

# 4. JPACF ELEMENTS

## 4.1 ENTRY FORECOURT AND PLAZA

The entry forecourt and plaza provide a combined open area of 2,000sqm capable of comfortably accommodating over 1,000 patrons. The space is ideally located to take advantage of the northern aspect with extensive tree planting providing shade and protection for patrons to ensure that the area can be used throughout the year.

A new enclosure to the existing services building adjacent to Grand Boulevard adopts the typology of the JPACF. The new form incorporates a fully serviced stage area to its eastern face, provides signage for the JPACF to its western face, and provides a sense of enclosure to the western end of the plaza.

The adjacent entry forecourt is 600sqm in size and serves a dual function as an external exhibition space and as a theatrical entry to the JPACF. Patrons weave through a series of pinnacle forms, one of which rises up to form an overhanging canopy. These overhanging forms clearly define the building entry points. The entry forecourt also provides an invaluable socialising area for patrons with large areas of glazing allowing patrons to see into and be seen from the internal foyers. The forecourt environment is enhanced by substantive native planting, proposed to include transplanted grass trees from the existing site.

This planting is extended along the northern facade of the JPACF where it not only provides shade and shelter for patrons and passers-by, but also plays a vital role in reducing the heat load to the northern areas of the JPACF. The scale of the adjacent plaza to the immediate north is mitigated by a number of design strategies including the use of variable materials, large areas of native planting and the introduction of a water course which winds its way through the plaza from Central Park. The plaza comprises areas of hard paving and softer granitic sand, which is a robust material widely used for outdoor event spaces, and suitable for disabled access.

The plaza also provides a ceremonial pathway to Jinan Gardens. This pathway morphs from the large open spaces associated with the stage area and main JPACF entry to the west, into to a smaller intimately scaled path bordered by native planting at the entry of Jinan Gardens.

In addition to the major east-west axis of the plaza, north-south access, both visual and physical, is provided at various intervals along the northern edge of the plaza. These connections to Central Park, Jinan Gardens and beyond ensure that JPACF is fully integrated into both the immediate surrounds and into the wider community of Joondalup.





## 4.2 FRONT OF HOUSE FACILITIES

### FOYERS

The foyer is a space for socialising, a space that is exciting and full of drama yet easy to navigate. The JPACF foyers are defined by the large rock walls through which they weave. The foyers have been detached from the theatre and pushed to the facade to allow patrons to see and be seen. This arrangement has also allowed us to reveal the rear wall of theatre and create a series of dramatic theatre entries accessed via bridges spanning over an impressive 14-metre-high cavern-like void.

In addition to its function as a gathering space for patrons, the foyer links the many internal functions in a clear and coherent manner and allows the performance, community and art gallery spaces to operate independently yet share support facilities such as lifts, stairs and toilets.

The main auditorium foyer is entered from either the forecourt or the carpark lobby. A grand stair leads to the Level 1 foyer which floats within a rocklike cavern. Access to the lyric theatre is provided via a set of bridges that traverse the void, while a portal provides entry to Level 1 of the community studios. The grand stair continues to the Level 2 foyer which also connects via bridge and portal to the auditorium and community studios respectively.

The foyers are sized to provide comfortable milling space for patrons during intermissions and before and after events, with bars and toilet facilities on each level, sized to accommodate the relevant patron numbers for each foyer level and located so as to avoid overcrowding during events.

### COURTYARD

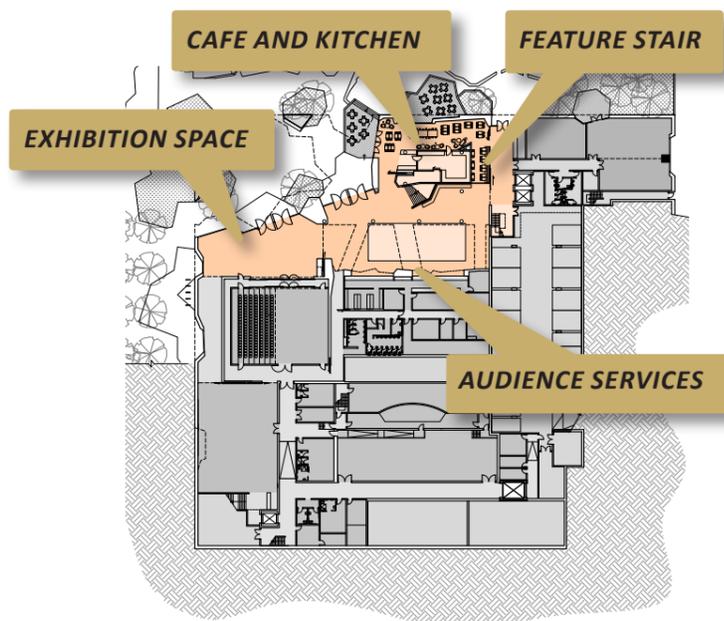
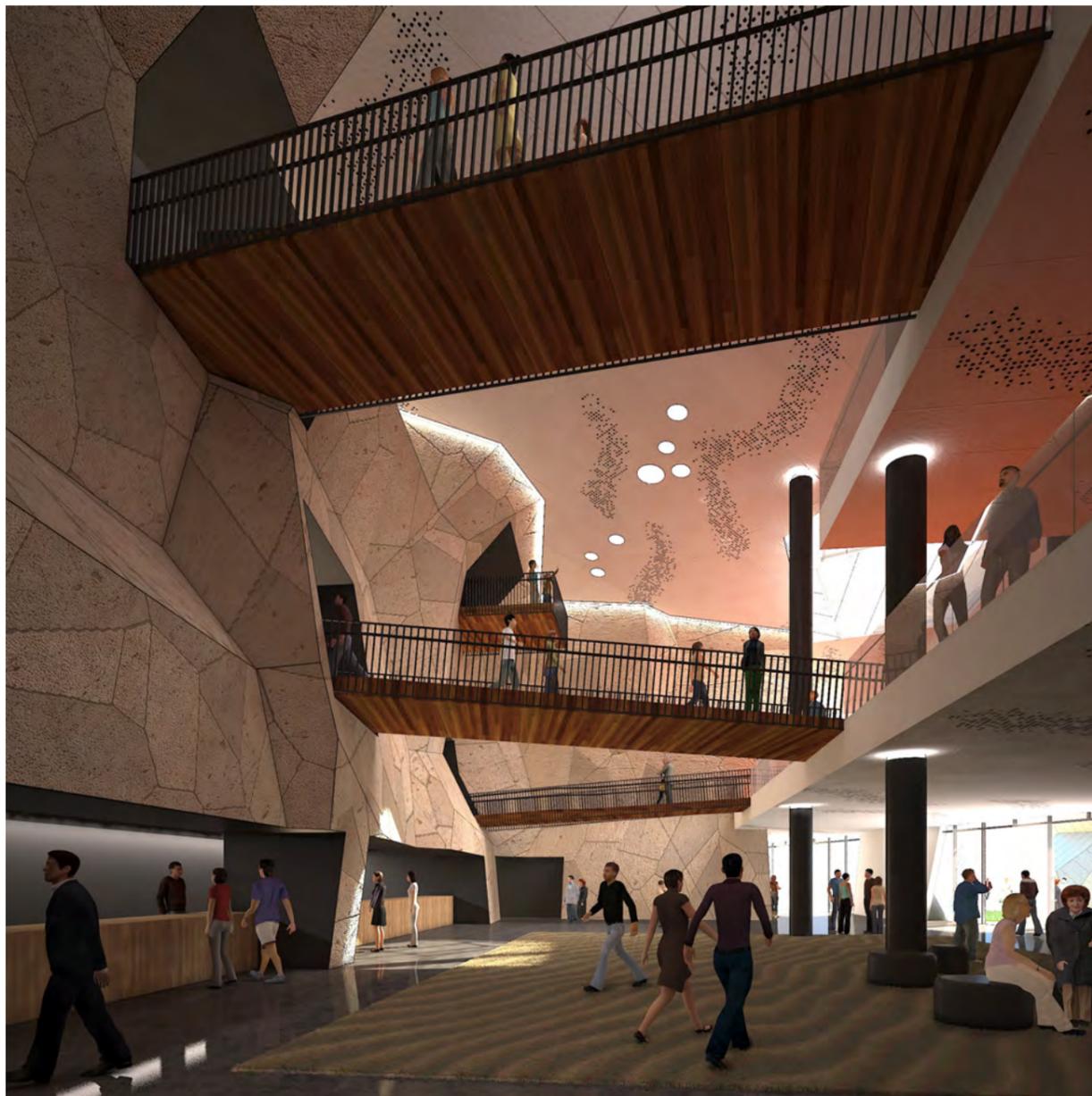
The erosive façade tectonic forms a raised courtyard garden which allows the building users to physically inhabit the façade. Located on the northern facade between the main foyer and the community studios, the courtyard is ideally positioned to take advantage of sweeping views over the public plaza and Central Park to the north.

The courtyard provides a dramatic double-height external space able to be accessed over multiple levels. At Level 1, conference delegates and theatre patrons have independent access to the courtyard, and at Level 2 communal access is provided to a large balcony area. The adjacency of the main lifts ensures that all patrons have the opportunity to enjoy the unique experience that the courtyard provides.

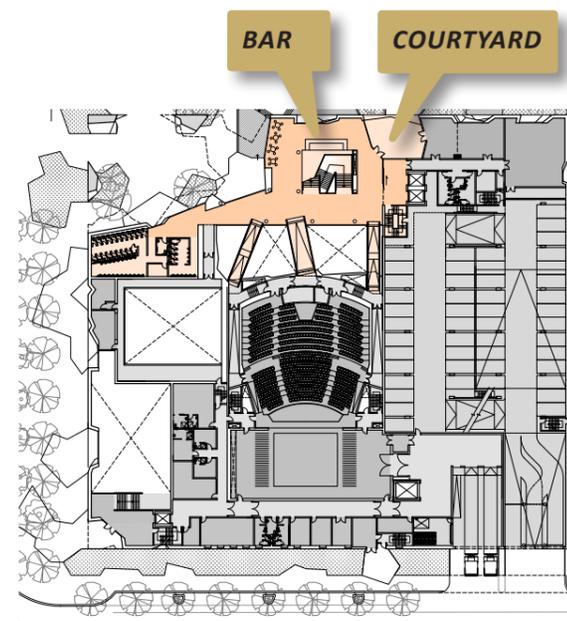
### EXHIBITION SPACE

The western end of the foyer can be separated with a large operable wall, allowing it to operate as an independent foyer for the black box theatre, or as an enclosed 200sqm exhibition space. The main foyer can also be used for exhibitions and events. The foyer doors, fire and exhaust systems are designed to allow for cars to be displayed in the foyer, giving the facility the potential to host launch functions.

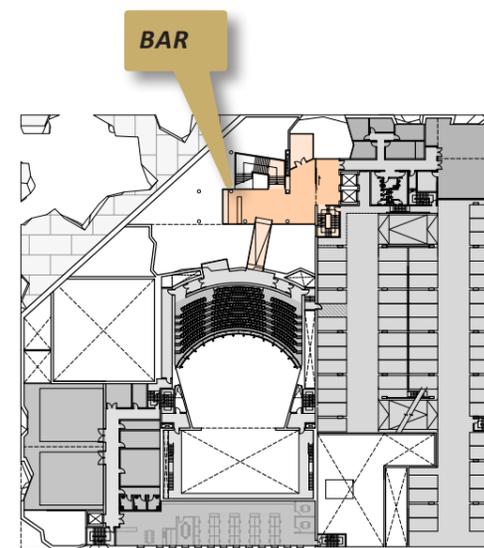




FRONT-OF HOUSE/ GROUND LEVEL



FRONT-OF HOUSE/ LEVEL 1



FRONT-OF HOUSE/ LEVEL 2

## 4.2 FRONT OF HOUSE FACILITIES

### AUDIENCE SERVICES

The audience services zone is located on ground level directly opposite the main entry, and adjacent to the bar. It comprises cloakroom, ticketing and information services, together with office spaces for the box office manager and theatre manager and a small open office area. Combining all points of customer service into a continuous and multi-purpose zone allows for maximum flexibility – for example a larger box office before a show can be easily modified to a larger bar during intermission.

### CAFÉ

The café is centrally located fronting Central Park, the ground level foyer and the community studios. The café is notionally sized for 90 patrons plus outdoor seating, and can be isolated so that it may trade separately to the theatres or community studios. This allows the café to operate as a separate business or as a subsidiary.

The café has direct access to the public plaza, allowing it to take full advantage of the northern facing aspect and passing foot traffic. Extensive alfresco dining areas are complimented by native tree planting adjacent to the facade, and shaded by the pinnacle elements surrounding the forecourt. The café has provision for a full kitchen which could support other areas with catering requirements such as the Level 1 conference facilities.

