



## **Out of the Auditory: Aural Architecture Exhibition**

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OUT OF THE **AUDITORY**

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out of the auditory logo designed by zoë wolfe



EDITED BY

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toby gifford  
alex brown

OUT OF THE AUDITORY  
**AURAL ARCHITECTURE EXHIBITION**

griffith architecture    queensland conservatorium

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"Within the architectural environment, every constructed space is an acoustic proposition... Undoubtedly, addressing sonic questions in a design raises certain challenges: from the standpoint of the architectural discipline, spatiality is caught up in a conventional history of points, lines and planes. Sound, on the other hand, whose centre is everywhere and whose boundary is nowhere, has no clear horizon through which to project conceptual lines of depth. Polycentrism may be altogether incompatible with the two-point perspective of architectural drafting."

Pnina Avidar, Raviv Ganchrow, Julia Kursell  
Editorial, OASE 78: Immersed. Sound and Architecture

Out of the Auditory is an exhibition of design work that forms the culmination of an exciting new investigation into the notion of aural architecture. The proposals exhibited and performed at Out of the Auditory seek to confront tensions between the temporal and intangible qualities of sound, and the visual precision required in the process of architectural communication. Through engaging with sound and sonic properties within a conceptual design process, the aural architecture interventions lay bare the seemingly irreconcilable differences between architecture and sound, recasting them as opportunities for challenging the dominance of the visual in architectural design.

# OUT OF THE AUDITORY

## AURAL ARCHITECTURE

### INTERVENTION

#### PROJECT BRIEF

Architecture students from the course 3901ENV were asked to design a temporary architectural installation within the foyer entry sequence of the Queensland Conservatorium building at the Griffith University South Bank Campus. The intervention was to be activated through the movement and/or occupation of visitors to the Conservatorium, rather than operating as a traditional performance space. Students could attempt to generate, amplify and/or dampen or even silence sounds through material and structural decisions.

The project was specifically concerned with the sonic properties of materials and structures and with sound generated within the surrounding urban environment, rather than with electronically-generated or digitally-focused work. Alongside drawn and model-based communication of their work, students were encouraged to test and document sound. The project ran over four weeks in March–April 2015.





# OUT OF THE AUDITORY

## NEW MUSIC ENSEMBLE

### PROJECT BRIEF

The New Music Ensemble is a mixed-year level group of students at the Queensland Conservatorium, dedicated to experiencing experiments in sound through the elective course 5970QCM. Through collaborations with visual artists, architectures, built environments and nature, we seek to examine how sound works, how music interacts with space, and how we as artists can transform audiences awareness of place. In 2015, we began working with architects, and began the process of working out what we as musicians value in a space. Is it silence, ambience, aesthetics, support, interaction, feedback, or surprise? Are we looking for the known, or the unknown? Do we seek out unique or generic space?

Our methodology for discovery is through both play and playing; improvising sound and listening. Listening is fundamental to all music, a feedback loop that provides us with information about how sound is supported in the space – is it dry, is it loud,

is it messy or clear, is it easy or difficult to play in this space? These are terms we use, but they are terms that need to be translated for use by other disciplines. We are talking about acoustics from a subjective listening perspective and from a playing perspective – all discovered and analysed in realtime improvisation.

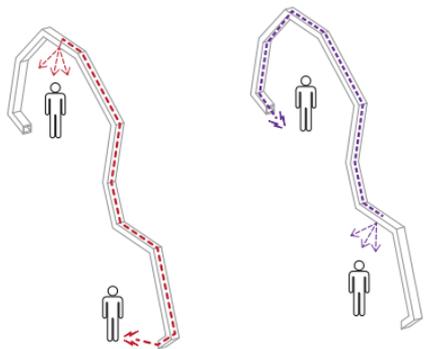
On April 23, 2015 we presented our preliminary findings in a concert called Sound in Space: performing space, considering transformation, redefining sound. After seven weeks investigating architecture, acoustics, sound, transformation and ideas alongside students from Griffith Architecture, the New Music Ensemble presented a series of intimate performance pieces composed by the members themselves. Starting and ending with a large ensemble performance in the foyer of the Conservatorium, audience members were directed to follow a colour-coded “choose your own adventure” performance, entering practice rooms for miniature performances, before being drawn to the next one. It was an hour of sound-making that challenged the way we listen in space for both performers and audiences.

