

TECHNICAL SPECIFICATIONS.

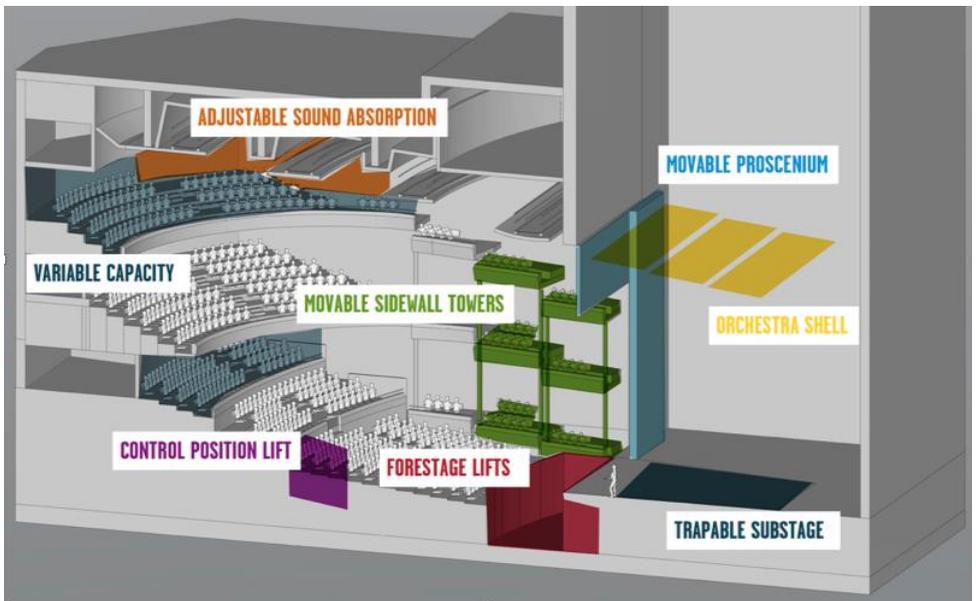
Charcoalblue spent many months working with local and national stakeholders, user groups and promoters to find the best outcomes for the community. It was clear that a new venue had to meet several challenges in order to satisfy the needs of stakeholders, audience, community and users. Perhaps the biggest challenge set down in the stakeholder discussions was how to deal with the differing acoustical requirements of amplified and non-amplified performance, and how a venue could be designed to be a truly great experience for speech, drama and music.

ORCHESTRA PIT LIFT AND MIXER DESK LIFT

The orchestra pit elevators can rise to stage level and extend into the auditorium, providing a forestage in two depths. In fully extended mode, together with the removal of a proscenium arch, the symphony orchestra is pulled forward into the volume of the auditorium.

STAGE FLOOR TRAPS

A portion of the stage floor will be made with removable rostra. These will sit on a network of steel beams and columns. Rostra and supports can be removed as needed for each show's requirements. The design does not propose any fixed below-stage machinery, however modular lifts would be purchased later or brought in for a specific performance.



ADJUSTABLE PROSCENIUM

It is proposed to vary the width between a 12m opening and a 20m opening, to enable the full available width of stage to be used for Kapa Haka performance or by a full symphony orchestra where no proscenium arch is required.

OVERHEAD SYSTEMS

The theatre will have overhead systems over the stage and the auditorium. Over stage flying will be realised with a counterweight flying system. To give incoming shows the flexibility, bars will be spaced approximately every 200mm. Counterweight flying allows skilled operatives to fly cues to the time of the music, which will differ slightly from night to night with opera and ballet. On the back face of the proscenium arch, will be a fire-retardant safety curtain. Over the auditorium and forestage will be a series of bridges, providing lighting positions. Around these will be an acoustic ceiling.

ACOUSTIC SHELL AND CANOPY

Some of the acoustic systems will be integrated into the stage engineering. A series of acoustic shells will be flown over stage, which will rotate vertically to store and deploy horizontally. When vertical, they will fly out and be unobtrusive to other shows' needs. An acoustic wall will be on the upstage wall. This will be flown to store overhead and deploy rapidly. Onstage will be temporary walls, both stage left and stage right, to complete the acoustic shell. These might be on stage trucks or flown. Further development of these will occur in later stages.

SEATING CAPACITY

It is proposed to set the seating capacity at around 1,100 seats. This will require further detail checking with the Business Plan at the next stage of design.