### BARS

The auditorium is serviced by bars at each level. The ground floor bar is located adjacent the audience services, while Level 1 and Level 2 bars are located as elements within the respective foyers. The bars are sized so as to ensure that queuing depths do not exceed five patrons and are located so as to avoid patron congestion during peak periods.

### TOILETS

The centre has a generous provision of patron toilets exceeding the BCA minimum requirements which are generally accepted to be insufficient for theatre buildings. The toilet numbers on each level are sized to suit the audience numbers of that level and are located to be discreet but readily accessible.





## MATERIALS

The materials for the front-of-house interiors add another dimension to the concept of the eroded form. Drawing from the ideas of cave walks and rocky interiors, the design and finishes of the interiors create a sense of exploration, expectation and awe.

### Floors

The floors at ground are mostly in-situ concrete slab with a finishing screed and jointing. Zones of special flooring included a large carpet area in the central space. Upstairs, the foyer levels are carpet throughout.

### Balustrades, Stairs and Bridges

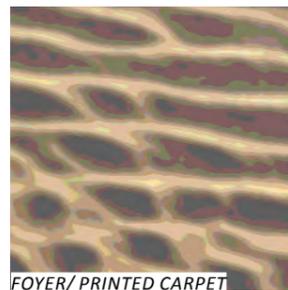
The stair is bright orange French polished, 2-pac paint with orange carpet. It visually attracts the eye on entry as it winds its way through to the upper levels. The balustrades for the upper levels are mostly glass, with simple rail detailing, contrasted with opaque bar areas on the upper levels. The bridge links are treated as walkways, clad in timber deck and open steel balustrading, to create a defined threshold before entering the theatre space beyond.

### Walls and Ceilings

Wall finishes include a feature stone-clad wall outside the theatre, otherwise known as the 'rock-wall'. The stone is repeated around the cafe kitchen and the stair to the north. All other walls and ceiling finishes are generally plasterboard, with integrating lighting and acoustic treatment.



FOYER/ POLISHED  
CONCRETE FLOOR



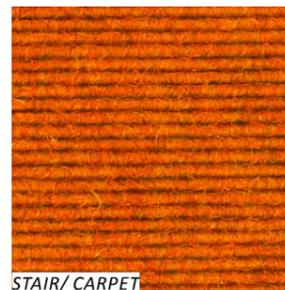
FOYER/ PRINTED CARPET



FOYER/ ROCK WALL



FOYER/ ACOUSTIC  
PANELLED CEILING



STAIR/ CARPET



STAIR/ PAINT

## 4.3 LYRIC THEATRE

The form of the lyric theatre has undergone significant development since the 2013 competition phase. In order to ensure an intimate experience for patrons, the theatre proportions have been revised. An intimate experience is defined as the ability of a patron to connect with a performer on stage in a visual and emotional way. These revisions have resulted in the overall depth of the theatre being significantly reduced and the deletion of the balcony boxes. Patron numbers have remained at 850 and sightlines to the stage have been improved.

The lyric theatre will cater to events such as large school graduations, Eisteddfods, touring commercial theatre, contemporary popular dance, and premium music. The auditorium is arranged in an intimate single balcony format with an eight-metre proscenium. The arrangement of the theatre ensures that the space is scalable, which allows audiences of varying sizes to be accommodated. For example the lower stalls can accommodate an audience size of approximately 300 which allows for a high density of patrons in a smaller area.

The theatre is accessed via dedicated sound vestibules designed to prevent sound and light from public areas intruding into the auditorium. The stalls are accessed from Level 1 and the balcony from Level 2 through a series of processional bridges and ramps that allow universal access to multiple points of the auditorium. Universal access is also provided to the stage, for patron and performer use. The crying and control rooms are located at the rear of the stalls. A sound mix position associated with the control room is located within the auditorium.

The auditorium also includes a forestage lift which can be configured into a stage extension, seating or an orchestra pit.

### SEATING

The auditorium seating is arranged in tiered rows of fixed theatre seats over two levels, stalls and balcony, with additional seating provided via rows of removable seats to the orchestra pit. The stalls are arranged on a stepped rake with a central entry point to provide access to the lower stalls. Within the stalls, seating access is provided via side and central aisles.

The balcony has a steeper rake than the competition scheme. The balcony has been bought forward to help create a sense of engagement with the stage, particularly for orchestral and choral concerts.

Seating on the orchestra pit is installed on mobile seating wagons that are stored under the auditorium in a dedicated seating store.

The theatre seating will be a mix of timber and upholstered surfaces, chosen for comfort, aesthetic, acoustic and durability properties. Seating is spaced at 1000mm between rows allowing space for comfort and ease of access. The seating arms will incorporate fully concealed aisle lighting designed to provide discreet low level lighting to the aisles.

### STAGE AND FLYTOWER

The stage area includes the orchestra pit, stage apron, proscenium arch, acting area, prompt side wing, opposite prompt wing, stage floor, stage vestibules, and flytower. The stage floor construction allows for the central acting area of 14m x 6m to be constructed in a "bolt and nut" manner with removable flooring and joists so that areas of the floor can be dismantled and reinstated as required for production purposes.

The flytower is a tall volume over the stage and wings. The flytower is a large unobstructed area used for rigging and operation of scenery, curtains, and lighting. Air conditioning ducts, electrical cable trays, and other services will be run at high level where they do not obstruct the movement of scenery and stage operations.

### LIGHTING AND CATWALKS

Typical stage lighting and technical positions are provided throughout the auditorium. All of the lighting positions are designed for minimal visibility, code compliance and safe access. The lighting positions are broken into four distinct areas.

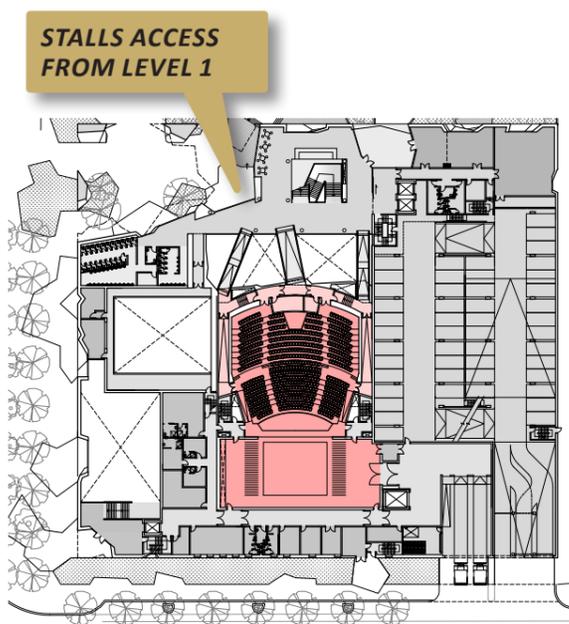
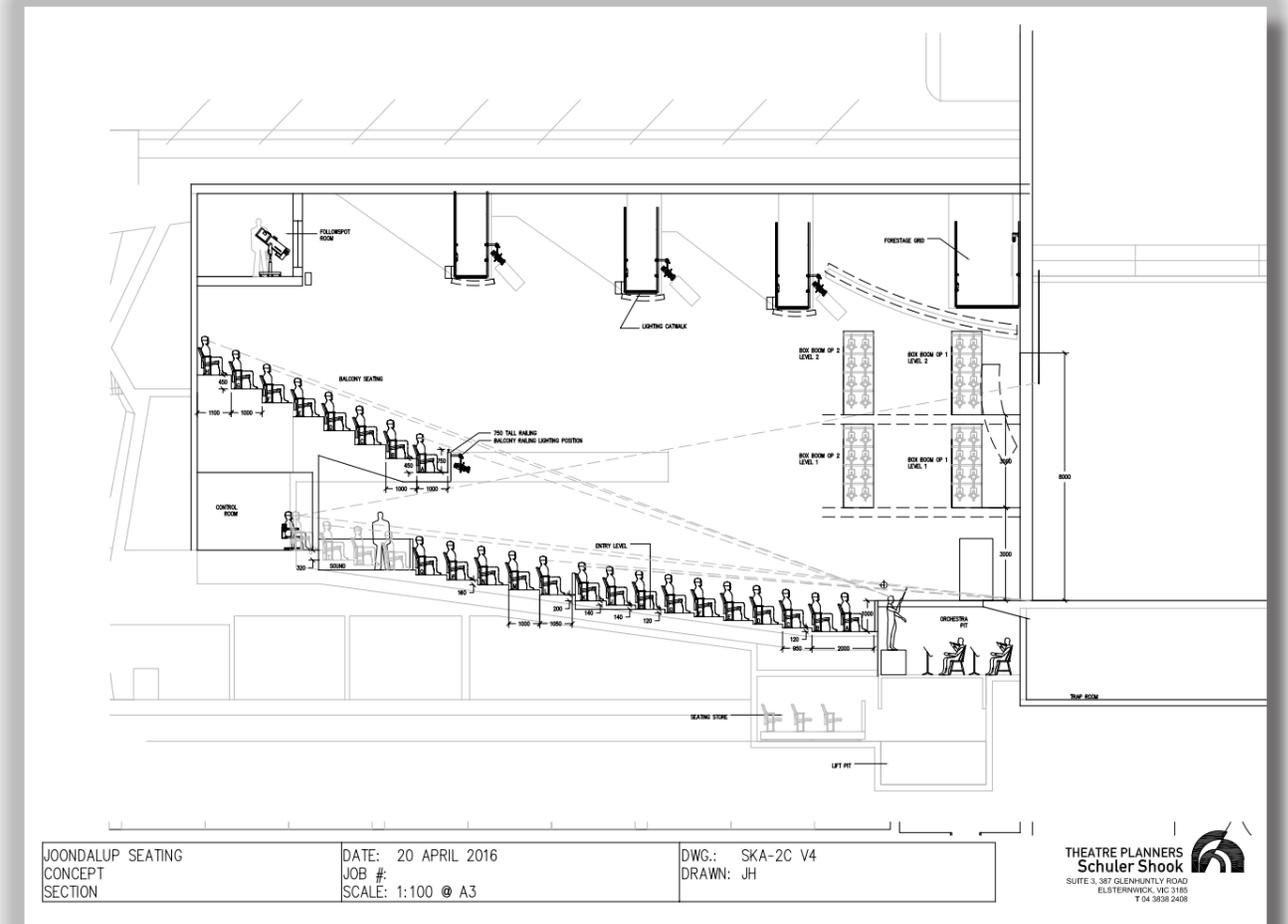
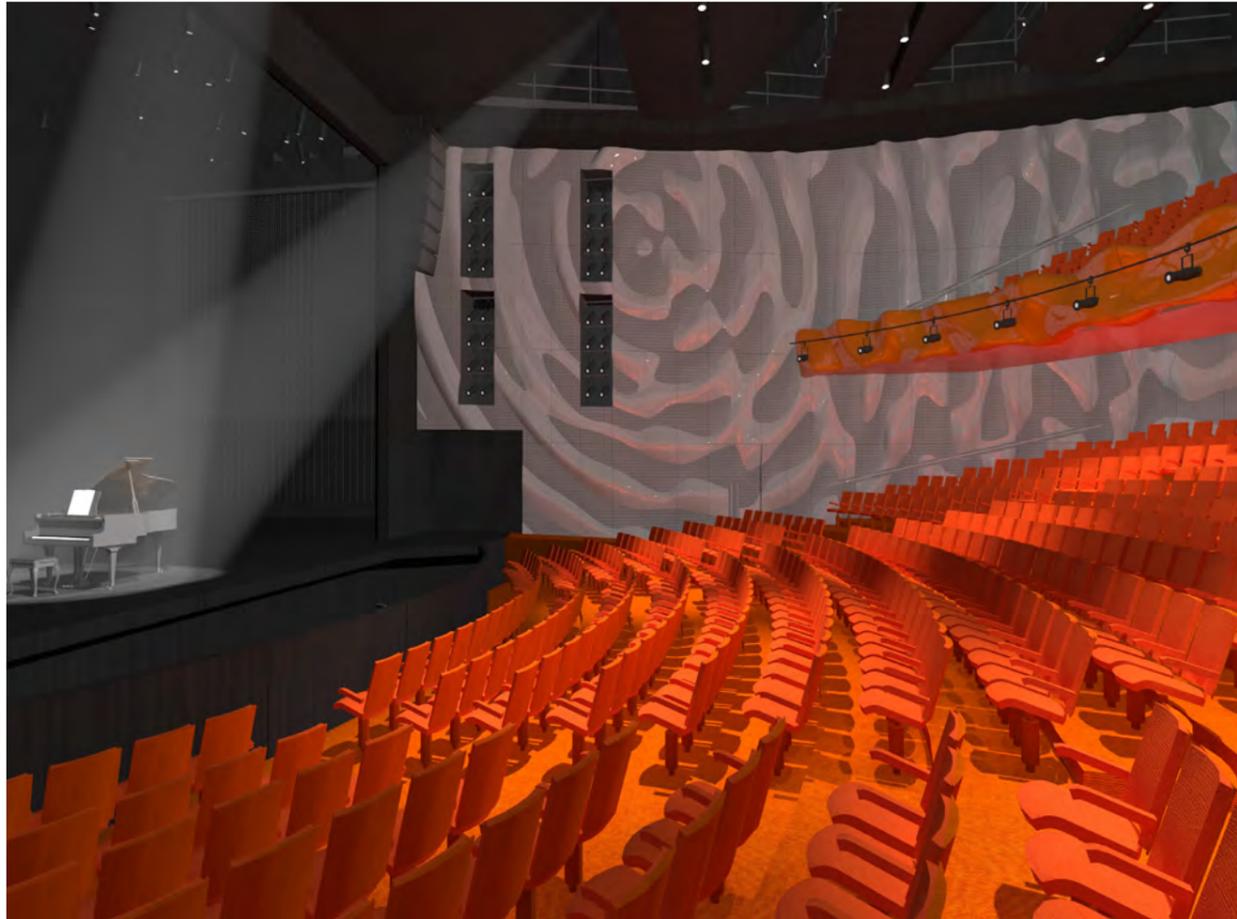
A soundproofed followspot room is located above the balcony seating to the rear of the auditorium. This is the primary location for followspot operation.