On August 28, the brief is slightly different. We are presenting sounds that highlight aspects of space, environment and materials, all key elements that the architecture students were grappling with in creating their designs. This may involve

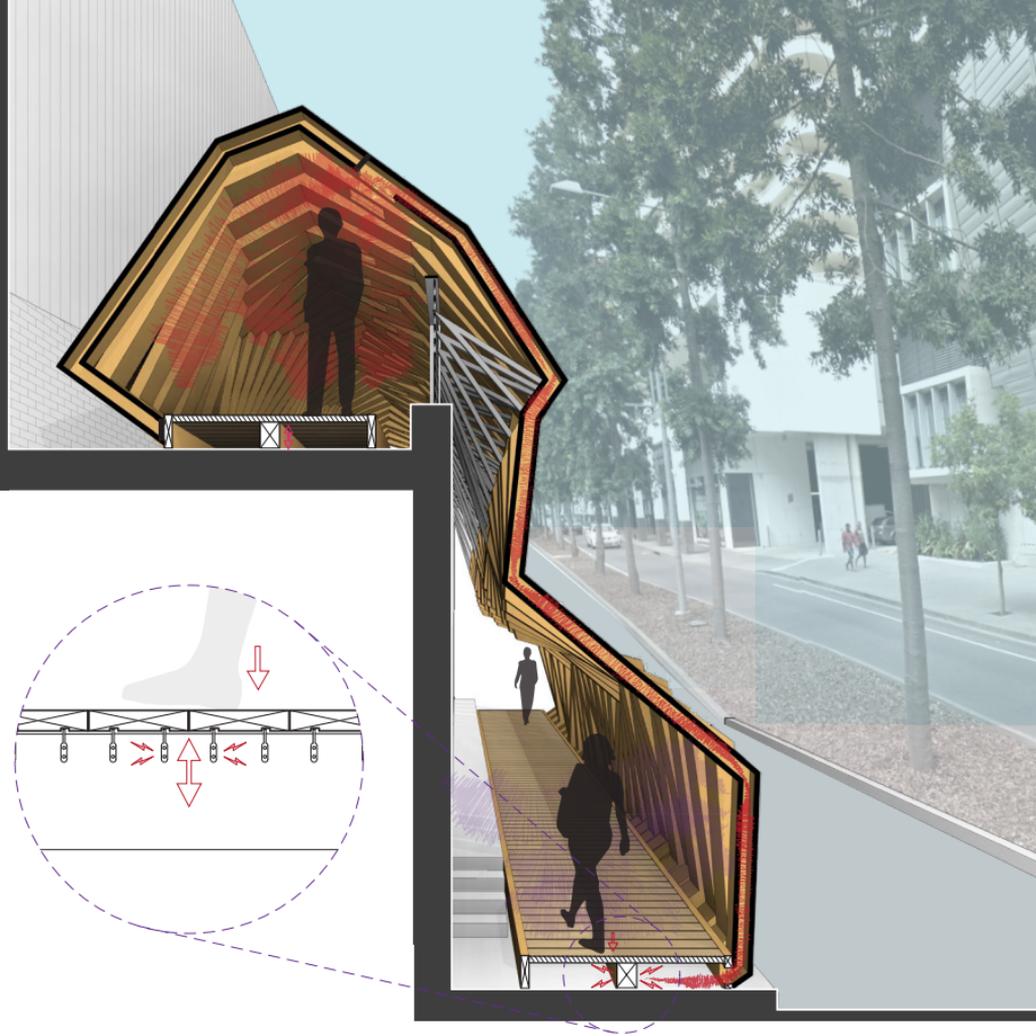
a number of interventions such as field recordings to blur the boundaries between environment and performance, inside and outside; familiar music to “fill” the foyer with sound; physical materials in the space as resonators and instruments to create awareness of the sonic properties of materials; and the audience itself as part of our instrument. Any number of devices may be employed to alter the way we experience the space. Most importantly, this is part of an ongoing experiment that we are sharing with an audience. Objective analysis only gives us so much information; embodied experience gives us so much more. Together we can begin to understand how sound can manipulate space, and how space can manipulate sound. We cannot be experts in this area, but our working methodology can help inspire architects, and their methodology in turn inspires us.

