asylum

Architecture / Design / Research

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Introduction

Peter McPherson

Head of School, Architecture, Unitec New Zealand

Looking back to my 2016 *Asylum* foreword I noted that we were looking towards a future becoming ever more disrupted by technology, and influenced by changing social, economic and environmental circumstances. That what we understood an architect needing to do may be very different in five years' time. That five years is now and Covid-19 has certainly impacted how we do things, including how we conceive of even mundane tasks such as going to work or places of education. It has provided opportunities to reflect on what we do and where we do it. In many instances it has brought communities together and reinvigorated local town centres and streets at a time when access to the CBD, large-format malls, and shopping districts was curtailed. As we move out of the pandemic into a world where Covid-19 is endemic, what lessons can we take with us as designers of the built environment?

What do changes in our social patterns mean for the design of our cities; the buildings and the spaces that constitute them? What is a home when it is also our place of work or study? What is important to us for creating separation between these two daily acts of living and working? What are those external, private and semi-private spaces that provide access to sunlight and fresh air? They are surely much more than the minimum set-back requirements that planners, councils and governments are keen to impose, and property developers exploit for financial gain. Where do we congregate, and how, when the separation of people is encouraged? The public streets, parks, squares and beaches take on an important dimension to our everyday lives and require considered design to ensure they meet our needs. And what of the office? Already we are seeing these environments change to respond to different ways people are working in response to the pandemic. Social patterns are informing and influencing spatial outcomes and require buildings to adapt to rapid change.

Responding to the global pandemic is not the only critical challenge before us. Another pressing issue bombards our senses daily – the

climate emergency. It is noted by Auckland Transport in their Transport Emissions Reduction Plan (August 2021) that the scale of reductions in carbon emissions from transport required by 2030 is equivalent to the reduction achieved in April 2020 when Auckland was completely locked down under Alert Level 4. What can we learn from this as we begin to return to occupy the city after lockdowns? While technology will form part of the solution to achieving carbon elimination goals, how each of us behaves individually has the potential to improve the environment and our appreciation of it much more immediately. These behaviours are things that we can start doing now, while policy and technology are being developed that address our thirst for 'more.' Architecture as a profession contributes greatly to carbon emissions, both embodied and operational. Understanding how buildings are made and will operate is of critical importance. This may be a case where 'less is more' takes on an entirely new meaning for us.

In this issue of *Asylum* design research journal the students have incorporated the theme of breath into their design of the publication. As you move through the pages you will notice greater space being given to the images and text, which reflects a reminder to pause and absorb the content. In these days of isolation yet hyper-connectedness it is a wonderful reminder to us all to find space in our days to acknowledge, understand and appreciate the physical world around us, and the people within it. It is interesting to take this idea of awareness further and understand what is fundamental to our lives. Covid-19 has shown us that we can adjust to radically different environments when pushed. We have developed strategies to maintain our daily lives and find gratitude in new ways. If we are to meet the goals of reducing carbon emissions it will be by doing less, not by living our same lives with electric vehicles and solar panels on the roof. As designers, uncertainty and constraint are two of our closest allies. It is our job to make sense of these in order to bring clarity to a problem and delight to those that will inhabit the environments we design. For architects, landscape architects and interior designers, a challenge is not something to avoid, it is something that we are trained to embrace positively and absolutely. A problem is there to be solved.

Editors' Note

Anna Bulkeley, Dr Renata Jadresin Milic,
Peter McPherson, Dr Yusef Patel, Marie Shannon

In 2021, the *Asylum* design research journal continues to be published by the School of Architecture, Unitec New Zealand, and ePress, Unitec's scholarly publishing house, as a both a printed and an online open-access publication, dedicated to design-led research and engaging design as research and its methodology. This issue is a student-focused end-of-year publication, with a double-blind peer-reviewed section of research papers, written by School of Architecture staff and associates. We have a following issue currently in production, which we had hoped to publish as a second 2021 issue; however, this is now scheduled for publication in the first half of 2022. It will be focused on a single theme, and will be an industry- and profession-focused publication with a guest editor, and will include papers by academics from Unitec and other schools of architecture.

With the help and support of the Advisory Committee, the *Asylum* editorial team is committed to ensuring the continued development of a scholarly publishing model and having an open-access research repository for the journal. Our hope and intention are to continue to grow the *Asylum* journal beyond Unitec to a broader audience in Aotearoa and internationally.

The peer-reviewed section of *Asylum 2021* begins with our introduction on page 116.

A focus of the 2021 *Asylum* journal has been to include commentary on student work to elevate exceptional design and research projects by aligning with design statements. In doing so we establish stronger links to the journal's peer-reviewed articles.

Asylum has traditionally presented a record of student work from the architecture programmes created within that year. By introducing the peer-reviewed section in 2020 it was evident that in omitting the thinking behind the student projects there was a disparity between the two sections. The editors hope that in 2021 this gap has been reduced, as we emphasise that creative problem-solving, which results in a design output, is research in and of itself. This highlights the experimental work and critical thinking undertaken within the Unitec School of Architecture, in the architecture, landscape architecture, garden design and interior design programmes.

This year's *Asylum* student team, responsible for the overall creation of the journal, sought to represent a broad and outstanding body of student work, to sit respectfully alongside peer-reviewed articles. This search for cohesion and harmony was challenged under the current Covid-19 environment, in which a team of four found they must operate singularly, yet in solidarity with one another. In searching for the familiar, the student team drew on the predictability and regularity of breath, and in doing so, graphically consolidated a body of work from the learners to the learned. The outcome is evident – a design research journal of standing, and a poignant representation of unity.

Design Team

Jack Culloty, Alexia Peng
Alexandria Speedy-Willis, Shené Strydom

Asylum 2021 is a journal like no other. This year we had to design the journal at home over the lockdown period and learn how to collaboratively piece together everyone's design ideas without being face to face with the team.

Not only did we learn so much from what it means to work in a team, but we learnt what it meant to be in a team during lockdown. There was a separate set of challenges, ranging from trying to create a relationship with our teammates, whom we previously did not know, at a time of isolation, but also learning software and skills that each person lacked in some way or another. At first it was difficult to create a cohesive journal and layout that had a glimmer of each individual's personality embedded within it.

Going through this process has taught us a lot, it has made us find our voices and new skills. On a daily basis we practised and developed our communication and time management, whilst also gaining a clear and strong cohesive vision towards what the *Asylum 2021* journal meant, not only to us, but to the rest of the architecture, interior design and landscape architecture departments.

Jack Culloty, Alexandria Speedy-Willis, Shené Strydom, Alexia Peng

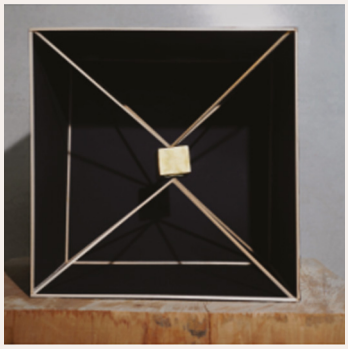
Bachelor of Architectural Studies
Year 1

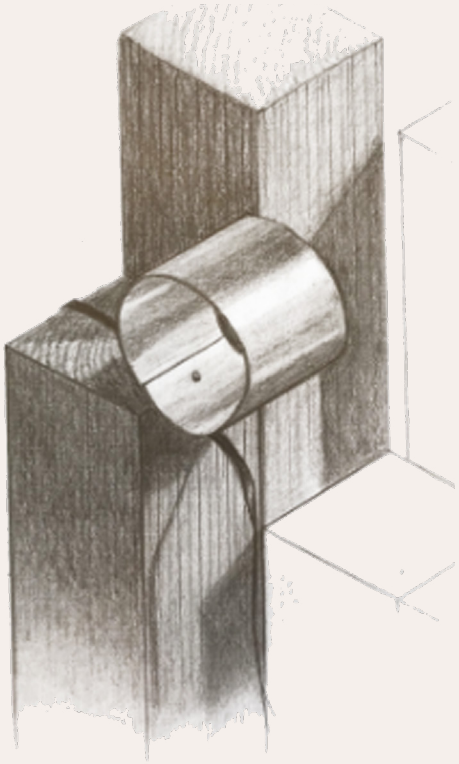
Year 1 simulates the main concepts and parameters that govern architectural design. Simple architectural propositions are developed through freehand drawing and physical modelling.

An understanding of architectural history provides a context for twenty-first-century concepts, and bases of design communication are introduced.

Arlene Sisarich

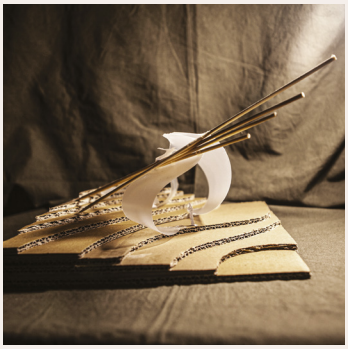
This project is an exploration of three different materials – brass, wood and black paper – their physical properties, and their balance in relationship with each other. Discovering the art of construction has allowed the three models to each express an idea – a ball tumbling over a precipice (mechanical), a spinning top balanced in motion, accented by a spiralling linear element (geometrical) and a cube suspended in mid-air (chemical). Dimensions in life shape our perceptions of reality – here they are spoken in the language of materiality, representing the language of movement.





Xi Zhang

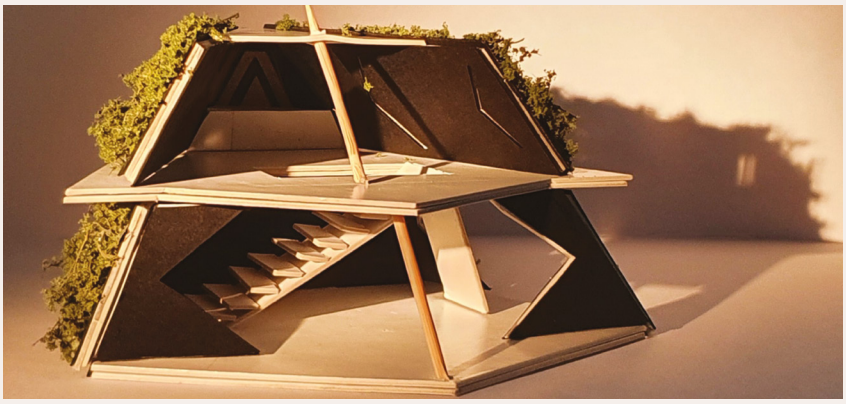
The intention of this project was to showcase the process of gradual dissipation under the influence of wind. From thick to sharp, and long to short, the bamboo sticks demonstrate the direction and impact of wind on the building from three-dimensional (mass) to two-dimensional (board) to one-dimensional (stick).

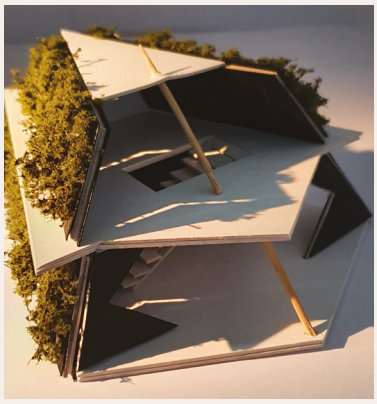


Exploration was then undertaken to demonstrate wind travelling through the building. A light material was used and bent to form a cavity to showcase the effects. The wooden strips were connected and interspersed throughout the model, revealing the different paths wind may take.

Mitchell Roos

The design approach undertaken for this project was to focus primarily on human civilisation and establishing presence in conjunction with the natural environment. The objective was to place a strong emphasis on the natural world and consider its standing on this earth, while displaying the dominant side of humanity in our efforts to place our footprint on the world.

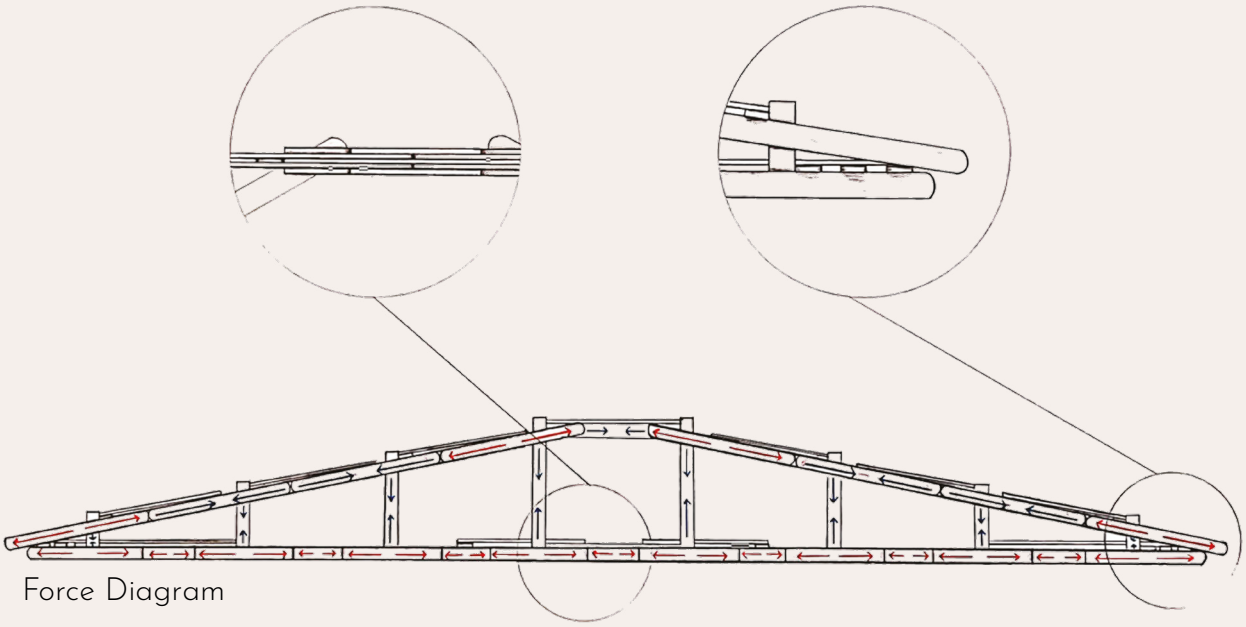




Considerations for the natural world and how it would impact the structure meant that strong foundations would need to be set in place for the holding of this building. The implementation of a concrete structure has been made to ensure the principle of a strong human presence in the natural world could be achieved effectively. A living green wall has also been designed on the outer walls of the structure, the idea being that having a strong presence in the natural world can be of benefit to the human side. And with the implementation of the wall, harmony between the two forces has been achieved, rather than overburdening the natural world with human presence. The two forces exist in harmony.

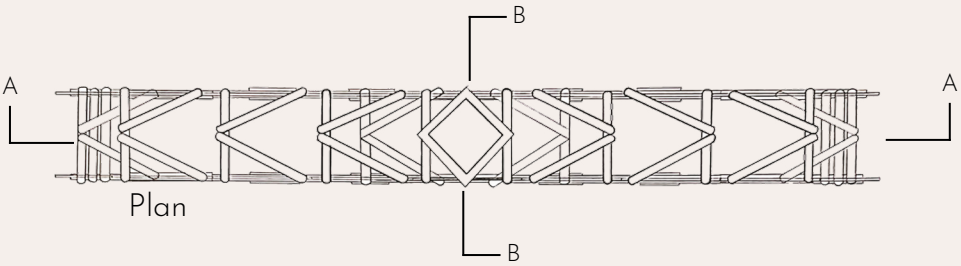
Elise Alexander

The aim of this brief was to create a bridge that would have strong aesthetic values while holding a high strength-to-weight ratio. At times throughout history, much misery has been brought to humans through travesties such as war, discrimination, and both mental and physical illness. The world can seem dull in the eyes of many. To combat this, the use of a vast amount of colour was favoured for this project. The objective was to create a feeling of happiness, and present the idea of fun through the application of colour to an enduring structure. This enriches the triangular shapes placed along the roof, which present as a sense of direction.



Force Diagram

Underneath



Plan

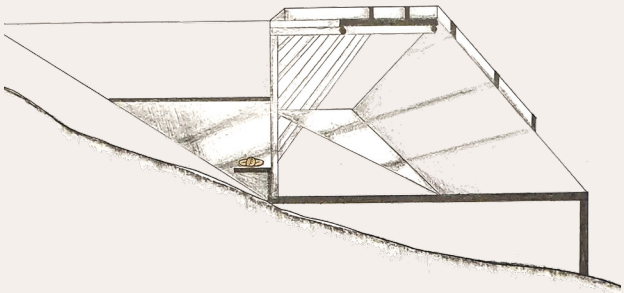
To meet the structural requirements, the shape of an arch is utilised to counteract the forces applied to the two parallel beams spanning across the bottom. The overall performance of the bridge is astounding, with a strength-to-weight ratio of 138. The bridge can hold 30,500 grams and weighs just 221 grams.

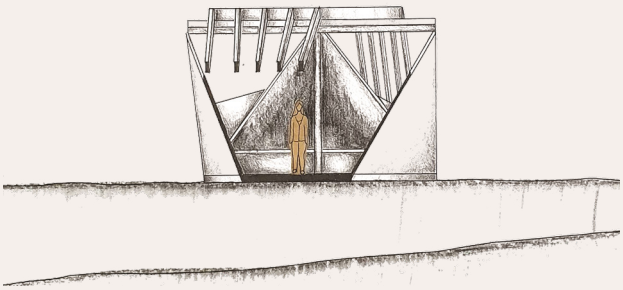
Naveed Saeid

This composition examines the various ways a structure may support the human body in its three states (sitting, lying, standing). The wooden steps lead to a series of wax platforms that cantilever over the cave. The open, spacious nature of the structure sits in contrast to the closed, confined appearance of the cave below.

Jessica Tregidga

The aim of this project was to create a conceptual mass and observe how it occupied space. The concept considers the fall of the land, the orientation of the structure, and the optimal views that were discovered in a previous study. In the interpretation shown, there is a main structural piece that connects heavily with the earth below and then the lighter piece that balances precariously and mimics the curve of the hill. Then the structure was explored: what was open, what was enclosed, how would light interact with this space, and how could materials convey the idea of a lighter or heavier structure and that connection to the earth; also, how would the two separate pieces be held together?





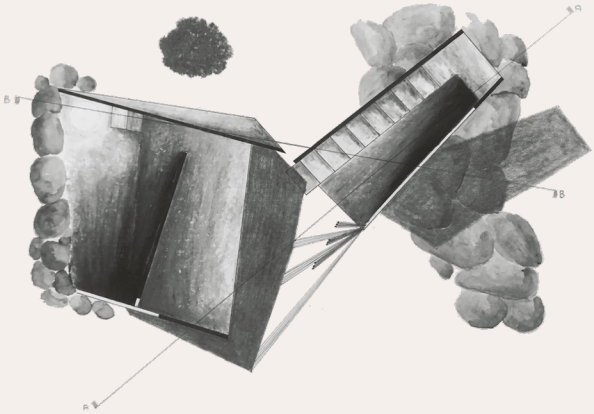
Consequently, sticks were used to model the 'heavier' frame of the structure, smaller skewers for the framework, and then string used for lashing and binding pieces together. To develop the design further there was a focus on inhabitation: how could what began as a simple mass become an inhabitable space for a person? This led to design changes, while keeping the initial idea of connection and movement between what were two separate masses that became one unified structure.

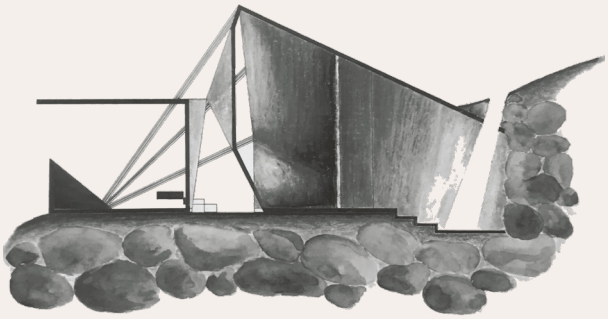
Renee Veltman

The aim of this brief was to provide an exploration of transitions through space in terms of context and, accordingly, this project, Rhadamanthus, was produced. Rhadamanthus, the tree made of both organic and synthetic components, is represented in both shape and material, exploration of material strength and the triangular form that has resulted from the initial square forms that were the foundation of the project.

The second model is primarily informed by the limitations of available organic materials, constrained by the manufactured. This led to a model that abstractly represents the original form while being inspired by the organic, a design principle closely followed. Finally, the third model is the inhabitable consideration of the brief, in which the scale is successfully introduced to tame the models into a shelter for the average person.

Brittany Famillton





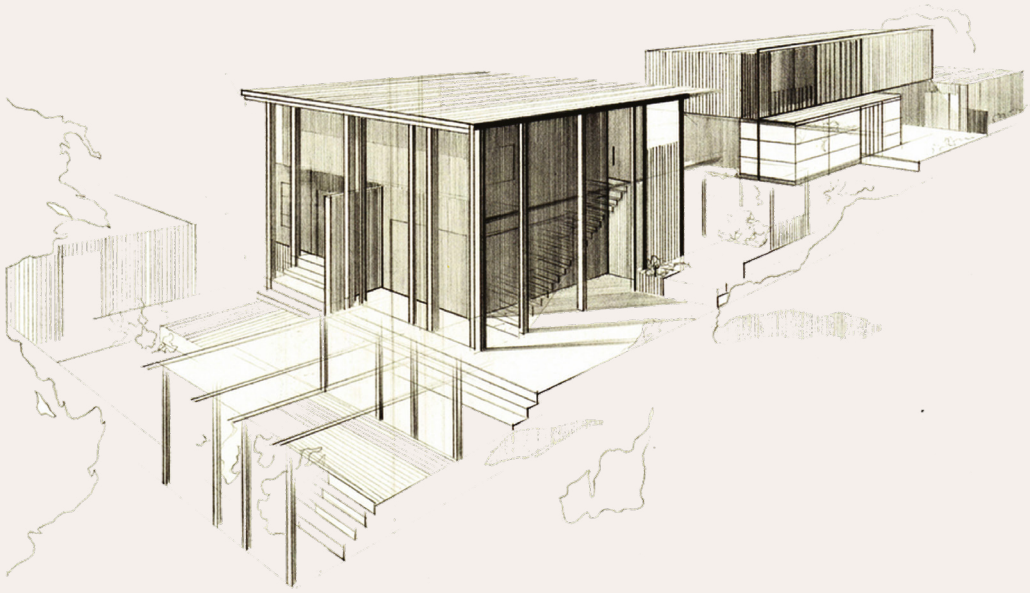
Sanctum investigates the parameters of the Semester One brief, Aperture, which required us to define light quality and quantity, while communicating narrative. The drawings tell the story of sanctuary, while exploring the ways in which architecture is experienced. Two architectural spaces represent definitions of sanctuary as a 'sacred place' or 'private place,' with specific use of aperture. Given the opportunity in the brief to create the context, the architecture is positioned on a remote cliffside location. Integrated into the rocky face, the first piece is anchored down into the earth. Linear elements connect to a neighbouring piece, to allow the architecture flight out over the cliff. Aperture is then used to illustrate function. As the sun navigates the sky from the east, the open, cantilevered space is illuminated for activity. Drawing occupation, panoramic mountain views are captured here from the context. As the sun continues its journey and begins its descent, a tunnel through the overhead plane of the main architecture is revealed. Painting a beam of light, signalling towards it and into its depths, it offers a closed-in, secure space to retire and await the following day. Through the movement of light quality and quantity, a sense of sanctum is realised.

Bachelor of Architectural Studies
Year 2

Year 2 is an introduction to small and medium construction that translates broad design outcomes into detailed design documentation. Students concentrate on small-scale projects with moderate complexity, with the development of 2D digital drawing and extended physical modelling skills. The framework of architectural history and theory is developed.

Scarlett Cibilich

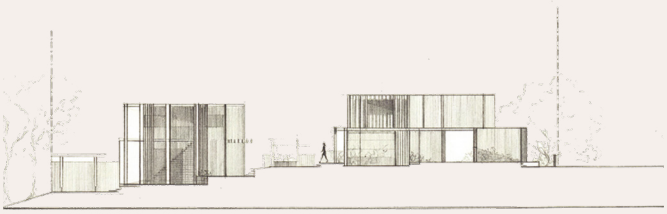
23 Verona Ave

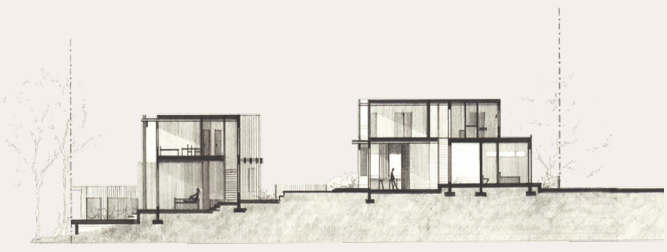


The Verona Avenue site has a significant 4-metre slope, and is connected to Norgrove Reserve. The reserve forms a natural boundary line between Verona Avenue's northern residential sites and Mount Albert's Chamberlain Park.

The brief required two dwellings, a glasshouse and a workshop to be designed for a young family of four and a family of three, with a small guest house to accommodate visiting extended family. The reserve is a distinct marker of the site's north end, and sets out for the design a dramatic end point. A network of internal and external zones is stepped along the site's contours, reflecting a sense of journeying towards the reserve.

Each zone is purposefully distinct, in order to provide the occupants with important moments for withdrawal from the more connected zones of each house, and to engage a close awareness of the outside environment. Timber decking and planting loosely trace the external boundaries of each building, bridging the two main dwellings and extending internal spaces to the central glasshouse and north-end pergola. Internal living spaces expand to discrete outdoor spaces in summer, while in winter the north-end dwelling recedes into a central core living area, protected by overhangs on the north and west façades.



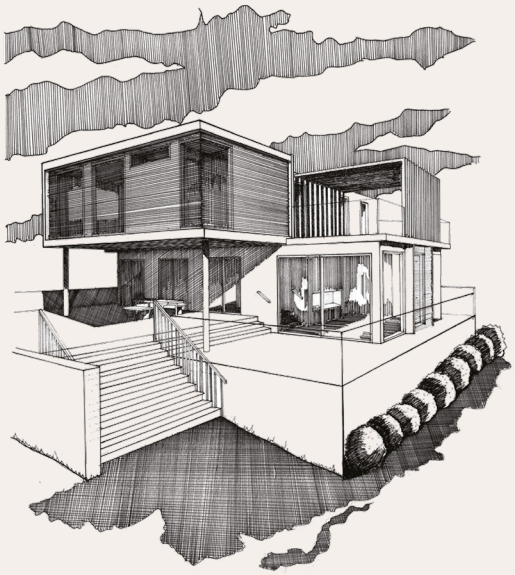


Yue Zhang

Architecture and Context

This is the third element of an initial project involving a nuclear family of two adults and two children. The site context identifies a sloping ground plane with half-metre contours, sloping downward with a good north-facing aspect. Early in the project, at concept design stage, three primary considerations were identified

- Providing enough outdoor space for family activities
- Design of good orientation within the restrictions of site
- Functionality that provides for the nuclear family



The focus, therefore, became finding practical solutions to maximise use of the site, hence the idea of a 90-degree rotation on the top floor. This allows the family easy access to the outdoor area, as well as enjoyment of the fantastic view from the sloping site. As a result, the position of the top floor cantilever is used to provide sun protection for the lower floor, and two additional louvres feature on the northwest and southeast sides to provide further protection from the elements.

Shené Strydom

Glen Eden United Sports Club

This project focuses on the redevelopment of the Glen Eden United Sports Club. The masterplan is to be upgraded, extending the football facilities and including space for indoor sporting activities. To club will become a central focus for the growing community, bringing people together and creating memories for a lifetime. Guests entering the main entrance gate from the east will be greeted by large columns inspired by flax plants, which focus on Te Aranga Māori Design Principle of Kaitiakitanga and express tangata whenua, the people of the land. The design concentrates on the importance of nature and people. Repetitions of the flax columns are located throughout the masterplan, including the football field, creating a sense of balance and harmony within the landscape where the building sits.

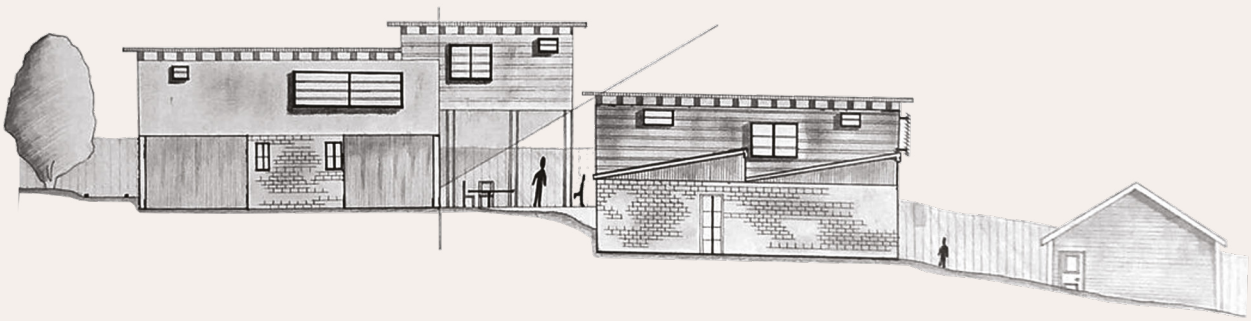
Symbolic measures of Te Aranga Principles were taken through the masterplan process by controlling Tāwhirimātea, God of the Winds, respecting Papatūānuku, the Earth Mother, and allowing Ranginui, the Sky Father, and Tāne Mahuta, God of the Forest, to exist within the architecture and cohesively form a connection between the movement of people and the enhancement of the built environment.

Jack Culloty

23 Verona Ave

Verona Avenue is a multi-dwelling project based in Mount Albert that focuses on the influx and outflow of accommodation at different times of the year. The project looks away from a standard nuclear house; the parents and one of the children live in one house and the older child lives in the other house with their partner. The grandparents come to stay regularly, so space for them needs to be accounted for in the house closest to the front of the property.

The orientation of the dwellings is shaped in an orthogonal manner to capitalise on the shared courtyard space in the middle of the site. At the same time, this orientation provides an intimacy gradient so that visitors do not venture into the private spaces of the dwellings.

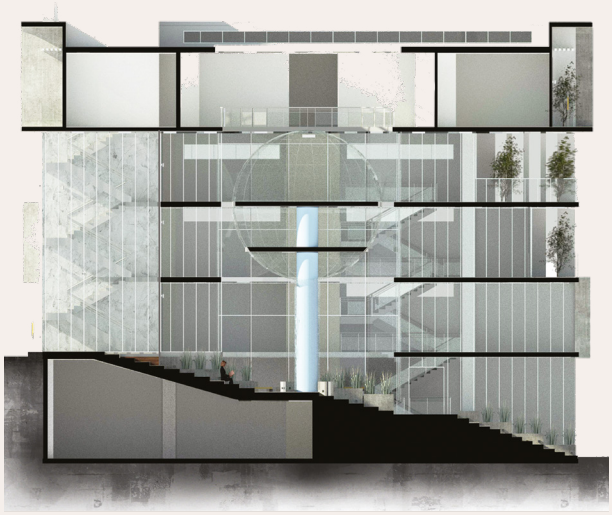


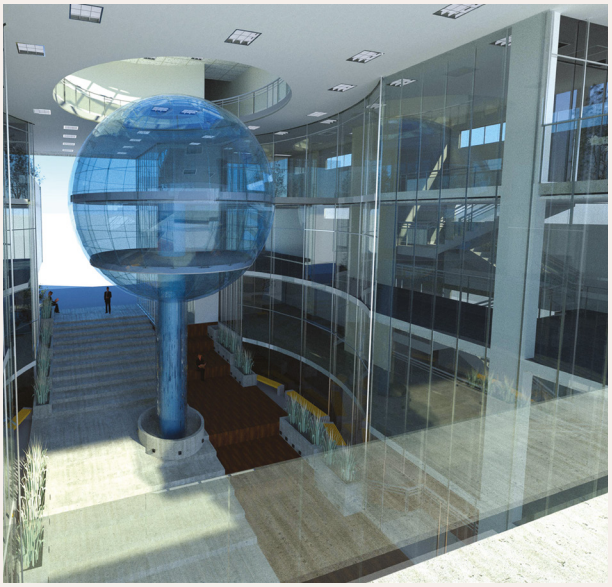
Rahul Ashok Garad

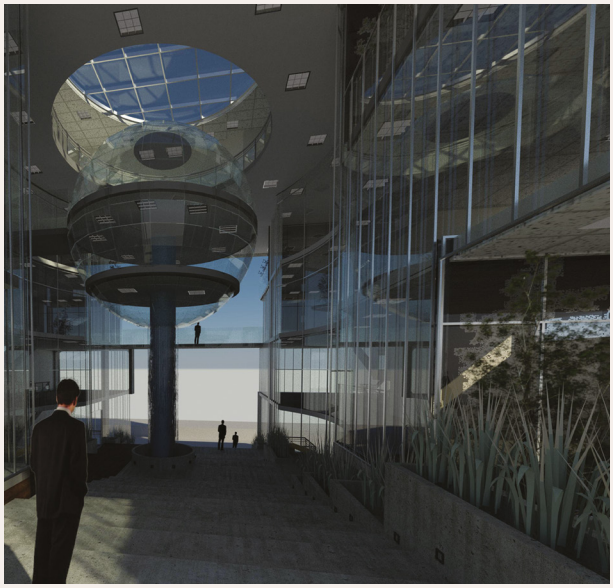
Library Building

The library was a challenging project as it does not have any closed ends, and is open from the front and back. It also has boundaries that touch neighbouring buildings. Working out the sun path and wind was also challenging. I drew the building envelope criteria that were given to us and started working inside the bubble. Working with circles and triangles was challenging because a lot of negative space was created, and the customers in the building needed every inch of space. For this reason, the design plays with square blocks, subtracting and adding space according to the criteria. The materials give a minimalist, spacious feeling to the design.

The main focus in the building is the glass globe in the centre. The path is a public space that connects New North Road to the train station, so it will have a massive flow of foot traffic. The globe in the centre of space will play a significant role in conveying the message to people commuting. It can also showcase the art from the art gallery. Inside the globe is a space that can be used for meeting rooms, security office and lunchroom, and to observe people, the surroundings and trains passing by.







Calvin Lao

Library Building

As Zaha Hadid famously said, "There are 360 degrees, so why stick to one?" This quote really inspired me to design buildings that go beyond a rectangular box, which sets up the basic footprint for the design of this brief.

This brief was to design a library, gallery and apartment structure at 476 New North Road, Kingsland. Obviously these functional spaces are essential, their layouts need to be reasonable and elegant, but the most important element is actually the threshold. This building requires a pathway or tunnel that allows pedestrians to walk from the northern side (New North Road) down to the southern side (Kingsland train station). This threshold needs to be flowing, pleasant and habitable, and this short journey serves as a great opportunity for people to experience the structure. Once the threshold is designed, the rest will folllow.
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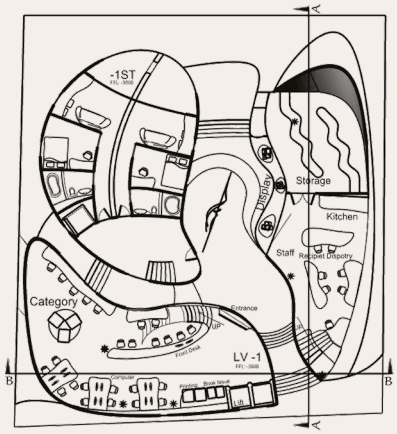
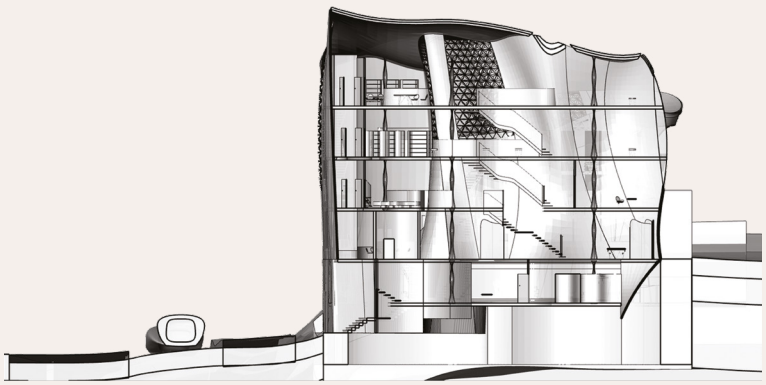





476 NEW NORTH ROAD, KINGSLAND

Joel Davies and Craig Butland

World Trade Center

New York's World Trade Center, which opened in 1973, comprised a number of buildings, including the iconic Twin Towers. These buildings were of particular significance due to their scale and also the advanced skyscraper design utilised at the time of their construction.