Three lighting bridges are accessed via an extensive high level catwalk system which allows for safe and easy access to all lighting positions over the auditorium.

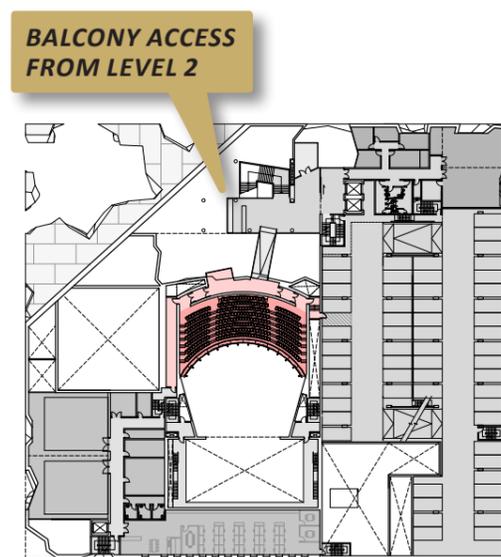
Box boom lighting slots are provided to each side of the auditorium with a dedicated room behind the each lighting slot allowing for safe and easy access to the lighting.

A speaker bridge is provided above the orchestra pit to allow for speaker systems, temporary trusses and equipment for productions.





LYRIC THEATRE/ LEVEL 1



LYRIC THEATRE/ LEVEL 2

## 4.3 LYRIC THEATRE

### ACOUSTIC DESIGN

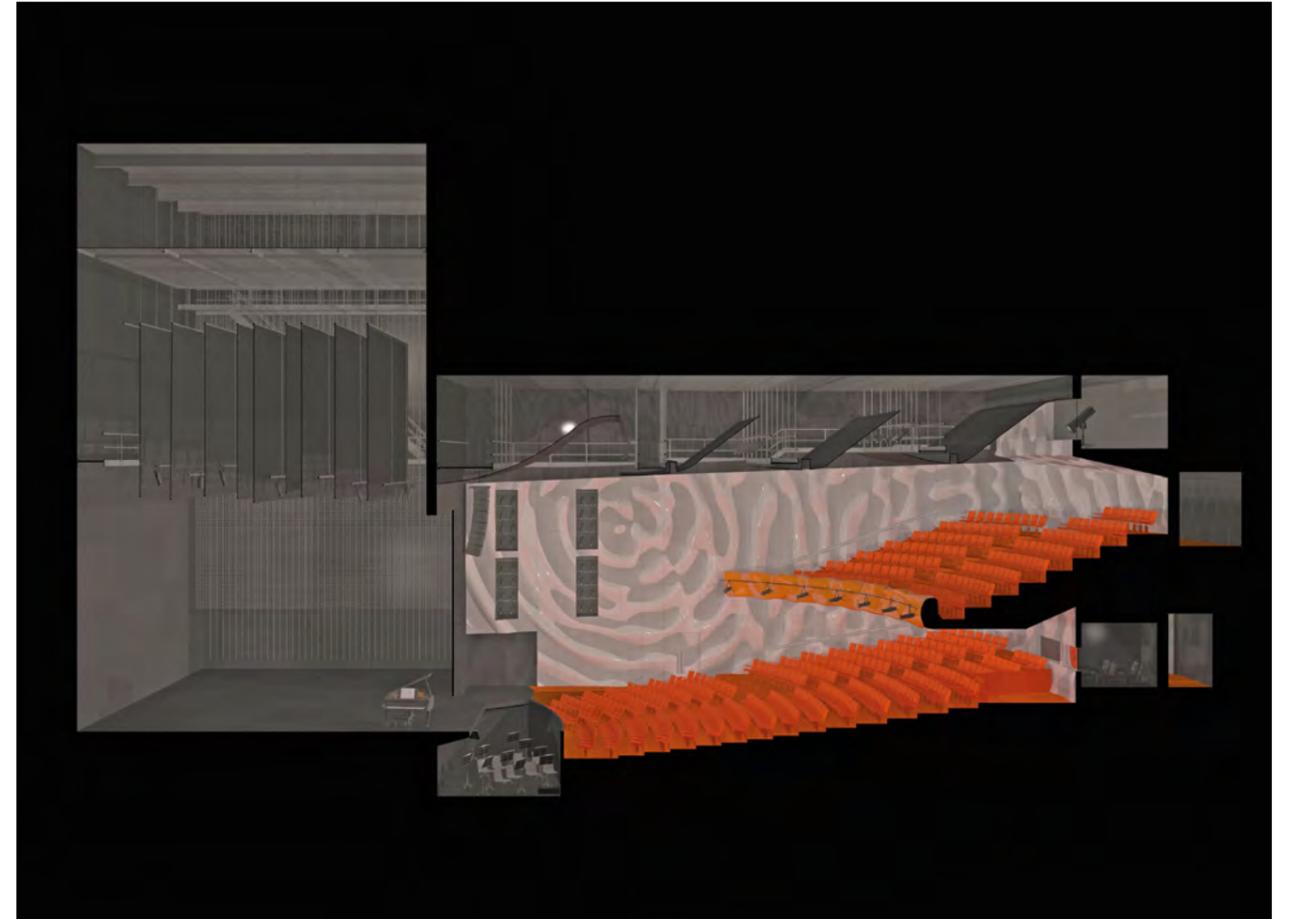
The primary acoustic design parameters for the lyric theatre are based upon its use as an intimate venue for spoken theatre. This implies a volume per seat of 5-7m<sup>3</sup>, a reverberation time of 0.9-1.1 seconds, a speech transmission index of > 0.55 at 80% of the seats, speech clarity of > +1dB and a loudness criteria of > 0dB. These values also prove ideal for dance presentations with pre-recorded accompaniment and amplified concerts.

In order to review the performance of the lyric theatre, Marshall Day Acoustics have undertaken a computer analysis of a 3d model of the theatre supplied by ARM Architecture. This analysis has confirmed that the proposed theatre falls within the parameters described above.

The computer analysis also highlighted two areas of concern regarding the form of the ceiling and its impact on the distribution reflected sound in the auditorium and the treatment to the front edge of the balcony and the potential for unwanted reflected sound. In order to address the concerns regarding the ceiling form a series of curved ceiling panels that evenly distribute reflected sound have been introduced. This will result in a more even acoustic quality throughout the auditorium.

The front edge of the balcony has been altered to diffuse, absorb and reflect the sound energy so as to avoid the potential for image shift for patrons at the front of the lower stalls.

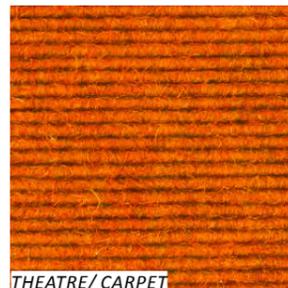




THEATRE/ WALLS



THEATRE/ ACOUSTIC  
PANELLING



THEATRE/ CARPET



THEATRE/ STAGE FLOOR

## MATERIALS

The design for the theatre interior draws on the concept of water eroding the limestone block, as well as linking back to the origins of the name 'Joondalup'. The ripple pattern on the theatre walls is formed of milled MDF, a process similar to that used on the Melbourne Recital Centre interior. The theatre floor and seating tie to the bright orange used on the stair.

## 4.4 BLACK BOX STUDIO

The black box studio is a flexible space that will be used for a wide range of activities including drama, dance, music performances, physical theatre, cabaret, exhibitions, lectures, community and educational events, rehearsals and dinners. As such the black box studio is designed with an emphasis on flexibility of set up and operation.

Flexible seating configurations allow for a variety of seating modes to service the creative and seating needs of the user groups. The performance space can be entered from all corners via corridors that encompass the space while a gallery level allows performers and patrons to enter from the upper level.

The main access point to the black box studio is via a series of large sliding doors which open on the main foyer. An adjacent set of doors within the foyer may be closed in order to provide a dedicated black box foyer when required. The sliding doors connecting the black box and the dedicated foyer are wide enough to allow the two areas to be combined into one large interconnected performance space when required.

To the south of the black box studio a large sliding door provides direct access to the adjacent art gallery, allowing for large functions, exhibitions or related performances.

### SEATING

The black box studio has 200 seats on a retractable seating system installed at the western end of the room. When retracted the seating provides an open area of approximately 240sqm. The retractable seating is augmented by rostra and loose chairs which will allow the space to have seating in end-stage, thrust-stage, theatre-in-the-round and casual modes as well as flat floor mode with all seats retracted and/or removed.

### STAGE

The stage level is a flat floor space that can be reconfigured as noted above. Performers and technicians can access all corners of the stage via corridors linking them to dressing, loading, and other back-of-house areas.

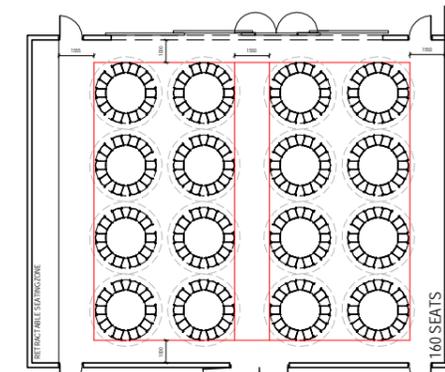
### CONTROL ROOM

A soundproofed control room is provided at the gallery level. The room may be used as a projection room if required. Rigging positions for lighting, sound and audio-visual equipment are located over the studio. More detailed design will determine if these are accessed via a lowered rig or by EWP.

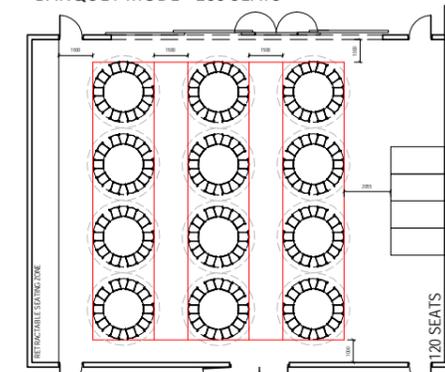
### ACOUSTICS

In order to allow concurrent performances, the black box studio is acoustically isolated from the adjacent lyric theatre. The large operable doors opening into the studio are acoustically treated in order to minimise sound transfer between the studio and the surrounding public areas.