AREA AND VOLUME

Setting the auditorium capacity calculates the area required for the auditorium, using a rule of approximately 1m² per person. The capacity of 1,100 suggests a venue of up to three tiers, stalls, a circle and a balcony. As well as maximising the performer/audience relationship by reducing depth, the divisions of tiers provides a natural, simple and cost-effective technique for dealing with reduced capacity audience numbers by closing the balcony and/or circle and selling tickets based on tier occupation, rather than seat choice.

AUDITORIUM TYPOLOGY

A “two-room” auditorium and separated stage is recommended, along with adaptations to allow “one room” functions.

FORM

A theatre with generally parallel sidewalls and stacking side balconies has been developed, to allow for a ‘frontal’ relationship to the stage - perfect for theatrical performances. The use of balconies is acoustically and theatrically useful to reduce the distance to performers, improving sightlines and volume. Drawing audiences near to the stage establishes intimacy and a sense of corporate experience. Stacking of sidewall balconies aids sound reflection paths allowing early arriving sound reflections and providing large scale sound scattering.

ACOUSTIC VOLUME

A target acoustic volume between 12,500m³ and 13,500m³ has been established. The over stage volume is best enclosed and not counted within the overall volume. There are, however, architectural means by which fly tower volume can be “captured” as usable acoustic volume, which may be subsequently explored. The theatre concept includes an orchestra shell to exclude fly tower volume from the acoustic volume of the venue when being used for unamplified concerts.

PROSCENIUM

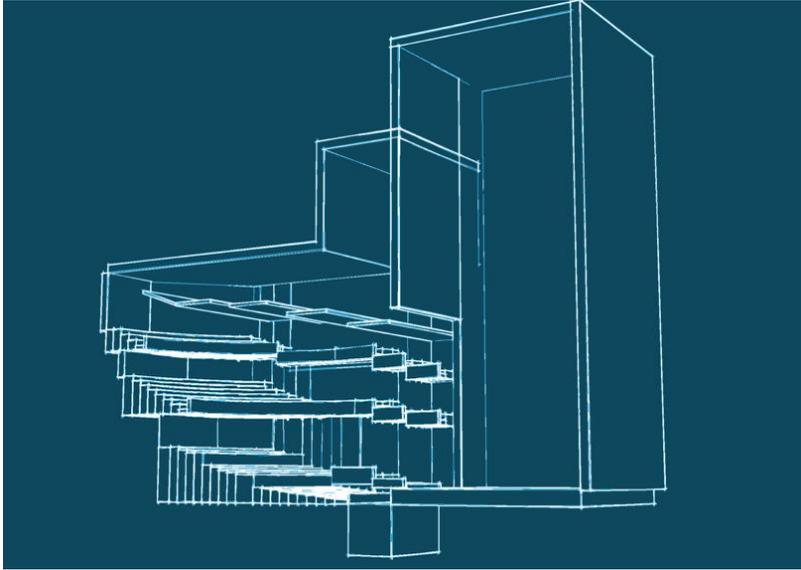
A scheme has been considered which brings musical ensembles far forward into the auditorium, onto the orchestra pit lifts. The orchestra shell and canopy over forestage align to provide consistent overhead sound reflections from all parts of the ensemble to the audience. Flexibility in the proscenium zone is required to effectively link the stage volume to the auditorium volume.

AUDIENCE RAKE

The design proposes parterre seating, which raises seating sections to reveal sound-reflective architectural surfaces.

CEILING HEIGHT

A theatre with an overall ceiling height of 17m or 18m is expected, with at least 4m of that height being above the top tier of seating.



VARIABLE ACOUSTICS

The means of reducing reverberation will be introducing sound absorbing finishes on a temporary basis. Sound absorbing variable curtains and banners are the expected means of providing variability in the room acoustics.

MATERIALITY

The degree of texture and relief to walls, ceilings, and balcony fronts will provide scattering of sound which will create an even distribution of sound and reduce harshness. The architectural surfaces will be strongly influenced largely sound reflective (in their base condition) and will be shaped by acoustic requirements.

SCHEDULE OF ACCOMODATIONS

Based on their expert knowledge of other similar venues, Charcoalblue prepared a Schedule of Accommodation, outlining the functionality of each of the spaces.

In the view of creating a precinct and utilising the space in the theatre complex in the best possible configuration, it was decided the planned office accommodation for administration could be found in existing spaces nearby and perhaps rented rather than add to capital expenditure.

Areas designated as 'multi-purpose/rehearsal/sponsors rooms' which are generally open rooms designed to allow many uses could be combined with other similar functions elsewhere in adjacent or nearby venues. They are currently removed from the main theatre floor area, as are associated catering spaces.