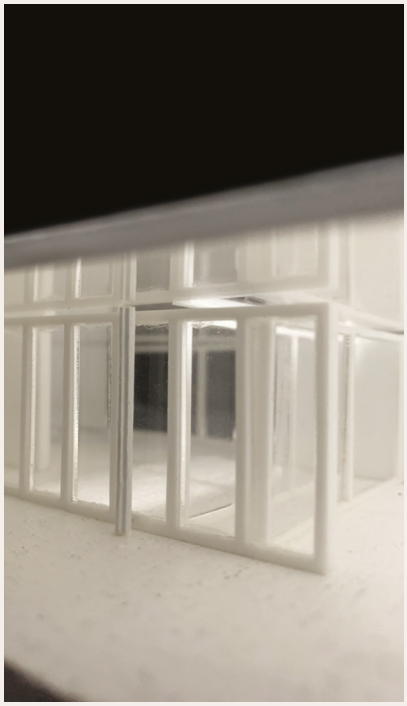
The towers were constructed using a cutting-edge, framed-tube structural system, essentially meaning the structure was on the exterior of the building, allowing for large volumes of open-plan office space. An additional innovation was the elevator system, which introduced sky lobbies, where local elevators met express elevators, ensuring not only more floor space, but efficiency when scaling a 110-storey building.

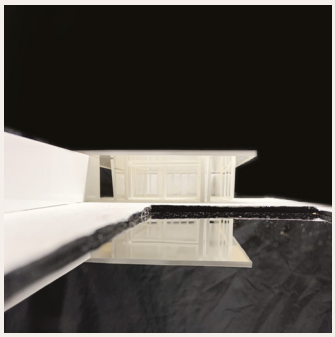
This building was remarkably tall, and to accommodate this the scale was adjusted to 1:500, making the model just over 1 metre tall. The main structure was made of acrylic, with the initial intention of laser cutting the cardboard façade to contain a light inside, illuminating the tower. However, throughout the process, etching the surface of the card was favoured. This saved time and achieved a much more accurate finish. The second model was of the elevator systems, which were a first in skyscraper construction. The overall system was made up of primary express elevators that alighted at sky lobbies on levels 44 and 78. Secondary elevators then took passengers to the levels in between the sky lobbies, as represented by the wooden cut-outs. The models of the towers were placed onto a base that had a mapped location of where the towers were standing prior to their devastating destruction in 2001.

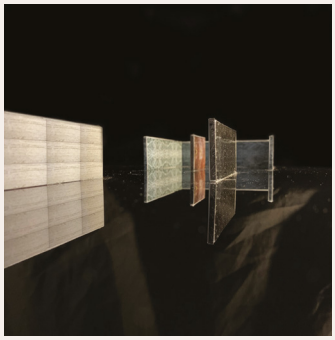
Esha Patel and Nidhi Patel

Barcelona Pavilion

Ludwig Mies van der Rohe's Barcelona Pavilion, designed for the 1929 International Exposition, is a manifestation of twentieth-century modernism. The initial undertaking of the Barcelona Pavilion model features the acrylic roof, illustrating the renowned open floorplan.







The symmetry and precise proportions became apparent when assembling the iconic 'free walls,' characterised internally by non-load-bearing walls. The spatial sequence of the pavilion is further reflected in the model by using white acrylic planes to represent solid walls and transparent acrylic for glazing.

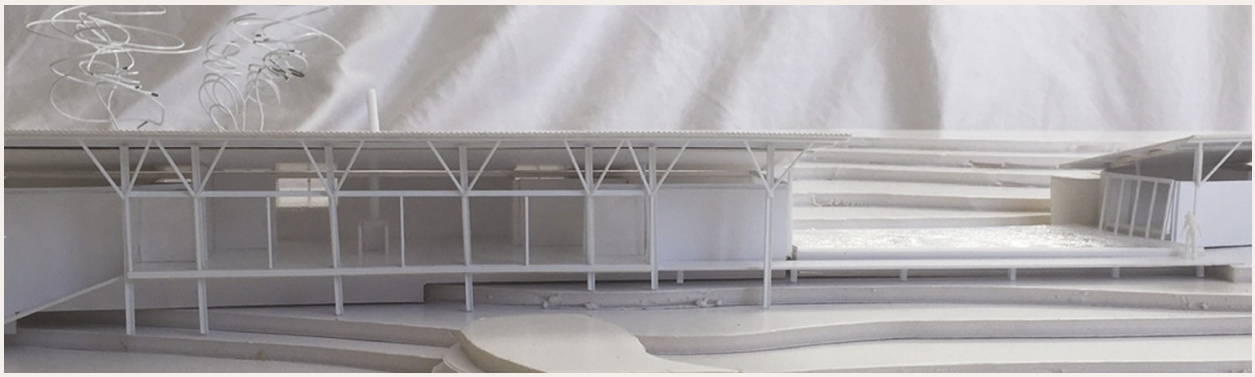
For the second model, we explored a creative approach by isolating the marble and onyx walls to create a more abstract form of the Barcelona Pavilion. Mies especially chose these materials because of their opulent and rich surfaces, playing with light and reflections from the pools. The walls closely replicate the material through the obvious pattern and glossy finish, along with the large sheet of reflective material, made with acrylic and black paint. The model aims to display a deeper understanding of Mies's design process and the quality he brought to his work.

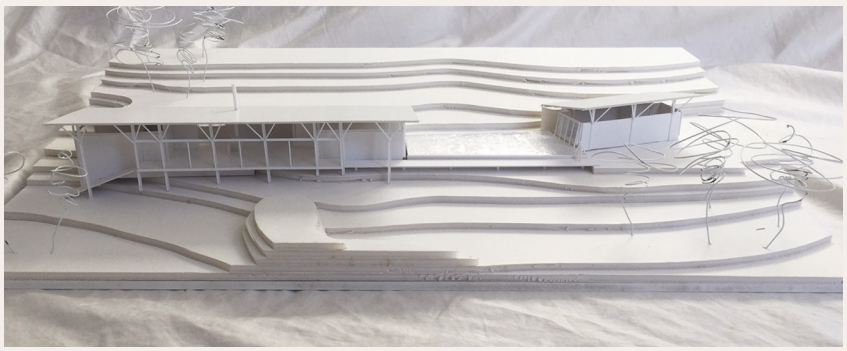
Suzanne Aitken

Simpson-Lee House

The brief for this assignment was to select a seminal building to be modelled at 1:100 scale. Glenn Murcutt's Simpson-Lee House was selected, as the architecture and design principles are compelling. It was Murcutt's intention for the Simpson-Lee House to be an example of how modernism can benefit and improve the way people live, but also to stay true to place. The clients encouraged modern simplicity with great consideration to be given to every aspect of the environment, including the direct ecological impact – how the building touched it, looked upon it and sheltered from it.

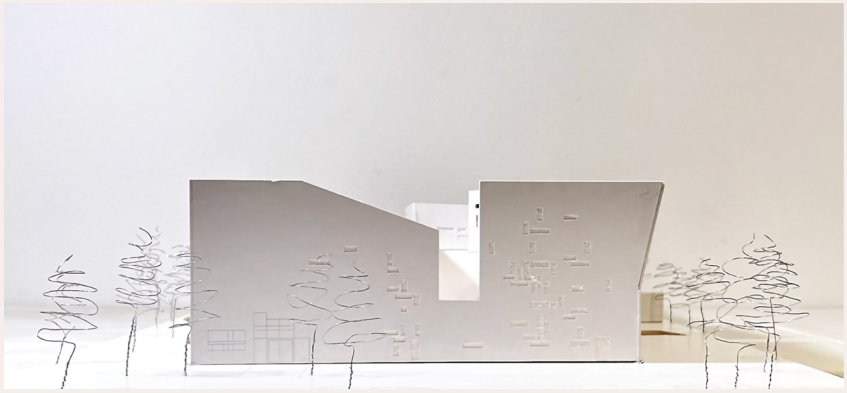
Located 150kms west of Sydney, in the World Heritage-listed Australian Blue Mountains, the building sits in the natural lee of a mountain, settled 30 metres back from an escarpment and at the base of a large rock formation. This was a natural path used by Aboriginal people that Murcutt was keen to acknowledge in the building's circulation, entering from a timber walkway that runs to the east of the linear design, adjacent to a Murcutt-designed pond. The pond is primarily used for fire protection, but is also positioned to allow light to reflect into the house. The strutting recalls the trees reaching out to the light, extending in the same direction as the existing trees, and opening to the valley. Ultimately, Murcutt designed the house absent of ornament, the building elements being successfully pared to their simplest form.

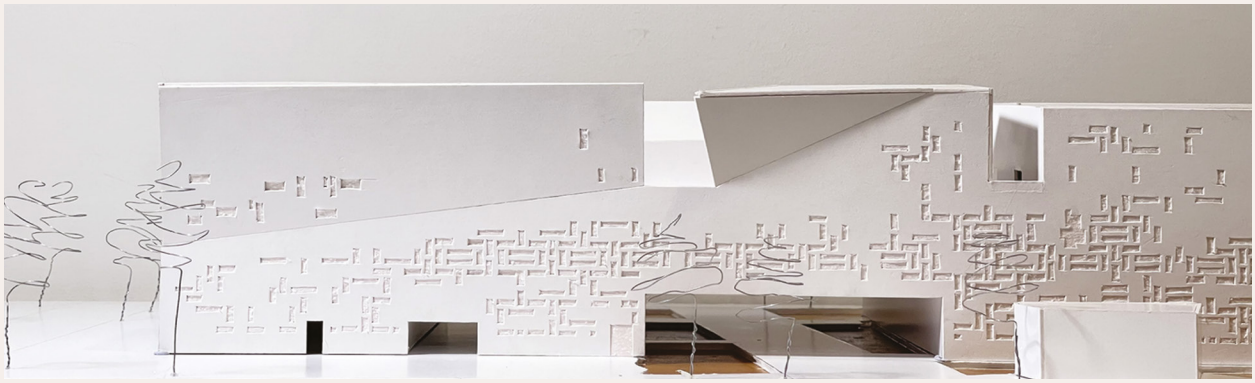




Bella Shi and Ziyue Bai

Ningbo Museum





Ningbo Historic Museum is located in the city of Ningbo, situated in Zhejiang Province, China, and was designed by Wang Shu, founder of Amateur Architecture Studio. Wang Shu was recognised as the first Chinese citizen to be awarded the Pritzker Prize, received in 2012.

Ningbo Historic Museum is a conceptual idealisation of shanshui (mountains and water) and constructed using a traditional Chinese building technique called wapan, in which numerous and varying sizes of bricks and tiles are packed together in order to create a hugely stable structure. The project contains two models: a context model at 1:250 scale and a conceptual model (not to scale). The context model showcases the building and its surroundings as placed on its elongated site. This emphasises the narrative around the square box disintegrating into a natural form. The conceptual model attempts to showcase a correlation between materials and building techniques. An abstract section of wall with three different colours of clay corresponds to the building's most significant materials. The lower grey block represents concrete while supporting the structure in its entirety. The other blocks represent recycled bricks and tiles derived from locally demolished buildings.

Bachelor of Architectural Studies
Year 3

Design capabilities of moderate complexity are explored in Year 3, typically in an urban environment. The dynamic nature of urban typologies and the factors that influence their evolution are investigated.

The understanding of large-scale, multi-storey construction is advanced and includes a sound understanding of the acoustic, thermal and lighting factors of a building's performance.

Regan Harrison

Onehunga Project

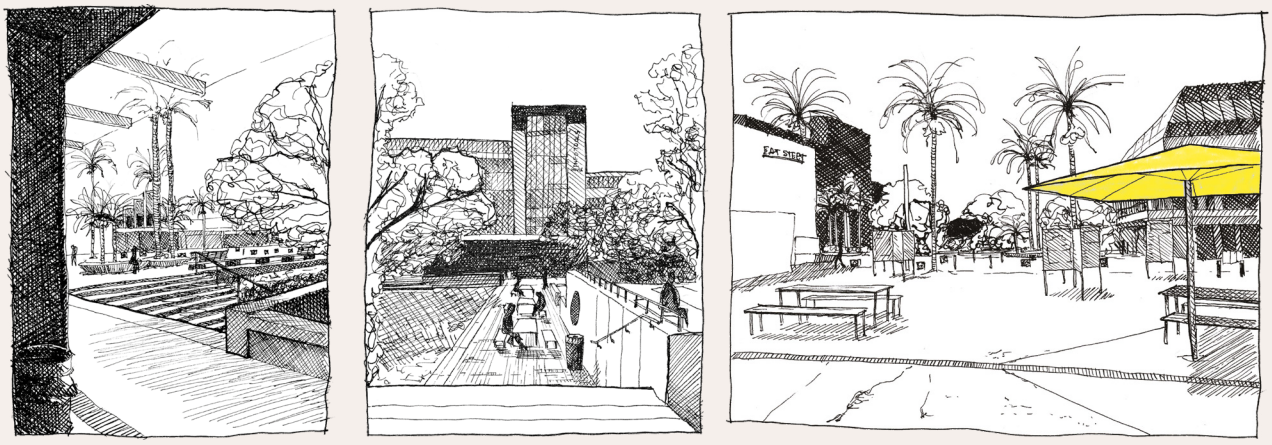
The Onehunga Project is a low-rise multi-functional space that provides apartment dwellings and civic space on top of the existing Onehunga train station site. The existing Onehunga train station has been improved into an inviting community space that offers an art gallery, café and shared workspace, as well as apartment living in the floors above. The main driver behind this design was to connect the users to the area. Use of Tohu, one of Te Aranga Māori Design Principles, allows the visual connection of significant sites such as Maungakiekie, and for this to be preserved and enhanced through the site.

The structure faces directly north for that connection to Maungakiekie One Tree Hill, but also welcomes those from the south, the harbour and Māngere. The idea of keeping this site as civic over retail space was to enhance the public-transport aspects. To be a place to meet and gather, highlighting the train station and making the space safer and more user friendly. Making this space civic also allows the use of Te Aranga Principle of Taiao, to protect and re-establish local biodiversity with planting of indigenous flora in public places, which is something many public spaces lack. Combining these functions, the Onehunga Project is ultimately creating a sense of community.

Renee Buckingham

Onehunga Project

For this brief the aim was to design a low-rise, high-density, mixed-used building for the heart of Onehunga. To begin, I looked at what sort of building could benefit the area. I researched the local demographic and found that the youth had a lower university entry rate compared to other areas in Auckland. Also, due to the lower socioeconomic aspects of Onehunga, there was a theme of youth not believing that they were capable of succeeding in life, due to the need to start working from a young age. Negative influences in the area are also a problem, with gangs being a prevalent issue. The youth could benefit from a place where they could move away from negative influences, if their home life was not great, and where they could feel safe and inspire each other to do well.



The challenge was that I did not want to bring youth together with no clear idea of how to break out of their norms, which could lead them to negatively influence each other and impact Onehunga for the worse. To combat this, I decided to use Te Aranga Principle of Whakapapa. Onehunga was once referred to by the Crown as the 'Gateway to the South.' The building would act as a gateway to life and provide youth a place to step into the world. 'Whakapapa' means to bring people together from all walks of life to create a system where people can share knowledge and learn from each other. The project site is right next to the Onehunga train station, which creates an easy commute from the building to Auckland's universities, and job opportunities.

The lower level of the building is mixed use. It features retail spaces, a café, and learning spaces such as study rooms and workshops for both the younger and older generations to use. I explored the designs of traditional Māori pā (fortified village) to form the entrance, or metaphorical gateway, to the building. The entrance to the traditional pā was usually very closed off, to protect the village inside. I wanted to keep to the nature of the design, but used angled, louvre-style walls to open it up and make it welcoming, while keeping the interior feeling safe and protected.

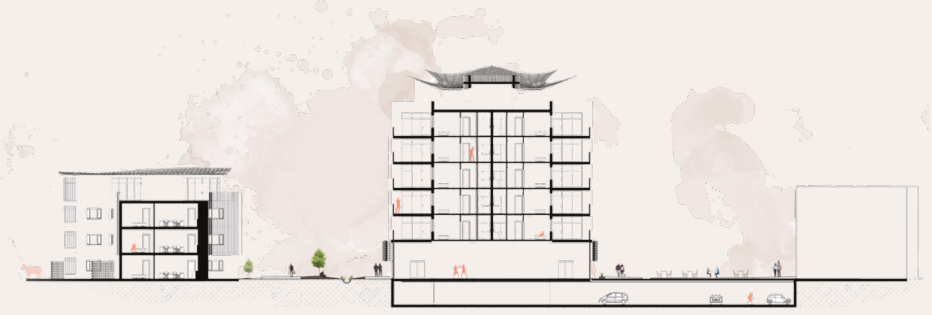
A whare was commonly located at the top of the traditional pā. Pulling from this idea of having a meeting house atop the settlement, the top floor of the building has been designed as a space purely for communal use. Apartments range from one to three bedrooms. Some have been designed back to back, which is appropriate for families with young adults who are ready to move out of home. This way they can stay close to their whānau as they transition into adulthood. I eliminated any form of hierarchy in the design, keeping all residential levels to the same layout. There are more-affordable spaces, as well as larger, costlier ones, but these are spread throughout the building to mix people with each other.

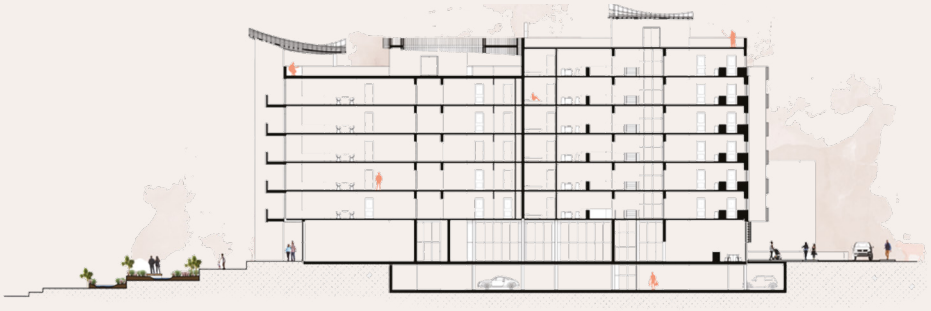
In Māori culture, shared spaces include storehouses, cooking houses, meeting houses and sleeping houses. I used common rooms such as laundries, lounges and kitchens on each level to create opportunities for people to bump into each other. A young person could be in the laundry, unsure of what to do, and a parent could be in there at the same time, opening room for conversation to be sparked and learning to take place. Single parents might get to know their elderly neighbours, who could mind their children while they are at work or busy with errands, forming family-like relationships between all residents.

Rohan Sadhu

Regenerating Maybury

This project involved developing high-density housing on a half-hectare site in Glen Innes. The project had several key aims to be included in the final design. These mainly centred around the concept of water and the maritime. Traditionally, Glen Innes was known as Ukutoia, and served as a meeting ground for the Māori population for generations. Especially during the seventeenth and eighteenth centuries, the clay banks were said to be lined with waka, ready to be borrowed. This was such a strong narrative that it was pursued from the outset of the project.





Te Aranga Māori Design Principle of Mahi Toi states that iwi narratives are to be expressed both creatively and appropriately. For this project, I utilised forms from this maritime record: including the waka, earthy materials such as wood and brick, and nets used for fishing and eel trapping. However, this design was also intended to engage with local iwi, artists and professionals. For example, the design has tall concrete columns that function as visual dividers between the buildings. These strong structures are intended to be decorated with iwi patterns, much like Ockham's Hypatia apartments in Newmarket. For the regeneration of Maybury, creating an environment that was culturally respectful, spatially welcoming, and could withstand the test of time including changes in climate, was of paramount importance.

Abigail Spence

Manawa Building

Manawa is the name of New Zealand's only mangrove species. The building rises between the existing structures and protects the heritage building on its eastern side. A large atrium sits off centre, with a 'living machine' underneath it that treats and reuses water. An under-used heritage building contains a staircase with a cascading water feature that activates after heavy rain. Improvement of the quality of the water that runs through the site, and extensive terraced and ground planting, embody Te Aranga Māori Design Principles of Taiao and Mauri Tū.

The mangrove concept splits the building into two sections: a light, airy tower and a dark, 'underwater' base. Timber construction is used to lower the building's embodied carbon but deliberately moves away from an overt timber look. In the apartments, cross-laminated timber (CLT) walls are covered with earth plaster, to alleviate humidity and help with respiratory health. On the lower floors, laminated veneer lumber (LVL) beams and columns and CLT walls are charred externally to give an uneven, glistening finish and to stimulate conversation about timber's strong fire performance. Whakapapa, the concept of belonging, is central to the development of small neighbourhoods within the tower. Every three floors share a garden that residents choose how to use. Apartment sizes and forms vary, to appeal to people in a variety of living situations, particularly families.


HIGH STREET
VULCAN LANE
QUEEN STREET


QUEEN STREET
VULCAN LANE

Abigail Spence with Melissa Knight and Victoria Carran

Ukutoia / Omaru Creek Masterplan

This year a group of third-year Bachelor of Architectural Studies students took part in a joint design studio with fourth-year landscape architecture students, in a project designed to draw on the strengths of both disciplines. Briefed by Kāinga Ora representative Orson Waldock, students were asked to design a future development in Glen Innes that increased density, and improved quality of life, sense of community and connection to the land, while addressing flooding concerns.

Ukutoia is the Māori word for the sound of waka being pulled ashore, and it is the Māori name for Glen Innes. Ukutoia speaks to the soundscape of the Tāmaki River and its surrounding network of inlets and streams, which were used by Māori to seasonally collect kai moana, to exchange waka, to commune and to move around. The banks of Omaru Stream are a part of this network, and the masterplan is inspired by the Indigenous understanding of the area and the relationship it prioritises between people and the landscape. The masterplan focuses on Maybury Reserve, using this to connect the township to the sea, and is centred around three ring bridges that are accessible even in flood. Streets were designed to foster play and community, showing the encouraging potential of greater density in large social-housing projects.

Melissa Knight

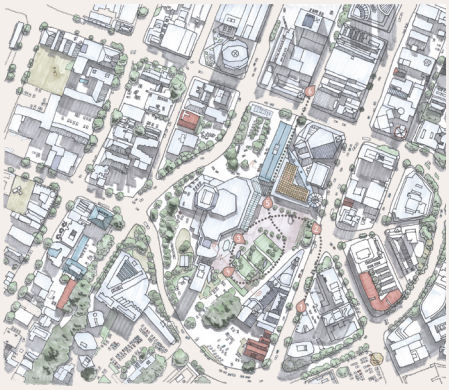
Takutai Square / Te Ara Tahuhu

At Takutai Atrium entrance looking west out across the square, I see a horizon of verticality. The buildings argue with each other in their disparity but not with me. This may be because the ones I am closest to are the most beautiful. Notably the relatively new Hotel Britomart on the south of the square. It could have been imposing in such a pretty space, but it is well designed and simpatico – the council did well capping its height at 24m.

The surrounding buildings graduate skyward with the square at the centre. Their verticality makes them feel like kaitiaki with PWC building's 180m perhaps the chief. On the square's boundary is Gore Street to the west and the Ernst and Young Building and Westpac to the east. It's raining hard so I'm hugging the perimeter, a good place to watch how well or not the square works. Looking out from under the shop awning I watch multiple users of the square. Fifty kids arrive – they love the fountain and linger to play. Perhaps they're going home on the ferry, which is only five minutes' walk away to the north on the waterfront. This view, with the harbour just beyond the buildings, shows the many differing styles of architecture that surround the square. The old brick and new concrete have little in common in the way of style or materiality, but this is outweighed by, or perhaps reflected in, the many offerings that the square has. Rocks, fountains, grass and, most importantly, a sense of being available to be used.

Yang Jiang

Aotea Square to Elliot Street



The view across Queen Street toward the entrance of Aotea Square. Aotea Square is a semi-enclosed public area surrounded by Auckland Town Hall, Aotea Centre and Event Cinemas. Many bus stops around Aotea Square provide convenient transportation. At the entrance of the square, the cinema building provides a well-shared area not only for buskers but for pigeons. Artist Selwyn Muru's Waharoa gateway sculpture provides an entranceway to the square and adds a more artistic and Māori characteristic. There is a row of café kiosks at the front of the cinema.

In the middle of Aotea Square there is an ample green space for people to eat and rest. Aotea Square is often utilised for public events. The sketch shows people enjoying churrascaria during a Latin fiesta. At the southwest corner of Aotea Square, there is less moving traffic. The paved ramp and flat concrete area become places for teenagers to skateboard. An access stairwell to the underground Civic Car Park is located inside the glass screen.

Master of Architecture (Professional)
Year 4

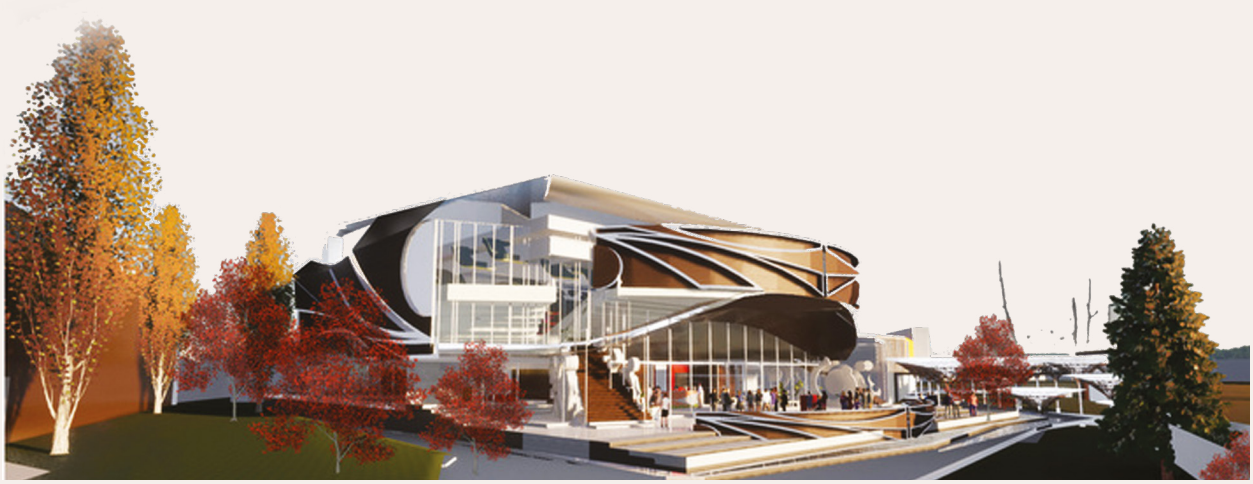
The first year of the Master's programme focuses on designs of urban, industrial and city-fringe typologies, as well as critical evaluation in theory and principles of conducting an architectural research project. In-depth details of construction, structure and associated services of extreme complexity are integrated.

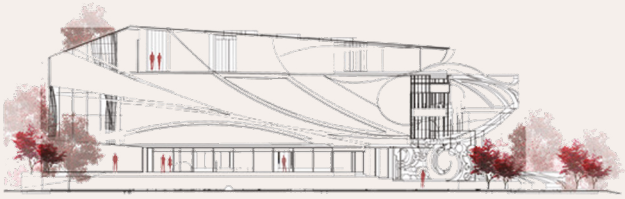
Shonika Shayal

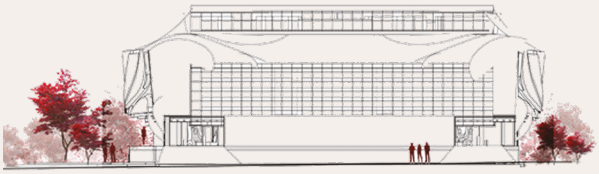
NorthArts Theatre

As part of the continuing Northcote development masterplan, for the C40 Students Reinventing Cities competition, the design for a multi-format theatre and performance arena contributes to the vision of interaction, multisensory design and transformable spaces, "to create an everlasting memory for each individual."

The selected site is situated between the library, community hub and the supermarket, seeking the connection points to the heart of the town that is located centrally. The ground floor opens up to all four directions, to encourage ongoing foot traffic. The theatre is medium scale, seating four hundred and fifty occupants, and addresses a net-zero approach through grey-water filters, sourcing of local materials and solar-powered systems that are a reflection of the original masterplan. Te Aranga Māori Design Principles are highlighted through the symbolism of the manaia, which represents the balance between the sky, earth and sea. This symbolism is carried out and implemented as a drive of the design through materials, and a focus on the conservation of water, seen through the flow and movement of people throughout the design.





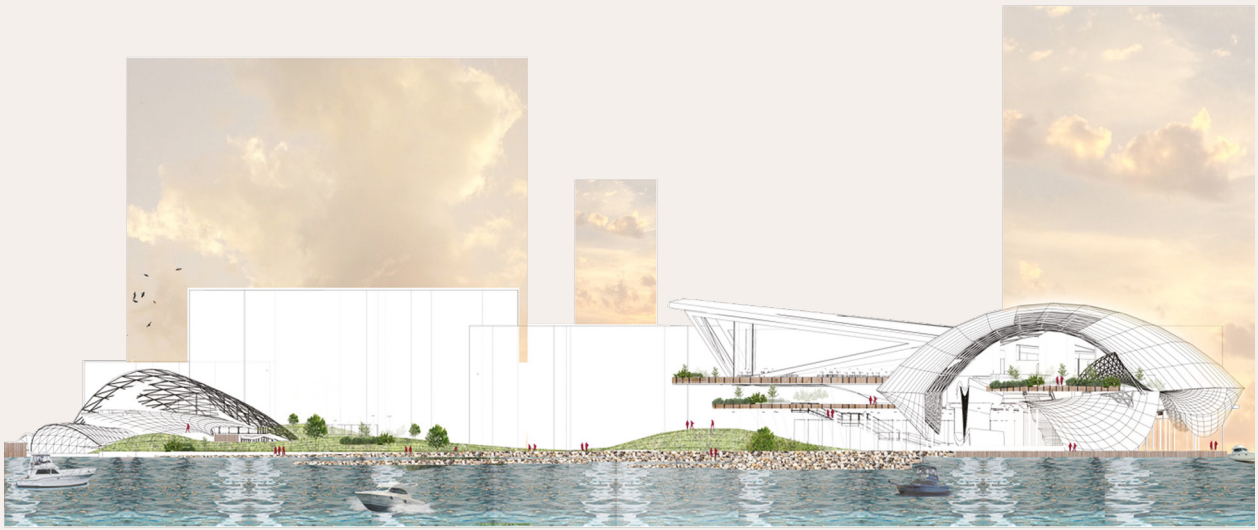


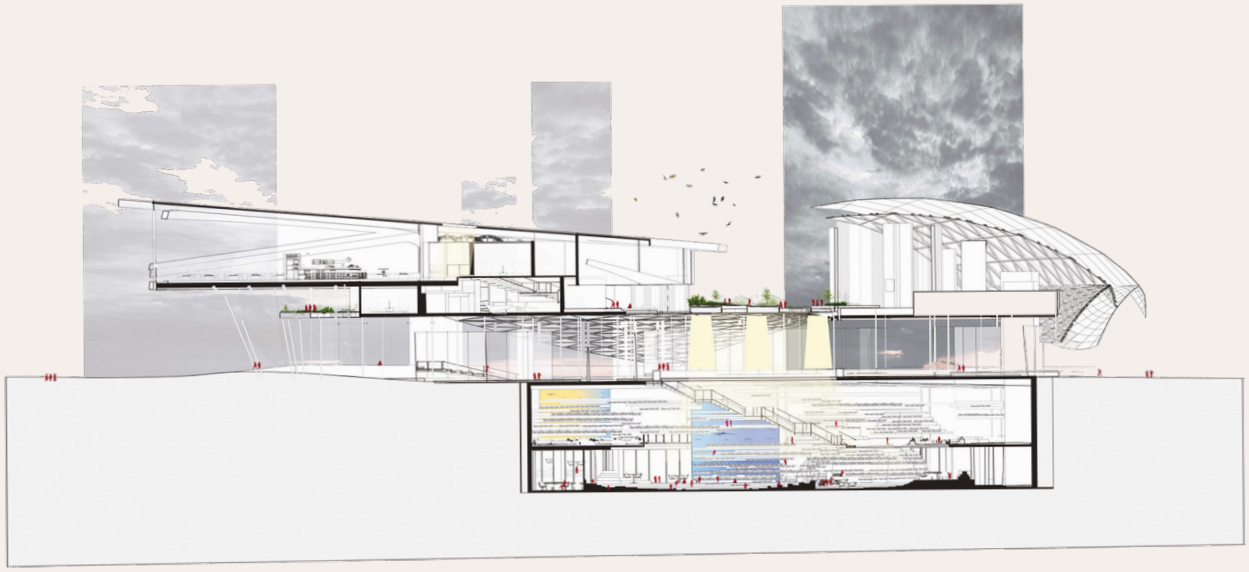
Shonika Shayal

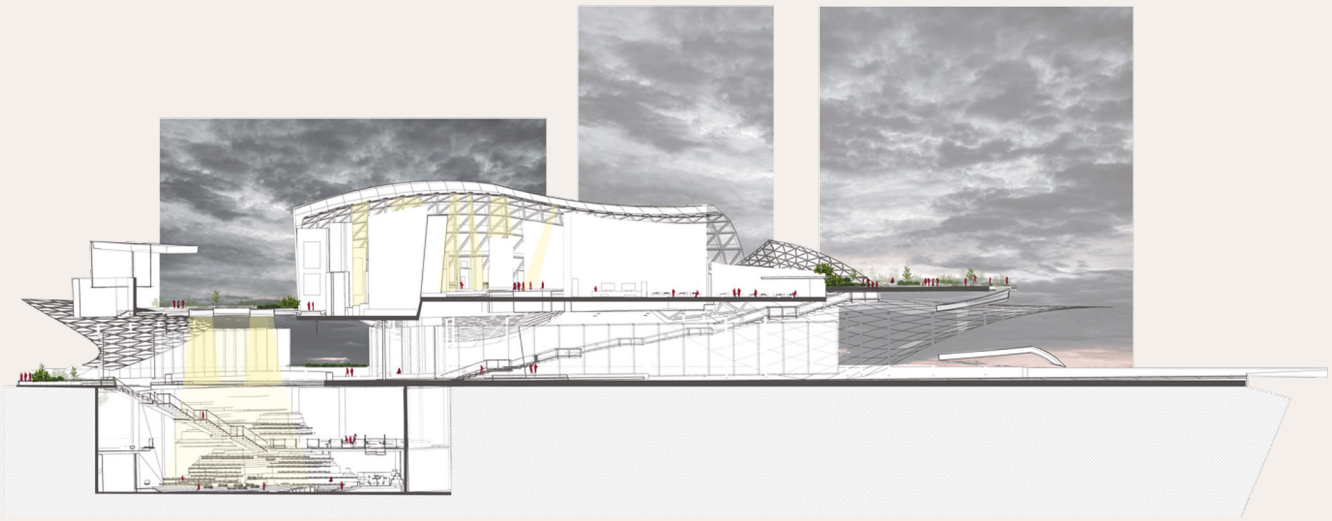
Wai Ora – Life from Water

The essence of this project is the act of connecting Pacific nations to Auckland's Wynyard Point. Māori and their Pacific neighbours are island people. In some traditions, the depths of the ocean are considered to be the origin and source of all life. The early concepts began with the placement of 'treasures' found on the site visit, leading to the form's origins. Lifting the building up helps the sun to peek through during all times of the day, using the prevailing winds as a means to push occupants gently into the space. As they enter, they are welcomed by walking through a prominent water feature, symbolising rebirth and purity.

Using the theme 'life from water,' the narrative of the evolution of the first fish to set foot on land developed the form. Programmes in this design include an Aquarium + Library, lit up by the skylight that carries through to the courtyard above, as well as cafés, bars, an art gallery and exhibition spaces, and a multi-format event space for building one (Wai Ora Events). The second building, which is connected via a bridge, includes programmes of a welcoming dock for guests and delegates to enter through, leading to a foyer; and then the conference arena, inspired by a kava bowl, lit up by a skylight that is accessed by the public to view the discussions happening below. This design aims to act as a landmark and destination point for activation through occupants from around the world, and Wai Ora liberates a design for important conversations to happen in every space.