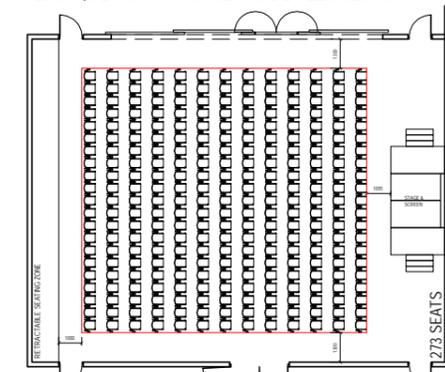




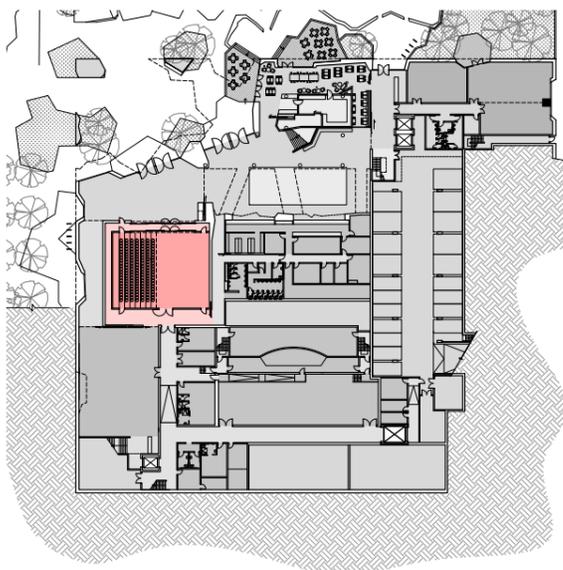
BANQUET MODE - 160 SEATS



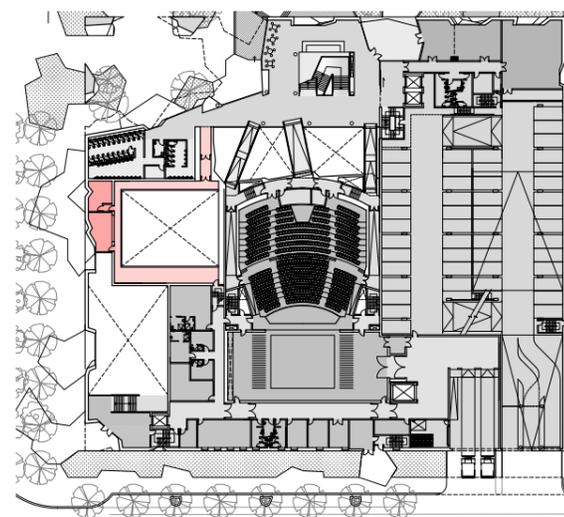
BANQUET WITH STAGE MODE - 120 SEATS



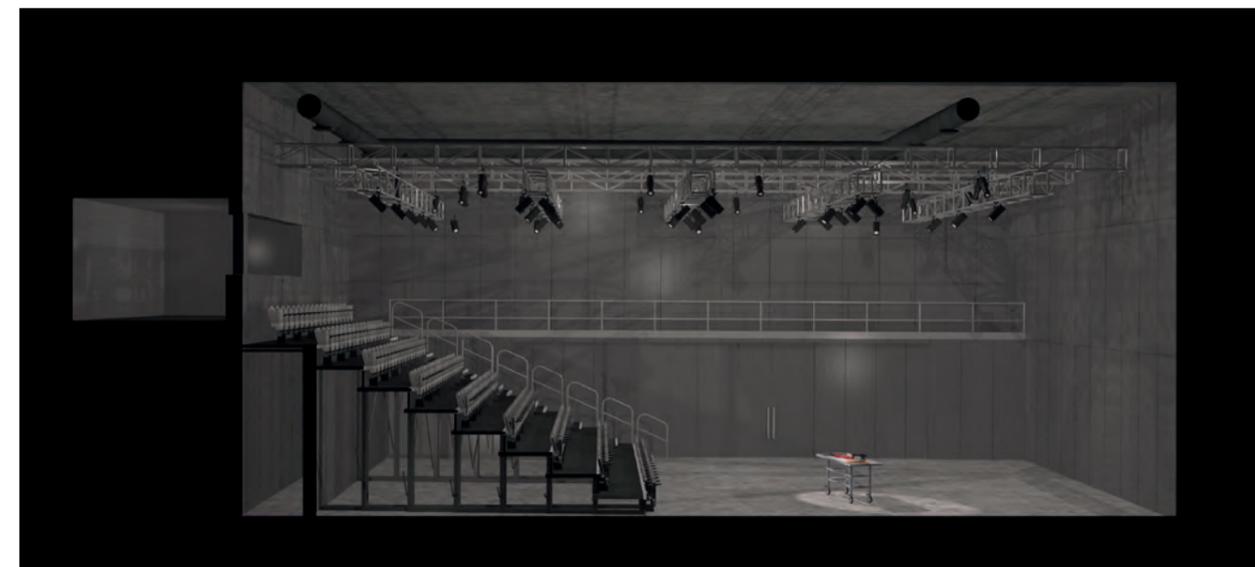
LECTURE MODE - 273 SEATS



BLACK BOX/ GROUND LEVEL



BLACK BOX/ LEVEL 1



## 4.5 ART GALLERY

The art gallery is a 400sqm space, self-contained and accessed via a highly prominent entry at street level to the corner of Grand Boulevard and Teakle Court. The gallery has been relocated from the upper levels at the competition phase to the ground level. This relocation has allowed the gallery to have direct access to the main foyer via a generous corridor/exhibition space.

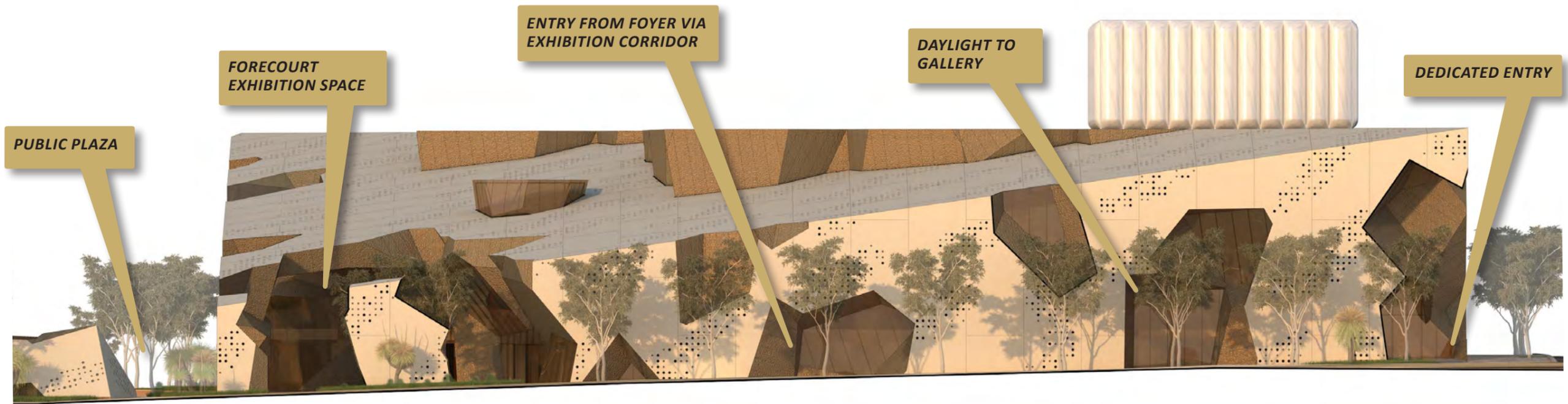
In addition the gallery now has direct access to the black box studio adjacent. This allows the spaces to be combined into one large function space when required. A series of sliding doors allow the gallery to be isolated from the main foyer, whilst maintaining access to the ground level toilets during events of this nature. The layout also allows for exhibitions to be displayed within the foyer and within the public forecourt if required.

In addition to the added flexibility, the new location of the art gallery provides street level activation and passive surveillance for pedestrians via large glazed areas which also ensure daylight access within the gallery.

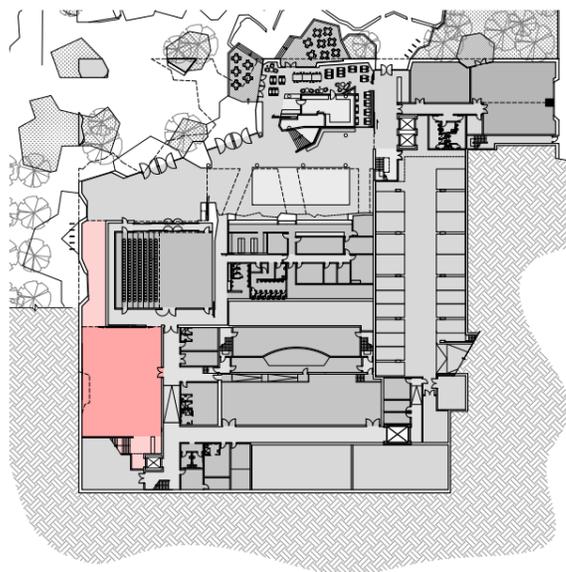
The gallery services have been considered to enable temperature and lighting control. This will allow a wide range of high quality touring exhibitions to be accommodated within the gallery, providing unique opportunities for the JPACF patrons. Humidity control is a potential value-add which would allow for premium exhibitions that are currently only able to be hosted at AGWA, the Lawrence Wilson or John Curtin Galleries.

The art gallery has curatorial space immediately adjacent to the gallery. Both the gallery and the curatorial spaces are provided with a designated mechanical system delivering curatorial quality temperature control. Loading to the art gallery is provided via an oversized service corridor and services lift from the main loading dock.

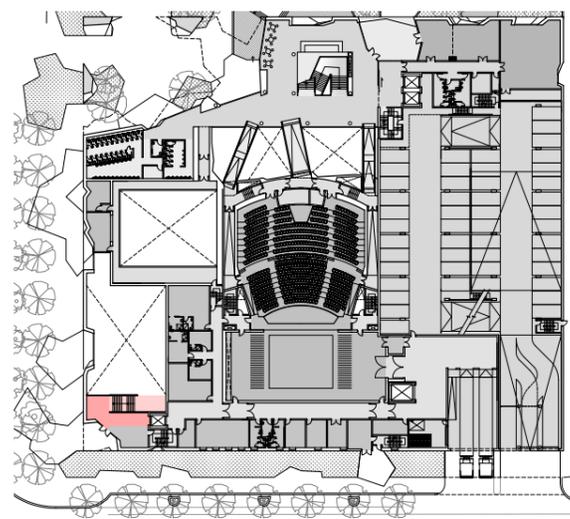




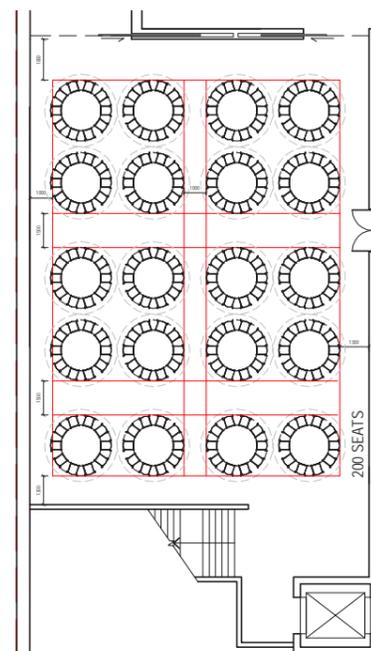
GRAND BOULEVARD ELEVATION



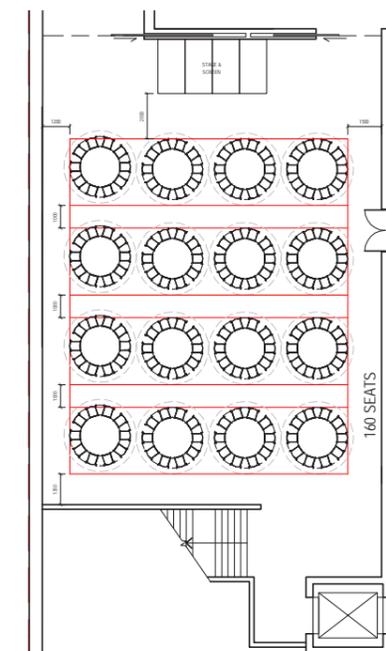
GALLERY/ GROUND LEVEL



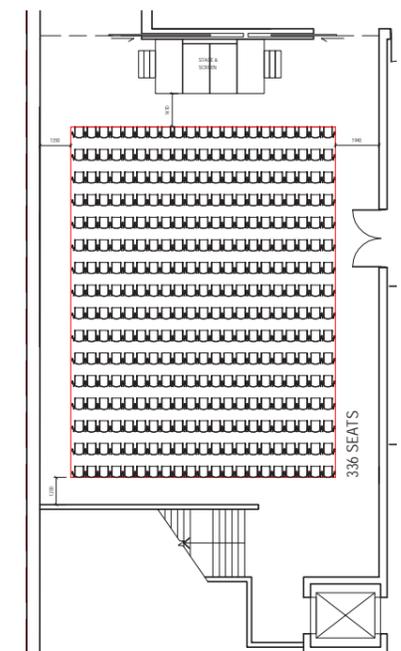
GALLERY/ LEVEL 1



BANQUET MODE - 200 SEATS



BANQUET WITH STAGE MODE - 160 SEATS



LECTURE MODE - 336 SEATS

## 4.6 COMMUNITY STUDIOS

The JPACF incorporates a community arts hub adjacent to Central Park and the main plaza. The community studios include a mixture of performance and visual art studios, practice rooms and meetings rooms together with a flexible conference facility. The hub is 1680sqm GFA across three levels and shares common lifts and toilets with the various foyers of the main auditorium.