# OUT OF THE AUDITORY

## ASHLEY ORTLIEB

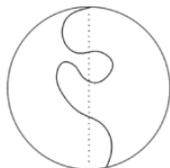


Bound together only by the omnipresent urban noise, Griffith Conservatorium users and Grey Street pedestrians are largely unaware of one another. An aural and visual divide exists between these two groups. By utilising transition areas on and above Grey Street, this intervention aims to connect the spaces and users. An aural loop, facilitated through the movement of people on the floor structures, will travel from space-to-space through openings in variously-spaced hollowed timber structures. The scale and nature of the timber structures wrapping around the two spaces also generates a visual connection between these circulation areas within the Grey Street precinct.



# OUT OF THE AUDITORY

## BRYCE SHURMANN



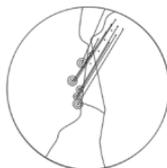
serpentine



intrusive



unnerving



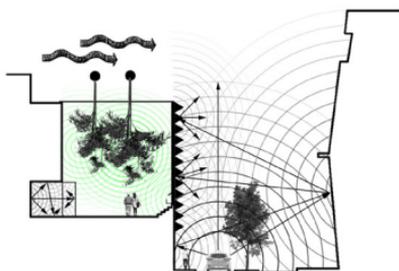
visceral

Forming the shape of dynamic sound, this intervention heightens awareness of the intrusive nature of space and sound. Its form is unpredictable, with constant variations, and coupled with the large amount of echo and reverberation, the space it presents is disorienting and intrudes on the senses. The second part of the intervention is a dead space, whereby perceptions of light and sound are deadened, forcing people to question what makes a space. Is it the architecture or the visual and aural cues that make a space? Architecture and sound tend to exist as static backdrops to our activities and largely go unnoticed by us. Through this intervention, sound and architecture are made noticeable, creating a completely new dimension where the built is as dynamic and ephemeral as sound.



# OUT OF THE AUDITORY

## JOSHUA HON



The staff and students who attend the Queensland Conservatorium must travel through a noisy urban environment every day. They are subjected to traffic and street noise on their way to and from the building. At the Grey Street entry terrace, these sounds mingle with the sounds of multifarious instruments being played throughout the day. The “Aural Asylum” is a void-like intervention that significantly reduces noise penetration from both Grey Street and the Conservatorium, and in which the introduced sounds of trees and trickling water can be heard. This void is neutral space in between two worlds. Occupants can either pause to prepare for their day, take a break during their day, or prepare for the journey home. The space not only acts as a form of sound barrier, but also a sound-filled foyer for the Conservatorium and its occupants.



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# OUT OF THE AUDITORY

## DEMITRYA FRANGOS



Dynamic & Intangible.

ARCHITECTURE



Static & Tangible.

AURAL

The conscious and subconscious characteristics of a space impact upon a user's experience, pertinent in the practice and performance of music. Nevertheless, the architectural and aural qualities of the Conservatorium go largely unnoticed by regular users. The architectural conditions of the Conservatorium are static and tangible, while the aural environment is dynamic and intangible. "Delineating Space" inverts these qualities. Architecture is made dynamic and intangible through a tunnel-like series of interlocked acrylic frames that oscillate back and forth along a central track, based on a user's movement. This causes collisions between acrylic rods and rubber strips hanging from the ceiling, creating a low resonating tone, both static and tangible. These sounds reach a climax at the tunnel's exit – a jarring juxtaposition from the Conservatorium's interior, promoting a consciousness around the practice and performance of music.