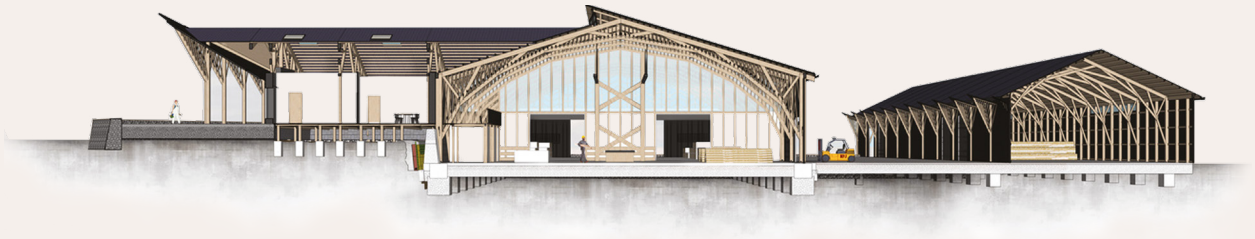


Ciaran O'Neill

Long-span Factory at Ihumātao

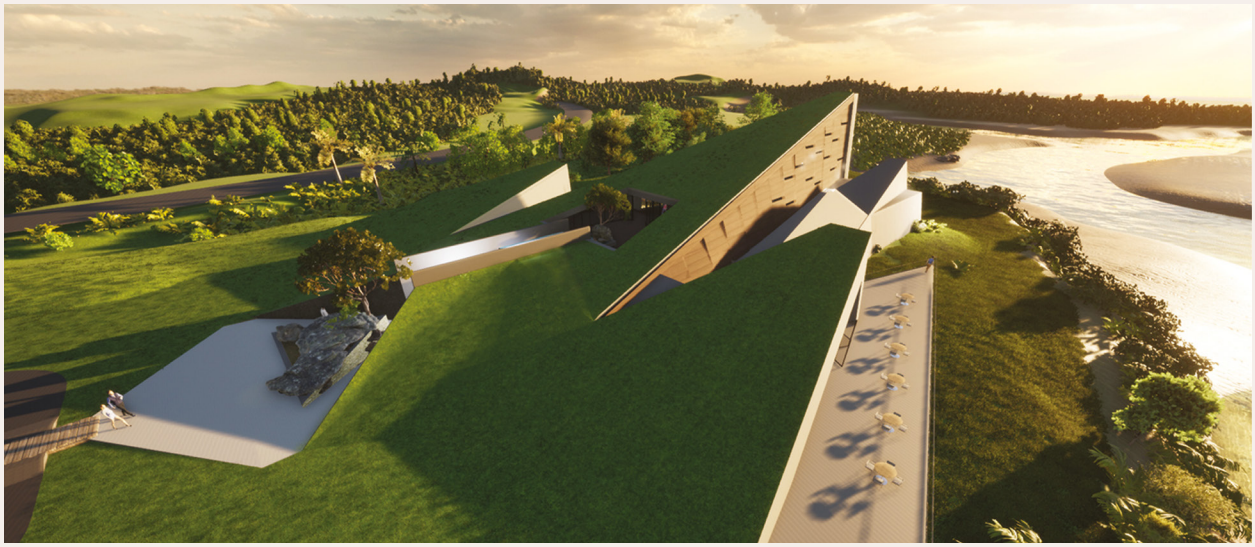
The land surrounding the Oruarangi Awa has been rapidly developed over the last twenty years from pasture to an industrial park. The landscape is now dominated by the long-span building typology. At the head of the awa sits the small village largely occupied by local iwi, who have lived in and cultivated this area for eight hundred years, making it the longest continuously occupied Māori settlement in the Auckland Region. This project takes this context as a catalyst to explore ways in which technology, rather than being a destructive, pollutant force in this landscape, can be a regenerative, creative and productive presence in this place.

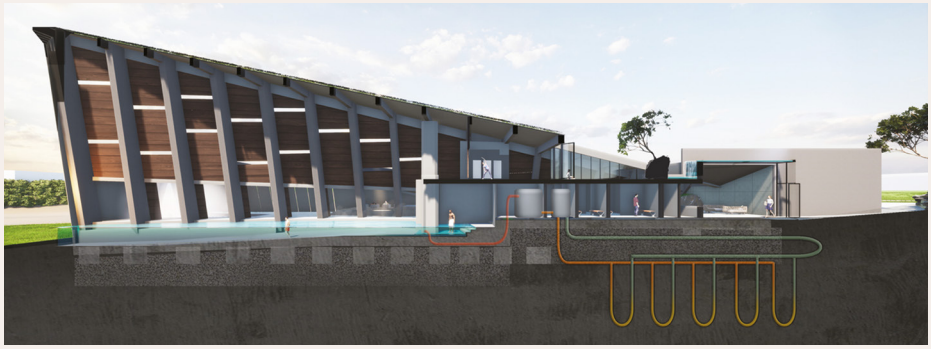
The long-span factory at Ihumātao sits between the new industrial park and the traditional settlement area. It stands here to create a dialogue between the two communities, and sets an example for how future developments in the area can be more sustainable, and acknowledge the people and history of the area. The building uses sustainable materials as much as possible. Ihumātao is known for its stone walls, so this traditional building material is used for the walls. A truss system made from Glulam creates a span of 25 metres over the main floor. The fine structure of the trusses has been expressed on the outside of the building and abstractly refences the nīkau trees that grow on an adjacent site. Window mullions have been arranged in a pattern similar to tukutuku panels. A number of sustainable technologies have been used onsite, such as solar tiles, green roofs, retention tanks and marshlands.



Ciaran O'Neill

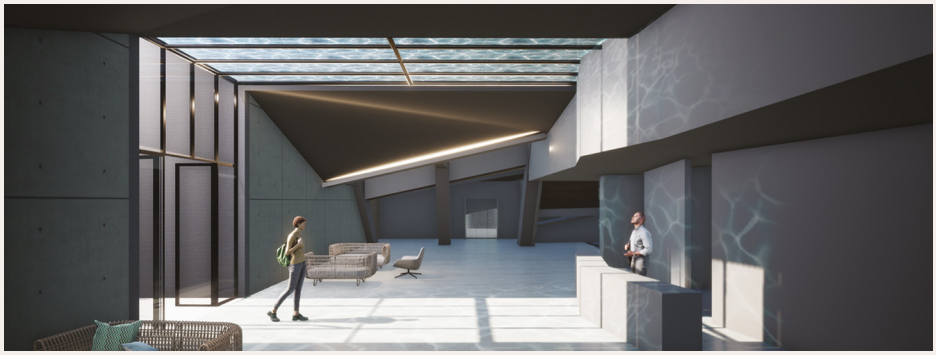
Body of Water

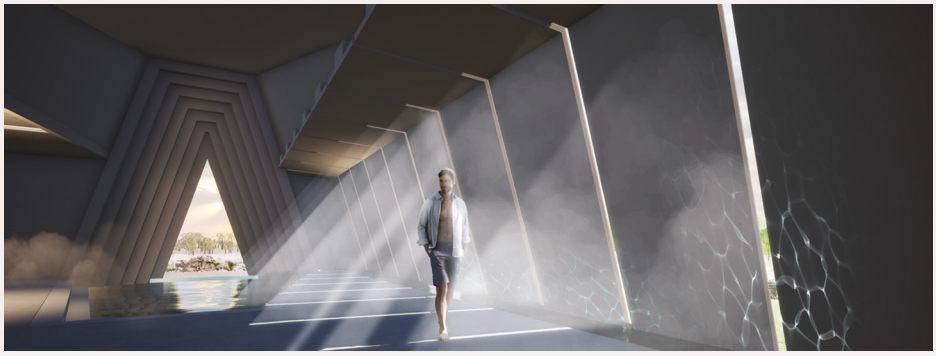


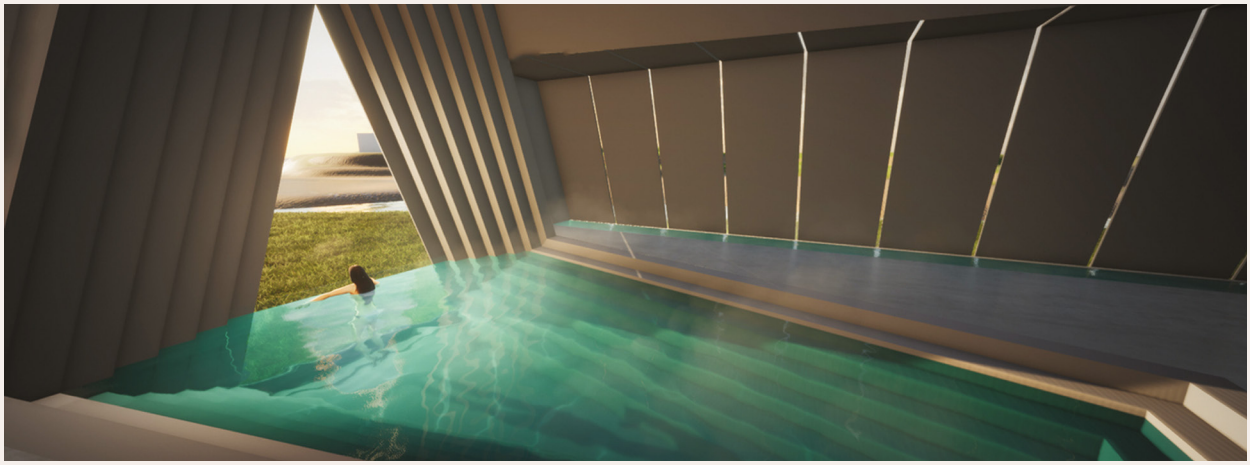


These hot pools are located on the edge of Oruarangi Creek in Māngere. The inspiration for the building was the idea of entering the underworld. The building's form is as though the earth has been pushed up in a seismic event and the volcanic core of Auckland lies inside. The stories of the Māori gods Hine-nui-te-pō, the Great Woman of Night, and her husband Rūaumoko, the God of Earthquakes and Volcanoes, have helped inform some of the design decisions. The building faces west, capturing the evening sun, so the ideal time to visit the pools is late afternoon, when the workers from the surrounding factories finish for the day. The pools cater for these workers, giving them a meditative space where they can relieve stress after a long day.

Architectural works such as The Therme Vals by Peter Zumthor and Brion Cemetery and Sanctury by Carlo Scarpa were studied to understand their transcendent qualities. Observing traditional Turkish baths, I was fascinated by the way in which the moisture in the air from the hot water allowed shafts of sunlight to be visible against the dark voluminous spaces, and I incorporated the effect into this building. The main pool is entered directly from the changing rooms. Guests get changed and then step down into the water in a dark, cavernous room, from which they pass through a passageway and emerge directly in the centre of the main pool, with its cathedral-like height and light. The smaller pools use the form of steps and tessellation to create the architectural language.







Alyssa Haley

Te Hārotoroto

The Oruarangi Creek is a taonga of high importance to the identity and wellbeing of the people of Ihumātao. However, the river has suffered a series of misfortunes over recent years, resulting in significant ecological damage. In addition to this, the surrounding industrial landscape results in a large amount of impervious surface with less-than-adequate stormwater management. Due to the substantial concentration of stormwater accruing in the stream, Oruarangi Creek is eroding away, so much so that residents of the community are witnessing their burial ground slipping into the water.

The final design in this project arose, primarily, in an attempt to combat these misfortunes. The use of a detention pond will detain the stormwater from the warehouse and help to restore elements of the degraded riparian system. The feature flute has been implemented into the design in order to highlight the intention to prevent further damage to the Oruarangi Creek. In addition, the use of a space frame will benefit the site and community in two significant ways: the low embodied carbon from the timber elements will alleviate the carbon calculations of the structure while also being able to be assembled by the community to ensure a better relationship between building, site and community.

Rimo Ribechini

Multiformat Performance Centre

Rūaumoko, son of Sky Father Ranginui (Rangi) and Earth Mother Papatūānuku (Papa), is thought responsible for all violent stirrings beneath the earth: the rumblings of earthquakes, the molten hiss of volcanoes, torrential rain and the inevitable rolling change of seasons.

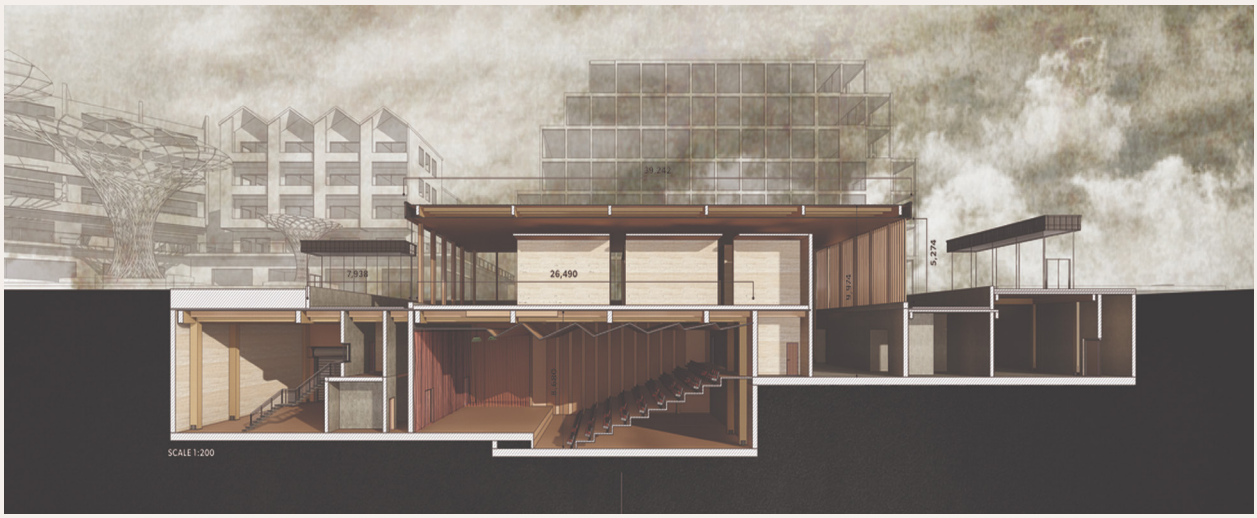
The design establishes a narrative that is linked to the mythology of Rūaumoko:

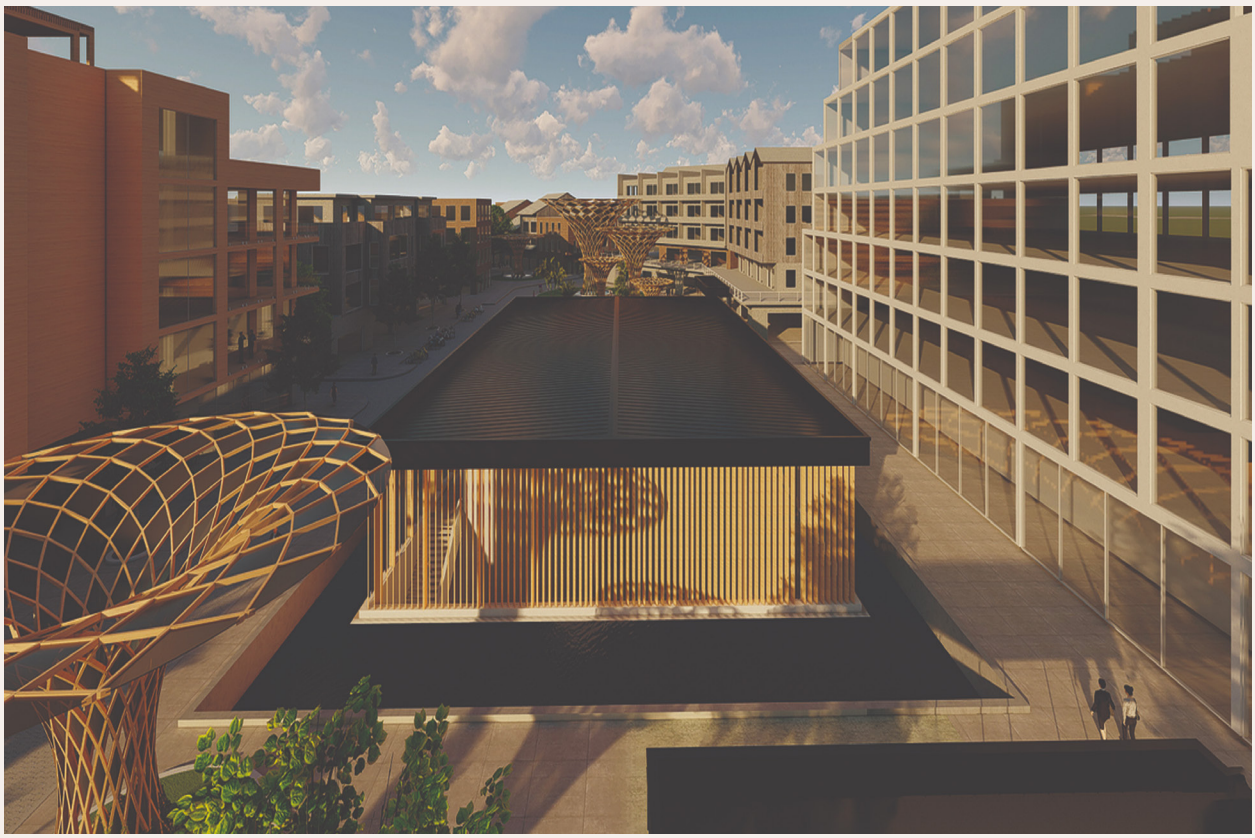
Light and space in the dark, cramped world. The design is a play of light and dark spaces. The permeable glazed pavilion above ground contrasts the darker, smaller spaces below the surface, which reveal themselves through dark subterranean passages and stairwells.

Rangi shed great tears of rain to flood the earth. The pavilion above ground is set in a moat of water that isn't distinguishably accessible. The entrances to the building are located in separate structures that take you below the water's surface to the lobby.

Rūaumoko's movements below the earth cause the tremor of earthquakes and volcanic eruptions. The underground auditorium where theatre, music and dance are performed is a metaphor for the tremors and movements caused by Rūaumoko.

Rūaumoko's movements cause variations in temperature as he releases warm or cool air into the atmosphere and over the surface of Papa. Temperatures above and below ground vary, adding to the experience of the multiple sized spaces.



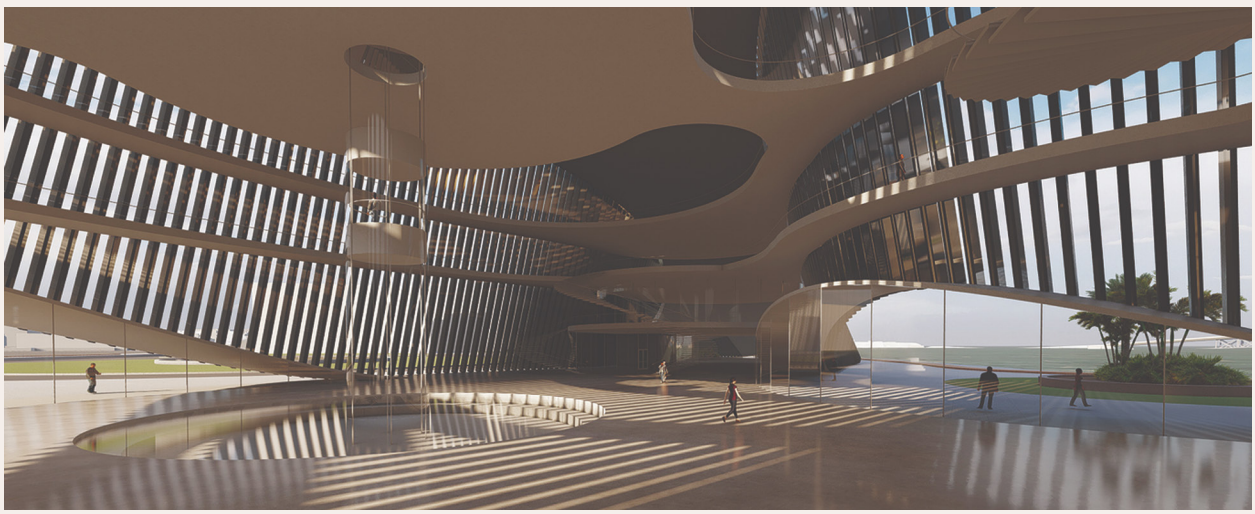


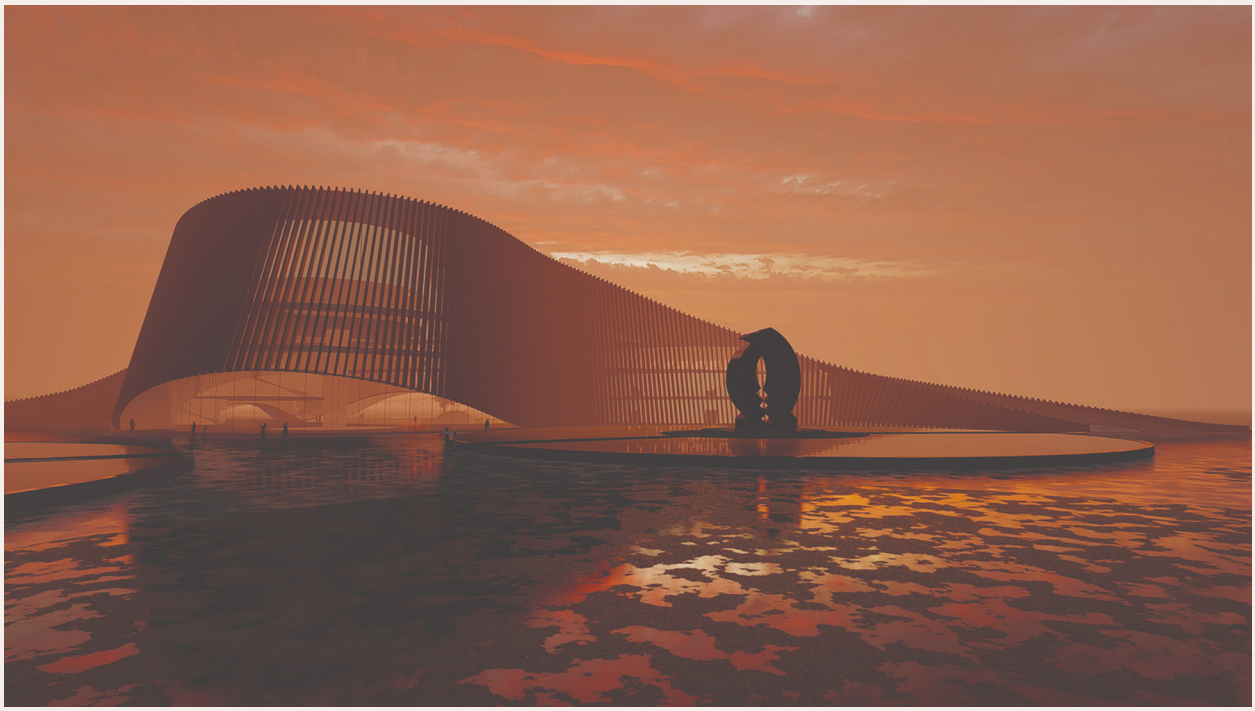
Rimo Ribechini

Tuhinga o Mua – Of the Sea

Tuhinga o Mua is a powerfully poetic representation of the journey across the seas and the energy and life force of the sea. It is an expression of Manawa o te Moana – Breath of the Sea. Tuhinga o Mua is a connection to the past, an experience of the present and a promise of the future. The design is derived from a cumulative study of spilling, plunging, collapsing and surging waves, depicting a sense of urgency and movement, yet a tranquillity endures.

Its walkable roof is a metaphor for the journey across the seas to Tāmaki Makaurau, presenting grand views of the Waitematā Harbour, Auckland City and beyond. Tuhinga o Mua is a link between land and sea.



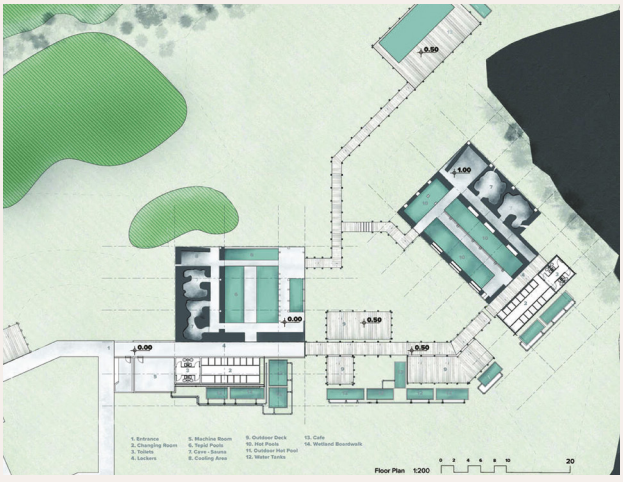


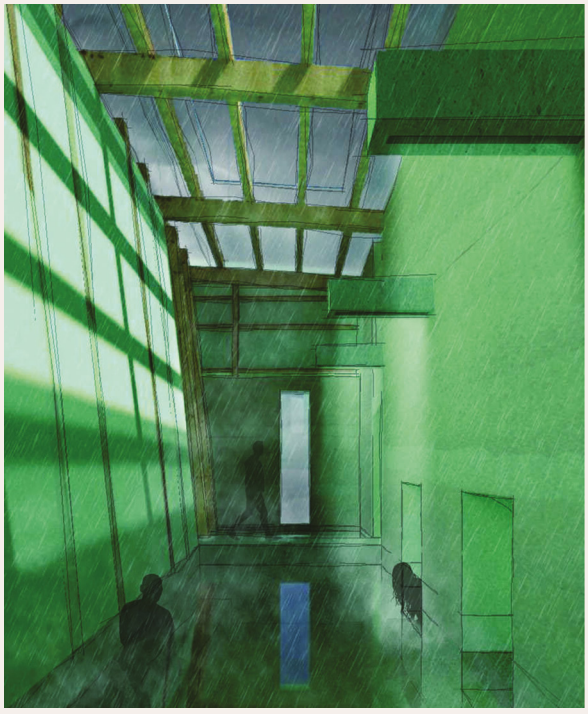
Samuel Oledan

Oruarangi Wetlands and Bath

Water is a precious resource and material. The Oruarangi Awa has become surrounded by an industrial park dominated by long-span building typologies. The flows of manufacturing, transport, capital and information overwhelm the flows of water they neighbour. The rehabilitation of the site and the awa are heavily determined by how architecture is designed for its local environmental and social context. The architecture, a bathhouse, provides opportunities for water collection and recycling, reducing carbon through material selection and passive design, and designing interactions between people and water.

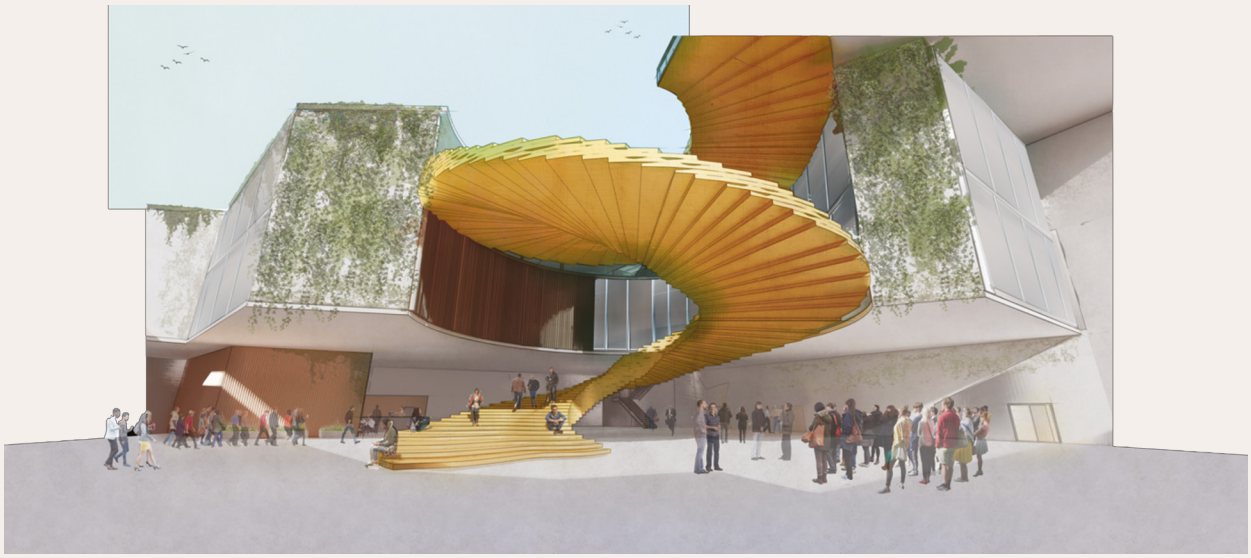
The illustrations show a process of designing with the local phenomena: sunlight, materials, sound, and environmental flows of water and flood plains to shape the architecture and land surrounding it. When the context of people is introduced, the architecture and landscape are enhanced. Interactions between people, the building, the awa and wetlands, begin to shape a new dimension to the business-centred industrial park.

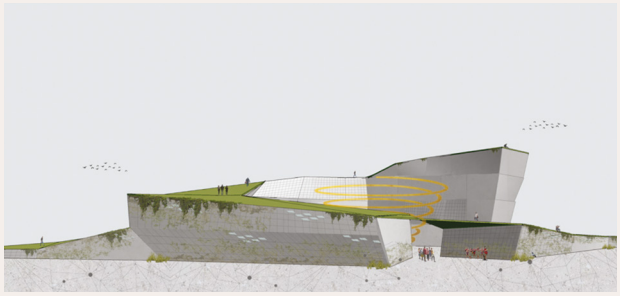




Jayna Patel

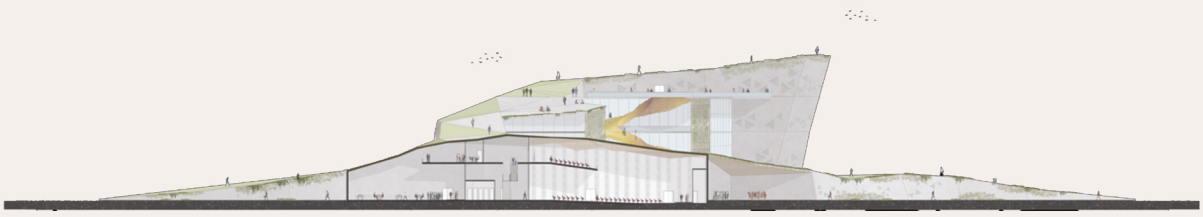
Te Haerenga





Te Haerenga created an opportunity for Unitec to collaborate with Jasmax to design a speculative cultural project at Wynyard Point, on Auckland's waterfront. The design was inspired by the essence of a volcano, a natural element that shapes and dominates Auckland and a reflection on the journey of how Auckland's landscape was formed. Everyone embarks on their journey in their respective ways; Te Haerenga reflects that, as a place that allows endless opportunities and experiences for one's journey along the way.


VIEWS TO NORTH SHORE
VIEWS TO RANGITOTO
VIEWS TO HARBOUR BRIDGE
VIEWS TO AUCKLAND CITY
A
B
C
D
E
G
LEGEND
A - FERRY TERMINAL
B - STONE SCULPTURE
C - TIDAL STAIRS
D - PROPOSED BUILDINGS
E - COMMUNITY CENTRE
F - PUBLIC TOILETS
G - WATERFRONT PROMENADE
H - TE KUPENGA
CIRCULATION
SCALE 1:1000 AT A1

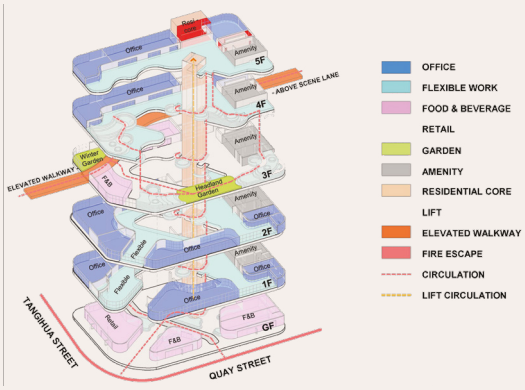


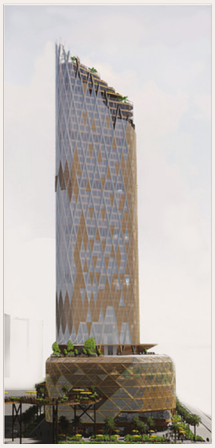
Matthew Challis, Yinsu Li, Joe Sun and Sheenal Pratap

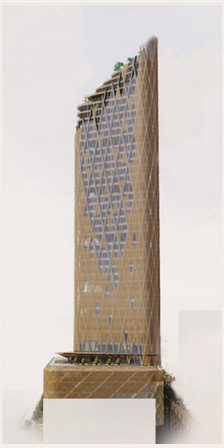
Te Mata

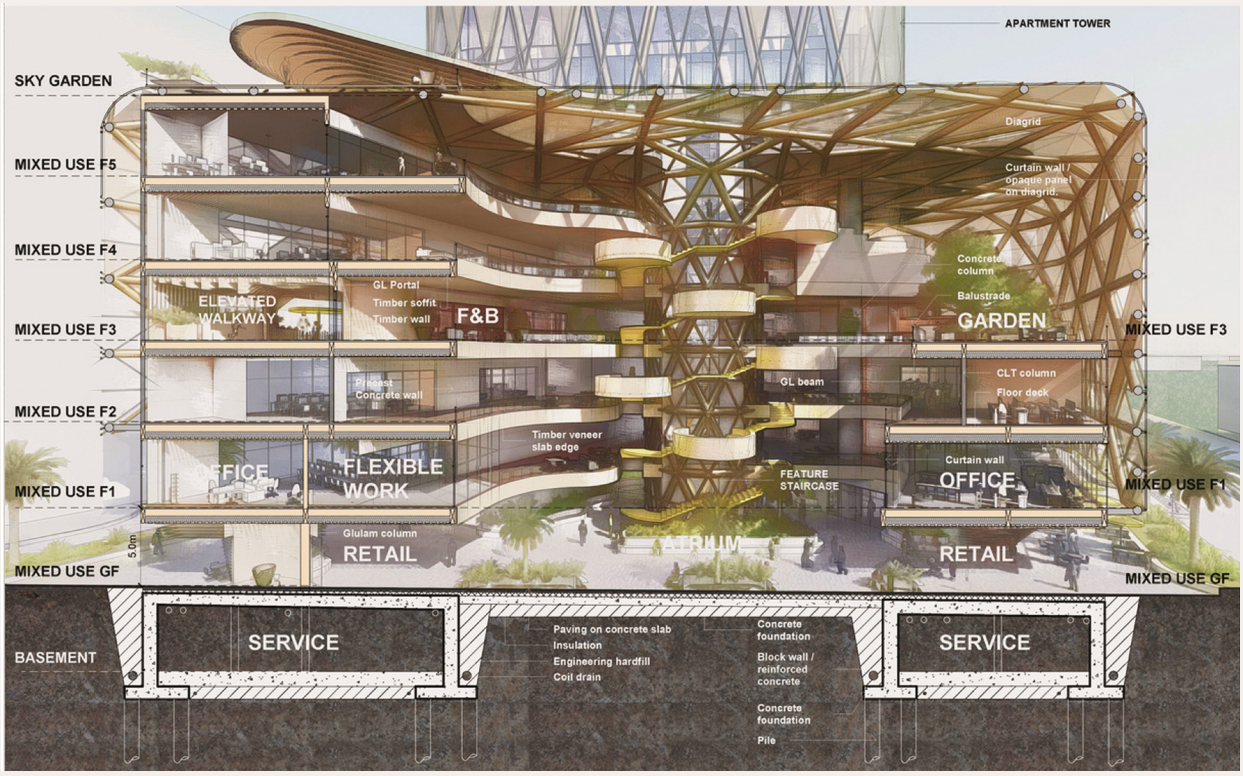
This site marks the end of Point Britomart, where Auckland's first European fort was established, on the site of an old pā; the Union Jack was hoisted on this spot in September 1840, and the City of Auckland was founded. Following the formation of the Auckland Harbour Board in 1871, the point was cut down and used to fill in Freemans, Commercial, Official and Mechanics Bays between 1872 and 1886.

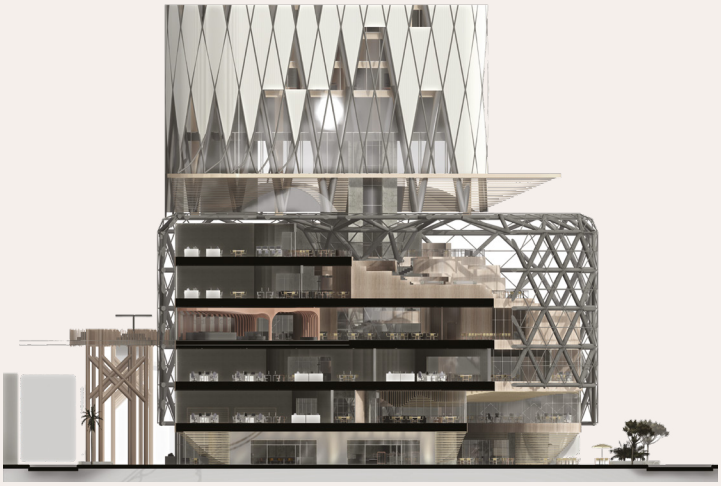
Culturally significant landmasses like Point Britomart have been quarried away and used to create reclaimed land currently occupied by the port industry. This process has decimated traditional Māori food harvesting regions and natural water bodies. Our design process is about restoring some of the history and memory of the site. The original shoreline, the headland and erosion are the main design drivers for our project. We created a laneway, based on the profile of the original shoreline, that connects Quay Street and Scene Lane.