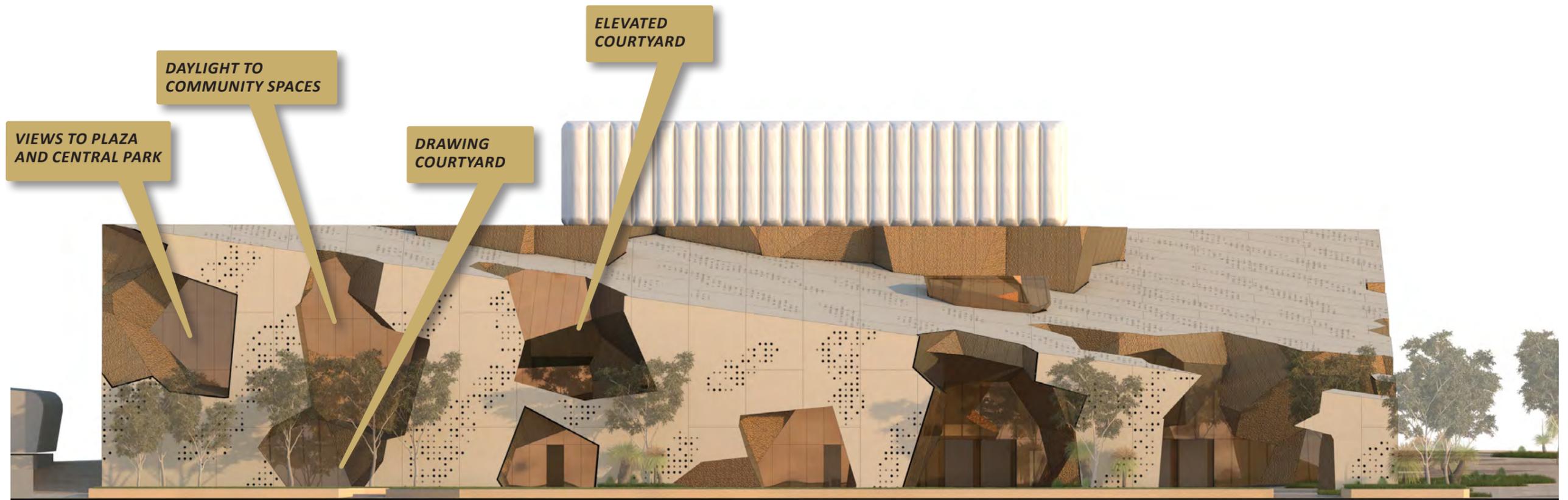
A variety of room sizes are provided, and larger rooms on ground and Level 1 are able to be partitioned via operable walls. This arrangement maximises the flexibility of the various rooms and allows for multiple simultaneous uses.

The community facilities have a dedicated entry at ground level with vertical access provided via an open stair and the main foyer lifts. Sliding partitions allow the stair and lifts to be accessed when the main foyer and theatres are closed. Ground level includes visual arts and crafts studios, and an administration / front desk area adjacent to the entry. A deck area provides an external area for use by the visual arts studios. Large north-facing windows provide excellent access to daylighting.

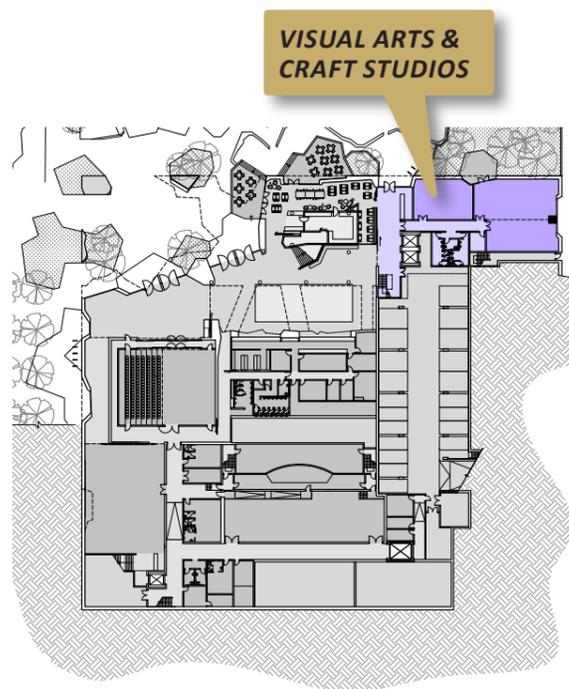
Level 1 facilities include conference and function rooms, a warming kitchen and storage areas. The function rooms are located against the facade to ensure access to daylighting and to allow views over the plaza, Central Park and Jinan Gardens to the north. In addition the western-most room has direct access to the courtyard space adjacent to the lift lobby. This allows this room to operate as a VIP venue during performances, or as an independent venue for events such as weddings.

Level 2 facilities consist of a dance studio, music practice rooms and a recording studio, with supporting storage areas. Access to the balcony overlooking the Level 1 courtyard space is provided in the lobby adjacent to the main lifts. The dance studios and practice rooms are acoustically treated to ensure that sound transfer between public areas and the community studio is minimised. A floating floor to the dance studios is provided to ensure sound transfer between levels is avoided. The dance studios have large windows to provide daylight access.

