the floor at the southern end, used for additional light to the architectural ribs, either on / off
These standard fixtures cannot be re-focussed, and apart from the rib LED up-lights cannot be colour altered from standard warm white	



## 7.2 Additional Lighting Equipment

The following lighting equipment can be utilised by your production at an additional cost.

Lamp Type	Allocation	Details
Selecon Accent Spotlight (track)	10*	Warm white LED
Source4 Jnr (hanging bar)	12	Warm white Tungsten
*Subject to availability		

### 7.2.1 Hanging Bar Lighting Equipment

In the event that the above lighting fixtures are not suitable for your production, a range of additional SOH stock is available for rigging onto the retractable hanging bars at an additional cost.

This also requires the installation of a lighting desk at an additional cost.

### 7.2.2 Hercules Battery Lights

Subject to available stock, Hercules battery lights can be utilised by your production at an additional cost. These LED floor-mounted fixtures can be placed around the floor or stage and are best suited for lighting the venue structure.

If DMX control is required, a lighting desk must be installed.

### 7.2.3 Music Stand Lights

24V LED scone lights are available to fit music stands at an additional cost.



## 8 Sound & Audio Visual

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The following equipment can be utilised by your production at an additional cost.

### 8.1 Loudspeaker System

The venue has four D&B E8 speakers rigged to the hanging bars that can be angled according to event requirements. At a cost, additional speakers can be rigged with considerations to weight loadings and consultation with SOH Audio.

The venue has audio and video patching infrastructure with microphone, speaker and video points located in some floor traps, as well as above some of the suspended ceiling panels.

#### 8.1.1 Control Position

The venue mixer is installed within the AV rack at the northern end of the room.

For theatrical presentations where an audio control system is required, a portable console can be installed at a cost (see additional equipment).

Subject to the venue layout, the control position can be in a variety of locations within the room.

### 8.2 Venue Projector

There is a permanently installed Panasonic 8K projector (see Venue Rig Plan).

It is suspended from the centre ceiling panel towards the middle of the venue and is focussed for use with the venue projection screen.

The projector is fixed and cannot be refocussed to point in other directions other than north.

Use of the venue projector incurs additional charges.

### 8.3 Venue Projection Screen

A motorised projection screen is installed in the centre of the moveable northern wall and can be operated when the wall is in any of its three positions.

When not in use, the screen is rolled up and concealed from view behind timber panels in the wall.

Two different aspect ratios are available.

Aspect	Width	Height
4:3	2350mm	1760mm
16:9	2350mm	1320mm



## 8.4 Additional A/V Equipment

The following equipment can be utilised by your production at an additional cost.

### 8.4.1 Audio

Equipment	Model
Mixing Consoles/Remote Surfaces	SSL L650 Console SSL L350+ Console SSL Remote Tile with a touchscreen running SOLSA software Yamaha QL1 Console
Stage Monitors	D&B Audiotechnik M4 D&B Audiotechnik Y-SUB D&B Audiotechnik V series line array D&B Audiotechnik V-Sub D&B Audiotechnik V10P D&B Audiotechnik Y10P D&B Audiotechnik Y7P D&B Audiotechnik E8
Radio Microphones – Belt-packs (Shure Axient Wireless System)	<u>AXT 100 Belt Packs:</u> DPA 4066 DPA D:Fine DPA D:Fine 66 DPA 4061 DPA 4080 DPA 6066
Radio Microphones – Handhelds (Shure Axient Wireless System)	<u>AXT 200 Handhelds:</u> Shure KSM9 Shure Beta 58 Shure SM58
Shure In-Ear Monitors	Stereo PT10T dual wireless transmitters P10R wireless body-pack receivers SE425 earpieces
Wired Microphones	SOH have a wide range of microphones from brands such as Sennheiser, Shure, AKG, DPA, Beyer and Neumann and offers a variety of packages to suit
Additional Playback	MacBook Pro running QLab



### 8.4.2 Video Replay

The Sound & AV department has a range of playback options and switchers. SOH vision equipment is shared between all venues and its use in the Utzon Room is subject to availability and will incur additional charges.

Equipment	Model
Switchers	Barco Image Pro Blackmagic Design ATEM 2 M/E Production Studio 4K
Vision Playback	MacBook Pro Sound Devices Pix 270i

### 8.4.3 Projection and Video Monitors

If the venue projector and screen are not suitable for your event, there are various options available for projector placement within the venue, including front and rear projection.

Element	Equipment
Projectors	Barco HDX 14k
Screens	Stumpfl 4.8m x 2.7m (16ft x 9ft) 16:9 ratio Fastfold Stumpfl 3.6m x 2.1m (12ft x 7ft) 16:9 ratio Fastfold
Video Monitors	LCD 75" LCD 55" OLED 17"



## **9 Communications**

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### **9.1 Paging System**

A paging station is located adjacent to the audio equipment rack. The system can be used to broadcast announcements to the venue dressing room.