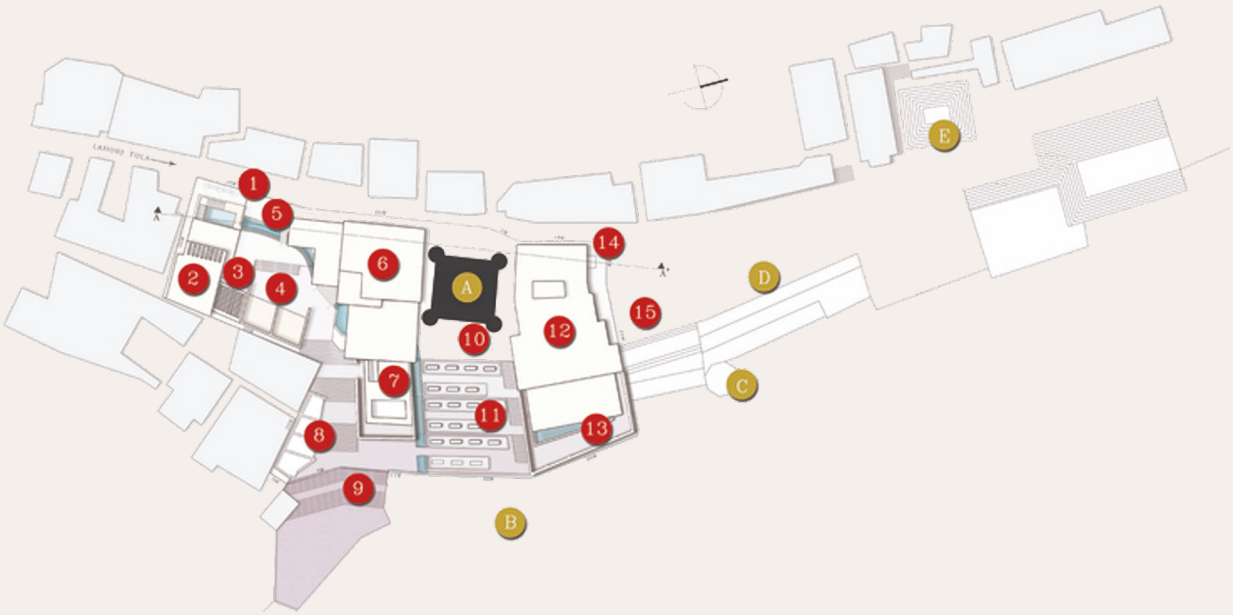
We offer public spaces such as a winter garden and the Headland Garden on the third floor, which sits at the same height as the original headland, to bring back the original view. The elevated walkway that connects the commercial bay and Spark Arena also goes through the building at this level. The idea of erosion has inspired us in form and mass, plan layout, structural exposure and façade treatment.

Master of Architecture (Professional)
Year 5

A supervised investigation of a research question formulated by the student is carried out with the aim of developing mastery in architectural design, through the critical application of design and academic research methods.

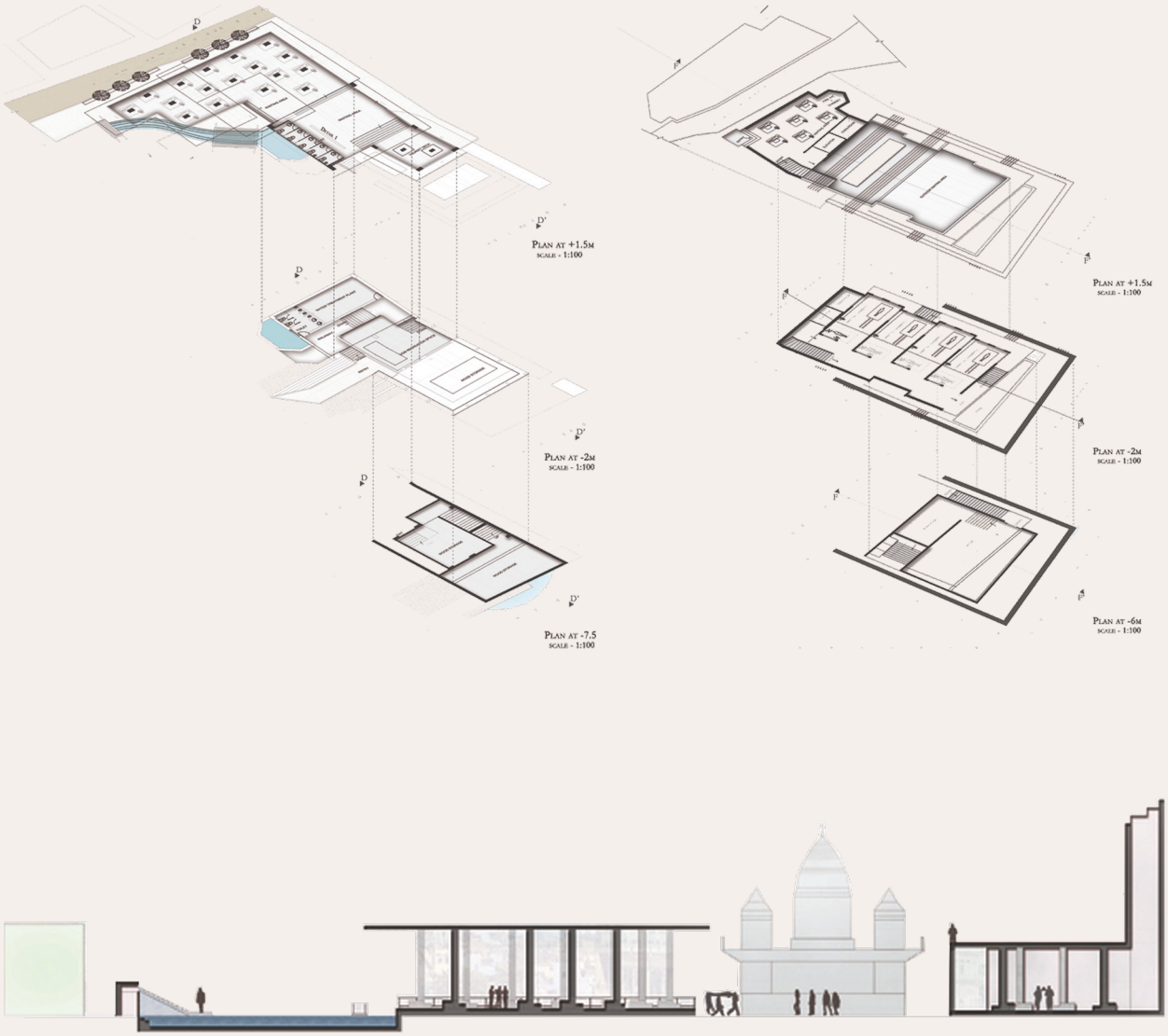
Ashwini Ram

Re-thinking the Manikarnika Ghat



1 Entry
2 Office
3 Wood Trade
4 Stacking Area
5 Water Body
6 Waiting Area
7 Water Treatment Plant
8 Wood Storage
9 River Bank
10 Temple Platform
11 Traditional Pyre
12 Electrical Crematorium
13 Services
14 Chimney
15 Exit
A Boothnath Temple
B River Ganga
C Water Tank
D Viewing Platform
E Kanikarnika Kund Pond

When thinking of the Hindu tradition of cremation, the first place that comes to mind is Varanasi's Manikarnika Ghat. This 'Great Cremation Ground' ('Mahasmashana': Maha = great, smashana = cremation ground) is the site of this research project. Situated in Uttar Pradesh, North India, on the River Ganges, or Ganga as she is locally known, Varanasi is considered the holiest amongst the seven sacred cities of India. It is considered the most auspicious place for Hindus to attain salvation and escape the cycle of rebirth. This research project, Re-thinking the Manikarnika Ghat, endeavours to remodel the Manikarnika Ghat into a modern crematorium while preserving the centuries-old traditional practices associated with death at this site.



Seeking to keep the mourners' experience as the central focus and responding to the environmental concerns yet preserving the traditions and spirit of the Ghats, three lenses of Issues and Problems, Religious Beliefs, and Traditions and Practices are adopted to develop a solution. Based on the resulting research design strategy, this study proposes a cluster of built spaces and infrastructure supporting traditional open-air cremations, an indoor electric crematorium, and other services at Manikarnika Ghat.

Ashwini Ram

Re-thinking the Manikarnika Ghat

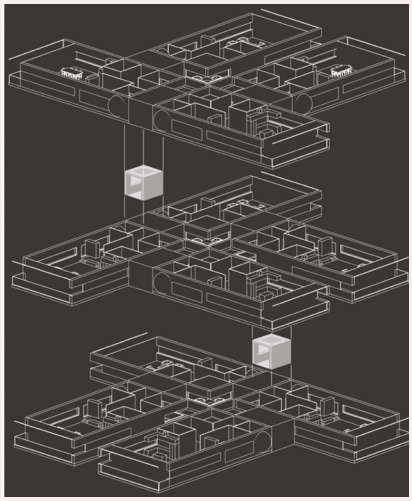
Alex Helg

Auckland 2070

The understanding of the origins of science fiction and dystopian worlds comes from current-day anxieties of the world around us. Stemming from Japano-American filmic futures that influenced *Blade Runner* (1982) and many other similar stories, to nuclear wastelands inspired by cold-war nuclear threats, the ideas we see portray possible futures and explore how we might cope in these situations.

The pandemic coronavirus Covid-19 (SARS-CoV-2) took the world off guard, and the effects of the pandemic have been something that 'Generation Z' and millennials have not had to deal with before. These 'unprecedented times' provoke ideas of dystopian futures amongst isolation and social distancing. The effects of lockdown and absence of work are significant factors in the sudden burst in violent and antisocial behaviour we see in America, with threats of social unrest, protests and rioting. This project aims to explore what a world might look like if the pandemic parameters of isolation, social distancing and contact tracing were a long-term reality. We can explore the effects these will have on social interactions and, most importantly, architecture. How will isolation architecture work, what are the defining differences, and how are these rules enforced with space and function? The setting is Auckland, fifty years in the future (2070), one of the last cities successfully fighting the virus throughout Aotearoa New Zealand. Auckland 2070 has become walled off from the rest of the country, and it houses the remaining few medical people able to fight the virus and produce a cure. As speculated, autonomy is a significant part of the way the city functions.

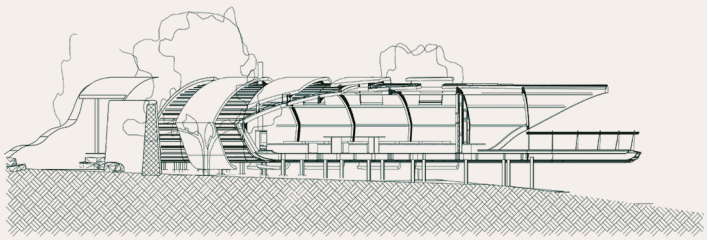
Due to the pandemic rule-set of social distancing and contact tracing, unmanned workforces (drones) are crucial to distancing and isolation: temperature-scanning drones, autonomous Ubers, robotic manufacturing teams and 3D-printed buildings are all defining points of this speculated future.

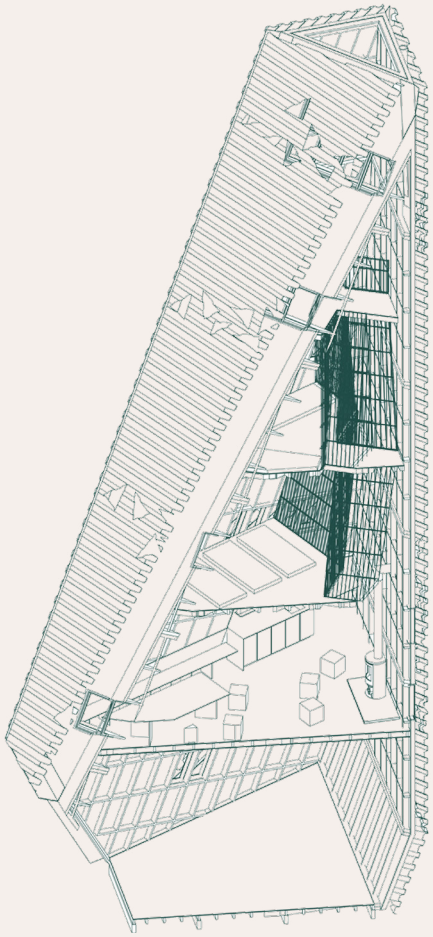


Matthew Ryley

Trails and Tribulations: A Journey Through Mountains

A journey of great importance, bridging the extremes of New Zealand's wilderness, from west to east, celebrates cultural awareness of the trials and tribulations of Ngāi Tahu and their quest for pounamu; battling across the main divide to conquer. This project seeks to find new solutions, educate, and give the respect to the natural environment that it deserves. Construction can touch lightly on its environment and be respectful of the way it interacts with nature. Māori did not use maps on paper like Europeans did, they used their oral language to describe places, stories and creation. 'Mahi kotahitanga' means to work together, and tramping – giving yourself to nature in all her moods – is doing just that. It is the great leveller for all diverse nationalities that call this place home.





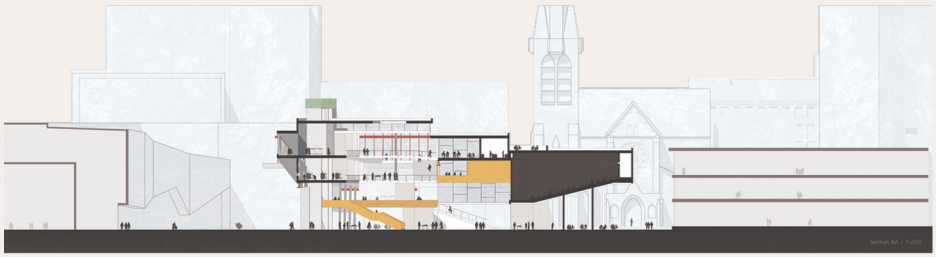
The designs that are the result of this research project attempt to embody the place that reflects all of our history in a way that respects and takes care of our land, our people and our tales. We may be a small nation, but we have big stories to tell.

Taylor Thorpe

Completing the Square

On 22 February 2011, a devastating earthquake struck Canterbury that changed the city of Christchurch in an instant. Cathedral Square, the geographic and metaphoric heart of the city, suffered some of the worst damage. ChristChurch Cathedral, a symbol of the city, fell, as did many other important buildings. Much of the Square's fabric was lost. Although the Square has seen many changes since its creation by European settlers in 1850, nothing was as dramatic as the changes it suffered on that day. Ten years on from the earthquakes, the Square is still a shell of its former self. Only three new buildings have been constructed, and the process of rebuilding the Cathedral has only just begun. This poses a question: how can new architecture act as an element that revitalises an urban space? With Cathedral Square's old vitality missing, it is in desperate need of life to remain the city's heart. However, there is also another layer to this.

How can this new architecture remain respectful to the historical qualities of the site? This project has developed a response that solves several issues that the Square currently faces.




ENJOY

Olivia Chiang

Ten Years After Fukushima's Triple Disaster

A decade after the 2011 triple disaster in Fukushima, Japan – the earthquake, tsunami and nuclear meltdown – some towns are still largely abandoned. Since 2017, when the evacuation order was lifted in Namie, a town eight kilometres from the nuclear plant, only five percent of its original population has moved back. A single engraved stone monument near the cemetery on the outskirts of town commemorates those who died. The monument and the area are starting to attract visitors, yet, despite the decontamination clean-up and government assurances about safety, the community's economic future is precarious. This project designs a memorial landscape and architecture to remember the disaster, to welcome visitors and to rebuild the community of Namie; a living memorial.

The project curates a journey for visitors across a memorial landscape, between the hills where, in Japanese religious belief, gods reside and the sea where many fishermen worked. The landscape is shaped to reflect the ditches of the former farmland and the volumes of earth excavated in the decontamination process. The architectural spaces are choreographed for spatial richness through compressed and expanded areas to gather the community and engage visitors. Educational workshops promote learning, public areas provide for social interaction, and small galleries narrate past events and house temporary exhibitions. The earthen bowl-shaped space is the heart of the building. Visitors descend below grade as a solemn reminder of the tragedy. The sunken area exhibits important stories and artefacts from the past. This space leads visitors through an exhibition gallery to the underground memorial shrine from which they emerge into the light.

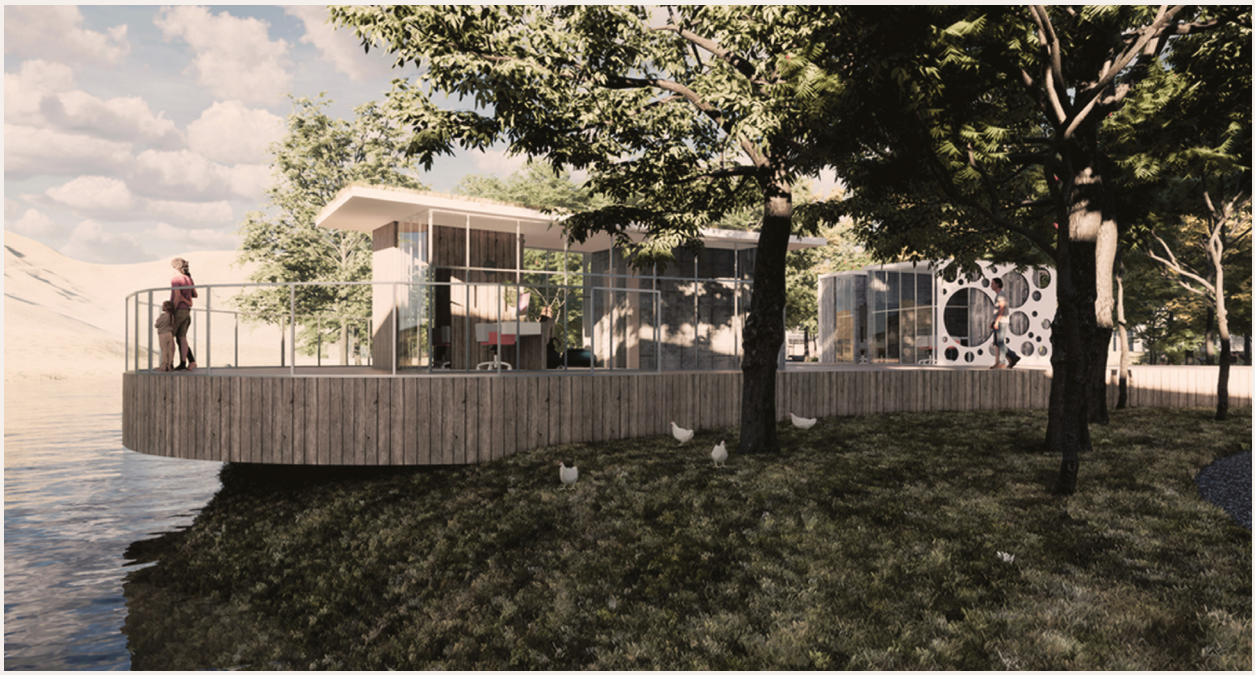
The project is a museum, educational centre, community hub and, crucially, a living memorial to reaffirm life and celebrate the future.


15

Ben Nunnerley

A Rural Respite

This research investigation focuses on the design of a rural respite facility for those affected by autism, a neurodevelopmental condition that affects approximately 80,000 New Zealanders. It is a condition that impacts learning styles, communication, social interaction and behaviour. Autism treatment is traditionally approached through personal aid and therapy, often within dull, clinical environments. Current facilities tend to focus only on the patient, while families and stakeholders are disregarded. This project, which looks to address this deficiency, explores the potential benefits of architecture in a natural and rural environment for those affected by autism. One of the ways that respites and small communities for autism can function effectively is through a strong connection to the landscape. In this project, the notions of prospect and refuge provide an overarching means for organising and understanding the relationship between architecture and nature. Refuge is linked in harmony with respite as it evokes a sense of safety and protection from surrounding threats. This has a particular impact on autism, as refuge has the ability to remove the stresses and confrontation associated with hypersensitivity and social integration.



Cameron Rigby

A Cancer Centre Cure

Inspired by my late mother's cancer battle, this thesis project highlights the need for a community-based cancer-care centre. The centre is sited on Auckland's North Shore, on the old Smale's Quarry site adjacent to North Shore Hospital. The centre's primary focus is to be on providing an uplifting and healing environment for its patients and caregivers. The design attempts to break down institutional barriers and reintroduce nature and scale, with a strong focus on the patient experience.

The focus for the centre is on areas of high stress. These include waiting areas, entrances and wayfinding, while resolving these problem areas with biophilic and salutogenic design methods. The centre provides facilities accessible to the public, such as shops, cafés, a gymnasium and pool, to encourage engagement with the local community. The objective of the facility is to have a positive impact on both cancer patients and the healing environment, as well as being integrated within local society.


Smales Farm
STAIRS TO CANCER CENTRE
LIFT CORE
TOILETS
ENTRY
OUTDOOR DECK/PATIO
PHARMACY
ATRIUM
BOOK SHOP
MAIN LOBBY
DELIVERY ACCESS
PEDESTRIAN ACCESS
SEATED AREA
FLORIST
INFINITY LAP POOL
STAIRS TO RECREATION CENTRE
CHANGING ROOMS AND TOILETS
RECREATION CENTRE RECEPTION AND ADMIN
LIFT CORE
CAFE
ENTRY
FREE WEIGHTS AREA
CARDIO AREA
MAIN ENTRY/ POWHIRI AREA
PIN LOAD MACHINES
Te Kopua o Matakerepo
Oneoneroa
RECREATION CENTRE
STUDIO 1
STUDIO 2
Te Kopua o Matakerepo

Tanya Bezuidenhout

The Tomorrow of Yesterday: Understanding the Layers of Built History

Historical buildings contain more than bricks and timber, they contain memories, experiences, philosophies, agendas and history, all of which become threatened when the building gets damaged and no longer plays an active role in our society. As a result, conservation efforts are vital in preserving the history of these buildings and ensuring they continue into our future. When a historical building becomes damaged, there is often controversy over whether to repair and restore or not. If one does restore it, to which stage of the building's history would one have the building return to? What makes a building's age more important than its current history? All too often, moments of history will be wiped from a historical building so that it can be returned to its original state. But what is original? Something that happened one hundred years ago, or last week?

This project challenges the conservation standards often used when historical buildings become damaged. In the aftermath of the September 2010 and February 2011 Canterbury earthquakes, many historical buildings remain as fragments of what they once were, needing more funding to allow for their complete restoration. The Canterbury Provincial Council Buildings are a perfect example of this. First built in 1859, the Council Buildings bore witness to a colony's development into a nation, reflecting moments of prosperity, growth and confidence throughout the provincial government years. Sustaining significant damage during the earthquakes, the Provincial Council Buildings have remained vacant ever since.

Thus, the purpose of this project was to find relevance in conservation philosophies of architects, theorists and historians, with a particular focus on architect David Chipperfield's processes and theory behind his design for Berlin's Neues Museum, to create a design response that accepts all layers of a building's history and the passing of time, allowing the walls to stand 'without silence.' It acknowledges the new within the old, but also that the past is just as important as the present. The result is a building that accepts growth and change as a natural part of its life, and a building that has made permanent the memories of a life gone by.

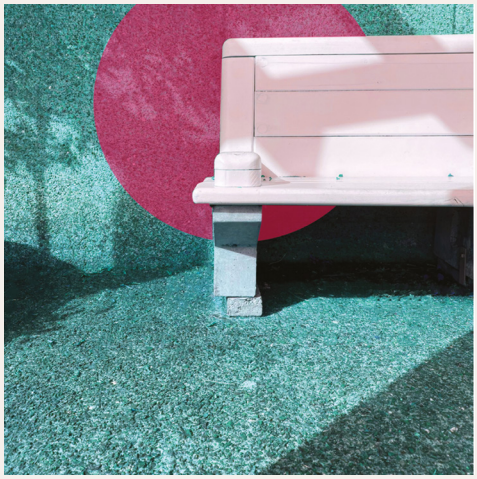
Electives

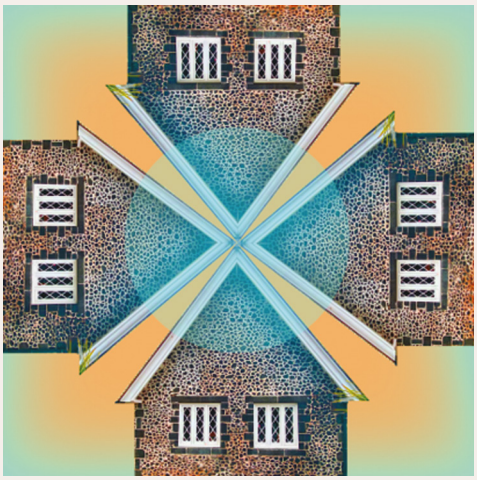
The elective programmes inside the Bachelor of Architectural Studies showcase a wide range of skills and expertise that are not just studio-based projects.

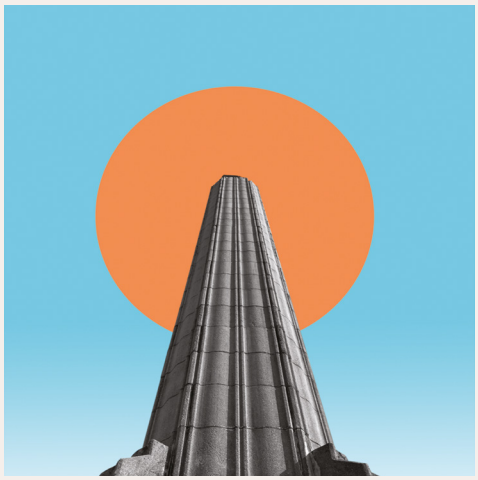
In this section of the journal, projects are explored through Architectural Photography, Design Processes, which delves into making a wooden stool over the lockdown period, and a Resource Matters paper, which looks at sustainable solutions through Māori architecture.

Shené Strydom

Architecture as Folly







Following my photography journey I was really interested to see how Folly and architecture could mix in an interesting way. One photographer has consistently stood out to me, Jeanette Hägglund, who is famously known for her bold colours and architectural statements. This is something that I was inspired by and strived to find, through creating my own balance between what is real and what I imagined the image could be. The contrasting colours aim to balance the image, and in most cases create a 1/3 ratio offering an off-centre perspective.

The images were composed through taking the picture of a building on an iPhone, followed by lightly editing the image to correct any lighting, perspective or obstruction. The pictures are then further edited in Photoshop to create the ratios, new colours and balance in the photo.

Stella Hamilton Wallace

A Trip Through Hauraki – Thames to Waihi

I have taken this trip many times, but this time I made the conscious decision to actually observe. This series provides a record of old public buildings in the local settlements of rural Hauraki, relatively unchanged in decades, like artefacts of past culture put on display. The remarkable captured in detail and the unremarkable made remarkable.

Craig Butland

Architecture as Journey

As much as these photographs represent the journey of a Lego car, they hold wider meanings relating to journey: the journey of growing up playing with Lego, graduating now to big sets; the journey of my photography, self taught; finding a way to get where I want to get, not letting those who might try put doubt into me get in the way. A photograph is just half the story of what actually is going on.

Nidhi Patel

Architecture as Urban

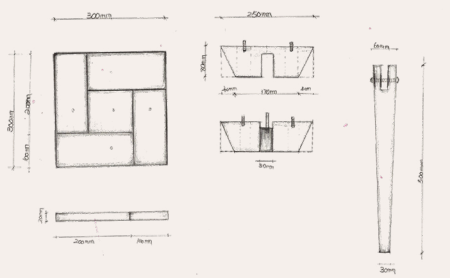
This series aims to capture Auckland's urbanity during a pandemic, exploring lighting and composition techniques, with the punctum of the image being the lack of people in the urban environments.

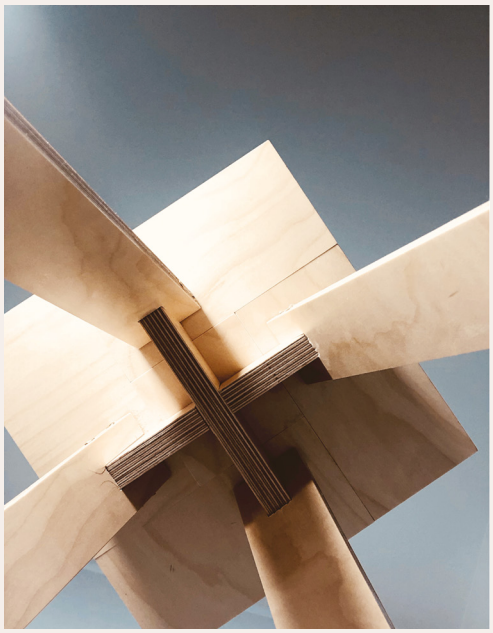
Sophia Dai

Covid Lockdown Stool

It was a magical journey from the design of the stool to the finished product. Chair, as the furniture that has the closest contact with the human body, is indispensable to all of us, whether in office, study or home. So I measured the height of everyone in my family, and the size of the chair they thought was the most comfortable and used that as my basis. I did a lot of research to see how other furniture designers designed a piece of work, including the choice of materials, the shape, function, scale, size, colour, materials and structure of the stool.

The sketch is the most rapid and easy way to turn all kinds of ideas in the designer's mind into visual graphics, it is the best way to record the idea of the image. The process of sketching is the process of coming up with a plan. The chair surface is divided into five pieces, breaking the original pattern of the wood and reintegrating it into its own pattern. In terms of proportion, I used a ratio of 1:3 to determine the size of the chair face and chair foot. Although the process was not as simple as expected, it was a special surprise to see my stool completed. This is the emergence of an object, from a piece of wood to a chair.



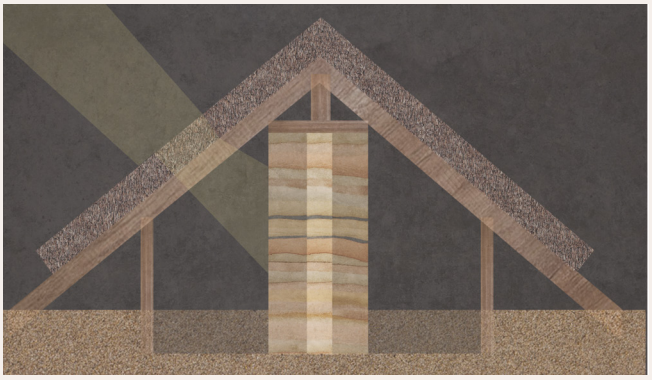


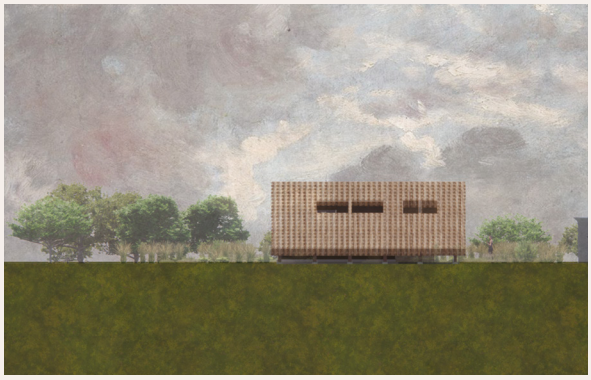
Victoria Carran

Resting Whare

Resting Whare is a tramping hut that is built from the ground in which it sits. It is a simple structure that provides the basic requirements for rest. Set into the ground, it is enveloping and cave-like, with a thick earth spine constructed from the excavated clay subsoil and a dense raupō roof that stretches down to the ground on two sides.

While researching the application of natural materials to contemporary architecture, I was able to look to my ancestors for clues as to how to design sustainable architecture for the future. Pre-European Māori architecture was naturally renewable, constructed from a diverse range of locally sourced materials and native plants. A harmonious relationship with the environment was required for survival.





Of importance to Māori in the context of architecture is a communal approach to resources, acknowledging the past and the future through sustainable harvest and cultivation through practicing kaitiakitanga. I am interested in how I can learn from the traditional materials and methods used in Māori architecture, and how these could be interpreted through contemporary design.

I have designed a communal resting space that could be built on Department of Conservation land near a body of water and a tramping track. Site selection would be determined by the availability of materials, allowing for a building that is made directly from its natural environment. This direct relationship between the availability of resources and site selection reflects a pre-European method of settlement. Ideally, timber and raupō could be harvested and processed nearby. Clay subsoil could be excavated from the building site and reused directly in adobe bricks that form the structural spine, seating, and low border walls. The main construction is simple and able to be carried out remotely by community members.

Interior Design

A residential-focused diploma covers interior design fundamentals. The courses explore design principles, theories and history, right though to application and development of practical business.

Carrying on to a commercial diploma will advance technical knowledge and CAD skills, consenting and documentation processes, products, materials and lighting design. This course develops the design of complex environments within the retail, hospitality and workplace sectors.

Gun Young Moon

Balmain Residential Project

The Balmain family wanted to build a house in the Waiuku area to enjoy the countryside, away from the demands of urban life. The family prefers the look and feel of mid-century furnishings. The primary request was to display their own artworks and their existing chairs. The lounge of the Balmain family home was inspired by the landscape of Waiuku. The natural palette of the landscape brings a calm and cosiness. I have chosen raw, textured materials and an eclectic mix of furnishings to connect with the peaceful landscape through the window. This space has exposed a comfortable yet sophisticated style, reminiscent of a bach.

Colours found in leaves surrounding the property feature both greens and browns, providing accents based on neutral tones for the lounge. The Balmains' bedroom is inspired by the clients' own artworks and chairs. To enhance this space, Bauhaus-style furniture was selected to work alongside contrasting patterns. Black and natural browns provide accent colours as required. The combination of the achromatic palette and Bauhaus style helps to create the uncluttered and sophisticated spaces, and now the clients can enjoy their desired lifestyle in their dream location.

Huiyan Wang

Balmain Residential Project

This project responded to a brief that required a redesign of the interior of Balmain, a transportable home located in Raglan. Consideration of sea views was paramount to the understated design, demarcated plan and pre-existing Bauhaus furnishings. The brief also called for indoor–outdoor flow while utilising intelligent storage solutions. The main focus for space planning was to maximise the northwest sea views and natural daylight. Balmain's lounge was oriented for this purpose and combined reclaimed timber, tactile textures and vintage mid-century furniture for a pared-back, modern rustic finish.

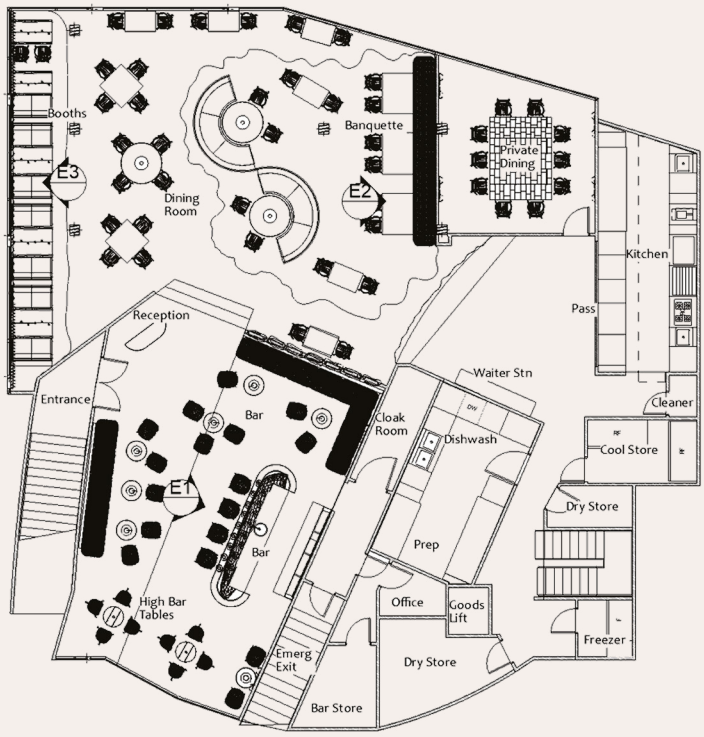
The calming, earthy palette was derived from the views of Raglan, consisting of creamy beiges, deep browns, forest greens and an ivory hue drawn from surrounding toetoe. The master bedroom was made reminiscent of Hamptons style, with a nod to beach settings of Aotearoa New Zealand. Deep, moody tones were selected to evoke feelings of serenity and relaxation.