QUEENSLAND CONSERVATORIUM



# OUT OF THE AUDITORY

## KIRSTIE MINIFIE



AMPLIFICATION



CONCAVE



WALKABILITY



FUNNEL PROJECTION



DAMPENING



CONVEX

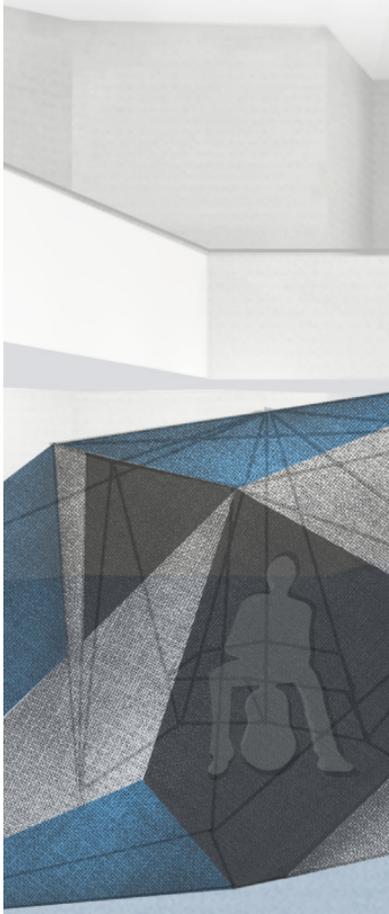
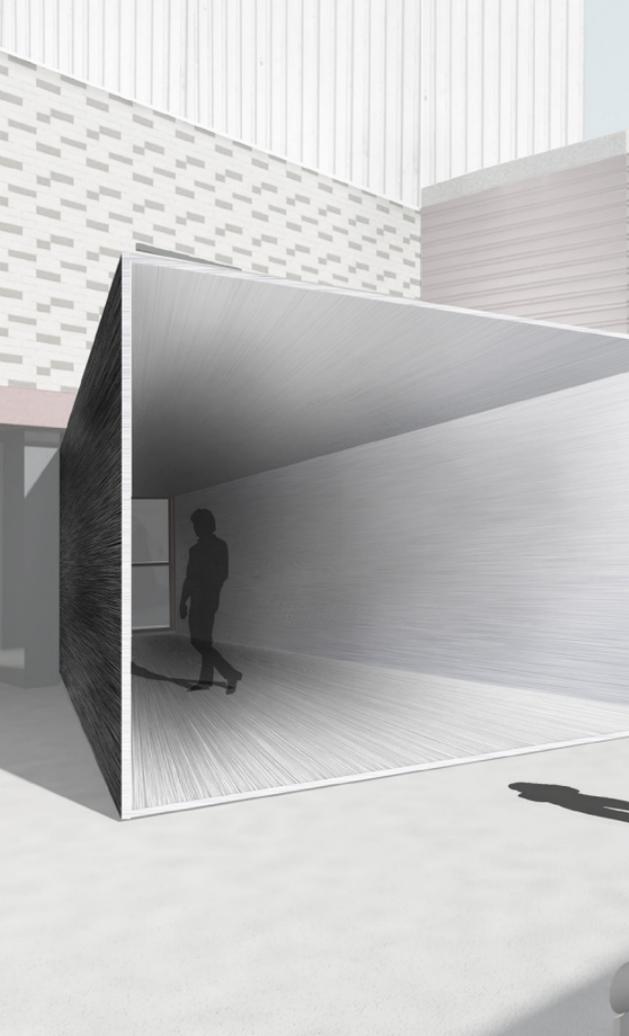


FACES ABSORB  
SOUND



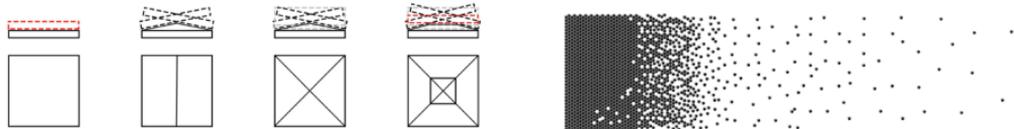
POD  
FORMATION

This intervention aims to make people aware of background sound which exists as part of our everyday lives. The Grey Street entrance to the Conservatorium presents a juxtaposition of two extreme sound environments. Voices are quite audible as people chat, competing with the outside noise as they walk into the foyer; this sound is then projected throughout the space, into the quietness of the foyer. The proposed installation sets out to make people more conscious of these shifting ambient sounds by amplifying outside sounds and dampening the inside environment. The resulting two extremes of sound encourage the user to be more aware of sound in their everyday environments.



# OUT OF THE AUDITORY

## JENNY-LYN ANDERSON

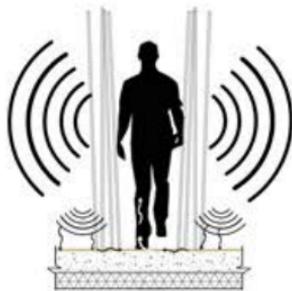


WHITE NOISE is an aggregation composed of possible sounds. White noise is used within the design proposal in an attempt to create a unique soundscape within the urban environment, which both BATTLES and MASKS the sounds of the immediate context. By creating white noise via their transition through the space, visitors both generate and manipulate the sound, creating an ABODE of SONIC REFUGE. Visitors emerge from the white noise into the foyer with an AMPLIFIED AWARENESS OF SOUND, allowing them to truly hear the sounds of the Conservatorium.