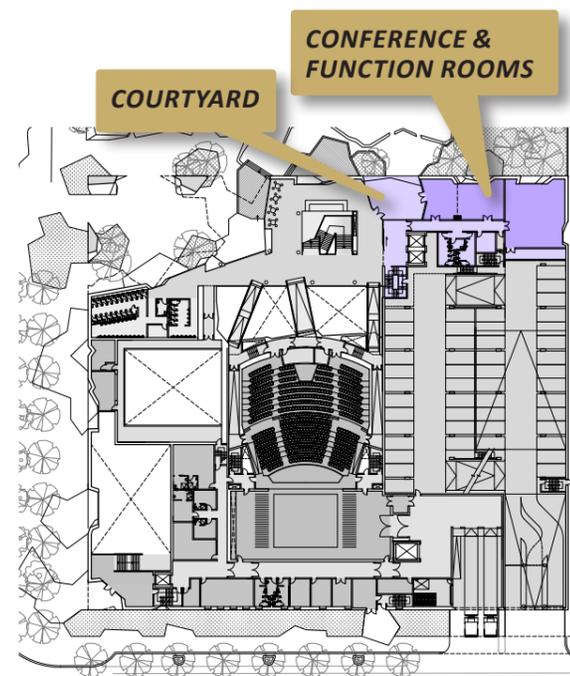




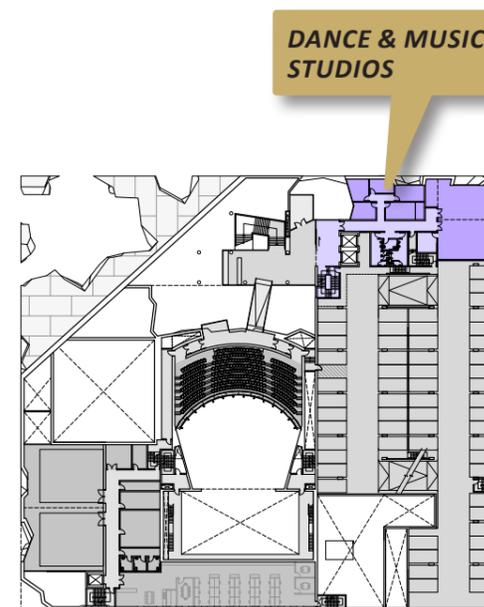
PUBLIC PLAZA ELEVATION



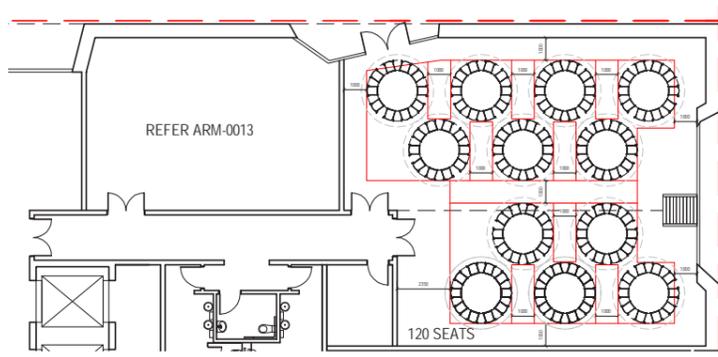
COMMUNITY/ GROUND LEVEL



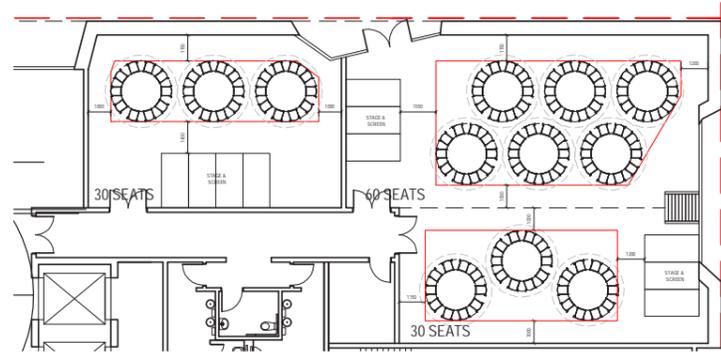
COMMUNITY/ LEVEL 1



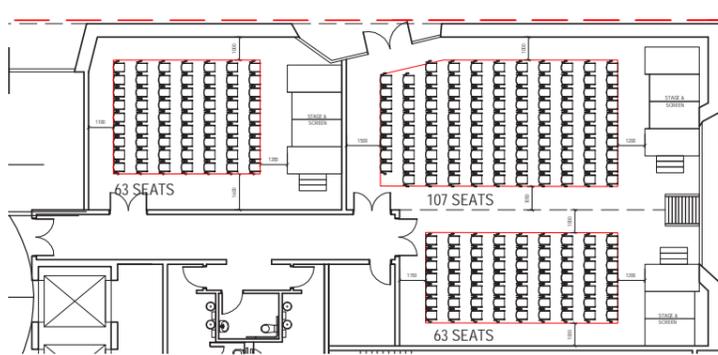
COMMUNITY/ LEVEL 2



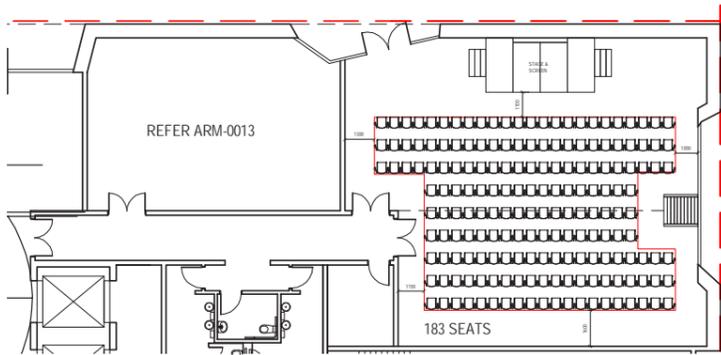
GROUND LEVEL - BANQUET MODE



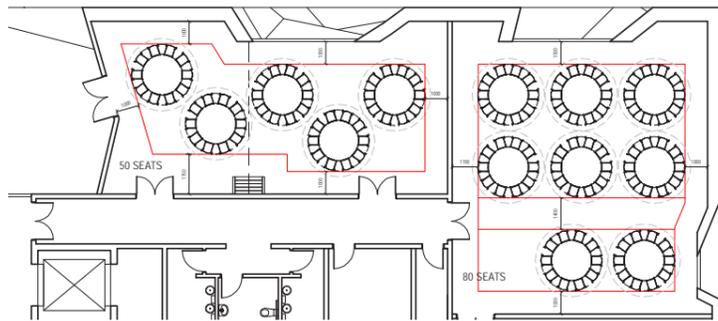
GROUND LEVEL - BANQUET AND STAGE MODE



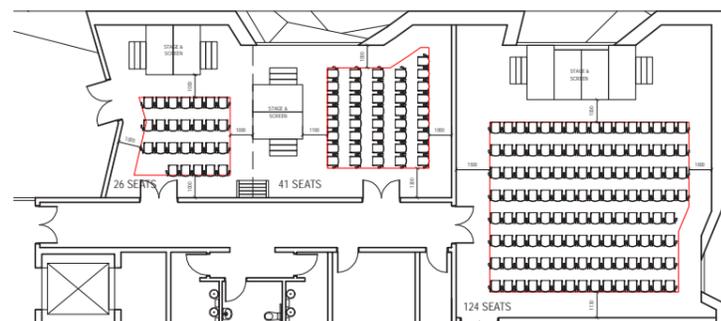
GROUND LEVEL - LECTURE MODE



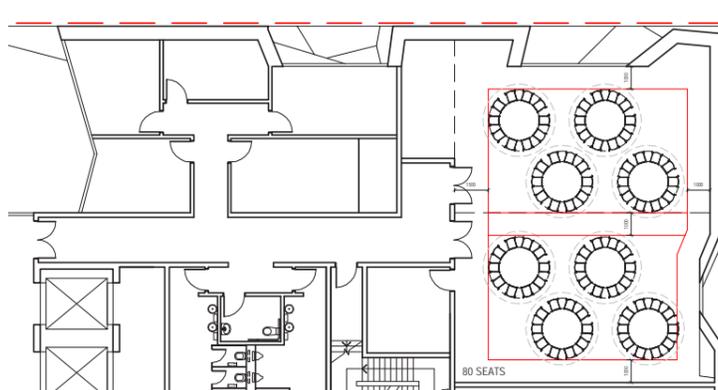
GROUND LEVEL - LECTURE MODE



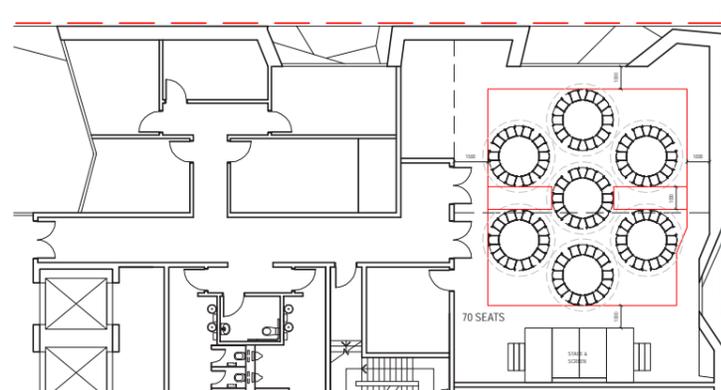
CONFERENCE LEVEL - BANQUET MODE



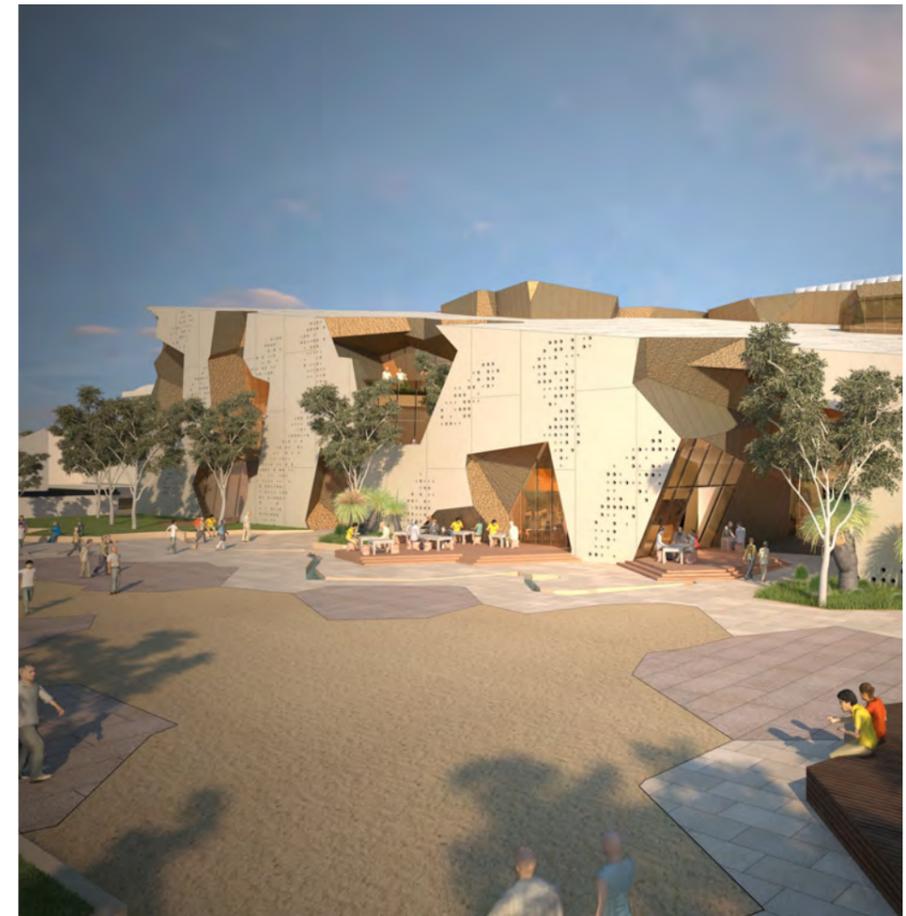
CONFERENCE LEVEL - LECTURE MODE



DANCE LEVEL - BANQUET MODE



DANCE LEVEL - BANQUET AND STAGE MODE



## 4.7 BACK OF HOUSE FACILITIES

The back of house (BOH) areas provide all the required amenities to ensure the operational success of the facility. Well-designed, functional spaces are safer to operate, lower operating costs, and serve as an asset to technicians, performers, and theatre management.

BOH circulation is wider than typical circulation paths to allow for multiple overlapping activities that include moving scenery, costumes and performers. All major levels of the BOH are accessible to people with disabilities, starting at the exterior of the stage door and extending all the way through to the stage, dressing rooms, and technical areas.

### STAGE DOOR

The stage door is the "back door" of the theatre through which performers and technical staff will come and go on a daily basis. It also functions as a hirer and visitor receiving area. The stage door is the security and control point where user groups and performing company personnel can "sign on and sign off" and it is the point where access to the BOH areas can be restricted, particularly when the theatre is hired by schools or children's groups.

### GREEN ROOM

The green room is a multi-purpose space for performers to gather when not on stage and will also be used for various other functions including backstage meeting space, warm-up areas, and as a holding room when large groups of performers arrive at the stage door.

### DRESSING ROOMS

Dressing rooms are performer support rooms for changing into costumes and applying stage make-up. Eight dressing rooms provide for a cast of 64, sized from 2-person rooms to 20-person. Each room includes makeup benches, mirrors, makeup lights, and above-bench power points. Smaller rooms are provided with higher-end finishes for use as "star" dressing rooms. In addition, the musicians' room functions as a dressing, green room, warm up space, and instrument case store for the musicians and is located at the ground level near the orchestra pit.

### REHEARSAL ROOMS

The two rehearsal rooms are multi-function, large volume spaces suitable for a number of purposes including rehearsal and performance class rooms. It is also common for these spaces to occasionally be used as function spaces. Located on Level 2, the rooms have good access to daylight while allowing for privacy when required.

Each of the two rehearsal rooms are sized to allow for stage footprint to be marked on the floor during rehearsal, with additional space outside of this footprint to set up stage management tables and prop setting.



## 4.7 BACK OF HOUSE FACILITIES

### TECHNICAL ROOMS

A general-purpose open plan office is provided for resident production and technical staff. The technical offices are in the backstage area and have flexible workstations or benches for several people to work as required. Other technical spaces include crew locker room, stage manager office, rack rooms, dimmer rooms and store rooms.

### WORKSHOP

The workshop is for repair and maintenance of stage equipment. Work will include wiring and soldering, as well as mechanical work on stage machinery components. Unlike venues such as the MTC Theatre, the JPACF will not have an in-house production company, so does not require space for the building of entire sets.

### WARDROBE

The wardrobe is a well-lit, air-conditioned workroom for maintaining and repairing costumes used in performance. It provides services for sewing and ironing equipment and large washing machines and clothes dryers. A separate fume extraction system for toxic sprays and hair products is provided.

### LOADING

In general theatres are giant empty rooms that constantly have people, equipment, and scenery moving in and out of them on a daily basis. The loading dock is a key element to facilitate this movement. When it operates poorly it causes major inconvenience for everyone involved including council operators and the users of the theatres. It also creates unnecessary operational costs as it is likely that major presenters may avoid the theatre (less revenue), and larger technical staffs will be required to load and unload trucks (additional costs).

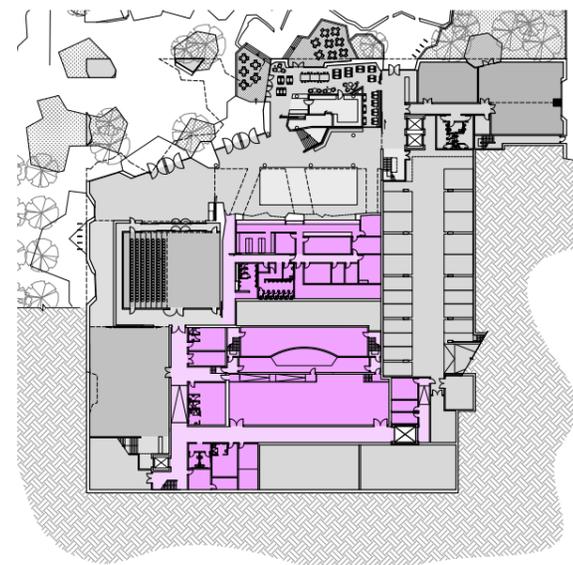
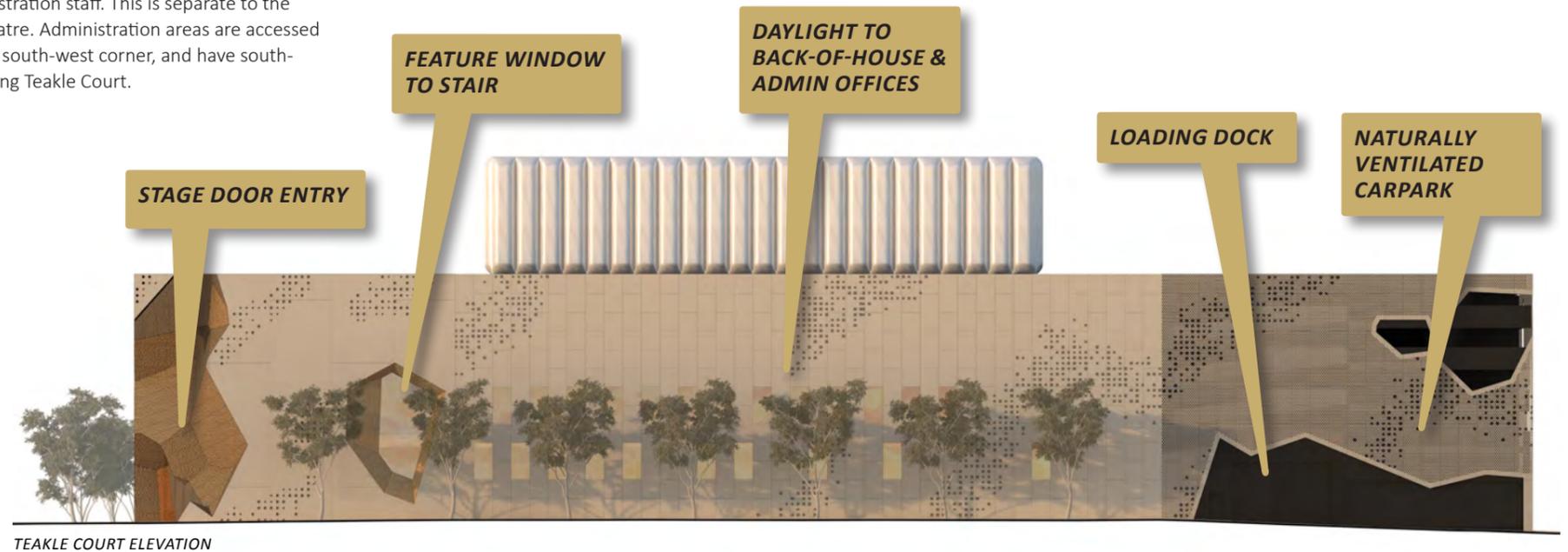
The loading dock has unobstructed access for two semitrailers and articulated vehicles up to 19.5m long to manoeuvre from the street to the loading dock for loading and unloading on a regular basis and at all hours.

### RUBBISH

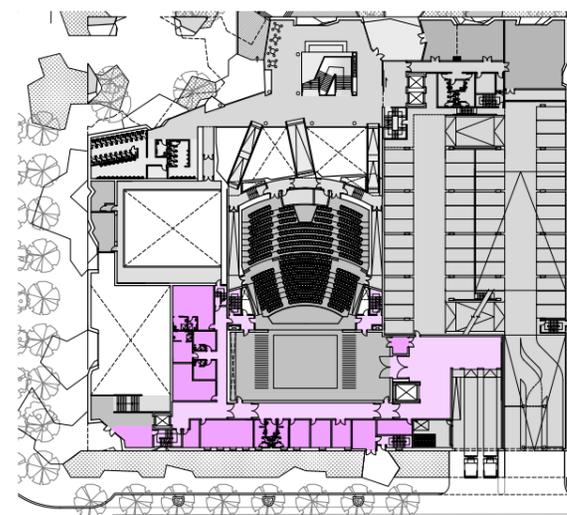
A bin room is provided adjacent to the loading dock, allowing bins to be stored and collected separately from the scene loading.