Ann-Louise Gough

Commercial Design Studio, Hospitality Project Tini Tini

The brief provided was to create an interior design proposal for a contemporary New Zealand-themed restaurant/bar serving a chosen specialist local cuisine. A key focus of the project was embedding an understanding of mātauranga Māori within the project by incorporating Māori values and Te Aranga Design Principles. Students were required to decide on the dining concept and menu offerings, in conjunction with the research of a Māori legend, in this case that of Rūaumoko, the Māori god of earthquakes and seasons. These elements were to be embedded both visually and spiritually within the design concept. The name Tini Tini refers to Tini a Rūaumoko, the Multitudes of Rūaumoko. The design embodies Rūaumoko and celebrates the Ngāti Whātua Ōrakei connection to Rangitoto and Mechanics Bay.

Dining concept 'The Char-Grilled Beast' was developed with the spirit and symbology of Rūaumoko, Rangitoto and Mechanics Bay. These elements became embodied within the design: the shape and form of volcanos, seismic activity, waka, materiality, furnishings and colour-palette selections. Te Aranga Design Principles of Mahi Toi, Taiao, Mauri Tū, Tohu and Mana, and Māori values of manaakitanga and kaitiakitanga provided design direction and were the guiding ethos of the Tini Tini concept.


Booths
E3
Dining Room
Banquette
E2
Private Dining
Kitchen
Pass
Reception
Entrance
Bar
E1
Bar
Waiter Stn
Cloak Room
Dishwash
Cool Store
Cleaner
Dry Store
Prep
Office
Goods Lift
Freezer
High Bar Tables
Emerg Exit
Dry Store
Bar Store

Erin Bird

BirDesign Office

The brief for this student project called for the design and fitout of a vacant two-storey office, intended for a small interior-design company that specialises in corporate office spaces. My design concept was based on a 'bird's nest,' a place for users to congregate safely and comfortably during their transition from home-based working back to the office, following Covid-19 lockdowns. The design centres around the core – the atrium, the heart of the 'nest' – creating a buzz of activity around the perimeter and allowing users to flit freely through a variety of zones. The design facilitates activity-based and agile working methodologies, with the incorporation of different zones that foster collaboration, social interaction, focused work and respite.

These areas include a shared workstation area, main boardroom, private meeting pods with multimedia functionality, breakout areas, 'hot' desks, a collaboration and presentation space, lounge areas with soft seating, and a large café and kitchen 'plaza.' Biophilic elements such as hanging plants and a living wall, the soft colour palette, contrasting textures and the use of repurposed timber throughout the space evoke a sense of comfort within nature indoors, giving a breath of fresh air to the occupants inside.

Erin Bird

Commercial Design Studio, Hospitality Project Puia Char & Smoke

Puia Char & Smoke offers patrons a seductive fine-dining experience gazing out over the Waitematā Harbour toward Tāmaki Makaurau's famous volcano, Rangitoto. Serving fiery cocktails and locally sourced char-grilled seafood, shellfish and indigenous vegetables native to the harbour and surrounding Auckland areas, Puia manifests the rumbling elements of the volcano's rich cultural history. The design is inspired by the traditional Māori myths of the origins of Rangitoto, including the legend of Rūaumoko the god of earthquakes, volcanoes and seasons, and son of Sky Father Ranginui and Earth Mother Papatūānuku as well as the legend of the ancient tupua who were cursed and expelled to Rangitoto as punishment for angering the goddess of fire, Mahuika.

'Puia' is te reo Māori for volcano, geyser, hot spring and eruption. The name summons a respect for the natural and forceful power of Rangitoto and the cultural history surrounding it. Puia Char & Smoke pays homage to these traditional legends through its food and beverage offerings, design of the interior, symbolic decorative elements, materials and finishes, and the people connected to the establishment, and emulates the dark, mysterious and trembling moods that these local legends evoke.

Landscape Architecture and Garden Design

Landscape architecture brings together science, technology, art and design, in order to engage in a broad range of environmental design projects. These can involve urban design, transportation infrastructure, waterfronts and resorts, coastal, estuarine and inland ecologies, and creating engaging and vibrant public spaces.

The landscape design diploma focuses on garden design, principles of plant selection and soil management. The course develops skills in technical draughting, rendering, production of specifications and installation schedules.

Rhys Baker with Sebastian Bartleet and Robert Havell

Pukekohe Sequential Drawings

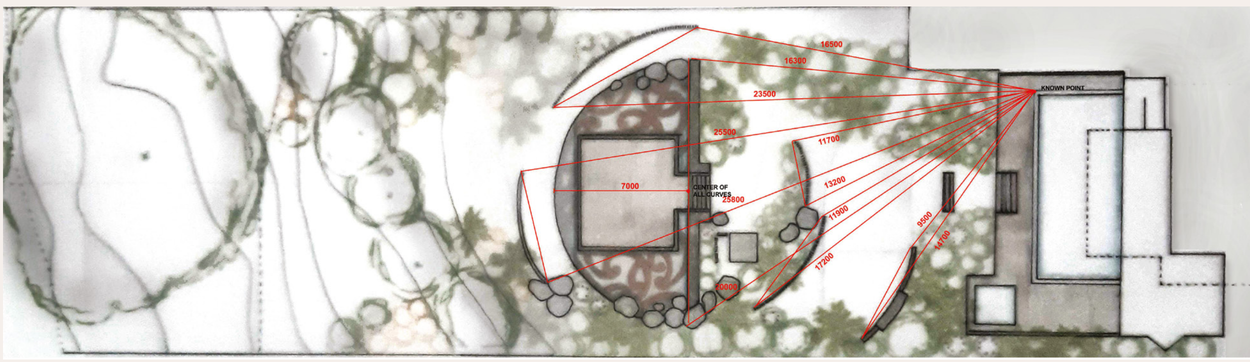
Landscape Architecture Studio 5 was concerned with mana whenua, community and stakeholder engagement in the masterplanning design process. The site for this study was Pukekohe, and the sequential drawings are based on my experiences of the initial site visit for the first assignment, a landscape analysis. The drawings are rendered in the style of early-twentieth-century tourism posters, partly for aesthetic reasons but also to visually express our analysis of the site. The style works by selectively colouring aspects of the drawing and leaving others uncoloured. I found that by doing this I could bring forward those aspects of the community, landscape and urban form that we most engaged with, the remainder being subject to change via our masterplan.

Mathieu Easterbrook-Egan

Tipu Landscape Design

My passion for design stems from my Māoritanga. This is easily seen here in this design, where I went all out, went with the flow and loved every minute of it. The clients wanted a full landscape that preserved the beautiful view to the beach, screened out the neighbours and provided a space where the client would be able to practice and teach yoga.

This concept revolves around the yoga space. My intention here is to introduce a te ao Māori approach in creating a truly unique space, focusing on the simlarities between yoga and the holistic ideas of rongoā. I thought this could be a great opportunity for the client to incorporate some of these holistic elements into her own teaching and practice. For the yoga space itself, a simple hardwood floating deck over a reflecting pool. This is surrounded by an oasis of native plants and rongoā species, and tukutuku-inspired screening makes this space feel secret, private and practical, while tying the landscape together beautifully. As the capstone project for the diploma of landscape design, this has been a great opportunity to use the skills I have developed during the course to express what I love about design.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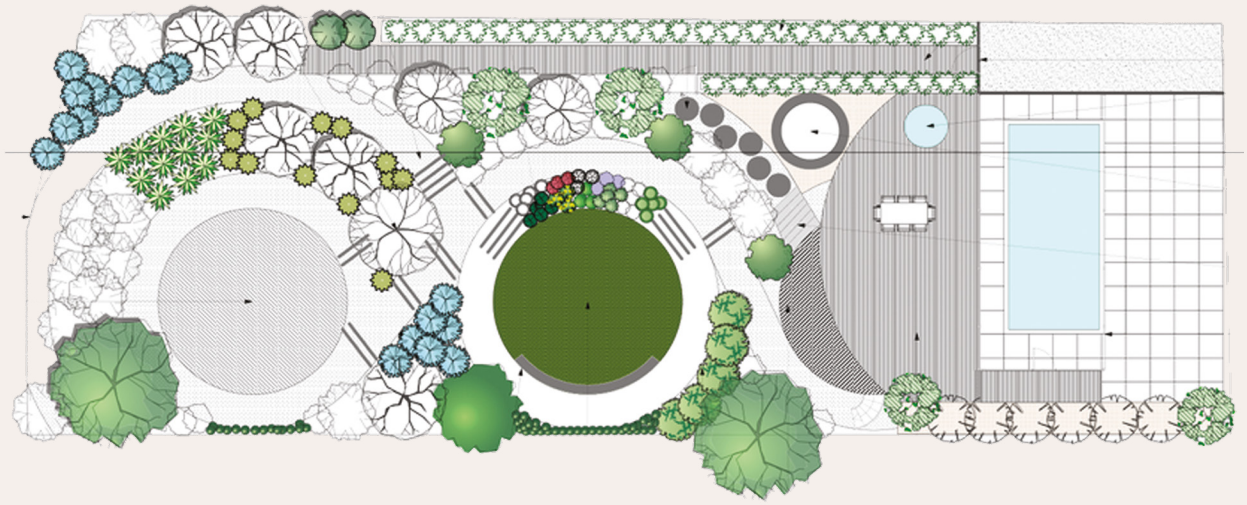
Eve Lennard

Beresford Street, Bayswater



This view from the pōhutakawa, with the soft silvery winter light and sandy grey curved forms of sand within Shoal Bay, is the thread I want to connect with the house. The larch detail and white walls of the house are linked to this view by curved land-forms, bringing you down the slope to the round yoga pod with the same view. The curved pattern of the larger sand bar directly in front of the property creates movement from the house down to the beach. To achieve this, the existing deck is extended from the pool area, raising the spa pool and extending out in curved form into the garden. Here we have a newly created relaxation/ entertaining space, transitioning into the garden by another small, curved deck to the lawn space for the grandkids, a small orchard and additional space for growing herbs and vegetables, then onwards to the round yoga pod.

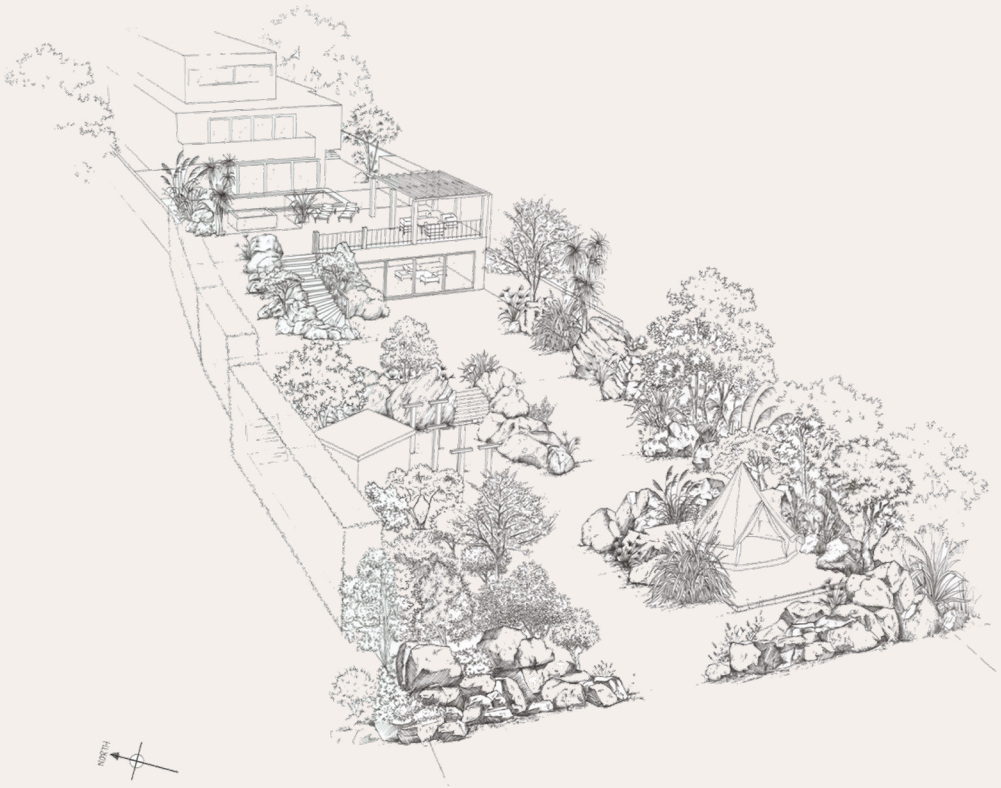
A bamboo corridor will lead the neighbours down towards the beach; the clumping bamboo will provide screening from the large house next door and create a feeling of being enclosed and drawn down to arrive at the wide expansive view at the water's edge. The path remains obscured from public view by new native planting.

Paul Bacon

Bayswater Harbourside Concept

The design for this site – which consists of an existing property containing a residential dwelling and pool, and joins directly onto an empty, sloping beachfront section – was inspired by designer Luis Barragán, and the cohesion between architecture and natural elements of the land. Presented as a coastal garden carved out of land's edge, careful use of space, scale, proportion and repetition help achieve a sense of balance and unity. Key construction elements (including a mid-level yoga/project studio) have been designed to make a strong connection with the existing house and pool. The existing sloping section has been equally divided into three terraces – the upper terrace has been projected outwards to elevate extensive sea views, while the lower level gently merges onto the beachfront esplanade.

Contours have been shaped to form a keen sense of harmony and flow as the expansive lawns seamlessly connect the various outdoor rooms. The alfresco poolside dining area, yoga studio, orchard and oceanside glamping/day platform are linked by peaceful lawn channels that encourage the observer to move from one outdoor space to the next. Concepts of colour, restraint and subtlety are all virtues that have been expressed through the careful use of New Zealand native plants. Plants have also been selected with particular focus on movement (lots of toetoe, etc.) and height (shrubs, flaxes, groundcovers) so as not to impede spectacular inner-harbor views from all of the terraced levels on the property.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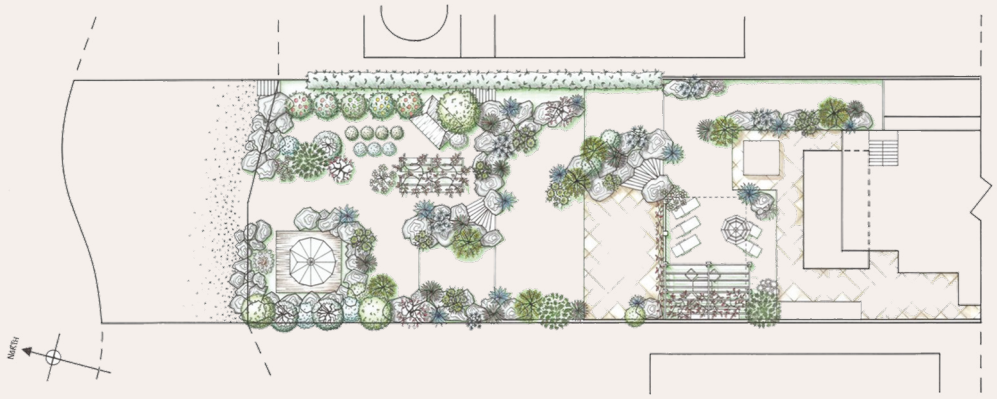
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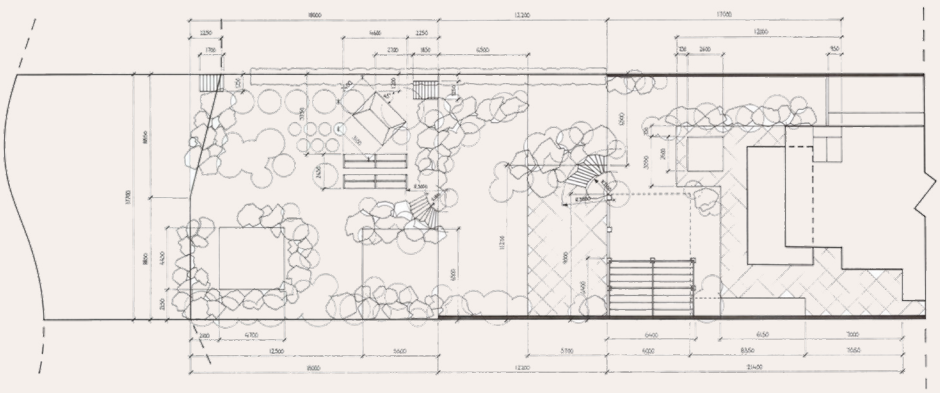
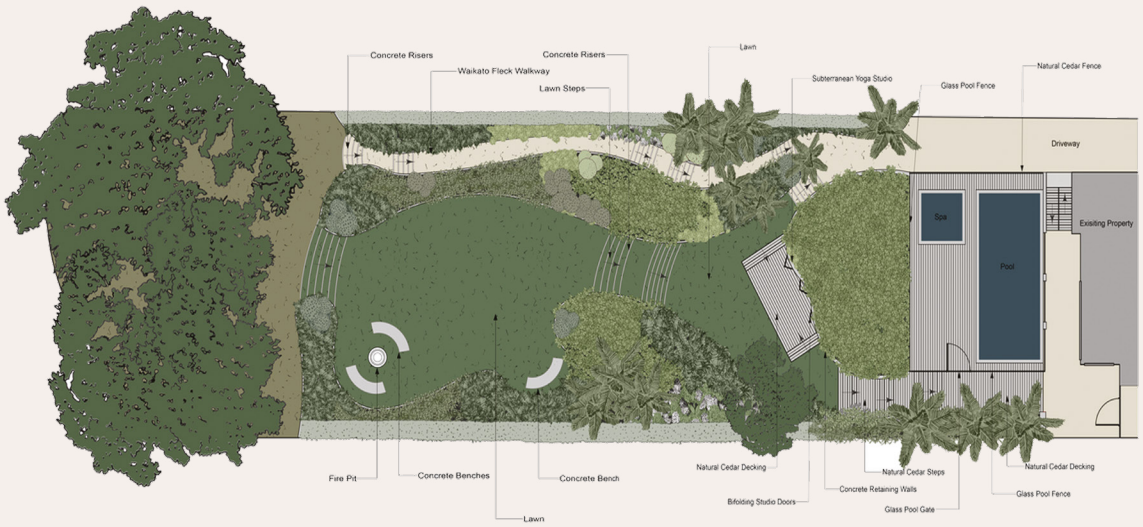


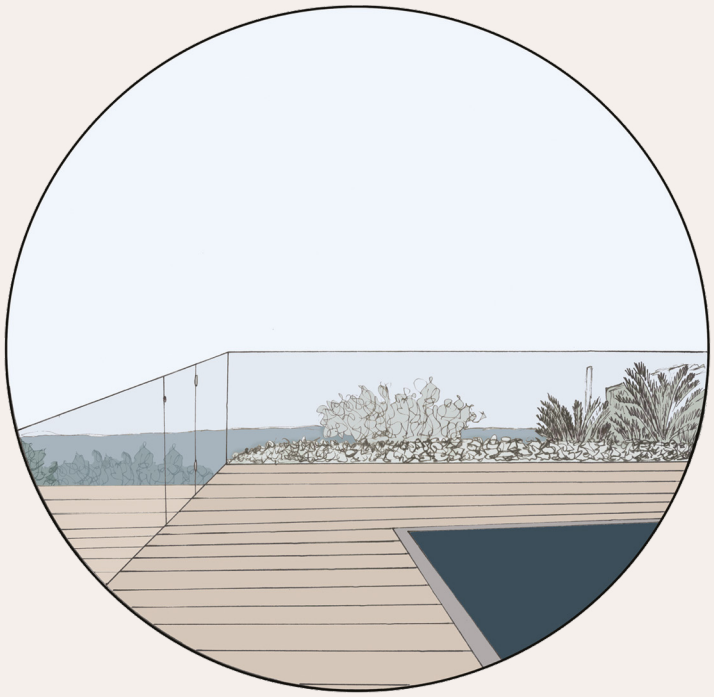
Gareth Walker

Bayswater Harbourside Concept



This is a beautiful harbourside property on Auckland's North Shore, where the owners have acquired an empty 600sqm section that sits between their home and the waterfront. With a stunning north-westerly outlook, but with little privacy from the neighbouring properties and requirements set by the client, I had four key objectives I wanted to achieve with this concept: embrace the views from both the current home and my garden design; create a sense of seclusion and introduce private spaces throughout; design a yoga studio that does not obstruct the views; make a usable space for the whole family, while offering a separate beach access for close neighbours.

Making use of the natural slope of the section, I introduced a multi-terraced garden that embraces sweeping curves around its borders, so the family can capture the stunning views and share special moments, while maximising privacy. The subterranean yoga studio sits below the home, within the heart of the garden design, offering seclusion and sanctuary. And, finally, the beach access does not intrude on the family garden but offers its own sense of journey through native sub-tropical coastal plants.



Peer-reviewed Articles

Introduction

Dr Renata Jadresin Milic

In this Issue

The peer-reviewed section of *Asylum 2021* comprises seven papers on architectural and urban research, pedagogical innovation, fabrication investigations, and collaboration with communities and industry. This year, the papers are grouped thematically rather than based on their research category. The three categories: Original Research Articles; Review Articles – original, detailed and critical research previews; and Short Communications – preliminary original research articles, are stated on the first page of each paper.

In "Suburban Styles: Housing Design at Higher Densities in Aotearoa New Zealand," David Turner provides an overview of suburban housing design in Aotearoa's cities that evolved through the twentieth century with versatile styles to suit changing fashions and various forms of external expression. The paper seeks to provide a context for a discussion of speculative housing markets and the absence of design controls. It presents an overview of styles of architecture that emerged between 1995 and 2006 in the first phase of post-RMA market housing, focusing on Auckland's intensification programme and its outcomes.

In "Māori Architecture: A Response to Colonisation," Maia Ratana presents the discussion and critical investigation of the very relevant and vital topic of architecture that becomes a mechanism for resistance. This paper gives an insight into the impact Māori architecture has had politically, focusing particularly on two buildings that both created unique pieces of architecture. Hiona, built in the early twentieth century, and Tapu Te Ranga, which began construction in the 1970s, were both refuges and symbols of autonomy, and have had a lasting impact on generations of Māori and non-Māori. The paper argues that it is possible to create presence during conflict in a meaningful way with built architecture, and to portray a sense of belonging and human occupation.

Xinxin Wang, Matthew Bradbury and Lúcia Camargos Melchiors, in "Climate Change and Housing: Exploring a New Urban Model to Help Build Resilience to Climate Change," discuss conceptually how designing for both affordable housing and climate change may be approached.

By acknowledging the underlying landscape and the consequence of climate change within the contemporary city, a collaborative design investigation between Kāinga Ora and students from the Unitec School of Architecture was conducted. The studio uses a real-life proposition and a development site in the Tāmaki regeneration zone as a study case. The paper argues that this investigation resulted in a new awareness by landscape architects and architects that demonstrates the two practices are inseparable in the face of climate change.

Yusef Patel, Wing-Tai (Bobby) Hung, Peter McPherson and Edward Peni in "Te Pūtahi Auaha: Avondale Graffiti Pavilion," reflect on the case study of a collaborative design practice between Eke Panuku Development in Tāmaki Makaurau Auckland and students from the Unitec School of Architecture. Developed as an architectural design intervention for a leftover space within the suburb of Avondale, this project aimed to foster cultural recognition of a place within diverse communities. In this paper, the authors focus on presenting the learning and development of this architecture course and its pedagogical elements, with the architectural process brought into clear focus.

Tanya Bezuidenhout and Graeme McConchie, in "A Layered Conservation Response to the Layers of Built History," develop and explain the idea of the legibility of layers of history when adapting historical buildings. An analysis of applied conservation principles in the selected precedent – David Chipperfield's project of the Neues Museum in Berlin – and the various conservation approaches applied here are further tested as the design responses for the earthquake-damaged Canterbury Provincial Council Buildings in Ōtautahi Christchurch. Based on the research of theory and practice of heritage conservation and adapting historical buildings, and conducted within the Conservation and Heritage Research stream in Unitec's School of Architecture, this paper contributes to the understanding of local heritage-building conservation in the wake of the earthquakes, as well as in the broader international context.

In "(Re-)Uses of Historical Knowledge in Architectural Education: The Value of the Client – Reginald Ford on Professional Practice," Milica Mađanović, Cameron Moore and Renata Jadresin Milic announce the second stage of the Unitec research project devoted to Gummer and Ford that is envisaged to build up to the 2023 centenary of the firm's establishment – seen as a milestone in the New Zealand architectural calendar. They outline the connections between academia and architectural practice, and the academic courses in architectural history and professional practice in particular. By building on Reginald Ford's 1921 publication "Architect and Client," explanation of the architectural practice, what an architect is, and what an architect does, this paper aims to show that, though commonly understood as detached from practice, history teaches valuable lessons and provides solutions for contemporary professional challenges.

In "Enigmatic Assemblages: Follies at the Intersection of Architecture and Photography," Annabel Pretty discusses the works of artists

Zacharie Gaudrillot-Roy, Carl Zimmerman and David Trautrimas, exploring the relationship and conflict between the photographer/artist and architect in creating the image of architectural space. Pretty identifies a contradiction that challenges the boundaries of existing practices and paradigms as a central engine for the articulation of relevant discourses and narratives, and reflects on its impact on contemporary spatial conception and practices.

In 2021, the *Asylum* editorial team has continued collaborative efforts to transform *Asylum* into a globally recognised, quality-assured, peer-reviewed journal that provides a platform for architectural research that serves its community while simultaneously showcasing the achievements of Unitec's postgraduate research students. We hope that the range of architectural research articles in this issue, written by Unitec academics and postgraduate students, continues to challenge traditional notions of what architectural research is and can be. Creating connections and partnerships with industry and community, and opportunities for colleagues and students to co-operate with them, as well as developing synergies between the programmes of teaching, have all been part of this *Asylum 2021* issue journey.

We would like to use this opportunity to thank all who contributed to *Asylum 2021*. Special gratitude goes to the Advisory Committee and peer reviewers, whose academic and professional expertise and opinions helped us decide the publishing merit of the work submitted. The constructive feedback and insightful comments were greatly appreciated by both the papers' authors and the *Asylum* editorial team.

Original Research Article

Suburban Styles

Housing Design at Higher Densities in Aotearoa New Zealand

Dr David Turner

Abstract

Suburban housing design in Aotearoa New Zealand's cities evolved through the twentieth century with adaptable styles to suit changing fashions and various forms of external expression. Designers followed a path that saw a gradual simplification of decorative detail and material diversity, while continuing to rely on, with rare exceptions, the single paradigm of a one-level timber-framed detached structure. By 1990 style preferences in new subdivisions had settled on an unostentatious modernist architecture that suited low neighbourhood densities seldom exceeding nine dwellings per hectare. Architects had little to do with the mass of suburban housing.

The focus on the environmental and economic imperatives of urban sustainability after the publication of the United Nation's Brundtland Report in 1988 coincided in Aotearoa New Zealand with significant political, economic, demographic and social change. In response to these conditions, and under the recently adopted Resource Management Act of 1992 (RMA), the Territorial Authorities re-set planning policies to inhibit sprawl, and to encourage housing intensification in the cities. The ideologies underlying neoliberal economics now passed design controls over to the housing industry, emphasising the use of the word 'management' in the new, radical planning legislation.

Architects working for the first time in the field of higher-density housing began designing with multi-unit typologies that were outside their practice experience, and that were also unfamiliar products in the speculative housing markets. In the absence of design controls, extraordinarily inventive styles emerged in the 'first generation' after 1995. Some were competitively styled to attract sales, or to distract attention from other characteristics of higher density. They became a refreshingly different presence in many of Aotearoa New Zealand's inner suburbs, marking the arrival of another form of housing. This paper considers styles of architecture that emerged between 1995 and 2006 in the first phase of post-RMA market housing, with a focus on Tāmaki Makaurau Auckland's intensification programme and its outcomes.

Introduction

The design of suburban housing in Aotearoa New Zealand was shaped by diverse stylistic influences over a century of city building and through several generations in the suburbs of the twentieth century. After about 1950, the dominant model settled on a mainstream preference for a relaxed, generally unostentatious form of modernism. Giving a name to a style for this mainstream is unnecessary: most of our housing since the mid-twentieth century has not been consciously aligned with a particular form of expression, but has evolved with material and spatial characteristics to become simply the customary practice in our housing culture. Style took ideas from current fashions, local and external, and responded to changing ideas about internal spatial arrangement, without attaching itself to a recognisable trend.

Ken Smithies has argued that, for designers, the adoption of a style is a statement of intent: style creates a context, an association, and a location in time and place.[1] Terms used in architecture to describe style such as 'mannerist,' 'neo-classical,' traditionalist,' 'modernist,' and so on are helpful for classifying particular forms of expression in buildings, with extended implications for scale, material, and possibly

[1] Ken W. Smithies, *Principles of Design in Architecture* (New York: Van Nostrand Reinhold, 1981).

function. However, contemporary discourse in architecture does not see the concept of a style – a design solution predetermined in a separate discourse by argument or example – as a useful way to design in the modern world, and since the days of the Beaux-Arts ateliers, it has seldom been used in Western versions of architectural design education. Paradoxically, the perception of a building's style is the way nearly everyone else approaches a conversation about architecture: the urban landscape of architecture registers in the discerning public eye as a variety of building forms to which named 'style(s)' can be attached.

This paper considers styles of architecture that emerged between 1995 and 2006 in the first phase of post-RMA market housing, with a focus on Tāmaki Makaurau Auckland's intensification programme and its outcomes. Since the mid-1990s population growth and the principles of sustainable urban development have become pre-eminent issues in city planning policies, shifting the design focus towards performance and environmental response for many architects and housing developers. The design models that suited the old suburban habits of density did not convert readily to the new paradigm of housing and intensified site layouts: new concepts of style emerged when it became necessary to identify forms of building that would suit higher densities.

Origins of Housing Design in New Zealand

Architectural styles imported in the nineteenth century from Great Britain were the foundation of the new urban settler's housing: generally, the products of taste in the Victorian era.[2] Timber-framed villas were decorated with ornate façades that established the long-standing preference for a public-facing elevation intended to express social conformity, individual taste and status. Designs changed in the early 1900s, when urban populations exceeded those living in rural areas;[3] shortly before this milestone, housing in the cities had become a political issue with the introduction by Seddon's Liberal administration of government participation in housing supply.[4] House builders responded to suburban planning theories that found fertile ground in the sprawling new cities of New Zealand and Australia. Ebenezer Howard's Garden City proposals, aimed at humanising England's tired industrial cities, became what Robert Freestone has called the "garden suburb movement" in Australia,[5] validating the settlers' idea that dense urban form is not necessary when cheap public transport and endless apparently vacant land is available. After 1910, the transitional, and then the Californian, bungalow replaced the villa style in New Zealand, and broadly modernist styles became popular.[6] They included some interesting but generally tame experiments with more expressive imported architectural styles, including Arts and Crafts styles, and Art Nouveau. Art Deco was popular everywhere,[7] and, after the 1931 earthquake, particularly popular in Napier, where it became the unifying style that now identifies the city. However, our run-of-the-mill suburban housing continued to be unpretentious and stylistically anonymous. It established housing in an unselfconscious vernacular of ordinariness, which was well matched to a conservative society that valued egalitarian social principles.[8] New Zealand society, with its conservative instincts, sought and found a way to provide itself with conservative housing, reasonably well adjusted to a mostly benign climate and a forgiving natural environment.

Modernism, Density and Early Urban Housing Models

Conventions of housing design established between 1920 and 1939 were challenged in the 1940s and 1950s by modernist ideas influenced by European and American architects. These influences mostly appeared in the form of private houses, presenting different ideas in the monochrome suburbs. Modernism also manifested in this period in the form of high-density housing typologies from the Ministry of Works, which included Gordon Wilson's Dixon Street Flats, the Grey's Avenue Flats, the 'Star' blocks, and others. Architects involved in these projects, including Ernst Plischke and Frederick Newman, campaigned for and demonstrated modernism in housing, and for others, exposure to new ideas by more travel to Europe and America helped the modernist's cause.[9]

In the suburbs, architects experimented occasionally with small-scale low-rise typologies planned at the higher densities seen overseas; projects of this type were built in all of New Zealand's major cities in the 1960s and 1970s. In the context of subdivision densities of fewer than twelve dwellings per hectare (dph), Miles Warren's practice in Christchurch designed small, dense clusters of houses at densities of up to 45 dph.[10] A small but discerning market was identified for these essentially modernist explorations of other housing possibilities, even though their quirky forms attracted unfortunate epithets such as "pixie" houses.[11] Peter Beavan and Burwell Hunt's 1973–75 Habitat development in central Wellington (now known as Thorndon Mews and

2 James Belich, *Making Peoples: A History of the New Zealanders* (Auckland: Penguin Books, 1996); Alison Drummond and L. R. Drummond, *At Home in New Zealand* (Auckland: Blackwood and Janet Paul, 1967).

3 Michael King, *The Penguin History of New Zealand* (Auckland: Penguin Books, 2003).

4 Gael Ferguson, *Building the New Zealand Dream* (Palmerston North: The Dunmore Press, 1994).

5 Robert Freestone, "Planning, Housing, Gardening: Home as a Garden Suburb," in *European Housing in Australia*, ed. Patrick Troy (Cambridge University Press, 2000), 126.

6 Jeremy Salmond, *Old New Zealand Houses 1800–1940* (Auckland: Reed, 1986).

7 Peter Shaw, *New Zealand Architecture from Polynesian Beginnings to 1990* (Auckland: Hodder and Stoughton, 1991).

8 Miles Fairburn, *The Ideal Society and Its Enemies: The Foundations of Modern New Zealand Society 1850–1900* (Auckland University Press, 1989).

9 Andrew Leach, *Frederick H, Newman: Lectures on Architecture* (Ghent: A & S Books, 2003).

10 Warren and Mahoney Architects, *New Territory: Warren and Mahoney: 50 Years of New Zealand Architecture* (Auckland: Balasoglou Books, 2005).

11 Andrew Barrie, "Warren & Mahoney in Christchurch 1," *Block: The Broadsheet of the Auckland Branch of the New Zealand Institute of Architects* 7, Itinerary No. 15 (2008), https://cpb-ap-se2.wpmucdn.com/blogs.auckland.ac.nz/dist/0/689/files/2020/03/Itin_15_Warren-Mahoney-in-Christchurch-1.pdf

Pitarua Court) was another example: a highly innovative project in its form and density at nearly 90 dph, and one that introduced a model that continues to be desirable in the local housing market.[12]

Higher densities were tested in Tāmaki Makaurau Auckland's inner-city suburbs in the 1980s and early 1990s with small terraced projects, for example Grace Square, in Vermont Street, Ponsonby (approximately 32 dph), and on George Street in Parnell (approximately 55 dph) (Figure 1). The developers in both schemes adopted the strategy of acquiring under-used or redundant commercial land, which they re-classified for residential use through the planning process, but were then able to elude residential density controls in force at the time.

State housing in this period developed at urban densities is represented by projects in Mount Albert, Orākei, and others. One durable and well-regarded example is the Napier–Wellington Street block in Freeman's Bay, where 98 terraced and one- and two-level houses were built at an average density of 31 dwellings per hectare. From sales into the private sector, much of this housing is now owner-occupied, but is well maintained, and an example of surviving postmodernism from the early 1980s.[13]

Initially, design sources were predictable, in one sense, but random in another. Paddington was a working-class district in early-twentieth-century Sydney, a densely developed terraced-housing suburb of about 60 hectares, still dominated today by a Victorian architectural style. By the 1990s Paddington had become a gentrified and highly priced inner-city suburb. No doubt encouraged by this reputation for high values, the architects of the George Street scheme borrowed heavily from the Paddington model. In a different style but with similar intentions, Grace Square's housing is based on a pastiche of sub-classical detail and rendered traditional façades painted in vaguely central-American colours, with a more than nod to Duany and Plater-Zyberg's New Urbanists in Florida.

Details in both schemes are sourced from design guides, and are used to reduce the visual impact of façade repetition, providing individuality to otherwise identical houses. More importantly, however, elaborate façade details help to disguise the density of the layout, which is double that of the immediate neighbourhood in both examples. Perceptions of 'crowding,' or 'density' are offset by complex façade details that slow down the eye's travel from one house to the next. The sense of higher density is also reduced by the visitor recognising (perhaps subconsciously) that, although these houses are alien to our domestic design habit, they have their roots in housing styles and traditions that can be identified from experience, or from overseas travel: in other words, they can register as legitimate forms of domestic architecture.

Figure 1. Left: George Street, Parnell. Right: Grace Square, 81 Vermont Street, Ponsonby.

Developments like these between the 1960s and the early 1990s made numerically insignificant contributions to the total stocks of housing in these cities. Their architecture was eclectic: it was seen as the personal property of the designers, rather than as a style that could be adapted, exported and amplified in the wider housing market. Their influence was limited and, to some degree, regional. In the absence of strong reasons to change, mainstream suburban design ploughed the same furrow of plain, single-storey timber buildings for sixty years between 1930 and 1990, and it provided the cities with an undeviating low-density housing culture that satisfied the great majority of New Zealand's suburban communities.