# OUT OF THE AUDITORY

## BRITTANY ROYDS



Outside the Conservatorium the audible experience is one of heavy street sounds and industrial units. Inside, however, the sounds of guitars, harps, violins and more drift down the corridors and into the foyer. This juxtaposition of ambient sounds leads to the idea of using the building – the ‘shell’ – of the melodious tunes to emulate a musical experience outside the Conservatorium as well. Visitors ‘create’ music through a tactile, resonating structure. The layout of this design seeks to mask and mimic the existing ambient sound environment through strategic placement of rods and a brass floor base. As users move through the installation, the movement of the rods produces a variety of sounds based on material type and density. These sounds resonate through the brass floor and are felt the by users as they move through the space.



# OUT OF THE AUDITORY

## LAUREN McINNES

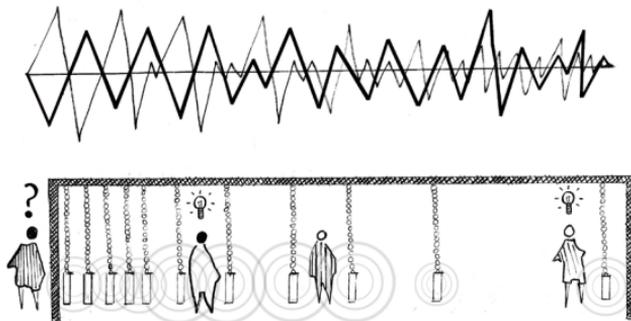


The Grey Street entry sequence to the Queensland Conservatorium of music requires the occupant to walk through a harsh environment of urban noise. The only respite found in this space is the trees, which provide a welcome melody against the urban chaos. The intervention provides a form of escape from the urban environment. It allows the occupant to gradually become immersed in the sound created by the intervention, distancing the unpredictable urban interruptions. The intervention mimics the rustling of leaves and provides a consistent sonic foreground, activated through wind, physical interaction or passing objects. It forms a connection between the streetscape below and the walkway above, providing an opportune landmark for the site. The intervention increases in scale upon entry and decreases upon exit, which provides a transition space between the urban environment and the activities of the Conservatorium.