### ADMINISTRATION OFFICE

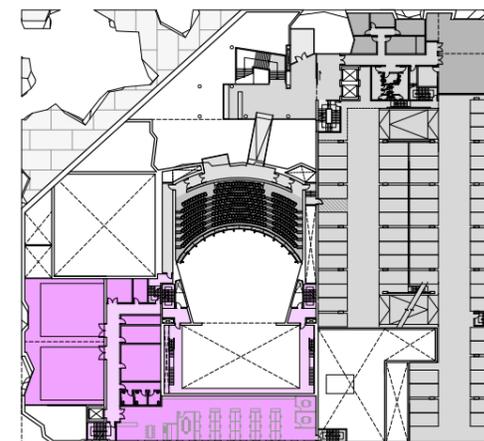
An open-plan office area is provided on Level 2 for operations, management and administration staff. This is separate to the technical crew of the theatre. Administration areas are accessed via the stage door on the south-west corner, and have south-facing windows overlooking Teakle Court.



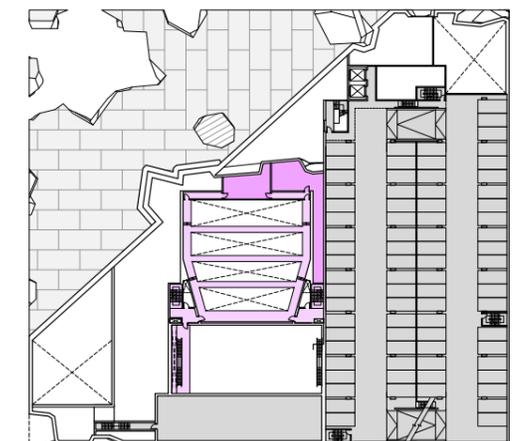
BACK-OF-HOUSE/ GROUND LEVEL



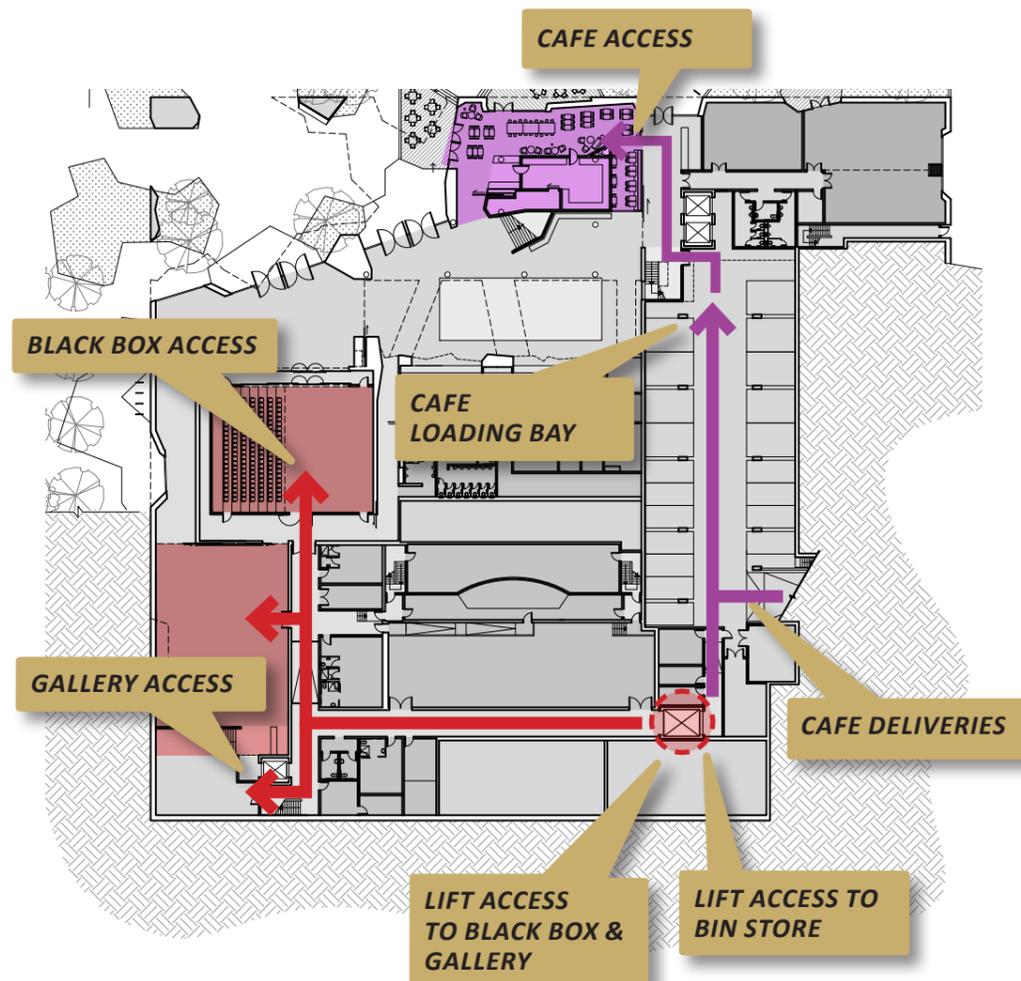
BACK-OF-HOUSE/ LEVEL 1



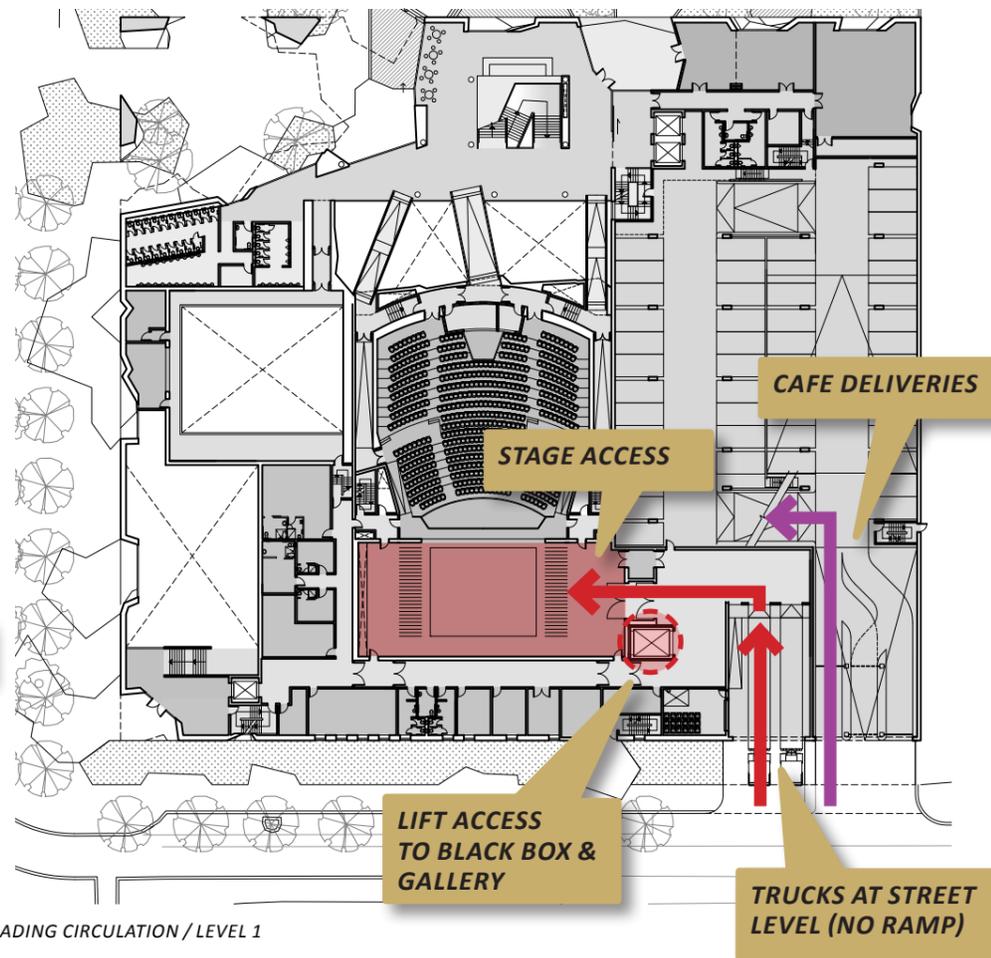
BACK-OF-HOUSE/ LEVEL 2



BACK-OF-HOUSE/ LEVEL 3



LOADING CIRCULATION / GROUND LEVEL



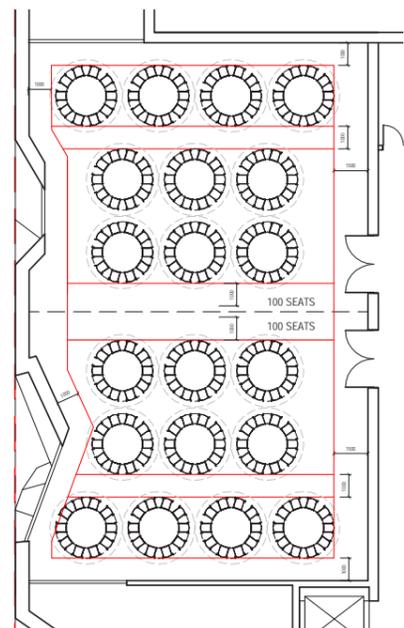
LOADING CIRCULATION / LEVEL 1

## MATERIALS

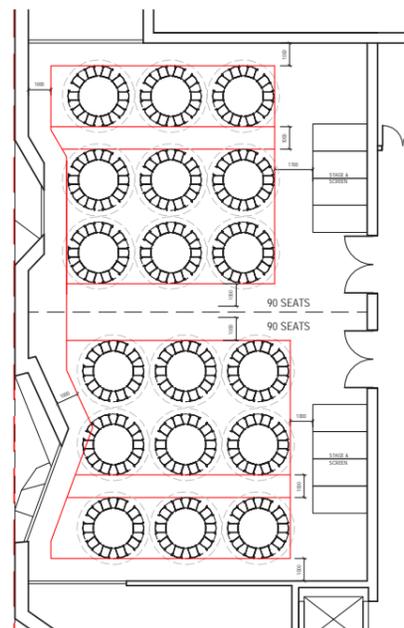
BOH finishes are kept neat, minimal and utilitarian. Most BOH spaces have particular functional requirements for materials. Control room finishes should have a non-reflective and dark value, and surfaces and cabinets should have a matte, dark, neutral or black colour, so as to minimise visibility to the audience.

Dressing-room materials should generally be of a neutral colour to not distort reflected light (for make-up). Surfaces should be durable and easily cleaned.

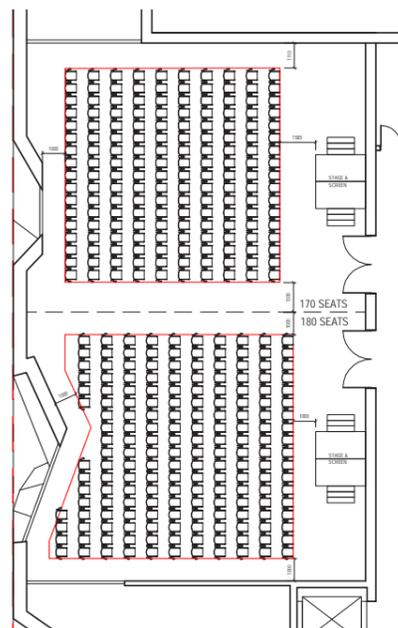
Rehearsal room floor finish is often hardwood tongue and groove or parquet finish, with light coloured plasterboard walls, and an open ceiling with pipe grid.