Housing Style After the Adoption of the Resource Management Act

Two major reforms to the legislation and administration of town planning in the early 1990s opened the door to radical change in urban housing design. First, the Resource Management Act (RMA) was passed into law in 1992. The RMA prioritises the principles of sustainability and specifically the concepts of kaitiakitanga, redefining planning legislation as an 'effects-based' rather than a prescriptive process for all land uses. Secondly, and following the RMA's mandate, most City and Regional Councils (Territorial Authorities) began developing policies designed to encourage housing intensification in their urban centres. Best-practice theories in urban planning now accepted that sprawl was unsustainable, and that housing being proposed for population growth needed to be steered towards various forms of higher-density typologies.

Identifying house types for the New Zealand markets that could suit these new density parameters, and finding a style of architecture that would represent our domestic aspirations, proved to be elusive. A style or styles that would satisfy the

12 Peter Beaven, *Peter Beaven Architect* (Blenheim: Peter Beaven Architecture, 2016); Mark Southcombe, "Translating Habitat: Revisiting Pitarua Court and Thorndon Mews," in *Translation: Proceedings of the Society of Architectural Historians, Australia and New Zealand* 31, ed. Christoph Schnoor (Auckland: SAHANZ and Unitec ePress, 2014).

13 Julia Gatley, "Domestic Architecture – Postmodern and Neo-modern Architecture," *Te Ara – the Encyclopedia of New Zealand*, 2014, accessed October 18, 2021, http://www.TeAra.govt.nz/en/photograph/45077/napier-street-townhouses-auckland

real estate agent's demand for 'street appeal' also needed to express concepts of individual self, as well as our collective identity as New Zealanders.

Speculative house-builders saw the opportunity to intensify their developments with terraced houses, a model based on the millions of similar houses that had already proved their practicality in Europe and Australia. The problem of identity and individuation became more intense as architects and their clients tested density ranges by site layout designs. New styles for these projects needed to be attractive to buyers; they needed to be straightforward to build with existing skills and equipment, while concealing the reality of high density – the sense of 'crowding' – and they also needed to replicate suburban conditions as much as possible. The concept of continuity was important because many of the new residents would come from the existing suburbs. It was apparent that some people would leave the suburbs in exchange for greater convenience of location and lower property maintenance, but it was not thought that they were likely to give up car ownership, intimating another problem: how is the private car to be integrated in site planning, and what is left of the traditionally generous private external spaces that characterise the suburbs?

Overshadowing all other problems, there was also the question of appropriate design styles. Planning Departments in the Territorial Authorities made suggestions about typologies through the publication of 'good practice' non-mandatory design guides, but these were deliberately free of design instruction. The issue of style was most acute in Tāmaki Makaurau Auckland in the 1990s, where the combined forces of larger-scale developments, annual population growth of 2–3 percent, and a competitive market led to more extreme experiments. The house builders needed to find a distinctive, but perhaps also anonymous, style and they depended on the inventiveness of the designers. New Zealand's architects had no habit of approaching their work with contextuality in mind: they have thrived on a housing-design tradition of buildings as separate entities. There were no readymade answers to the style question, nor were local precedents useful for showing ways to negotiate such an issue in a conservative market.

Some Early Design Solutions: Auckland Innovations

In the first few years, house buyers in Tāmaki Makaurau Auckland were only persuaded if the property offered was either in a coveted location or if it was the lowest-priced housing on the market. The latter option began with development of disused industrial sites previously classified as Business 4 (B-4) zoned land in Isthmus suburbs from Henderson to Panmure. Developers were attracted to B-4 land because it offered the freedom to build outside the rules that regulated housing in the suburbs, making previously unthinkable densities possible.

Figure 2. Mary Street, Mount Eden: high-density town houses in a Mediterranean-modernist style.

In the mid-1990s design solutions materialised rapidly, but in a disorderly parade of styles. Early projects include the two phases of terraced townhouses at Mary Street, Mount Eden (Figure 2), where about 180 three-storey units were built between 1996 and 2000. The architects used an understated 'Mediterranean-modernist' aesthetic, expressed in smooth plaster finishes, earthy colours, parapets (no projecting eaves), and vertically aligned fenestration. Some of the challenges of layout design that are seen in this illustration became apparent in the first generation of the new typology.

Other large-scale schemes in the early phase of Tāmaki Makaurau Auckland's intensification included Waitākere City's Harbour View development on Te Atatu Peninsula (372 units, mostly in terraced layouts), and the redevelopment of the old Crown Lynn pottery site at Ambrico Place in New Lynn, for about 400 units. A wide range of new architectural styles emerged in both of these developments, many of them based on New Urbanist design principles that promote traditional architecture.[14]

In New Lynn the 100-unit Tuscany Towers project adopted the architecture of a medieval Italian city; there was also a pastiche 'Mediterranean–Mexican' cul-de-sac of 45 units in Avondale (now gated and renamed Saintly Close). In the 2003–2005 development of 83 terraced houses off Mount Lebanon Way, Henderson, seven builders distinguished between their separate projects with styles that included traditional Dutch Cape double-curved gables, Breton country-town terraces, another terraced group with Paddington-style wrought-iron balconies at first-floor level, and a short three-storey terrace of colourful Art Deco houses with rounded bay windows and corners on their street façades (Figure 3).

In practice, styles that suited the aesthetic of parapets with metal cap-flashings and sheet claddings became fashionable. Designers abandoned eave projections – traditionally an effective detail to protect external walls from heavy rain – in order to save space onsite under regulations that governed height-to-boundary relationships. Regardless of the style adopted, densities in the range of 40 to 50 dph became the new standard for the two- and three-storey terraced typology where some suburban features, such as individual garages and small patio-type urban gardens, have been retained.[15]

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14 Andreas Duany, Elizabeth Plater-Zyberk, and Jeff Speck, *Suburban Nation: The Rise of Sprawl and the Decline of the American Dream* (New York: North Point Press, 2001).

15 David Turner, John Hewitt, César Wagner, Bin Su, and Katherine Davies. *Best Practice in Medium Density Housing Design* (Wellington: Housing New Zealand Corporation, 2004), https://www.researchgate.net/publication/351993158_Best_Practice_in_Medium_Density_Housing_Design_A_report_for_Housing_New_Zealand_Corporation

Figure 3. Left: Tuscany Towers, Ambrico Place, New Lynn, 1997. Right: Art Deco, Winery Way, Henderson, 2003. Bottom Left: Saintly Close, St Georges Road, Avondale, 1999.

Looking Back: The First Post-RMA Generation Revisited

The early period of the post-RMA generation of speculative higher-density housing now registers as a bravura experiment in which competitive housing markets, public opinion and the demands of real estate advertising campaigns all bore down on architects seeking new design solutions, who found some of their answers in bizarre places.

Looking back, it is clear that identifying the potential sales market was an important part of the design process. From the start, a sales strategy that aimed to supply houses at the lowest possible price was based on an assumption that housing at increased densities would mainly attract investors and lower-income buyers. Low costs were helped by keeping floor areas down to under 120 square metres,[16] and, together with tight site-planning for vehicle access and minimal private garden spaces, layout designs were able to maintain a position in the bottom range of property prices.

Figure 4. Tuscany Towers, New Lynn, 1998 and 2012.

Initially, although the typology's attraction was based on its economy,[17] it also presented buyers with choices not seen previously in price, density and particularly in architectural styles, some of which were enticingly different, and in this suburban context, positively exotic.

Leaky Buildings and Rebuilding the First Generation

The reputation for adventurous styles gained by the new typologies was devastated within a decade, however, by the 'leaky building' disaster.[18] This event followed soon after the national deregulation of the construction industry in the early 1990s, a calamitous error of legislation that undermined market confidence in the property values of all of these higher-density housing models.[19] It also discredited the entire intensification project as a system for housing supply.

The result of the defective revision of the New Zealand Building Code in 1992 has been a rebuilding programme forced on almost all of the first-generation projects. Few of the original styles have survived the repair process. Housing styles that signalled difference, that tested market willingness to experiment, and that revealed a genuine public interest in styles other than the safe-but-dull suburban paradigm all but disappeared, as body corporate managers and their client communities took the opportunity to minimise reconstruction costs and replace disintegrating external walls with traditional materials.

In the rebuilding programme the double-curved gables of the Dutch Cape-styled terrace at 28–44 Winery Way, Henderson, have given way to a straightforward pitched-roof gable, and the terracotta-coloured faux-Italian Tuscan-style block in New Lynn is now an undistinguished cream-coloured series of weatherboard-clad terraces (Figure 4); Saintly Close in Avondale is reclad, also mostly in weatherboard but painted in dark colours and with other external details modernised to improve the building's appearance, which no longer misrepresents a Mexican village (Figure 5). Although the interior layouts and site plans are unchanged, original styles have been purged, and the materials, surfaces and

16 David Turner and Bin Su, "A Classification Methodology for Medium Density Housing Based on Site Layout Analysis," in *Fabricating Sustainability* (Wellington: ANZAScA, 2006).

17 Bernard Orsman, "Intensified Housing Unpopular with Aucklanders," *New Zealand Herald*, September 10, 2004.

18 BRANZ, *The Hunn Report: Report of the Overview Group on the Weathertightness of Buildings* (Wellington: BRANZ, 2002).

19 Geoff Cumming, "Buyers Search for a Backstop," *New Zealand Herald*, September 11, 2004.

Figure 5. Saintly Close, St Georges Road, Avondale, 1999 and 2016.

colours of mid-twentieth-century domestic architecture in New Zealand have been reinstated. The seven houses in the Art Deco terrace at 2–14 Winery Way, Henderson, are an exception, as are the earlier examples (George Street and Vermont Street), which both preceded in time the defective construction systems that led to the 'leaky building' disaster and have survived intact.

Reflections and Conclusions

Tāmaki Makaurau Auckland's middle suburbs have lost the strange, alien, provocative and occasionally confusing (but in the event, short-lived) presence of the many different styles of housing architecture in the higher-density ranges. It is suggested that their disappearance corresponds to a maturing of public taste, and to a waning of public resistance to intensification, initially a potent obstacle in the public debate, but now subverted by the insistent logic of the case for sustainable city form.

These two factors have advanced to become embedded in the way residents imagine the city, and the New Urbanist's proposition – that selected superimposed styles of traditional architecture are useful for disguising higher-than-suburban densities – can now be superseded by a return to more conventional forms of expression. Social and demographic changes are reflected in greater public acceptance of higher density, with the growth of smaller households, and with the attractions of urban living evidenced by the increasing numbers of apartments in all our cities.

Furthermore, the wholesale removal of the original styles of developments discussed here can perhaps be seen as an indirect way of blaming the style itself for the repair costs – associating the style with costly losses in order to justify its removal. There is also a sense of public fatigue with experiments in un-traditional styles that can be detected in the rebuilds: regardless of density, our weatherboard claddings are safe, as they always were; our urban and suburban landscapes are rich enough, and have no further need for the added excitement of architectural fictions. This explanation corresponds to a widespread market distrust of the regulatory authority that first permitted substandard non-traditional construction in the building industry, and then denied liability for the consequences.

Most of the audaciously different first generation of higher-density housing architecture has now gone from the suburbs. It can be seen in retrospect as a deviation, perhaps delightful for a brief period, but replaced now by more reliable materials, tighter construction regulations and practices, and simpler external designs in essentially modernist styles. Design since the mid-2000s has been increasingly confident in form, material and colour, with, in some projects, prominent architects leading the way towards a more coherent urban housing landscape. Arguably, however, the subsequent generations of house builders and their architects owe a debt to their predecessors for the experiments that were conducted in the styles of higher-density housing architecture.

Author

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All photographs: Tektus A&R.

Preliminary Original Research Article

Māori Architecture

A Response to Colonisation

Maia Ratana

Abstract

For generations, Māori have disputed colonisation and the impact it has had on Indigenous peoples. As settlers acquired more land, Māori realised they were losing power over decision making in Aotearoa and began to create their own communities, religions and even a monarchy, in an attempt to retain tino rangatiratanga, or soveriegnty. Māori leaders wanted to send a clear message to the settler state that they weren't prepared to give everything up and assimilate into the Pākehā world.

Architecture became a mechanism for resistance. Buildings, whether they be temporary or permanent structures, portray a sense of belonging and human occupation, and therefore became a meaningful way to create presence during conflict. This paper attempts to give an insight into the impact Māori architecture has had politically, focusing particularly on two buildings: Hiona, built in the early twentieth century, and Tapu Te Ranga, which began construction in the 1970s. Both buildings were built by Māori leaders who saw how their people were struggling under Crown rule and wanted to create a place of solitude and acceptance for Māori. They created unique pieces of architecture that were not only refuges, but symbols of autonomy. These buildings have become well-known architecturally and politically, and have had a lasting impact on generations of Māori and non-Māori.

Introduction

Since the arrival of Europeans, Māori have actively contended colonisation in Aotearoa New Zealand. Māori have struggled under colonial laws and have therefore had to fight for recognition and equal rights on their own land. While much was taken away from the Indigenous peoples of this land, they found ways to contest their right for tino rangatiratanga and, in many cases, whare Māori are an explicit symbol of autonomy.

The significance of architecture in the continual push for recognition of Māori rights and equality is paramount. For generations, Māori buildings have been used to portray opposition to a dominantly Pākehā society and have been hugely influential on New Zealand architecture as a whole. In Damien Skinner's book *The Māori Meeting House*, he says, "While the meeting house was – and is – a Māori form of architecture and art, their history is entangled with the complicated and contested interactions of Māori and Pākehā over the past two centuries."[1] This relationship between Māori and non-Māori is portrayed ingeniously in Lyonel Grant's design of Ngākau Māhaki at Te Noho Kotahitanga Marae on the Unitec campus. His combination of traditional and contemporary whakairo, or carving, tell the story of the coming together of two cultures, highlighting significant events in our history.

This paper briefly explores the history of the use of architecture as a method of resistance against the Crown and also looks specifically at two significant buildings built by renowned Māori leaders. The first is Hiona, built at Maungapohatu in 1907 and constructed as a symbol of sovereignty for the prophet Rua Kenana and his followers. It was a building

[1] Damien Skinner, *The Māori Meeting House: Introducing the Whare Whakairo* (Wellington: Te Papa Press, 2016), 22.

unlike anything that had been built by Māori before and is said to have been inspired by the Dome of the Rock in Jerusalem.[2] Despite their isolated location, Hiona and Rua Kenana were targeted by the colonial government because of Kenana's deliberate disobedience against the Crown.

The second is Tapu Te Ranga Marae and, in particular, the main building Pare-Hinetai-No-Waitotara, which was established by the late Bruce Stewart, a man who saw a need to find a place for dispossessed Māori in Wellington. In 1974 and in the midst of a worldwide social movement of Indigenous peoples, Bruce Stewart began his journey to create a place that all people could belong to. Built with the sweat and tears of mostly homeless ex-prisoners, Tapu Te Ranga is nothing less than a masterpiece of great beauty and mana.

The Whare Whakairo and Early Māori Resistance

A Māori building, and particularly a wharenui, or meeting house, is more than a functional piece of architecture. Art and spirituality play a vital role in how a building, or a cluster of buildings, is designed, constructed and fitted out. A wharenui is designed like the human body, and is believed to protect and guide its people and ensure the safekeeping of historical stories and whakapapa. "The whare whakairo (carved meeting house) isn't a building so much as an ancestor. And in turn, this ancestor is filled with other ancestors, who are embodied in the art form of carving, weaving and painting."[3] The customs and activities that take place in a wharenui or whare whakairo reflect the respect that is shown to the building as a holder of knowledge and guardian of Māori lineage.

It has been said that Captain James Cook was astounded by the whare whakairo when he arrived here in Aotearoa; however, this has since been disproved. Instead, more recent research has proven that, in fact, the carved houses as we know them today were a post-colonial development as a response to the growing population of European settlers.[4] After the land wars, many Māori became concerned for their land as Pākehā settlers spread throughout the country. They made buildings that were big enough to hold meetings to discuss how they could bring an end to the confiscations and hold on to what they still had. In South Taranaki, the Ngāti Ruanui people built a whare called Taiporohēnui, meaning 'to end the matter' or 'the restraining of evil,' in order to host a meeting with various iwi leaders about the land sales.[5] Taiporohēnui is an example of how politically driven Māori architecture has been, not only as a functional space to host such discussions but also as an architectural statement opposing colonialism.

Figure 1. Te Hau-ki-Tūranga wharenui, Te Papa Tongarewa Museum of New Zealand, Wellington. Source: Wikimedia Commons, licenced under Creative Commons Attribution 2.0 Generic Licence.

At the same time, Māori were taking note of the different tools that Pākehā were bringing from Europe and knew that they would enable Māori to construct wharenui that were much bigger than their forebears. Therein began a new version of the wharenui that was larger and more elaborately carved than those before. In the mid-1800s, Te Hau-ki-Turanga was built by the master carver Raharuhi Rukupō at Manutuke. Rukupō was against the settlement of Europeans on the East Coast and built the wharenui as a statement symbolising mana motuhake (self-determination).[6] The house was large, and set the precedent for the decorative elements of meeting houses that are recognisable today. Te Hau-ki-Turanga was covered in carvings both inside and out as a means to preserve the history and whakapapa of the rohe for generations to come. Sadly, in 1867, Te Hau-ki-Turanga was confiscated by the government and taken by military ship to Wellington to be exhibited as a piece of art.[7] Despite being officially returned to its rightful owners Rongowhakaata recently, it is yet to be returned physically to its original home and continues to be exhibited in Te Papa Museum, visited and admired by all. It has therefore become a symbol of something else, of beauty and of indigeneity, but by taking it away from its turangawaewae, or ancestral home, the connection to its whakapapa and whenua has been severed and, until it is returned, Te Hau-ki-Turanga is unable to stand as a guardian of its people and place.

Religion and the Development of Post-colonial Communities

There is also a clear correlation between the uprising of Māori religious sectors and the design and construction of contemporary Māori buildings. During the late nineteenth and early twentieth centuries, many Māori began to liken their experience of colonisation to that of the Israelites and

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2 Judith Binney, "Dictionary of New Zealand Biography: Rua Kenana Hepetipa," *Te Ara – the Encyclopedia of New Zealand*, 1996, accessed October 6, 2018, https://teara.govt.nz/en/biographies/3r32/rua-kenana-hepetipa

3 Skinner, *The Māori Meeting House*, 13.

4 Ibid., 33.

5 Ibid., 45.

6 Ranginui Walker, *Ka Whawhai Tonu Matou*, 2nd ed. (Auckland: Penguin Books, 2004), 188.

7 Michael Bennett, *Whare Māori*, series, episode 2 (2011), https://www.nzonscreen.com/title/whare-maori-the-wharenui-episode-two-2011

the prophet Moses, and therefore began to construct buildings that portrayed this loyalty to other oppressed peoples. The relationship between religion, war and architecture can be seen through the actions of Māori leaders such as Te Kooti. Te Kooti (born 1814), who had been an apprentice to Rukupō, built meeting houses across Aotearoa as a way to symbolise and mobilise support for justice and spiritual revival through the Ringatū movement. "The scale of Ringatū meeting houses was significantly greater than earlier Māori buildings and often equalled the proportions of Christian churches."[8] Te Kooti demonstrated an intentional defiance against the European church and colonisation by developing an architecture that could compete on all levels. His buildings were large and could house religious ceremonies, where in the past a separate church building would have been erected alongside a wharenui for prayer, thus combining religion, tikanga and politics under one roof.

Māori embraced colonial technologies and styles; however, they held fast to their beliefs and resistance to Pākehā domination. For example, Miti Mai Te Arero was the name of Te Whiti's house at Parihaka. It was a Victorian-style house built by a Pākehā man, which sat perched above the settlement overlooking the wider community. Whilst it may seem that this was assimilation in an architectural sense, the name translated meant "The tongue lashes out towards me," referring to the continual negative effects of colonisation.[9] After being imprisoned and taken to work in a woollen mill in the South Island as punishment for their resistance against the government, Te Whiti and Tohu, the two leaders of the Parihaka movement, returned in 1883 to Parihaka and rebuilt the settlement. They embraced many Western, urban design constructs in the rebuild. For example, the houses began to face the street and they incorporated services such as electricity and streetlights. Once again, this could portray a sense of conformity, but instead they saw it as a way of incorporating what they had learnt, but on their own terms.

There are many more architectural examples of resistance against the Crown over this time period and, despite the use and appropriation of Western ways of building and living, Māori continued to fight for autonomy over their land and their culture. In some ways this shows a subtlety in the way Māori defended their sovereignty. Māori saw the benefits of Pākehā technology but the mana of such buildings continues to reflect Māori leadership and opposition to colonialism.

Hiona and Tapu Te Ranga Marae

Hiona, the transliteration for Zion, was a religio-political building in the small settlement of Maungapohatu, deep in the Urewera forest. Used for community meetings and government affairs, it was built in 1907 and led by the Tūhoe prophet, Rua Kenana. Unlike the typical A-frame style of most Māori buildings, Hiona was a perfectly circular building, perched on a hill overlooking the village. It also had two levels despite customary practices declaring it tapu to have someone sitting above your head. What also made

Figure 2. Burton Brothers (Dunedin), 1868–1898. European-style meeting house Miti Mai Te Arero, also known as Te Whiti's House, at Parihaka. Alexander Turnbull Library, Wellington, New Zealand. /records/22774791.

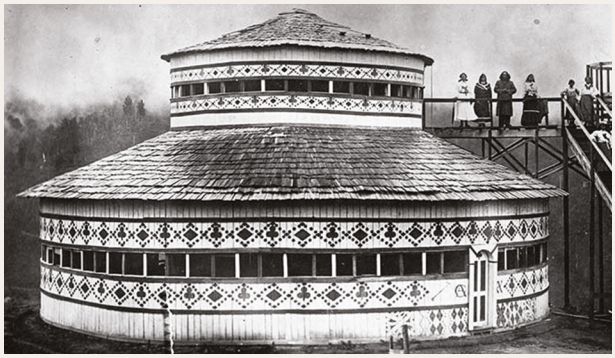

Figure 3. George Bourne, 1875–1924. Rua Kenana Hepetipa's wooden circular courthouse and meeting house at Maungapohatu. Alexander Turnbull Library, Wellington, New Zealand. /records/23131313.

Hiona unique was the decorative mix of Western motifs and traditional Māori patterns. A sequence of diamonds and clubs painted along the outside of the building is said to have represented the father, the son and the holy spirit,[10] whilst kōwhaiwhai flanked each side of the doors, a nod to traditional design and representation of Māoridom. Sadly, and despite its obvious uniqueness, Hiona did not stand the test of time and when Kenana was taken to prison under false accusations, it was no longer used and fell into disrepair.

Sixty years later, Bruce Stewart, an activist who had been in and out of prison as a young man, became aware of the financial and social inequality that urbanisation had brought upon Māori people. He was gifted land in Island Bay, Te Whanganui-a-Tara Wellington, by the Sisters of Compassion and began to build Tapu Te Ranga marae, which opened in 1974. The whare Pare-Hinetai-No-Waitotara was an architectural feat all on its own. With eleven storeys and nine wharepuni stacked on top of each other, the building rose to

8 Deidre Brown, *Māori Architecture: From Fale to Wharenui and Beyond* (Auckland: Penguin Group, 2009), 59.

9 Ibid., 72.

10 Michael Bennett, *Whare Māori*, series, episode 1 (2011), https://www.nzonscreen.com/title/whare-maori-episode-one-2011/overview

Figure 4. Tapu Te Ranga Marae, Wellington, New Zealand. Source: Facebook, reproduced with permission.

26.5 metres in height, making it the largest and tallest building in the world made from recycled timber.[11] This was not a goal that Stewart set out to achieve but was instead due to his having no money and, as a result, the whole building was created using salvaged materials. The blood, sweat and tears that went into constructing such a magnificent building was portrayed everywhere. Stewart mentioned in the television series *Whare Māori* that he feels sad when he drives past marae and sees that they are empty and barely used.[12] Tapu Te Ranga, in comparison, was home to Bruce Stewart and his whānau and, as kaitiaki, the doors were open to people from all over the world as a place of refuge and enjoyment.

Hiona and Tapu Te Ranga Marae are not only outstanding examples of New Zealand architecture but also symbols of tino rangatiratanga. Native American activist and educator Gerald Alfred says:

> It has been said that being born Indian is being born into politics. I believe this to be true; because being born Mohawk of Kahnawake, I do not remember a time free from the impact of political conflict.[13]

This further reiterates a global feeling by Indigenous peoples who have no choice but to be implicated by politics and therefore must find ways to not only survive in a colonial system, but fight for autonomy and recognition. Centuries of degradation have caused loss of language, traditions and land, and, irrespective of when such events took place, Indigenous peoples are still experiencing the negative effects of colonisation today.

If we were to consider the political climates when Hiona and Tapu Te Ranga were erected, it is evident that they were times of heightened unrest for Māori. Rua Kenana was a political target due to his leadership style and activities. He believed himself a spiritual leader and spent many years developing a strong following before settling at Maungapohatu. The Tohunga Suppression Act of 1907 was aimed directly at Rua Kenana as a way to control his spiritual and political attempts to create a sovereign Māori community. He was watched by police and government officials for any sign of defiance and was interrogated at every opportunity. He was well known for his disapproval of native schools and his influence over young Māori to refrain from volunteering for the First World War. He strongly believed that Māori had their own war to fight and that he would be the one to liberate them in a developing Western world. He was later arrested for treason, which resulted in the longest trial in New Zealand history up until 1977.[14] Hiona was intentionally unique. It was a statement piece designed to stand out and be noticed. The architecture Kenana created at Maungapohatu was the result of his vision to create an independent community for the growing number of people dispossessed by land confiscations. Rua Kenana was a symbol of hope and leadership to many and a major threat to the colonial government's plans for New Zealand. In December 2019, the Crown officially signed a Bill that sought to restore mana to Rua Kenana and acknowledge the ill doings during the police invasion at the settlement in 1916, which ended with two men killed and Kenana unfairly arrested and imprisoned for 18 months.[15]

Hiona can be compared in function and style to the Beehive, which is the unofficial name for the Executive Wing of New Zealand Parliament Buildings. Both buildings are symbols of leadership and community, and both are distinctively circular in shape. Completed in 1979, the Beehive was designed by Basil Spence, who convinced the Prime Minister at the time that it would be better to design something modern rather than complete the original design of a colonial building. Needless to say, the Beehive has become a national icon, featured on the New Zealand twenty-dollar bill and easily recognised as a significant building by the general public. In 2015, Heritage New Zealand assigned it the highest rating for a historic place, Category I. Heritage New Zealand describes the Beehive as "of outstanding heritage significance for its central role in the governance of New Zealand."[16] It also mentions that the Beehive is of great cultural significance, saying "the Beehive can be considered a marae of the people of New Zealand."[17] It is interesting to compare the different attitudes to and treatment of the two buildings. Both are architecturally significant to New Zealand and representative of political agency, and yet one was seen as a threat to a developing society while the other is celebrated as a representation of progress and modernity. It could be argued that this is due to the difference in time period but, in fact, Hiona and the Beehive were built only

11 "Tapu te Ranga Marae," accessed September 15, 2018, http://www.taputeranga.maori.nz/index.php

12 Michael Bennett, *Whare Māori*, series, episode 1.

13 Linda Tuhiwai Smith, *Decolonising Methodologies*, 2nd ed. (London: Zed Books, 2012), 114.

14 "Rua Kenana," Ngāi Tūhoe, accessed September 24, 2018, http://www.ngaituhoe.com/Folders/TipunaProfiles.html

15 Aroha Mane, "Crown Clears Rua Kēnana and Says Sorry for Maungapōhatu Invasion," *Te Ao Māori News*, December 21, 2019, https://www.teaomaori.news/crown-clears-rua-kenana-and-says-sorry-maungapohatu-invasion

16 "Executive Wing (the Beehive)," Heritage New Zealand, accessed October 1, 2018, http://www.heritage.org.nz/the-list/details/9629

17 Ibid.

Figure 5. The Beehive, Wellington, New Zealand. Photograph: Ulrich Lange, licenced under Creative Commons Attribution-ShareAlike 23.0 Unported.

sixty years apart and, as it is evident in the reception of Tapu Te Ranga, many attitudes about Māoridom, both within government and the wider community, had not changed. Similarly, Bruce Stewart wanted to build a thriving community for those in need and was scrutinised by an established Western government. As a political statement, Tapu Te Ranga has had its fair share of conflict since its inception in 1974. Many locals were not happy with the idea of a group of homeless, Māori ex-prisoners living together in a well-to-do neighbourhood and the whānau at Tapu Te Ranga spent over thirty years fighting colonial policy and attitudes in order to hold on to their special place. However, the building's mana and the good it has done to a marginalised group of New Zealand society is undeniable. The kaupapa of Tapu Te Ranga is to manaaki all people of all cultures and to give them a place to be who they are. Stewart was known to have driven around Wellington picking up youth who were homeless and on the brink of offending. He would take them home to Tapu Te Ranga, feed them a good meal and then teach them to use their hands to help build the marae, continuously adding to the ever-evolving marvel that was Tapu Te Ranga. The result was a masterpiece, built without any money but with an abundance of determination and will. Stewart would often recite a whakataukī that translated as "those who build the house are built by the house,"[18] encapsulating his philosophical approach to the building he continued to work on up until he passed away in 2017. Unfortunately, like Hiona, the main building Pare-Hinetai-No-Waitotara no longer stands, having burned to the ground in June 2019. Sadness was felt across the world and people grieved for a building that represented belonging and pride for its large and diverse community. There is no doubt, however, that Bruce Stewart's children, mokopuna and extended whānau will in time rebuild Pare-Hinetai-No-Waitotara and continue the legacy of Tapu Te Ranga.

Conclusion

This paper is merely a glimpse into how architecture has been used as a way to resist colonisation, and much more research is needed in this area to be able to discuss this topic at greater length. However, what we do know is that Māori buildings play a critical role in how we assert an Indigenous identity in a prevailing European context. From passive resistance at Parihaka to the occupation of Ihumaatao, Māori have never shied away from speaking their minds and have used architecture to tell a story, to make a statement and to function as a space for political, religious and cultural activities.

Hiona and Tapu Te Ranga are two of the most relevant examples of architectural activism in Aotearoa. Both buildings represent groups of people outcast from society and have been cleverly designed to be recognised both architecturally and politically. Hiona was intended to symbolise and serve Maungapohatu, a sovereign state for the people of the Urewera after severe loss under British rule. Tapu Te Ranga came to life because of Bruce Stewart's commitment to provide a place for those who needed refuge from a system that worked against them. Both buildings continue to be admired for their architectural uniqueness, and their creators are among the most courageous Māori leaders of post-colonial New Zealand. These buildings and many others are a testament to the political climate of their time and of the struggle Indigenous peoples have been through to be recognised. Architecture has helped Māori hold on to traditional values and practices, and has ensured Māori have always been present even when other parts of their culture have been lost.

Author

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[18] Alexandra Johnson, "Tapu Te Ranga Marae an Ex-prisoner's Dream," *Stuff*, August 27, 2009, para. 15, http://www.stuff.co.nz/dominion-post/news/local-papers/the-wellingtonian/2802452/Tapu-Te-Ranga-Marae-an-ex-prisoners-dream

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Fig. 1. Te Hau-ki-Tūranga wharenui, Te Papa Tongarewa Museum of New Zealand, Wellington. Wikimedia Commons. https://commons.wikimedia.org/wiki/File:Wharenui_in_Te_Papa_museum.jpg. Licenced under Creative Commons Attribution 2.0 Generic Licence.

Fig. 2. Burton Brothers (Dunedin), 1868–1898. European-style meeting house Miti Mai Te Arero, also known as Te Whiti's House, at Parihaka. Original photographic prints and postcards from file print collection, Box 7. Ref: PAColl-6001-48. Alexander Turnbull Library, Wellington, New Zealand. https://natlib.govt.nz/records/22774791

Fig. 3. George Bourne, 1875–1924. Rua Kenana Hepetipa's wooden circular courthouse and meeting house at Maungapohatu. Godber, Albert Percy, 1875–1949. Collection of albums, prints and negatives. Ref: APG-1679-1/2-G. Alexander Turnbull Library, Wellington, New Zealand. https://natlib.govt.nz/records/23131313

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Fig. 5. The Beehive, Wellington, New Zealand. Wikimedia Commons. https://commons.wikimedia.org/wiki/File:Beehive,_Wellington,_New_Zealand.jpg Photograph: Ulrich Lange. Licenced under Creative Commons Attribution-ShareAlike 23.0 Unported.

Climate Change and Housing

Exploring a New Urban Model to Help Build Resilience to Climate Change

Xinxin Wang, Dr Matthew Bradbury and Dr Lúcia Camargos Melchiors

Abstract

The environmental effects of climate change and the provision of affordable housing are seen as essential yet disparate issues in contemporary urban discourse in Aotearoa New Zealand. We argue that these two critical problems are actually linked through shared landscape-based conditions. We suggest that without careful thought, the provision of housing, especially in denser typologies, could exacerbate the environmental effects of climate change. We propose a new approach to urban planning, one that acknowledges the underlying landscape and the consequence of climate change within the contemporary city. We put forward a method using catchment mapping and GIS analysis to ensure the planning of safe housing.

To investigate this proposition, a collaborative design investigation between Aotearoa New Zealand government housing authority Kāinga Ora and students from the Unitec School of Architecture was conducted. The studio uses a real-life proposition, an 18-ha development site in the Tāmaki regeneration zone, as a study case. The site is susceptible to flooding and about to be intensively redeveloped, and thus exemplifies the two identified problems. Using the methods described above, students carried out a number of site investigations, shared interdisciplinary group analyses, and tested the effect of climate change (especially flooding) on the existing site and the impact of the intensified development in exacerbating flooding. The result was a new awareness by landscape architects and architects, that in the face of climate change, the two practices are irrevocably intertwined.

Introduction

Building resilience to the environmental effects of climate change and the need for affordable housing are two of the most pressing issues in Aotearoa New Zealand. The country is already experiencing the impacts of climate change; the recent flooding in Kumeū attests to the immediacy of the problem.[1] Alongside the threat of climate change is the long-running issue of affordable housing. This problem is prompting both social and economic questions.[2] Solving these two problems has become a critical issue for Aotearoa.

To address the problem of climate change, the government has established a Climate Change Commission,[3] is bringing specific legislation to direct resources into addressing sea level rise[4] and is investing 700 million dollars a year into

1 Nathan Morton, "West Auckland Floods: Kumeū Community Rallies as Recovery Begins," *Stuff*, September 1, 2021, https://www.stuff.co.nz/national/300396428/west-auckland-floods-kume-community-rallies-as-recovery-begins

2 "Housing Affordability Measure (HAM)," Te Tūāpapa Kura Kāinga – Ministry of Housing and Urban Development, accessed September 20, 2021, https://www.hud.govt.nz/research-and-publications/statistics-and-research/housing-affordability-measure-ham/

3 "He Pou a Rangi Climate Change Commission," Climate Change Commission, accessed September 20, 2021, https://www.climatecommission.govt.nz/

climate change research, most notably the Endeavour research projects.[5]

At the same time, housing affordability is of continuing concern as house prices are rising inexorably. The government's primary strategy to address this issue is to use the state housing authority, Kāinga Ora (KO), to build more houses.[6] As part of this housing drive, KO is actively investigating ways to build more intensively, breaking away from the traditional standalone state house. The Hobsonville development was one of the first examples of KO using the terrace-house model, followed by four-storey walk-ups.[7] The latest experiment is looking at the viability of apartment housing. Private enterprise is also part of the drive to build new housing with both long-established developers, such as Fletcher Living, and relative newcomers like Occam,[8] all building new housing in a range of different typologies from terrace housing to apartments.

Ensuring the safety of citizens from the effects of climate change and the provision of affordable housing is critical for the future safe development of Aotearoa New Zealand cities. How are these two problems related? The most obvious connection is increased flooding, such as we have seen around Aotearoa in 2021.[9] Flooding both damages property and affects the safety of housing residents. Less well understood is that the building of housing can increase flooding by reducing the amount of pervious ground that can absorb rainfall. By attempting to build more-intensive housing in an era of catastrophic flooding and sea-level rise, the results could be potentially fatal.

We argue that these two problems need to be considered together. In any intensive housing development design, an understanding of the effects of climate change on the building site should be undertaken. Our contention is that by considering both the location and magnitude of the environmental effects of climate change, a safe housing model for intensification can be developed.