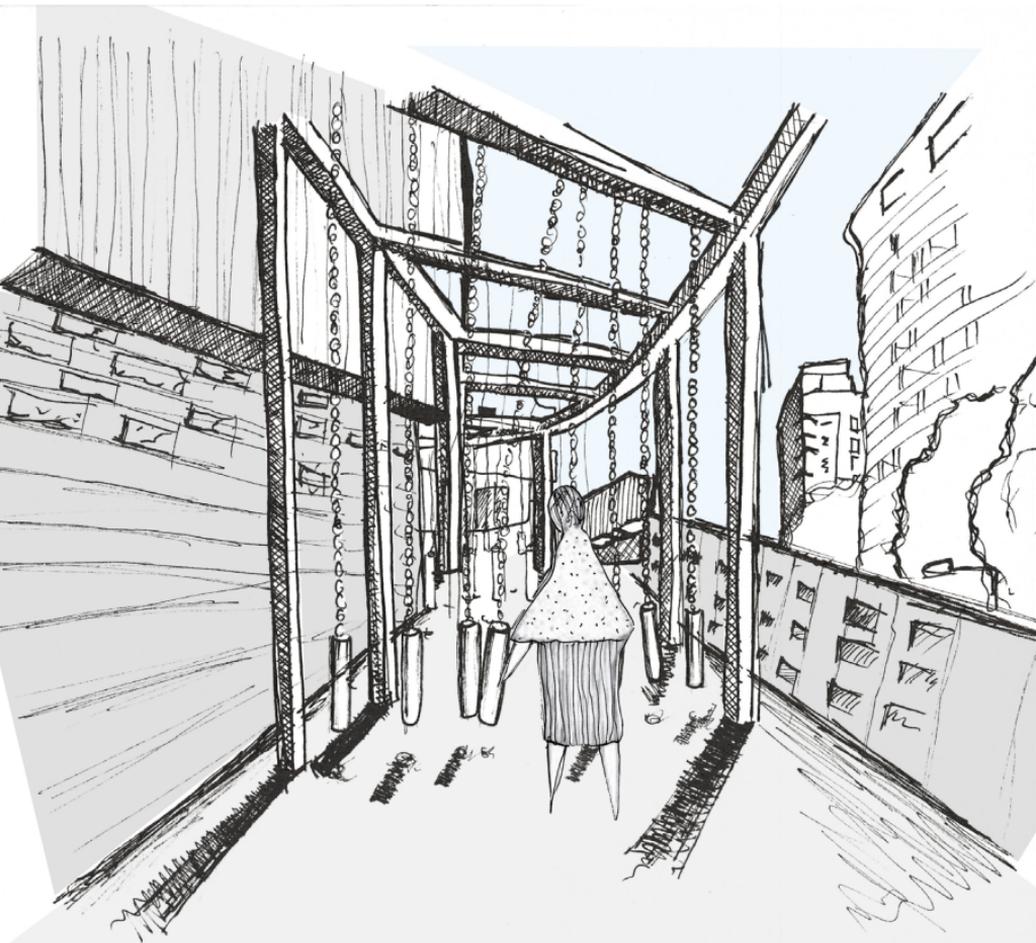


# OUT OF THE AUDITORY

## JAMAL TOMKINSON

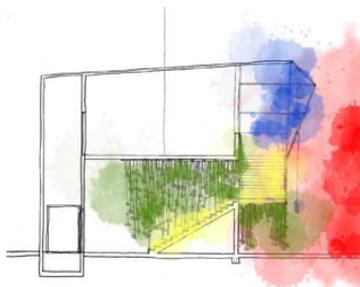


“Decrescendo” is a temporary interactive sound installation which seeks to alter the user’s mood as they move through the structure. The hitting of the steel pipes ring out a meditative hum, which dissipates as the user walks towards the entrance of the Conservatorium. The space separating each frame becomes larger, causing the sound to gradually diminish. The sounds created by “Decrescendo” mask the ambient noise of traffic and other urban sounds, turning the listener’s attention to the new sounds generated by their interaction with the installation. The experience is highly subjective – “Decrescendo” may be confrontational or exciting, depending on the individual.