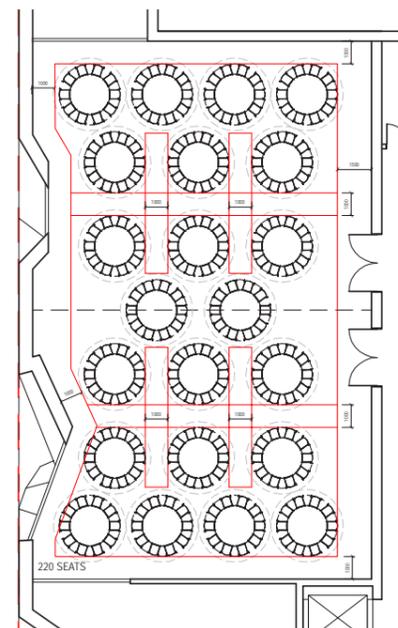
REHEARSAL SPACES - BANQUET MODE



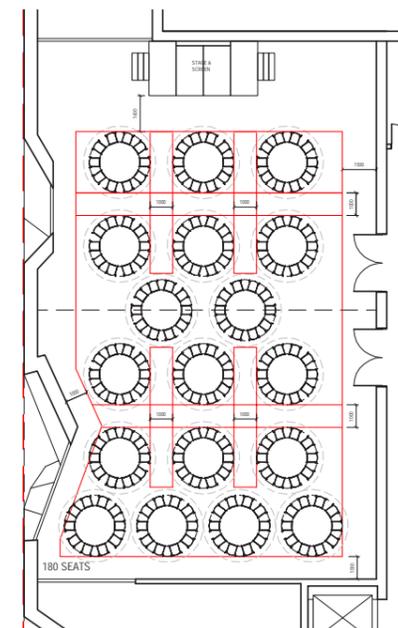
REHEARSAL SPACES - BANQUET MODE WITH STAGE



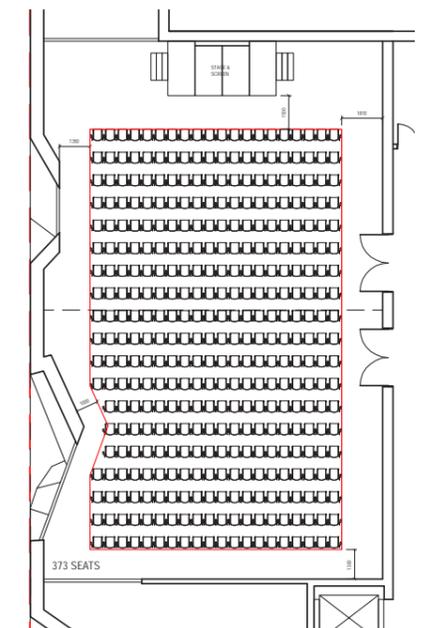
REHEARSAL SPACES - LECTURE MODE



REHEARSAL SPACES COMBINED BANQUET MODE



REHEARSAL SPACES COMBINED BANQUET WITH STAGE MODE



REHEARSAL SPACES COMBINED LECTURE MODE

## 4.8 FACADE & MATERIALS

Material selection for the exteriors has followed from the concept design of the project – the eroded, solid form. The palette of external materials is deliberately kept simple to achieve the design intent. Materials are chosen based on the following criteria:

- Ability for lighting integration
- Durable finishes for the Perth environment
- Low maintenance, cleanable surfaces
- Detailing and integration of services
- Cost

### Facades

The north and west facades, along the main roads, are proposed to be panels of glass-reinforced concrete (GRC), either as vertical sheer façade panels, or more articulated and textured internal reveals. The reveals are combined with sections of glazing and entry points to provide light and visual connection inside and out. Around the main entry, the flat panels have integrated lighting, provided in zones of recessed 'pits'.

To the southern and eastern facades, the panels are combination of precast concrete, glazing to admin offices, and perforated metal panelling for the car parking to allow for natural ventilation, as well as visual activation. BOH loading and car parking entry are all integrated into the design strategy.

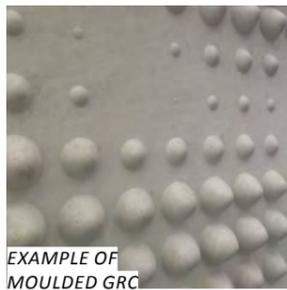
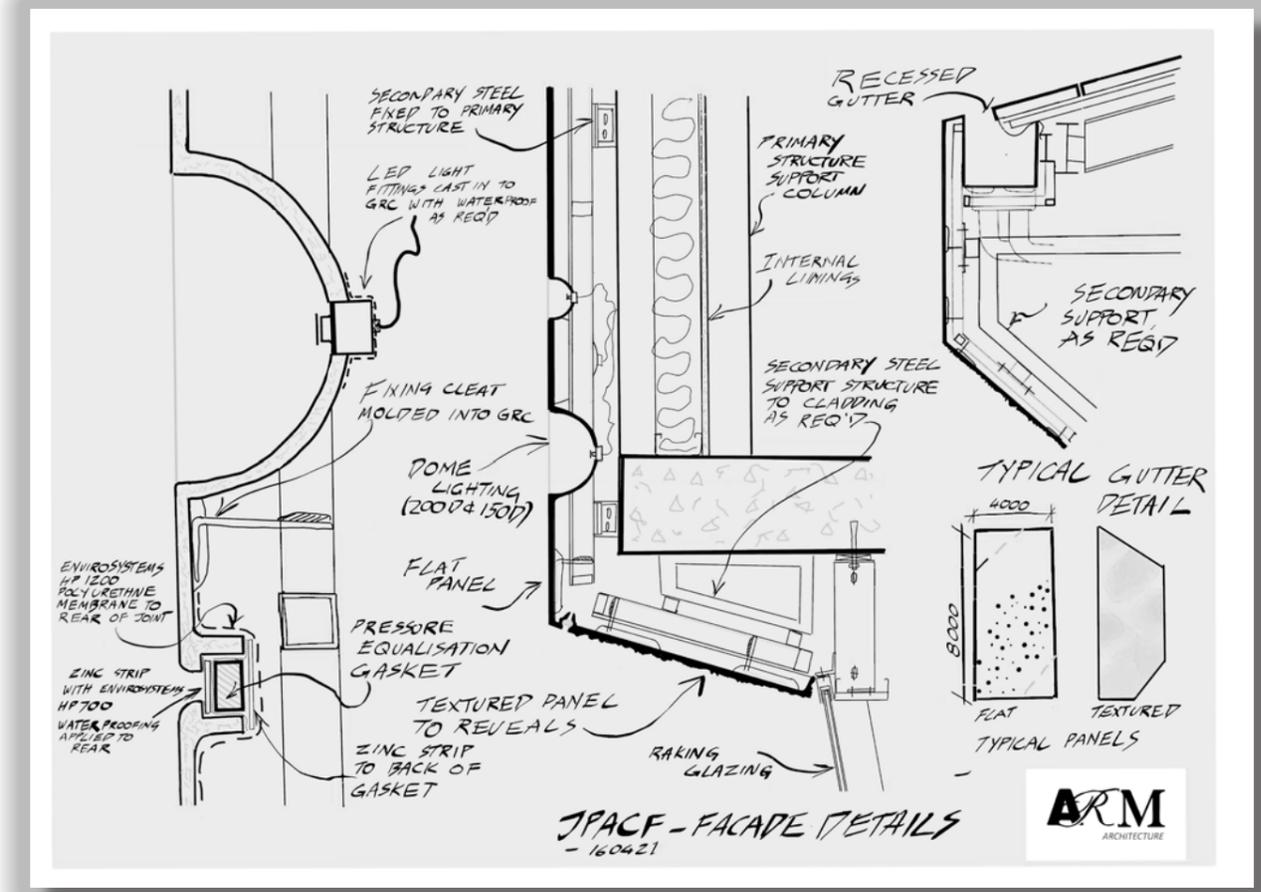
### Roof

The roof is a combination of traditional roof sheeting, and perforated precast panelling to the north western corner with a rain-screen water-proofing. This creates the impression of the overall solid mass, with the facade material appearing to wrap up over on to the roof. The areas of traditional roof sheeting aren't visible from pedestrian level or from the street. All mechanical services are located in this 'hidden' zone, adjacent to the carpark.

The flytower to the south is clad with back-lit translucent panels to act as an illuminated beacon from a distance.

A large glass skylight hovers over the central foyer space.

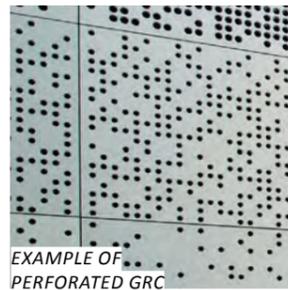




EXAMPLE OF MOULDED GRC



EXAMPLE OF MOULDED GRC



EXAMPLE OF PERFORATED GRC



TIMBER DECKING



FLYTOWER CLADDING

## 4.9 CARPARK

The carpark provides approximately 374 car bays, with vehicle access from Teakle Court. The car park is in a half-split-level format which links in with the main building at every level, via stairs and lifts. The bottom level of the carpark is dedicated parking for staff, and ACROD bays. This level also includes a short-term loading bay with direct access to the cafe and bar, allowing these vehicles to be kept separate from the theatre loading path.

The carpark shares the main lift core and can be accessed by pedestrians from Central Park or Teakle Court while the rest of the facility is closed. The carpark is naturally ventilated. This will require a ventilation easement to be agreed with the Department of Education (TAFE) but delivers a substantial cost saving.

The top level of the carpark is open, assisting with natural ventilation. Although integrated within the JPACF envelope, the carpark is structurally and acoustically separated from the main building. On the top level, catenary lighting is provided in a pattern that reflects the rocky shape of the building. There is the potential for shade-sail cover to be added if required.

## 4.10 PLANT

Plant has been strategically located within the building to provide the required services whilst minimising acoustic impact on the theatre and surrounding buildings. It is typically positioned to the south and east of the main theatre on ground, Level 1 and the roof, with supplementary services for localised areas being located in adjacent areas.

Rainwater harvesting storage, fire tanks and associated pump and hydraulic plant are located south of the main theatre at lower-ground and upper-ground level. Structurally these elements are preferred on ground due to significant loadings and the southern location provides access to the fire pump room from Teakle Court for DFES. At Level 1 to the south of the theatre, the switch rooms (both HV and LV) have been located to provide direct access from Teakle Court for Western Power. The roof to the south and east of the theatre provides an open air environment for air handling units (AHUs) chiller plant, smoke exhaust and hot water heating.

Throughout the building, risers have been integrated within the architecture to allow the efficient distribution of mechanical, hydraulic and electrical services.

## 4.11 ESD INITIATIVES

The regulatory requirements for energy efficiency for the JPACF are stated in Section J of the Building Code of Australia. These codes provide the basis for the minimum standards for the JPACF. In addition to meeting these minimum requirements the project proposes to instigate a range of Environmentally Sustainable Design (ESD) initiatives.

These include natural ventilation to the above-ground carpark; the utilisation of rainwater harvesting for sanitary facilities; the use of WELS-rated fixtures to minimise total water consumption; the reuse of water used in the testing of the fire system; the use of low emission paints, carpets, sealants and wood products; the use of motion controlled energy efficient light fittings; water-sensitive landscape design; and the careful control of heat gain and glare via the design of the facade elements in order to ensure that glazing areas are shaded for the majority of the year.

In addition to these items, other initiatives that could be investigated as part of the next phase of the project include the use of a photovoltaic array to power building base electrical loads; consideration of adaptive comfort conditions to reduce energy by aligning air conditioning set points with occupant clothing levels; the use of energy efficient lighting equipment within the theatre; and the use of night purging and natural ventilation within front-of-house areas in order to reduce energy consumption.



# 6. REFERENCE DOCUMENTS

## ARM DRAWINGS

Drawing No	Title	Rev
<b>LOCATION PLAN</b>		
SD-A1401	Location Plan	21
<b>PLANS</b>		
SD-A1000	Floor Plan- Ground	21
SD-A1001	Floor Plan- Level 1	21
SD-A1002	Floor Plan- Level 2	21
SD-A1003	Floor Plan- Level 3	21
SD-A1040	Roof Plan	21
<b>CARPARK PLANS</b>		
SD-A1020	Carpark Plan- Level C1-C3	21
SD-A1021	Carpark Plan- Level C4-C7	21
SD-A1022	Carpark Plan- Level C8-C11	21
SD-A1023	Carpark Plan- Level C12	21
<b>ELEVATIONS</b>		
SD-A2000	North Elevation	20
SD-A2000	West Elevation	20
SD-A2000	South Elevation	20
SD-A2000	East Elevation	20
<b>SECTIONS</b>		
SD-A3000	Sections A and B	21
SD-A3001	Sections C and D	21
<b>SEATING LAYOUTS</b>		
ARM-A0010	Black Box and Gallery- Banquet	21
ARM-A0011	Black Box and Gallery- Banquet and Stage	21
ARM-A0012	Black Box and Gallery- Lecture	21
ARM-A0013	Arts Studio	21
ARM-A0014	Arts Studio- Combined Rooms	21
ARM-A0015	Conference Facilities	21
ARM-A0016	Conference Facilities- Combined Rooms	21
ARM-A0017	Dance Studios	21
ARM-A0018	Dance Studios- Combined Rooms	21
ARM-A0019	Rehearsal Spaces	21
ARM-A0020	Rehearsal Spaces- Combined Rooms	21