An understanding of the implication of this project for mana whenua was essential. Students worked with Auckland Council's Te Aranga Māori Design Principles to understand how they as designers working in the urban realm can acknowledge their obligations under the Te Tiriti o Waitangi. In developing this project in Aotearoa, the principles of Mauri Tū (environmental health) and Taiao (the natural environment) are particularly relevant.

To explore these issues, a collective landscape and architecture studio at Unitec was initiated in collaboration with Kāinga Ora to investigate the building of a housing project in a flood-sensitive area in Tāmaki Makaurau Auckland. The critical question that guided the establishment of the studio project was: How can a housing development respond to the challenges of climate change?

The first part of this paper introduces the status and relationship of housing to climate-change issues in Aotearoa New Zealand. The second part discusses the design approach drawn from insights from urban ecology, helping to understand and frame remedial strategies. This is followed by a discussion of the design case study, the Maybury Street housing project, demonstrated by two design projects. The paper closes with a reflection on the development of a collaborative design process and how remedial climate-change practice and the associated housing design can lead to a new urban-planning model.

Problem: Climate Change and Housing

Climate change

One of the environmental results of climate change will be increasing rainfall. The increased volume of water cannot readily be absorbed in the ground or quickly directed to the nearest water body. The consequence of these sudden weather events can be catastrophic flooding such as the recent flooding in the Kumeū catchment,[10] flooding in Christchurch,[11] and flooding in South Napier in January.[12] Existing urban infrastructure can exacerbate these events and cause more flooding and pollution. Cities are primarily impervious; in sudden intensive downpours, rainfall quickly gathers, causing intensive flooding. As well as being unable to absorb flooding, the physical infrastructure of an existing city is often obstructive to the quick and effective discharge of flooding. Blocked flooding pathways will cause increased damage to the urban structure.

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6 "Developments and Programmes," Kāinga Ora – Homes and Communities, accessed September 20, 2021, https://kaingaora.govt.nz/developments-and-programmes/

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10 Morton, "West Auckland Floods: Kumeū Community Rallies as Recovery Begins."

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Housing

Tāmaki Makaurau Auckland's population is growing and intensifying.[13] The housing crisis here is related to the lack of units and a growing number of residents who cannot buy a property. The city has the highest average home price in the country, increasing by nearly 35 percent in the past five years and almost three times in the past 15 years. Studies show that while new housing has been built in Tāmaki Makaurau Auckland, the developments are mainly either low-density suburban development on greenfield sites[14] that contribute to the notorious Auckland problem of sprawl, or "over-dense developments using inappropriate house types."[15]

The twin problems of building affordable housing that doesn't contribute to more sprawl while at the same time doesn't contribute to the worsening of flooding are going to become a fundamental concern in the development of cities in Aotearoa New Zealand.

Approach

Ways to address the environmental problems that will be occasioned by climate change or the provision of affordable housing have been extensively canvassed in the literature.[16] However, ways that are able to address both problems in a large-scale development have not been fully investigated.[17]

One way to understand these interactions and their implications for design practice is through the lens of urban ecology, which is a subject that focuses on the relationships between people and built and natural systems.[18] Housing- and climate-change-related issues can be integrated as part of the metabolism of the city.[19] These problems are closely associated with other urban issues such as social, cultural and utility infrastructures, and are often driven by similar economic and political forces.[20] The science of urban ecology considers the city a holistic ecological entity consisting of many interdependent systems. It focuses on the relationships among people, built systems and the dynamics of nature.[21] Unlike conventional landscape architecture or architecture approaches that consider the counterpart as a homogeneous background, urban ecology acknowledges the intimate nature of urban designs and heterogeneous patterns of the urban fabric.[22] It brings both natural and artificial systems to the forefront and emphasises the flows, exchanges and interactions between these two systems.[23]

Based on this view, there is a potential to shift conventional climate-adaptation interventions to a more progressive approach that acknowledges co-evolution and integrations between the built and natural systems.[24] This co-evolving system has the potential to provoke a radical shift from separate mitigation measures to reimagining both housing and environmental systems working together, achieving urban sustainability that accommodates more urban dwellers and is more resilient to climate change. The analysis of ecological patterns, processes and dynamics will help landscape architects and architects form a holistic view of the extent of the problem occasioned by climate change, thus promoting integrated solutions that can address both housing-and climate-change-related issues.

The design process to address these two issues is articulated in the book *Water City: Practical Strategies for Climate*

13 "Auckland Population May Hit 2 Million in Early 2030s," Stats NZ, accessed September 20, 2021, https://www.stats.govt.nz/news/auckland-population-may-hit-2-million-in-early-2030s

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17 Min Hall, "Less and More in Aotearoa New Zealand: More Houses and Less CO^2 Emissions," in *The 51st International Conference of the Architectural Science Association (ANZAScA)* (Wellington, New Zealand, 2017), 217–26, http://anzasca.net/wp-content/uploads/2017/11/Back-to-the-Future-The-Next-50-Years-0502.pdf; Chris Murphy, "Climate Change, Natural Hazards and the Auckland Unitary Plan: Too Little Too Late?" in *Proceedings of the 10th Conference on Sustainable Development of Energy, Water and Environment Systems, SDEWES 2015*, edited by M. Ban, N. Duic, D. R. Scneider et al, (0484, 1–11), https://www.researchbank.ac.nz/handle/10652/3344

18 Richard T. T. Forman, *Urban Ecology: Science of Cities* (New York: Cambridge University Press, 2014).

19 Gareth A. S. Edwards and Harriet Bulkeley, "Urban Political Ecologies of Housing and Climate Change: The 'Coolest Block' Contest in Philadelphia," *Urban Studies* 54, no. 5 (November 27, 2015): 1126–41, https://doi.org/10.1177/0042098015617907

20 Steward T. A. Pickett et al., "Evolution and Future of Urban Ecological Science: Ecology in, of, and for the City," *Ecosystem Health and Sustainability* 2, no. 7 (2016), https://doi.org/10.1002/ehs2.1229; Jianguo Wu, "Urban Ecology and Sustainability: The State-of-the-Science and Future Directions," *Landscape and Urban Planning* 125 (2014): 209–21. https://doi.org/10.1016/j.landurbplan.2014.01.018

21 Forman, *Urban Ecology: Science of Cities*; Timon McPhearson et al., "Advancing Urban Ecology toward a Science of Cities," *BioScience* 66, no. 3 (2016): 198–212, https://doi.org/10.1093/biosci/biw002

22 Pickett et al., "Evolution and Future of Urban Ecological Science: Ecology in, of, and for the City."

23 Forman, *Urban Ecology: Science of Cities*.

24 Monika Egerer et al., "Urban Change as an Untapped Opportunity for Climate Adaptation," *Npj Urban Sustainability* 1, no. 22 (March 25, 2021): 1–9, https://doi.org/10.1038/s42949-021-00024-y; Steward T. A. Pickett, Mary L. Cadenasso, and Brian McGrath, *Resilience in Ecology and Urban Design: Linking Theory and Practice for Sustainable Cities* (Dordrecht, Netherlands: Springer, 2013).

Group Six

Group Three

Figure 1. Location and context of the Maybury Street project.

Change.[25] The process starts with the development site being placed into the catchment, and an environmental audit of the conditions is made. Identifying and protecting the existing hydrological structure of the catchment is essential; this can be done by using GIS mapping to identify catchments, overland flow paths and riparian margins. Mapping these corridors enables them to be protected from development pressures. The ability of a city to absorb rainfall by becoming more pervious is also critical. Making the city form more open and the building programme more compact by clustering buildings together are ways to achieve this goal. These two broad strategies, identifying and protecting existing riparian corridors and making the city more open and absorbent, can help the catchment become more responsive to climate change.

Maybury Street Housing: A Joint Studio Project

The collaborative landscape/architecture studio is a studio project between senior landscape architecture and architecture students that has been running for six years. An exploration of climatechange adaptive design projects has been investigated for the last three years. The Maybury Street project, developed in collaboration with Kāinga Ora, will be presented as a case study to explore the twin issues articulated in the first part of the paper.

The Maybury Street site (Figure 1) is part of a broader development strategy for the Tāmaki area (comprising Glen Innes, Panmure and Point England) undertaken by Kāinga Ora, the government housing development agency.[26] The Kāinga Ora brief for the Maybury Street redevelopment zone proposed densification of the area, constructing 3000 residential units. This represents a significant change in the space, today mainly occupied by detached houses and star blocks. In the face of the densification of the area, the existing Maybury Reserve represents an opportunity to act as a release of green space for amenities. The Kāinga Ora brief required "a high-density modern exemplar of apartment and terrace house communities centred around an uplifted town centre and connected through the Maybury Reserve to the coast."

The project was broken into two halves to understand the interaction between provision of intensive housing and the harmful effects of climate change. The first half was devoted to developing a new urban masterplan for the Maybury Street redevelopment that will be resilient to climate change while providing high-density housing. This part of the project was developed in a collaboration between architecture and landscape architecture students. The second half was devoted to individual architecture students and landscape architecture students exploring the consequences of the masterplan for designing a high-density residential building (architecture student) and creating a new public space (landscape architecture student).

To help address the Kāinga Ora brief, the 2021 Maybury Street studio developed four objectives:

1) Understand the relationship between the effects of climate change and urban development.

2) Explore the correlation between housing density and the provision of green space.

3) Identify appropriate climate adaptation strategies and correlating housing typologies.

4) Embed Te Aranga Principles throughout the design process.

25 Matthew Bradbury, *Water City: Practical Strategies for Climate Change* (London: Routledge, Taylor & Francis Group, 2021).

26 "Home | Tāmaki Regeneration," Tāmaki, accessed September 20, 2021, https://tamakiregeneration.co.nz/

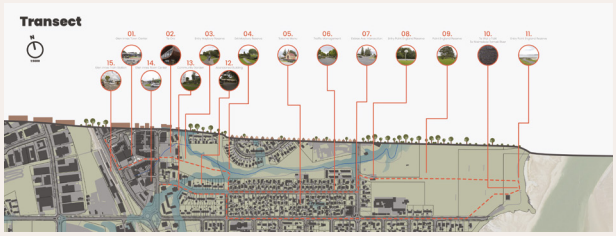

Figure 2. Transect from the town centre to the sea (Group Six).

Understanding the relationships between the effects of climate change and urban development

Understanding the impact of climate change, especially urban flooding, on housing development was critical. Students were asked to work in interdisciplinary groups. Each group started work by undertaking two forms of analysis. The landscape architecture students looked at the site using topographical and cadastral maps at several different scales. Using GIS mapping tools, students developed hydrological maps such as overland flow paths and flooding analysis to understand the effects of climate change on the site. Architecture students investigated different Auckland housing types, from standalone houses to apartment buildings. Students also investigated the dimensions of each dwelling unit, from houses to apartment blocks, and their relationship to the surrounding landscapes.

Combining this initial analysis with a site visit, all groups drew transects, situating the development site within the larger landscape, from the Glen Innes town centre to the Tāmaki Estuary. The transects helped students understand how the development site was located within an urban section from the town centre to the park, and a landscape transect along the Omanu Stream valley (Figure 2).

Exploring correlation between housing density and green space

The Maybury Street site is 18.2 ha; the overall dwelling units specified by KO have increased from the existing 307 dwelling units to 3081, more than ten times the dwelling density. Although this density is standard in many overseas cities, it is unprecedented in the Aotearoa New Zealand urban realm.

Each group was required to test at least six possible combinations of the required 3081 dwelling units and how the projected flooding might be remediated. Landscape architects were asked to build a catchment model to show the effects of different amounts of rainfall on varying levels of flooding and how stormwater could build up in the catchment. Landscape architects were then asked to test/model other remediation measures such as flood retention/detention zones, flood conveyance channels, and stormwater treatment options such as the provision of swales and wetlands. To help with this mapping and analysis, several experts from NIWA, Healthy Waters and Opus generously gave their time and expertise. Architecture students were expected to test density variations by building physical models to understand the location of housing within a 400-metre and 800-metre walking distance of the railway station and exploring different New Zealand building typologies.

Figure 3. Students work in teams to explore density and green-space relations. Photographs: Lúcia Camargos Melchiors

Using this analysis, each group was then expected to compare and contrast their six plan concepts and make a collective site model with the different landscape and housing options in three dimensions (Figure 3). This helped the students to form their final masterplan. The group modelling exercise was an opportunity to create interaction between the students and to contribute to the collaborative design process. Melissa Knight (from Group One) described it as "a good exercise for a visual representation of the flood paths and zones, and then good for our development planning." Students developed an understanding of new subjects from the group work and enlarged their perspective about the other discipline. Melissa described how she now understood the risks and potential damage that weather events can cause and "now think[s] differently." Melissa also emphasised the importance of "not building in a flood path or zone, but also not being afraid of these as natural occurrences that we must try to mitigate, but still may need to live next to."

Identifying climate adaptation strategies and housing typology

To explore the masterplan strategies at a finer scale, the second half of the project required students to focus on the public/private interface. Each student selected an area from the proposed masterplan for a detailed design in conjunction with other team members.

Figure 4. Creative process through physical modelling. Group Six and Group Three.

Landscape students chose a public space; architecture students chose an apartment block. While students were now working in their respective disciplines, they were encouraged not to lose the discoveries they had made in the masterplan stage of the project, and to stay in touch with their colleagues as they developed their projects. Landscape students started to create a public-space design that connected to the building programme, using sketches, diagrams, models and cross sections to show both environmental remediation and a new public space. Architecture students started developing an apartment design, including sketches, diagrams, volumetric models and cross sections to show the mass configuration of the building block (Figure 4).

Embedding Te Aranga Principles throughout the design process

Embedding Te Aranga Principles throughout the design process helps students to acknowledge the cultural values that connect the built form with the natural environment.

Te Aranga Principles have been formulated as a way in which stakeholders and designers who are working in the urban realm can acknowledge their obligations under Te Tiriti o Waitangi. Amongst the seven principles, Mauri Tū (environmental health) and Taiao (the natural environment) are particularly relevant to the development of Maybury studio. According to the Auckland Design Manual, the principle of Mauri Tū guides designers to protect, maintain and enhance environmental health, while the principle of Taiao advocates to protect, restore and enhance the natural environment. Students were asked to incorporate Te Aranga Principles in both the masterplan and individual projects. Their design work should demonstrate how the principles inform different housing typologies and environmental solutions.

Studio Design Outcomes

The respective design outcomes explored how both buildings and public spaces can respond to the challenges of climate change while at the same time creating an agreeable social space for both inhabitants and citizens. Students discovered that buildings and landscape could be spatially rearranged to densify the development zone, at the same time increasing ecological and hydrological resilience to climate change.

Omanu Stream Flood Retention Basin and Housing

Eloise Twaddle and Abigail Spence (Group One) worked together to develop a large flood-retention basin in the centre of Maybury Reserve, and an adjacent apartment building. Eloise commented, "The stream's centrality to the overall development invited it as the main axis along which residents and the public could move from sea (Tāmaki River) to suburb (Maybury Street) to city (Glen Innes township). Our project augmented this inherent logic through wide pathways which could accommodate people whether they were moving north–south or east–west. The circular bridge was where these paths met, and the bridge peeled away into a helix that could carry stormwater (via an inset conduit) or people down to the stream and its banks. In a storm event, the helix would disappear underneath the floodwaters, leaving only the uppermost revolution on which to walk." Abigail commented on the design of the apartment building: "Our architecture and landscape responses had to be able to hold and slow rainwater to decrease the amount of runoff caused by impervious surfaces, and to use the rainfall entering the site. Rather than hiding our response to rainfall, our architecture and landscape made the water collection and treatment process visible, even celebrated."

Integration of the landscape and architecture design solutions contributed to acknowledging the effects of climate change. The design of the apartment building explored a mix of public and private outdoor spaces, organised in terraces, balconies and a sequence of internal courtyards. Rainwater was collected and filtered to reduce the new impervious surfaces created by the apartment buildings. The remediated stormwater was contained in a structured rill that conducted the water to the flood-retention basin in the Omaru Stream, thus linking housing and climate-change remediation (Figure 5).

Figure 5. Omanu Stream Flood Retention Basin and Housing, by Eloise Twaddle and Abigail Spence.

Point England Road Wetland and Housing

Alexander Korolyov and Kahli Foote (Group Four) continued to work together as they developed an apartment building and a public space (Figure 6). Alex explained how he developed his public space: "I proposed a constructed wetland because it responds to the effects of flooding and stormwater that I mapped in the first part of the project and addressed Te Aranga Principles principally though stormwater remediation. A large, constructed wetland was proposed to collect stormwater runoff from the surrounding buildings, filter, clean and discharge the runoff into the Omanu Stream. An existing overland flow path was channelised and connected to the new wetland to serve as an overflow outlet to the treatment process."

Kahli commented: "The overland flow path ran through the middle of the designated building site. One option for me was to separate the building programme into two buildings on either side of the newly channelled stream. I explored the idea of two buildings by initially designing both buildings to mirror the stream shape. This created an organic curved structure that, in plan view, sat alongside the new stream. As the stream went through the middle of the building complex, the space became a central area for the public, and this was emphasised by the communal spaces on the ground floor of both buildings. A market space was also designed to allow for connection between the wetland and the apartments."

Amber Bray (Group Six), one of the landscape architecture students, commented on the overall development of the studio. "Climate change is now impacting how our

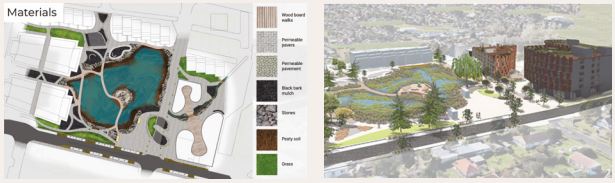

Figure 6. Point England Road Wetland and Housing, by Alexander Korolyov and Kahli Foote.

professions design, and being able to design in a way that will be resilient to issues such as flooding and increased stormwater is invaluable. The many lectures from different experts in climate change and flooding guided me to design thoughtfully, to combat the increasing amount of impervious surface in an ever-growing urban world. This base work on the landscape meant that our team could provide for the intended housing density while minimising the risk of climate change."

The Maybury Street project used several strategies to encourage collaborative design investigation to address building a safe housing development and remediating the effects of climate change. Building multidisciplinary teams was the first move; two design exercises helped the teams to understand the importance of extensive landscape-based conditions – drawing a transect and building a model. Firstly, drawing a transect helped students understand how their project brief was located within a gradient from Glen Innes to the Tāmaki Estuary. Secondly, building a large-scale site model helped the groups see the importance of the Omaru Stream catchment to their future urban configuration.

The utility of these two workshops was evident in helping the students develop collaborative design strategies in the final design stage. The student design work confirmed the research proposition, that climate change remediation and the provision of new housing are linked. The project Omanu Stream Flood Retention Basin and Housing, by Eloise Twaddle and Abigail Spence, showed these two conditions most clearly, building a flood remediation device in Omanu Reserve and the construction of the apartment building that acknowledges how buildings contribute to stormwater production through the design of several remediation features linked to the flood-retention pond. The project Point England Road Wetland and Housing, by Alexander Korolyov and Kahli Foote, demonstrates students' understanding of the need to remediate stormwater in a new building programme by allowing for open space, which is simultaneously a remediation wetland; the building programme acknowledges the new remediation structure by reducing the building footprint and using the remediation landscape as a new public space.

Conclusion

This paper presents two pressing challenges in Tāmaki Makaurau Auckland – affordable housing and the impact of climate change. To address these two intertwined issues and aid large-scale housing development, the authors drew inspiration from the science of urban ecology and proposed a new urban planning method to build resilience to climate change, particularly flooding. The joint studio promoted new design thinking that emphasised the interaction between built and natural systems and the co-design of the entire urban catchment.

The results of the Maybury Street studio project, described in this paper, demonstrate how this interactive approach aided students' learning process. By working closely in teams, landscape architecture and architecture students understood the relationships between climate change and housing across various scales from regional, to local, and to individual buildings. Through mapping and modelling, they were able to configure different combinations of housing density and green space. Embedding Te Aranga Principles throughout the design process, students could connect different housing typologies and environmental solutions with an acknowledgement of mātauranga Māori. The two design examples demonstrate the students' in-depth understanding of how the built and natural environments can be co-developed into more resilient forms.

While the focus of this paper is to explore the provision of high-density housing in a flood-sensitive area, in a tertiary learning environment, the interactive approaches demonstrated in this paper have several implications for the built and natural systems. This makes the findings highly relevant to professional practices for landscape architects, architects, urban designers and policymakers.

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Group Two. Jackie So (LA), Mya Pitchayapa Prangnak (LA), Justin Zhou (Arch), Mohammed Sarfaraz (Arch), Nischal Kumar (Arch)

Group Three. Sarah Ebbings (LA), Sharon Yang (Arch), Toby Lou (Arch), Zheng Wang (Ada) (Arch)

Group Four. Kahli Foote (Arch), Hanalei Kanter (Arch), Harshit Mehta (Arch), Alexander Korolyov (LA), Nikko Eichler (LA)

Group Five. Colin Cao (Arch), Jennifer Vuong (Arch), James Ximin Li (LA), Rooks Waedueramae (LA), Greg van Maanen (LA)

Group Six. Jayden Robinson (LA), Amber Bray (LA), Rohan Sadhu (Arch), Till Buch (Arch)

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Te Pūtahi Auaha

Avondale Graffiti Pavilion

Dr Yusef Patel, Dr Wing-Tai (Bobby) Hung, Peter McPherson and Edward Peni

Abstract

Public architectural and art installations can enable leftover and forgotten urban spaces to be positively reinvigorated. These interventions can be produced at different scales and placed in a variety of existing neighbourhood locations. Such projects aim to foster cultural recognition of a place within diverse communities.

In collaboration with Eke Panuku Development Auckland, students from the Unitec School of Architecture developed an architectural design intervention for a leftover space within the suburb of Avondale. The project's aim required students to design an architectural product that considered community, place, material and function.

The project followed a three-step programme. The first step required architectural students to formulate a placemaking intervention for a defined space set by Eke Panuku. The second step required students and academic staff to prefabricate and install a pavilion on site. The project's final step required students to observe The Pavilion being graffitied by six curated artists over six months.

At the end of the programme, the pedagogical outcomes highlighted the ability for students to reflect on and be resilient to evolving design problems. The success of the architectural intervention led Eke Panuku to extend the onsite programme to eighteen months, and the naming of The Pavilion in te reo Māori as Te Pūtahi Auaha.

Introduction

Today, Avondale's former 3 Guys supermarket site has become a space for street artists and the community to organise and express themselves. The 7500-square-metre space has primarily sat empty since the late 1990s and is currently owned by Auckland Council's development arm, Eke Panuku Development Auckland. Towards the back of the site, the original supermarket parking lot still has the same function. Of the supermarket building, only the concrete floor and block wall remain. An artists' collective has claimed the block wall to create the Avondale Art Park, a 60-metre-long by 2-metre-high concrete wall as their public canvas. This legal wall operates as a hall of fame for artists and a central hub for creative activity. The leftover concrete floor area has become an informal community congregation space. Local schools and other community organisations also use the area to host public events and festivals throughout the year.

After much delay and several changes to the design brief, Unitec's School of Architecture students installed The Graffiti Pavilion onsite at the end of January 2021 for Eke Panuku. Invited local graffiti and street artists were asked to adorn The Pavilion with temporary artwork to reflect the context and street-art culture. The purpose of the artwork placed on The Pavilion is that it should be viewed as an artistic ritual that does not need to have permanence, but expresses the life and thoughts of an individual artist that resides within the Avondale community.

The work discussed in this paper focuses on architectural students and their experiences in designing and building a placemaking product that considers community and place. Like many other design–build courses hosted within architecture schools, the project asks students to investigate novel ways to engage with material, form and function.

The design process asks students to work with Eke Panuku to ensure the community's social outcomes are embedded within any design output that is produced.[1]

Purpose of Placemaking

Placemaking is about the production and introduction of an intervention into the neighbourhood. The measure of its success can be acknowledged by how others respond to what has been created. Cities, in general, are made up of novel neighbourhoods with distinctive urban, social and economic traits. While some neighbourhoods have attractive public amenities, private social enterprises and landmarks, other less-fortunate neighbourhoods lack these urban attractions to offer visitors. Inhabitants and, to a larger extent, the communities they live in develop their own 'sense of place' within neighbourhoods by simply assigning their experiences, perspectives and feelings to them. Other ways people assign a sense of place to a neighbourhood can be through history and unique environments.[2]

Public artworks and installations are significant place-making markers that can allow leftover and forgotten space to be positively reinvigorated. These interventions take place at different scales within existing neighbourhood locations.[3] The aim of such enterprises is for councils and communities to invest in and foster cultural recognition of a place. Ultimately, the hope of place-making activities is that they can prompt and entice novel ways of experiencing the neighbourhood.[4]

Project Methodology

The project followed a qualitative and experimental research methodology. A large amount of value of architectural research comes from observing, evaluating and reflecting on a design post erection.[5] The cross-disciplinary team comprised architecture students and academics from Unitec New Zealand, artists from the Avondale art collective, urban designers and placemaking specialists from Eke Panuku. The make-up of diverse cross-disciplinary teams can allow for innovation, as working within a discipline can stifle experimentation.[6] Both Eke Panuku and the students worked with key external product suppliers, community stakeholders and consultants to ensure the project was an important way for students to gain quality design feedback and critique. The research formulated a placemaking programme for Avondale that was divided into three steps. They were:

Step 1, Master of Architecture (Professional) thesis students were asked to formulate a placemaking concept intervention for a defined space. The process required architecture students to work through various design iterations with urban design and placemaking specialists at Eke Panuku. Step 2 required Bachelor of Architectural Studies students to work with the thesis students to develop, prefabricate and install The Pavilion on site. The process involved the architecture students collaborating with material suppliers and fabricators to further refine the construction detail of The Pavilion and prefabricate modular components within the School of Architecture workshops before taking them to the site.

Step 3, post-occupancy studies, saw The Pavilion repainted by different artists each consecutive month for the six-month duration of the pilot project. An artist–researcher curated the painting of The Pavilion. Two emerging artists assisted, observed and offered them insights. While the artworks were temporary, each of the repainted pavilions was documented in real-time video format and paired with a 30-minute interview with each artist to discuss their background and journey, and unpack the creative process. The interview process also followed a narrative methodology called The Hero's Journey, which is an approach to storytelling usually found in films, but in this case, it was applied to the context of the artists.[7] The importance of this exercise should not be understated, as it understands actions taken by the community beyond the initial design work. It can be a great way to determine whether the design intention of the project meets its anticipated objectives.[8]

The success of a project was measured by three overarching criteria. The first was for the project to meet Panuku's aims to create a structure that could provide a simple amenity for people to use, whether it be every day or for events. The second was the need to visually complement and contribute to the site's street-art scene. The third was for the project to meet the pedagogical requirement of understanding design and detail, and to fabricate and install the prefabricated architectural outcome on site. Overall, the three criteria needed to meet to help solve the community's frustration at the lack of action within the former 3 Guys supermarket site.

Project Timeline

The three steps outlined above spanned over two years, with three different cohorts of students participating in the project. The timeline of events was as follows:

1. Semester 1, 2019: Architecture students and Eke Panuku collaborate to formulate a project brief for Henderson.

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7 Joseph Campbell, *The Hero with a Thousand Faces,* 3rd ed. (Novato, CA: New World Library, 2008).

8 Harriss, "Co-authoring a Live Project Manifesto," 45.

2. Semester 2, 2019: Students produce and develop design concepts for Eke Panuku.
3. Semester 1 and 2, 2020: Students work with local material suppliers and distributors to develop the design further and create shop drawings for prefabrication. Where necessary, amend the design and prefabricate The Pavilion at the School of Architecture workshop.
4. Summer Semester, 2020 and 2021: Students install The Pavilion on site.
5. February to July 2021: Dr Bobby Hung curates a six-month exhibition of The Pavilion painted by graffiti artists.

Step 1: Formulating a Concept

Students and Eke Panuku collaboratively formulated a design brief and developed a design concept for The Graffiti Pavilion. Eke Panuku's involvement in the development of the brief originally sought for an interesting activation for a car-park site that would provide amenity for people and signal change. Unitec's previous work with pavilions in other spaces provided a different take on activating a space.

The original project was to be designed for 5 Trading Place in Henderson Town Centre. The site was located behind Waitākere Library and Unitec's Waitākere Campus, and added value to existing cycleway placemaking activities. The site was defined by a cul-de-sac road on the west, a park with Waikumete Stream on the east, and blank buildings north and south. Concepts of the space were initially about creating a place for the student community and local residents to dwell, relax or find shelter.

The brief developed by the students and Eke Panuku was conservative in scale to ensure resource and building consent requirements and an initial budget of $10,000 could be met effectively. There was a requirement for The Pavilion to be durable and be easily maintained. A large part of the design brief was dedicated to students needing to research effective ways to mitigate or remove vandalism from the structure. The most difficult aspect students faced while designing the structure was that it had no permanent foundations and needed to be bolted to the ground. Two main design changes were presented to the students to entice the community to be drawn to The Pavilion and the site. The first was to create a pavilion that allowed the site to be open and allow the public to feel safe. The second was to formulate ideas on how to work with the institution to promote community.

View angles from adjacent buildings largely drove the first design iteration. The students pursued concepts centred around floating canopies to ensure The Pavilion felt open and safe (Figure 1). Instead of designing large vertical obstructions, such as screens and heavy vertical structural elements, tapped column elements were designed into the scheme. A large seating module was placed under the canopies for the columns to be affixed and to anchor The Pavilion. The thesis students involved in the project worked with a lighting engineer from Stephenson and Turner Architects to light up The Pavilion at night. The resulting design led to the concept of The Pavilion to become a 'nightlight' and cast images of students' work on walls of the site (Figure 2). To realise this concept, the lighting engineer and the student working on a scheme to project light down

Figure 1. Floating canopies sketch. Image: Myles Durrant, 2019

Figure 2. Number 5 Trading Place, night render. Image: Myles Durrant, 2019

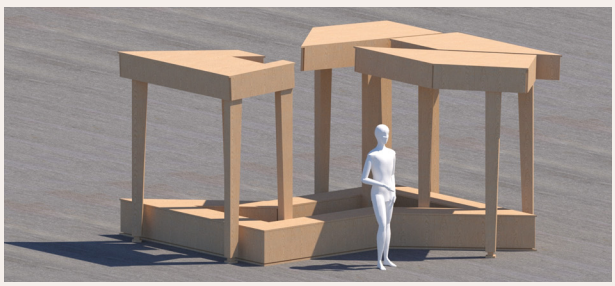

Figure 3. The third design iteration. Image: Neil McCulloch, 2019

onto the ground surrounding The Pavilion to create a soft glow around it. The second design iteration reduced the construction cost and complexity by reducing the size and removing expensive design features. Disappointingly, the lighting elements needed to be removed from the design, as a product sponsor could not be found to fund the lighting equipment and the expense to provide The Pavilion with electricity was simply too high. The third design iteration (Figure 3) sought to modularise the design so it could be easily transported without the need to hire a truck-mounted crane (HIAB). The third design iteration led to students taking on advice from product sponsor Nuralite Waterproofing to refine the canopy design to suit their product range. The ultimate design changes led to the design of the canopy to be reduced in size.

The project's fourth iteration responded to Eke Panuku's decision to move The Pavilion to the former 3 Guys site as part of their Avondale rejuvenation project. The move was informed by Eke Panuku's feedback from their consultants

on the evolution of the design of The Pavilion; a change in location was suggested to a more visible location in Avondale. The permeability of the structure to take on characteristics of the site, e.g, the graffiti wall, made the move to the new locale a successful choice.

In collaboration with Dr Bobby Hung from the Avondale art collective and Unitec School of Creative Technologies, the design brief was updated to ensure that The Pavilion would fit into the existing context, with the goal of the project to be informed by the design and art culture.[9] Dr Hung advocated that The Pavilion should respond to the graffiti activity that had been occurring on site for well over a decade. To do this, The Pavilion became a three-dimensional structure designed to be a rotating showcase for local graffiti and street artists, to ensure other graffiti artists would not vandalise The Pavilion. A methodology used to underpin the curation of this project draws on a framework of reclaiming public space, where artists within the community are partnered together to beautify spaces and celebrate the identity that already exists within the site.[10]

Instead of starting afresh, the students decided to keep a large portion of the existing design. It was important the updated design was oriented and welcoming from the Avondale Central Reserve's community square to the south of the site. Students modified the structure by removing columns, creating three equal-sized canopies and breaking the loop of the seating module. The result was a pavilion that was symbolically closed from the north, east and west but opened to the south.

Step 2: Prefabrication and Install

The fabrication and installation of the project went through four stages. The first stage saw Bachelor of Architectural Studies students working with the thesis students to prefabricate canopy and column components out of polyisocyanurate foam and plywood in the School of Architecture's workshop (Figure 4). The materials were selected as the students wanted to create an affordable but rigid structure without the need of framing elements. Constant conversation with Nuralite during the fabrication exercise led students to discover that The Pavilion could be made out of a series of structural insulated panels (SIPs). This in turn led students to collaborate with Nuralite to produce a series of SIPs by sandwiching plywood on either side of their Enerthem polyisocyanurate foam product. To ensure there was a strong bond between the Enerthem and plywood, Nuralite sponsored the PU adhesive product to ensure the foam did not dissolve.

The second stage saw the March 2020 Covid-19 snap lockdown put a pause to the fabrication programme. This led to a compromise of the original ten Digital Fabrication Elective students being able to use the project as a platform to learn how to operate digital fabrication technologies. It instead led to four students working on The Pavilion outside their study timetable for extra credit.

Figure 4. An architecture student prefabricating roofing components. Photograph: Yusef Patel, 2020

Figure 5. Assembled Pavilion in the architecture workshops. Photograph: Yusef Patel, 2020

Figure 6. The portion of The Pavilion flipped after a winter storm. Photograph: Yusef Patel, 2021

The second Covid-19 lockdown, in August, placed extra pressure on the four students working on the project. When

9 Aksamija, *Integrating Innovation in Architecture*, 173.

10 Luca M. Visconti et al., "Street Art, Sweet Art? Reclaiming the 'Public' in Public Place," *Journal of Consumer Research* 37, no. 3 (October 2010): 520, https://doi.org/10.1086/652731

they returned from their month-long break from the project, they found that some of the prefabricated elements were damaged due to the poor manner in which they had been stored. This setback added to the work students needed to undertake and led to their losing focus on the project.

The project's third stage saw all the prefabricated elements assembled in the workshop (Figure 5) before being painted. This was an important step to ensure all the pieces came together effectively and to find any defects that might have occurred during the fabrication stages. The results of conducting a mock assembly led to the students discovering major flaws in the fabrication of the columns and details within the canopies. To fix these problems onsite would have been difficult and resulted in the students needing to return the prefabricated elements to the school's workshops to be repaired.

The fourth stage of the project was to disassemble The Pavilion, pack it up into a transport van and erect it on site over one and half days. This time included fixing up some damage that occurred during the transportation to the site. The students made a few errors when bolting The Pavilion to the ground. The mistake resulted in one of the canopies flipping over during a mid-winter storm (Figure 6). The durable design of The Pavilion meant the damage to the canopy was minimal and was simple to put back into place with the correct bolt fixings.

Step 3: Post-occupancy Observation

The graffiti community regularly uses the site, and it was essential to select local artists who already contributed to the space to participate in the project. It was equally crucial for Dr Hung to curate select artists to produce work representing substantial cultural diversity, gender and output quality.

Haser painted the first iteration (Figure 7), with work that explored graffiti letterforms and structures. Using a background of retro-inspired colours, his letters were reminiscent of the early New York subway styles from the 1970s. The second iteration (Figure 8) was painted by Levi. He adopted an alternative aesthetic and intention. While the foundations of his work were also influenced by graffiti lettering, the forms, shapes and graphic linework were like brutalist architecture. Gasp's approach to the third iteration (Figure 9) was an intersection of aesthetics between type and image by bridging the realms of signwriting, typography and 1960s popular culture; his artwork embraced approaches of appropriation and remix. Fluro's practice is a synergy of influences between hip-hop culture, graffiti and typography. As a full-time graphic designer, her art for The Pavilion spelled out the word 'Avondale' in various typefaces from multiple perspectives on the fourth iteration (Figure 10). Doubling as an artist and curator, Berst's version of the fifth Pavilion (Figure 11) featured abstracted graffiti letterforms and followed a tonal rendering of colour. Each letter was situated within the irregular planes of The Pavilion and painted using an infrared-like treatment to give focus and depth between foreground and background. The sixth and most recent iteration of The Pavilion (Figure 12) was painted by TrustMe. His practice responds to the local area of Avondale and involves the research of local history and stories. Public interest in The Pavilion has been highlighted

Figure 7. Pavilion painted by Haser. Photograph: Bobby Hung, 2021

Figure 8. Pavilion painted by Levi. Photograph: Bobby Hung, 2021

Figure 9. Pavilion painted by Gasp. Photograph: Yusef Patel, 2021

on social media. Ongoing stakeholder engagement and feedback has been sought through conversations on social media and community Facebook groups. This feedback has evidenced the project's impact on the community and the improved accessibility of the arts in public spaces. Images and video of the structure have been posted on platforms such as Instagram and YouTube. The architectural and urban design community have rallied behind the initiative. Architects from Woods have 3D-scanned painted iterations of the structure and placed it on Vimeo, while also distributing it through digital networks like LinkedIn. Urban designers have posted encouraging comments on Instagram, stating: "Excited to

Figure 10. Pavilion painted by Fluro. Photograph: Bobby Hung, 2021

Figure 11. Pavilion painted by Berst. Photograph: Bobby Hung, 2021

Figure 12. Pavilion painted by TrustMe. Photograph: Bobby Hung, 2021

Figure 13. The Graffiti Pavilion at Matariki Night Ride. Photograph: Yusef Patel, 2021

see all the graffiti artists that will have their work displayed between now and July at the pavilion in Avondale by @Eke Panukuakl."