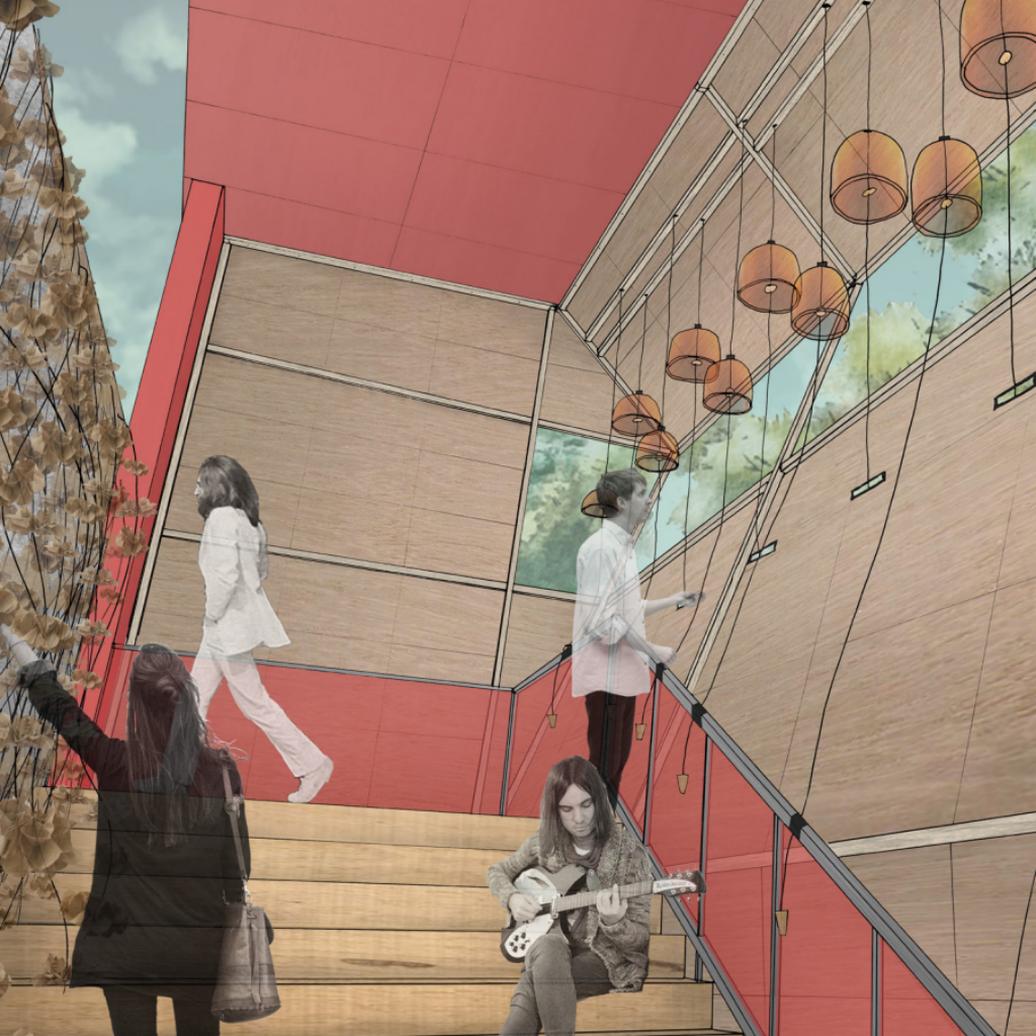


# OUT OF THE AUDITORY

## KATE DE PINA



The streetscape might offer more to the ears than a pedestrian walking down the street will hear or notice. Instead of calming sounds, the streetscape brings to mind bustling traffic, car horns and the clicking of the pedestrian crossing. These are “macro” sounds but beneath these lie the unnoticed micro sounds – the patter of feet, the crackling of dried leaves rolling along the ground and, in the case of Grey Street, snatches of musical phrases piped into the street. MICRO SOUND attempts to reinvent a stairwell that was once overwhelmed by the macro sounds of the streetscape through the use of various interactive and architectural interventions. MICRO SOUND amplifies the common micro streetscape sounds to produce them at macro level, creating a calming soundscape through which users can move, relax and anticipate what’s coming next as they enter the building.







OUT OF THE AUDITORY  
LECTURE SERIES

**JEFF DRABANT**

**THE AUSTRALIAN  
INSTITUTE OF  
ARCHITECTS**

The Australian Institute of Architects regularly offers seminars and other learning opportunities focussing on design considerations and technical requirements that contribute to enhancing the built environment. Past seminars on acoustic and auditory topics within architecture have typically discussed defending against external noise; methods and techniques on how to keep streetscape and other encroaching sounds out. In March 2015 the Institute was pleased to host the Out of the Auditory lecture series; a short series of professional development talks for members of the architectural profession, students and other guests. The series focussed on another important aspect of the auditory experience in architecture, specifically, the considered and creative use of sound, design and materiality which can combine to enhance a space and users' experience within that space. The Institute thanks the auditory architecture series presenters and seminar organisers for sharing their unique and thought-provoking perspectives on the history, functionality, measurement and purposeful use of sound within architecture and the built environment, with many demonstrations of sonic properties and examples of built works, past and present.

OUT OF THE AUDITORY  
LECTURE SERIES

**BRUCE WOLFE**

**ANALYSING  
SOUND ON SITE**

Sound environments, what we hear, what we don't and how we assimilate the visual and acoustic attributes of space have the potential to influence the way architects design. One may be conscious of the link between visual and acoustic experience through accumulated memory as evidenced by the imagined crowd noise reverberating through a packed stadium. We can imagine the stadium – full and empty, and the preconceptions that brings to the space – excitement or anticipation. The emotions elicited from the interior of a gothic cathedral: Is it the imagined choir voices hanging in the air that interacts with the image of the soaring arches?

In our day to day world we actively listen to content extracting meaning from words and emotion from music. We appreciate the importance of the concert hall but seldom think of how “normal” spaces affect the “sound” of what we hear.

Whilst we sometimes predict the atmosphere of a place by the anticipation of how it might sound (think of the hard shiny surfaces of the trendy coffee shop, or the sparse quiet of the starched linen restaurant), we don't register how our voices change when passing from corridor to open office, from high ceilinged foyer to lift-car.

As architects, we could perhaps think more about the relationship between inhabited space and sound when designing the places in which we live and work.

OUT OF THE AUDITORY  
LECTURE SERIES

**TOBY GIFFORD**

**WHAT IS THE  
SOUND OF  
SILENCE?**

What is the sound of silence? Silence is typically understood as an arithmetic category of absence, as the Hegelian antithesis of sound. Yet this description contradicts sonic experience. Loudness is relative; in the absence of incident vibrational energy the ear will provide its own. Rather than an absence of sound, 'silence' is better understood as a culturally and contextually determined soundscape of familiarity.

The implications for architecture and urban planning are profound. Where sound is considered at all in these disciplines, it is generally homogenised to a single parameter—the deciBel, and problematised as 'noise', for which the only solutions tendered are various forms of mitigation.

On the flip side of the coin, much music is composed, conceived, or recorded with little regard for the space in which it will eventually be heard. Yet the sonic properties of space influence greatly the aesthetic experience of music and sound art.