### **9.2 Telephones and Data**

Telephones are located at the main entrance and at the northern end of the venue.

Each floor trap has two data points that can be used as either network data or voice, and there is a network switch linked to the SOH LAN for use in the venue.

### **9.3 Wireless Communications**

A Riedel Artist wired intercom system operates across all venues.

SOH can provide wireless belt-pack communications in the venue at an additional cost.



## **10 Backstage Facilities**

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### **10.1 Dressing Rooms**

The venue has one allocated dressing room (DR66) on the ground floor, with access via the BOH lift.

The dressing room is suitable for up to four performers, and contains a shower, toilet and four make-up desks with lights and mirrors.

### **10.2 Rehearsal Rooms**

There is no rehearsal space dedicated to the venue. Rehearsal space is very limited across SOH.

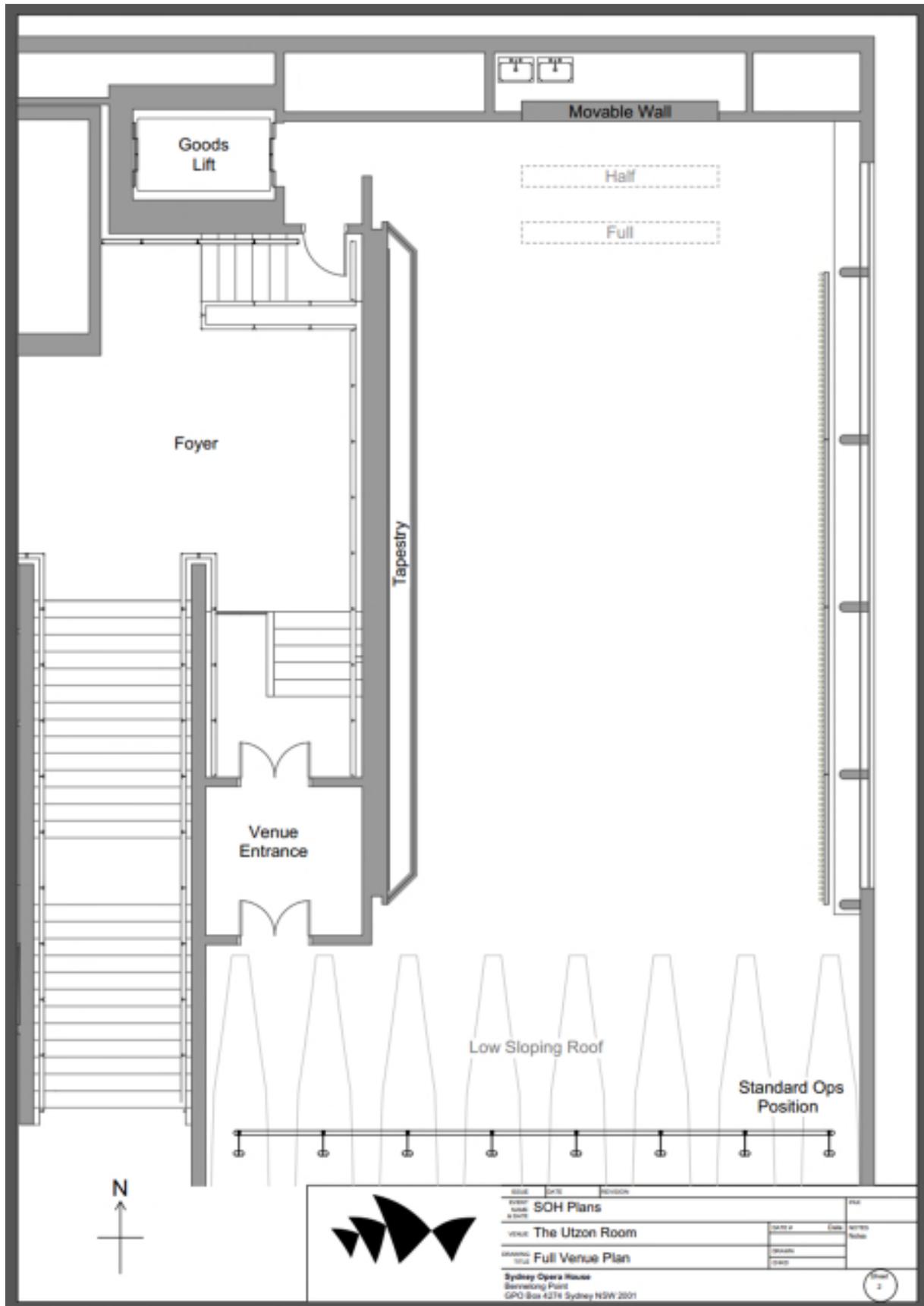
### **10.3 Storage Space**

Storage space on SOH site is very limited, and there is no space dedicated to the venue.



# 11 Appendices

## 11.1 Full Venue Plan





## 11.2 Venue Section Plan