Out of the Auditory seeks to help bridge these disciplines through examination of their respective vernaculars, interrogating implicit assumptions on both sides, and highlighting the tensions encountered.

OUT OF THE AUDITORY  
LECTURE SERIES

**JAMES HEDDLE**

**ARCHITECTURAL  
ACOUSTICS**

A basic question that needs to be asked of a space is “Does it function adequately?”, and further, “Do its users have a good experience?”.

Unfortunately, recent building occupant surveys have indicated that levels of acoustic satisfaction are the lowest performance factor of all the surveyed interior environmental factors. To answer why this might be occurring as an end result of a design process it is important to consider whether our relationship with sound – its physiological, psychological and cognitive effects, and how sound interacts with spaces – has been given due design consideration. The body of knowledge that can contribute to this evaluation is known as architectural acoustics.

OUT OF THE AUDITORY  
LECTURE SERIES

**SUSAN HOLDEN**

**PHILIPS,  
CONCRETE MUSIC  
AND A SCAM:  
SOUNDING-OUT  
THE MID-CENTURY  
SITUATION**

What interested me about the Out of the Auditory project was the ambition to interrogate sound for architecture as more than an issue of function, or a problem requiring mitigation – indeed to think of sound as an aesthetic effect. My contribution to the project was to discuss some experiments and adventures from the mid twentieth century. In the 1950s and 1960s numerous artists and architects made explorations into the experiential and performative potential of sound that exploited newly available electronic technologies. A radical example was that of Nicolas Schöffer, whose cybernetic sculptures and theory of chronodynamism attempted to unite sculpture, sound and urbanism into a singular source of aesthetic effects and a determinant for the modern city. Such cross-disciplinary exchanges between the arts provoked an interrogation about how different artistic mediums orchestrated both spatial and temporal experience. This was the milieu in which a spatial understanding of sound and music, and a temporal understanding of architecture became catalysts for each other, changing our concept of an architectural medium.

OUT OF THE AUDITORY  
LECTURE SERIES

**VANESSA TOMLINSON**

**LISTENING IN  
PLACE: HOW  
MUSICIANS  
EXPLORE SPACE**

I am interested in how we privilege listening in our environment, whether an outdoor place or an indoor performance space. When we intentionally listen to sound we awaken not only our ability to hear, but all our senses. We begin to hear angles, proximity, curves, roughness, flowers. I have been engaged with a series of works over the past 10 years called Soundings; first with composer Erik Griswold examining drought through Sounding Wivenhoe, with the audience standing on the cracked lake bed of our major water source, for a musical performance that investigated acoustic, visual, and cultural perspectives. Later with Sounding the Condamine I was interested in the sound of the landscape, and drovers' bells that could be heard up to 10 miles away on a cold still night. More recently still, Dot: Enter examined the entrance to a building for the World Forum of Music; what is the sonic role of the entrance, how do we transform from one listening environment to another, how do we prepare to listen? What are the remnants of space on sound – the footprints of the environment, people, weather, time? Do we experience sound from a multi-sensorial perspective? All these questions bring me to architecture, and delightfully problematize the disciplines of sound and space.

OUT OF THE AUDITORY  
RESEARCH PROJECT

**JOCELYN WOLFE**

**SHAPING SPACES  
IN SOUND: THE  
LANGUAGE  
AND PRACTICE  
OF AURAL  
ARCHITECTURE**

We experience aural architecture every day but we are so accustomed to sounds in our familiar environment that we pay little attention to how they shape what we do and how we do it. Yet the sound of places, built or natural, affects the way we inhabit and enjoy them profoundly. How does a building sound when you enter it? Is it noticeable, welcoming, jarring, soothing? Does it mean anything? Working in a Conservatorium, a place where making sound and listening to it are two of the central activities, I became curious about the real and possible aural encounters brought about by choice of materials and design in architecture. Looking at the literature, I found that few studies have examined how sound can be used as a fundamental creative principle in the design of buildings, designing as it were through a more heightened sense of sound; where the possibilities of changing people's behaviour through design can have such profound consequences as subtly 'tuning' our ears. Knueppel (2010) notes that there is too much focus on controlling noise level to ensure occupant comfort to consider more creative and aesthetic uses of sound. Ripley comments that despite the multi-sensorial nature of our being in spaces and places "architectural practice and discourse clearly privileges the optical" and is largely silent on the impact of other senses (2007, p. 98). I felt that the Conservatorium presented an ideal site to challenge and explore such perceptions.

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