Client Eke Panuku has highlighted how well The Pavilion has been incorporated into the community. Their previous pop-up intervention on the Pump Track site was vandalised, and needed to be refurbished when relocated to a new site. Over the past six months, each artwork has been treated with respect. The Bike Avondale community group recently worked with Unitec to incorporate the structure into their Eke Panuku-sponsored Matariki Night Ride event (Figure 13).

Conclusions

The Pavilion's presence in the space enables an activation that acknowledges the graffiti walls in Avondale and the street art community, and meets Eke Panuku's aims to create a public amenity for the community. Its visibility from the street helps to enhance and reflect the pulse of creativity imbued into the wall and provides a place for local residents to interact and engage with a new character in the long-form narrative of urban regeneration.

It is well known and acknowledged that students who can reflect and learn from failure would be better prepared to engage with and manage problems in the future.[11] In this project, students took the opportunity to reflect when they were given a chance. To have successful outcomes, the students needed to participate in meaningful discussions with all the stakeholders and compromise where necessary. The fabrication aspects of the project taught the students about design detail and prefabrication workflow processes. By the end of the project, the students acknowledged that it is not easy to work with constantly changing briefs, project delays and abandoned ideas. The process of working to overcome these challenges, however, led the students to grow their understanding of the realities of producing built architectural outcomes and to expand their capacity to be resilient. Although Covid-19 lockdowns brought challenges to the pedagogical outcomes of the projects, the students that participated in a project were not denied the learning outcomes found within a design–build course.

Avondale community has a strong connection with the site, taking ownership while it has sat vacant, with walls that have seen many interactions, meetings and events of every scale. The introduction of The Pavilion has helped to highlight its character as well as contribute to ongoing discussions of change. In a public social media statement, Eke Panuku posted the following message on Instagram:

> We'd like to tell you about the meaning of Te Pūtahi Auaha, aka The Pavilion. Part of our ongoing work in Avondale, Te Pūtahi Auaha translates here to "The Meeting Place for Creativity", acknowledging the exciting streetart project that we're running with Dr Bobby Hung of School of Creative Industries. Each month has seen a different ringatoi (artist) transform Te Pūtahi Auaha through tohungatanga (expertise) and mahi (work). The project has been such a success that it's been extended into next year! Once it's safe to do so, be sure to head

[11] Harriss, "Co-authoring a Live Project Manifesto," 45.

down to the old 3 Guys site in the town centre and check out Te Pūtahi Auaha in person. Shout out to our project partners, Unitec School of Architecture, and to Nuralite for sponsoring the materials!

The success of the installation has resulted in the lifespan of The Pavilion being extended further, with Dr Hung invited to curate six more iterations of The Pavilion over the next six months. The next line-up of artists has been confirmed and includes Burns, Deus, Deow, Mark, Bone and Techs. Each artist presents a variety of aesthetics, approaches and discourses of practice. Upon completion of the pavilion by these artists, a third round of artists will be selected to complete the project. Rather than paint being utilised to protect The Pavilion, it is being used to connect and reflect the community Te Pūtahi Auaha serves. Overall, The Pavilion helps to signal change as well as being a new character in the long-form narrative of urban regeneration.

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Preliminary Original Research Article

A Layered Conservation Response to the Layers of Built History

Tanya Bezuidenhout and Graeme McConchie

Abstract

The Conservation and Heritage Research stream in Unitec's School of Architecture explores the theory and practice of heritage conservation and adapting historical places, as well as incorporating new design into heritage environments, both internationally and in Aotearoa New Zealand. Research addresses conservation, and the future use and development of historical and modern buildings, from preservation through to adaptive reuse.

Dedicated to design-led research, engaging design and its methodology as research, this paper proposes an approach to building conservation that recognises the value of utilising various conservation methods in accordance with the ICOMOS New Zealand Charter, based on a detailed investigative analysis of the varied layers of embodied history. The meticulous and meaningful analysis of applied conservation principles in the selected precedent – the Neues Museum in Berlin – critically inspired and influenced the design response for the 2010- and 2011-earthquake-damaged Canterbury Provincial Council Buildings in Christchurch, where the various conservation approaches were tested.

Introduction

Historical buildings are significant to our collective memory – the understanding of our pasts, our achievements, challenges, philosophies and agendas. They are the most tangible evidence of our pasts, therefore there is the expectation that these buildings should be retained in a preserved state, seemingly 'untouched' and without change since construction. This focus on protection often leads to such an 'original' historical building being considered too precious to touch, change, or adapt; that any change will somehow threaten the historical value of the building itself.

This position is, however, challenged when a historical building is subject to change and damage from causes beyond our control, as in the case of natural disaster. What is our response – to restore or not? The path of restoration and repair brings forth challenging questions with no simple answers. Restoration takes a building back to a particular point in its existence, often to its supposedly original state; although the restoration process could focus on any stage in the building's life, from initial conception through to its most recent state, depending on which stage of its life is considered historically most important. Each has added to the layers of history and evoked new memories. If not restoration, then there is the threat of demolition. When the cost of restoration is assumed to outweigh the historical and potential use values of a building, it will face a probable future of abandonment, dereliction and, eventually, demolition.

Yet we should understand how significant the histories evidenced in our built environment may be. Establishing legibility of all the layers of history a building has been witness to is what conservation practice aims to protect, to ensure that the building continues to have relevance within society and to retain evidence of those layers of history for

future generations.

The paper has as its focus this research question: How can differing conservation responses and approaches maintain and enhance those layers of history within a historical building? The challenge of maintaining the authenticity of a building and its layers of change and history cannot usually be achieved through a singular method of conservation. The ICOMOS New Zealand Charter (2010) lists four degrees of intervention for the purpose of conservation: preservation, restoration, reconstruction and adaptation.[1] Each intervention involves different outcomes, with each having varying levels of permanence and legibility within the building. As such, to assume that one method of conservation will be an appropriate response to the entire building and its layers of history is ill-conceived. This is especially so when presented with varying levels of damage in a building. Such an example is the Canterbury Provincial Council Buildings in Ōtautahi Christchurch, New Zealand. The Provincial Council Buildings suffered considerable damage overall, from both the 2010 and 2011 Canterbury earthquakes, and have remained in limbo ever since, awaiting their fate as discussions continue around a conservation plan. Through precedent case study, this paper investigates how the use of various strategic conservation approaches as compared to one singular approach can maintain and enhance the authenticity in the layers of history of a historical building. Detailed and critical analysis of a suitable precedent can become the basis for formulating a multi-faceted conservation approach, applicable to historical buildings both nationally and internationally. One such precedent is the Neues Museum in Berlin, Germany.

The Neues Museum, Berlin, Germany

Designed by Friedrich August Stüler, the Neues Museum was one of the first buildings in King Friedrich Wilhelm IV's vision to create a 'sanctuary for the arts and sciences' on what is known as Museumsinsel (Museum Island).[2] The three-storeyed building, opened in 1859, had richly decorated internal spaces, which were arranged around two central courtyards, referred to as the Egyptian and Greek courtyards. The museum fell victim to bombing during the Second World War, which caused the complete destruction of the west wing, the central stair hall, and the southeast corner of the building.[3]

It remained in a ruinous state for nearly fifty years, before serious conversations were held around reconstructing and repairing the Neues Museum in order to help restore Museum Island to what it once had been. Two international design competitions were held in the 1990s; one for the redesign and masterplan of Museum Island, including reconstruction of the Neues Museum, and the second exclusively for the reconstruction of the Neues Museum. Submissions for the reconstruction of the Neues Museum included designs from Giorgio Grassi and Frank Gehry, though ultimately it was the English architect David Chipperfield who was selected to embark on what would be a twelve-year process to reconstruct and restore the Neues Museum.[4] The complex design approach of Chipperfield revealed a building that embodies all layers of its past; the intricate details of Stüler's design, traces of the Second World War, years of languishing and deteriorating, and its sensitive embrace of a modern twenty-first-century reconstruction.

Figure 1. Neues Museum southwest façade, drawing of Friedrich Stüler's 1859 design. Source: Wikimedia Commons (author unknown)

Figure 2. Neues Museum, completed staircase hall echoing the form of the original. Photograph: Jean-Pierre Dalbéra. Source: Wikimedia Commons. Licenced under Creative Commons Attribution 2.0 Generic Licence.

The destructive past of the Neues Museum created a unique challenge for Chipperfield. The damage from war and time had left the museum inconsistently ruined. Large sections of the building were completely lost, some parts partially destroyed, with others only showing superficial damage.

These varying degrees of damage meant it was important not only to curate a sensitive response to the damage but also to realise that one conservation method would struggle to respond appropriately to the entire building. There was an important focus on achieving historical legibility and authenticity. Chipperfield's conservation approach "gives

1 ICOMOS New Zealand, *ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value: Revised 2010* (Auckland: ICOMOS New Zealand, 2010), 6.

2 David Chipperfield et al., *David Chipperfield Architects,* ed. Rik Nys (London: Thames and Hudson, 2013), 198.

3 Jonathan Taylor, "The Neues Museum: A Fresh Approach to Conservation," BuildingConservation.com, accessed January 23, 2021, https://www.buildingconservation.com/articles/neuesmuseum/neuesmuseum.htm

4 Chipperfield et al., *David Chipperfield Architects,* 12.

Figure 3. Ethnological Room, showing minimal intervention, retaining traces of the original wall colour and previous restoration work. Source: Google Maps

Figure 4. Ethnological Room, Ionic capital with deliberately retained damage. Source: Google Maps

back only enough context so that the significance of the whole structure and sequence of spaces contained within [the Neues Museum] are legible."[5] His response was unique in that each space, surface, wall, detail or decoration was assessed as a separate entity. It was never assumed or suggested that a conservation approach selected for one space or surface would work or be appropriate for any other space or surface in a similar condition. Referred to as 'soft restoration' by architect and historian Kenneth Frampton, this approach by Chipperfield is explained as "[keeping] everything that is original and [making] sure nothing synthetic creeps in. Don't take off the render on the face and redo the whole thing. Keep it, paint it, use the same colour – but make sure it is now seen to be new. Not glaringly evident but then not faking it either."[6]

Evidence of how this method of conservation can successfully honour each layer of history is seen when there is a closer look at the internal spaces of the Neues Museum. There is a distinction between the old and new; what has been restored, repaired or replaced. Three main strategies of conservation can be seen in the internal spaces of the Neues Museum: preservation, restoration and reconstruction. The ICOMOS Charter describes preservation as a way to ensure a building's long-term survival, which involves as little intervention as possible through the means of stabilisation, maintenance and repair.[7] The Ethnological Room in the southwest corner of the Neues Museum demonstrates the way in which preservation can reveal a sense of rawness in the space, seemingly only touched by the hands of time. There is no attempt made to repair the broken capitals or the cracked plaster, or to retouch the faded paintings on the wall. The space is unapologetically honest about its age, history and the trauma it experienced that has come and gone. The only moments of intervention that are visible are in the essential stabilisation and support for the weakened plaster. Applied in areas with superficial damage, Chipperfield's 'soft restoration' method aims to memorialise rather than suppress and hide the damage caused by post-WW2 decay and weathering. Decayed areas were painted in a colour a shade or two lighter than the original, which created a variegated effect. It was never the intention to restore the surface to a completed state, but rather to a state that could be perceived as complete. Close inspection of the surfaces would reveal the colour difference, and also the texture of the surface continues to display the decay, ensuring historical legibility. Reconstruction is defined by the ICOMOS Charter as a form of restoration involving the introduction of new materials to replace what has been lost. This is considered an appropriate conservation method if reconstruction "is essential to the function, integrity, intangible value, or understanding of a place."[8] Reconstruction was used by Chipperfield in spaces where the architecture was integral to the exhibit, as it was in the Roman Room. In an advanced state of decay, the Roman Room had only fragments of the plaster remaining on the walls and ceilings. When reconstructing the missing elements such as the decorative mouldings and capitals, it was important for the reconstructed material to provide a neutral backdrop to the surviving original material. Working with a muted colour palette provided context for the surviving fragments, allowing visitors to experience the space as it once had been, yet with subtle evidence of what had been reconstructed.

Addressing the lost west wing of the museum had a simple solution: to re-establish the form. Chipperfield supported this by saying, "it doesn't make sense not to re-establish the form – it would be like a Greek sculpture with the missing arm. It's one thing not to put the arm back, but it would be funny to add something that wasn't there in the first place."[9] It was about re-establishing and honouring what had been. Chipperfield did this by working with the footprint, scale and masonry materiality of the lost element to recreate the overall formal symmetry of the building; but with simplified detailing at the roof cornice and around

5 David Chipperfield in an interview with Alejandro Zaera, "A Conversation with David Chipperfield," in *El Croquis 120: David Chipperfield 1998–2004: Minimalismo Denso = Dense Minimalism*, ed. Fernando Marquez Cecilia and Richard C. Levene (Madrid: El Croquis, 2004), 22.

6 David Chipperfield, *David Chipperfield: Architectural Works 1990–2002*, ed. Francisco Rei and Thomas Weaver (New York: Princeton Architectural Press, 2003), 39.

7 *ICOMOS New Zealand Charter*, 6.

8 Ibid., 7.

9 David Chipperfield in an interview with Adam Caruso and Peter St John, "A Conversation with David Chipperfield," in *El Croquis 87: David Chipperfield 1991–1997*, ed. Fernando Marquez Cecilia and Richard C. Levene (Madrid: El Croquis, 1998), 20.

Figure 5: Room of Niobids, with previously weathered areas of wall retained. Source: Google Maps

Figure 6: Roman Room, with reconstructed detail. Source: Google Maps

Figure 7. Southwest façade of the Neues Museum. Photograph: Janericloebe. Source: Wikimedia Commons

window openings, offering light but recognisable distinctions between the new and the existing. As mentioned earlier, the different conservation intervention strategies may have varying levels of permanence and legibility within a building. This is something that is clearly evident in Chipperfield's response to the Neues Museum – convincing evidence of his detailed analysis of different spaces and surfaces, deciding which elements are important in providing a context of understanding for historical legibility, and then developing a conservation method in response. Choosing a singular method of reconstruction may have provided for the building to be experienced in a similar way to how it once had been before being subjected to damage, but it would not have acknowledged the many years that the Neues Museum had spent in its ruined 'limbo' state. Through strategic application of an array of conservation methods, there are moments within the building that now reveal details that were never intended to be seen, such as the brick wall construction behind the plaster, the confronting remnants of the Second World War in the form of bullet fragments and charred columns, which would have been filled in and painted over; and the cracks and chips within the plaster caused by the years of being a ruin, which would have been filled and repaired. It is such moments in the building that reveal and contribute to an enriched story of the various periods of the building's life. A walk through the Neues Museum reveals that narrative.

The Canterbury Provincial Council Buildings

The Canterbury Provincial Council Buildings were constructed in three stages between 1859 and 1865, following the formation of the Canterbury Provincial Council in 1852.[10] The building was a reflection of the growth and success of the new province. Designed by Christchurch architect Benjamin Mountfort in the Gothic Revival style, the three building stages reflected just that. The first and second stages were of timber construction, the second displaying a higher level of decorative detailing and including a stone tower, which is considered the "first example of Victorian constructional polychromy in New Zealand."[11] The third stage showed substantive evidence of the province's growing wealth base and its ever-growing confidence. Constructed from stone, it included a new Bellamy's dining facility and Provincial Council Chamber with intricately detailed interior. As Aotearoa New Zealand's only surviving purpose-built provincial council buildings, they have held significant heritage value; home for a varied array of occupations since the disestablishment of provincial government in 1876 until the 2010 and 2011 Canterbury earthquakes. The earthquakes caused a significant loss of building fabric, including the complete collapse of the Provincial Council Chamber (the 'Stone' Chamber), the interior of which had been admired by architectural historian Nikolaus Pevsner as one of the finest High Victorian Gothic spaces outside Europe.[12] The varying degrees of damage throughout the buildings related to different construction materials and methods used over the years, and also from previous conservation and strengthening interventions on some parts of the buildings. In the early stages of this research project the assumption was that a singular conservation response could be applied to all aspects of the damaged Provincial Council Buildings. However, following detailed investigation of the multi-faceted conservation approach used by David Chipperfield in the Neues Museum and assessing the varying degrees of

10 Ian Lochhead, *A Dream of Spires: Benjamin Mountfort and the Gothic Revival* (Christchurch: Canterbury University Press, 1999), 93.

11 Ibid., 100.

12 John Stacpoole and Peter Beaven, *New Zealand Art: Architecture 1820–1970* (Wellington; Sydney; London: A.H & A.W. Reed, 1972), 25.

Figure 8. Completed Provincial Council Buildings, ca.1870 (Armagh Street Tower, far left, and Council Chamber to the right). Source: *Christchurch Star* archive and Christchurch City Libraries

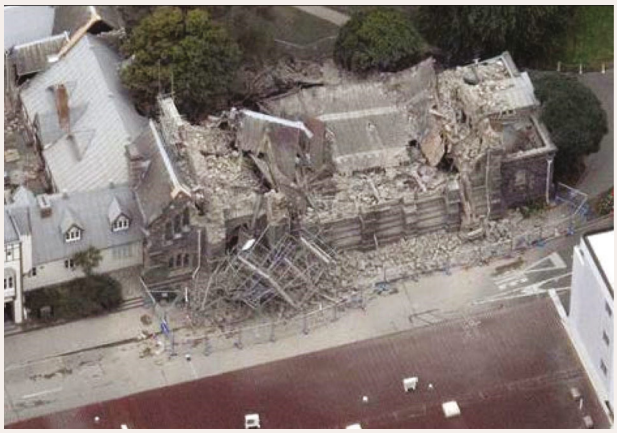

Figure 9. The February 2011 earthquake in Christchurch caused the complete destruction of the Provincial Council Chamber. Photograph: Tony Ussher. Source: Christchurch City Council

damage that the Provincial Council Buildings sustained during the earthquakes, from cosmetic to structural collapse, it became clear that this would not be an appropriate response. As a result, this project became an amalgamation of interventions, taking account of the damaged state of each area, its historical or architectural significance, and its potential use-value within the proposed repurposing programme.

There were two levels of intervention: minor and major. Minor interventions focused on sections of the buildings that suffered the least amount of damage or had been dismantled after the earthquakes. The exterior walls of Bellamy's suffered a partial collapse, and the initial conservation response could have been to restore walls to their previous state, hopefully by recycling fallen stones. However, it was proposed, in acknowledgement of this moment of history, to reconstruct the fallen areas of the exterior walls out of a similar, but not identical stone, coursed in a more regular construction pattern. This would allow the reconstruction to sit sympathetically within the surviving stonework, while maintaining honesty about being a new material and revealing the scars from the earthquake. Major interventions responded to sections of lost fabric and new moments of growth, within and in addition to the existing building fabric. As mentioned previously, the Stone Chamber had one of the finest High Victorian Gothic interiors. The greatest loss of the Provincial Council Buildings during the earthquakes was this interior space; in particular, the highly decorated ridge-and-furrow ceiling. With so much of the material lost following the earthquakes, it was essential to find an appropriate conservation response that would not only honour the layers of the building's history, including the earthquakes, but also the aesthetic and historical significance that was associated with the interior of the Stone Chamber. Two approaches were considered. The first could be likened to Chipperfield's approach of 'soft' restoration. Only a small number of the panels of the ridge-and-furrow ceiling had survived the collapse of the Chamber. The gaps left after reinstating the surviving panels would be filled by new panels

Figure 10. Perspective of Bellamy's illustrating selective reconstruction with new masonry. Drawing: Tanya Bezuidenhout

painted to match the existing colours; however, the pattern of the existing would not be replicated on the new. Only enough detail and colouring would be given to the viewer to help understand the form and grandeur of the Stone Chamber, while still indicating where new material had been used.

The second approach looked at the way damaged buildings, or buildings left in a state of limbo, can reveal elements and aspects of themselves that were never intended to be seen. A particular feature of the Stone Chamber was the timber scissor-trusses above the painted ceiling. Found throughout the Provincial Council Buildings, these scissor trusses are a unique feature of the buildings. This second approach would reinstate the surviving decorative panels in their original positions, though it would not replace missing panels; instead, there would be glimpses of the scissor trusses afforded through gaps between the surviving panels. Either of these solutions would be acceptable in revealing the layers

Figure 11. The substantially reinstated Durham Street Tower (above the line indicated). Drawing: Tanya Bezuidenhout

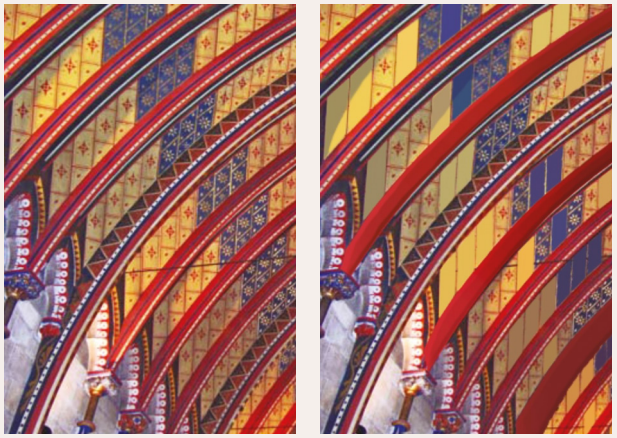

Figure 12. The highly decorative ridge-and-furrow ceiling of the Stone Chamber pre-earthquake. Photograph: Melanie Lovell-Smith, for *Te Ara Encyclopedia of New Zealand*. Licenced under Creative Commons Attribution-NonCommercial 3.0 New Zealand.

Figure 13. Soft restoration of the ridge-and-furrow ceiling. Surviving panels retain decorative detailing. New panels only show base colour. Photograph: As for Fig.12 (with adjustments by Tanya Bezuidenhout)

of the Stone Chamber's history, as well as the architectural features that contribute to its significance. It became clear that, as with the Neues Museum, conservation responses to the damage of the Provincial Council Buildings are varied, with multiple solutions being appropriate. There is a driving focus on honouring the collective legibility of the multitudinous layers of the building's past; including the ten-year period since the earthquakes, through the deliberate retention of some of the post-earthquake 'temporary' support provided to surviving stonework.

This paper acknowledges that no one method of conservation can be considered the 'right' way, but that the process of utilising various conservation methods can maintain the authenticity of a building, respecting and retaining the often multiple layers of change. The meticulous and meaningful analysis of applied conservation principles in the selected precedent – the Neues Museum in Berlin – critically inspired and influenced the design response for the Canterbury Provincial Council Buildings in Aotearoa New Zealand, where similarly various conservation approaches were tested. The result is a design response that honours both the significant aesthetic and historical values of the Canterbury Provincial Council Buildings, and the many layers of the building's history.

Figure 14. The reinstatement of material between the buttresses 'weaves' new and old elements together, respecting the overall history of the Stone Chamber. Drawing: Tanya Bezuidenhout

Figure 15. Selected retention of post-quake strengthening will provide tangible evidence of earthquake response. Photographs: Tanya Bezuidenhout

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Fig. 8. Completed Provincial Council Buildings, ca.1870 (Armagh Street Tower, far left, and Council Chamber to the right). Source: Christchurch Star archive and Christchurch City Libraries. https://canterburystories.nz/collections/archives/star/prints/pre1900/ccl-cs-4149

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Preliminary Original Research Article

(Re-)Uses of Historical Knowledge in Architectural Education

The Value of the Client – Reginald Ford on Professional Practice

Dr Milica Mađanović, Cameroon Moore and Dr Renata Jadresin Milic

Abstract

With the support of Tūāpapa Rangahau Research and Enterprise at Unitec New Zealand, a research project devoted to Gummer and Ford – an Auckland architectural firm founded in 1923 by William Henry Gummer (1884–1966) and Charles Reginald Ford (1880–1972) has been developed by a team of researchers. This paper announces the second stage of the research project devoted to Gummer and Ford, which builds up to the 2023 centenary of the firm's establishment – seen as a milestone in the New Zealand architectural calendar. In 1921 Reginald Ford, a founding partner of Gummer and Ford, often described as New Zealand's most eminent architectural firm from the interwar period, wrote an explanation of architectural practice titled "Architect and Client." Ford's explanation, written one hundred years ago, of what an architect is and what an architect does still rings remarkably true today. In framing his explanation from the client's point of view, he naturally prioritises the ability of the architect to communicate, both with the client to manage expectations and to make clear the value of the architect, and to the contractor to assist in construction.

This paper aims to show that, though commonly understood as detached from practice, history can teach us valuable lessons and provide solutions for contemporary professional challenges. With a little effort, architectural history could be reinvented by researchers and educators, reflecting all of the latest demands, pressures and priorities of higher education and the architecture profession throughout the world, enhanced by the accreditation process (NZRAB and AACA). In doing so, the teaching of history would produce knowledge that would stand the test of time and help equip students to practice architecture with confidence.

Introduction

> The relationship between academy and practice is important to foster from first year through to post graduate study. Architecture schools must have an open dialogue with both the national and regional profession, facilitating positive and critical exchange of ideas and knowledge.[1]

Unitec's School of Architecture is recognised in New Zealand as a school that advocates a pedagogy of architectural practice. With this pedagogy, the school necessarily teaches professional skills, creating a multifaceted framework for design thinking. Similarly, research of architectural history conducted at Unitec is primarily executed to reinforce architectural teaching and learning processes. Accordingly, the second phase of a three-year project focused on the practice that has often been described as New Zealand's most eminent from the interwar period – the firm of Gummer and Ford – is dedicated to applying architectural knowledge in education. This short communication will concisely

[1] Lorraine Farrelly, "Foreword," in *Defining Contemporary Professionalism. For Architects in Practice and Education*, ed. Alan Jones and Rob Hyde (London: RIBA Publishing, 2019), xi.

introduce one of the topics – based on the understanding of Gummer and Ford's business processes acquired during the first phase of the project – that will be covered by a one-semester elective paper offered at Unitec's School of Architecture. Condensed from various texts written by both naming partners of the firm, the paper will focus on their advice on managing professional practice and, more specifically, engaging with clients.

Setting the Stage: Unitec School of Architecture Accreditation and the Relevance of Professional Practice Education

Unitec's School of Architecture is accredited by the New Zealand Registered Architects Board (NZRAB). The procedure is licensed by the Architects Accreditation Council of Australia (AACA), which also recognises the professional degree. This extends to mutual recognition agreements internationally. Reviews conducted by the NZRAB and AACA Panel assess compliance with these competencies every five years (the last one was completed in 2021). The agreed competencies underpin the requirements of the programme's Aims and Graduate Profile in the School of Architecture at Unitec.

In preparation for professional accreditation, the National Standards of Competency for Architects (NSCA) performance criteria[2] were mapped, indicating the major impact that the two undergraduate and postgraduate courses in professional practice have in this accreditation process. The regulatory domain is explicitly introduced to students through the undergraduate course Professional Studies, with architectural practice management and ethics extended upon in the postgraduate course Professional Business Management (PBM). The Professional Business Management course brings the notion of the professional to the students' approach to the practice of architecture and creates a framework for design thinking.

The Professional Business Management course aims to prepare students for business procedures necessary to successfully practice architecture in New Zealand. Learning outcomes are clear in their intention to help students navigate the waters of the profession. The ambition is to teach students how to:

1. Critically examine business strategies including strategic and marketing plans, business taxation strategy, quality management strategies and Total Quality Management.
2. Devise a strategic plan, with budgets, for a business opportunity.
3. Devise a marketing plan for a business opportunity.
4. Evaluate various management styles.
5. Evaluate management and accounting systems and interpret company financial reports.
6. Critically examine and debate business ethics.

This is scaffolded on the learning outcomes of Professional Studies:

1. Analyse the structure of architectural practice.
2. Demonstrate the use of available management tools and processes in the control and administration of architectural projects.
3. Analyse procurement typology options; the impact on project programme and documentation requirements.
4. Discuss the New Zealand legal system and its concepts related to the practice of architecture.
5. Examine the rights and obligations of parties to a contract under New Zealand contract law.

Though covering a wide variety of relevant topics, these courses might benefit from allocating more space to teaching various communication strategies that would better prepare students for working with clients. In perspective, though initially developed with the ambition to inform the course offered in the second phase of the Gummer and Ford project, the knowledge accumulated during this research might contribute to other papers taught at Unitec's School of Architecture.

Learning from the Past: Early-twentieth-century Tactics for Working with Clients

Founded in 1923 in Auckland by William Henry Gummer (1884–1966) and Charles Reginald Ford (1880–1972), the Gummer and Ford architectural firm has been described as one of the most prominent practices in New Zealand architectural history.[3] Charismatic and influential, Gummer and Ford played an essential role in the professionalisation of New Zealand architecture, founded earthquake construction techniques, and contributed to the development of the country's institutionalised architectural education.

While Gummer often pondered about design challenges and solutions, the entrepreneur of the charismatic duo, Charles Reginald Ford, was more interested in successful business strategies. Contemplating professional processes, Ford wrote a series of articles titled "Architect and Client," published in *Progress*, the leading architectural magazine of the times. Ford started the series expressing his wish "that there were some book explaining the ordinary building procedure in New Zealand, the relations between architect and client, to which he [the architect] might refer an owner about to engage in some building operation for the first time." Ford stressed that he had often felt "that not only much loss of

2 "2021 NSCA Performance Criteria," Architects Accreditation Council of Australia, accessed September 1, 2021, https://www.aaca.org.au/national-standard-of-competency-for-architects/performance-criteria/

3 See, for example: Terence Hodgson, *Looking at the Architecture of New Zealand* (Wellington: Grantham House, 1990), 48; Bruce Petry, "The Public Architecture of Gummer and Ford" (master's thesis, University of Auckland, 1992); Peter Shaw, *A History of New Zealand Architecture*, rev. ed. (Auckland: Hodder Moa Beckett, 2003), 19, 67, 88, 90, 111–15, 146, 197; Paul Waite, *In the Beaux-Arts Tradition. William Gummer Architect.* Exhibition catalogue (Napier: Hawke's Bay Cultural Trust, 2005); Denis Welch, writing for the *New Zealand Listener* the following year, described the firm as "the best architectural practice of all time in New Zealand." Denis Welch, "The Best of New Zealand," *New Zealand Listener,* August 4, 2007.

Figure 1. Charles Reginald Ford, photograph by Clifton Firth, 1948. Auckland Libraries Heritage Collections 34-147.

time, but subsequent misunderstanding and annoyance might be avoided were such a work available for ready reference."[4] He complimented the efforts of the English architect Inigo Thomas and the American critic Charles Matlack Price to help prepare the expectations and behaviours of the architectural audiences – and potential clients.[5] However, in his words, though valuable, the advice these two authors provided could not suit New Zealanders as they were written "for other conditions than our own."[6]

Ford strove to educate the lay public so that he might inspire honest communication and confidence in architects. To do so, he explained what an architect was, quoting the American Institute of Architects:

> An architect is a professional person whose occupation consists of originating and supplying artistic and scientific data preliminary to and in connection with the construction of buildings, their appurtenances and decorations; in supervising the operations of contractors therefor; and in preparing contracts between the proprietors and contractors thereof.[7]

Therefore, Ford stressed,

> architecture is at once a science and art, and its practice a profession. Every building project in which an architect is engaged involves the exercise of his functions as an artist, craftsman, man of science, and both professional and businessman. He has to engage in correspondence; interview clients, contractors, and various agents and suppliers of building materials; evolve schemes for many and varied planning problems; develop these problems in both scientific and artistic aspects; compute and design footings and sustaining powers; compute and design supporting columns, beams, investigate and select materials of construction; manage an office; prepare working drawings in detail and write specifications; estimate costs; design sanitary, heating and ventilating systems; arrange for bell and telephone wiring; design ornament and embellishment; draw up contracts; check accounts; superintend construction. This is surely a formidable list, yet it is far from complete.[8]

In the following pages, Ford continued to explain *How an Architect Works*.

> After receiving instructions from the client, the architect's first step is the preparation of preliminary drawings for the purpose of consideration and discussion of the project with the client. The preliminary drawings having been approved by the client, the architect next proceeds to prepare the 'from working drawings,' that is, those drawings which the contractor makes up his tender and from which, supplemented by other 'detail' drawings, the building is erected.[9]

Having completed the plans and specifications, the architect still has the important work of supervising the erection of the building. Ford stressed that this was primarily the contractor's responsibility; however, architects ought to try and give their best to help guide the contractor towards success. He quoted Matlack Price upon the matter of supervision:

> after all, it should be remembered that the architect's reputation is at stake, not only in the design of the house, for which he is directly responsible, but for the contractor's part of the work, for which he is indirectly responsible. It stands to reason, therefore, that the architect will not wittingly allow a contractor to erect a monument which will reflect upon his professional ability, and much of the client's apprehension regarding insufficient supervision may well be allayed by this reflection.[10]

Ford explained that the amount of time given by a 'conscientious' architect to that part of his work coming under the heading of 'supervision,' even on a work of small size,

> would astonish the uninitiated. There are innumerable matters, small and large, referred to him for his determination. Not only do these entail visits to the building

4 C. Reginald Ford, "Architect and Client," *Progress* 16, no. 11 (July 1, 1921): 253.

5 Francis Inigo Jones, *Keystones of Building* (London: John Lane, 1912); Charles Matlack Price, *The Practical Book of Architecture* (Philadelphia; London: J. B. Lippincott Co., 1916).

6 C. Reginald Ford, "Architect and Client," *Progress* 16, no. 11 (July 1, 1921): 253.

7 Ibid.

8 Ibid.

9 Ibid., 254.

10 Ibid., 255.

> and to the contractor's workshops where certain portions of the work are being made, but various tradesmen engaged upon the building are constantly in and out of his office asking for instructions upon many matters of detail. For all large works, the employment of a clerk of works is very advisable. For some classes of work, for example, that in which reinforced concrete forms a part of the construction, his employment is absolutely essential in the interests of safety alone. In every case, he acts as a check upon a possibly dishonest or incompetent contractor, or dishonest or careless workmen, and conserves the interest of the owner throughout.[11]

Having outlined the client's duty in the second part of the paper,[12] in the third one he expressed his business ethics, explaining the primary motivation behind architectural design. Namely, in the third part of the paper Ford attempted to clarify – this time, by quoting Lethaby from memory – the difference between *architecture* and *building*, stressing that the former is the latter "touched with emotion."[13] In other words, "Building – however efficiently for the satisfaction of physical needs only; architecture, on the other hand, while providing equally well for the physical needs, satisfies in addition the needs of the spirit."[14] For Ford,

> the craving for beauty as a spiritual activity cannot be denied. That beauty in building can evoke the spiritual emotions and minister to the spiritual side of life, many glorious temples and cathedrals have testified throughout the centuries. But temples and cathedrals no longer form the main building activities of whole peoples. To-day schools, libraries, hospitals, post-offices, factories, and other utilitarian or altruistic buildings are taking their place in common life .... All these buildings touch the common life of people at every point – surely they should be made to minister to their spiritual and not alone to satisfy their physical needs?[15]

Conclusion

Ford's explanation, from one hundred years ago, of what an architect is and what an architect does, at least in the residential sector, rings remarkably true today. In framing his explanation from the point of view of the client, and what their incentives are, he naturally prioritises the ability of the architect to communicate. The architect communicates with the client to manage expectations and to further clarify the value of the architecture, and the architect communicates with the contractor to assist during construction, and offer a broader perspective of the project. The ability of the architect to communicate well might be even more critical today, with the proliferation of other professional consultants in the building industry, yet achieving standards of communication itself is not a stated learning outcome in either professional practice course at Unitec. Alex Maroya, Gill Matthewson and Louise Wallis, in *Architectural Education and the Profession in Australia and New Zealand*, found that both verbal and written communication were considered either extremely or very important in the profession by both practitioners and academics, ranked just below critical thinking and problem solving.[16] In the same study, professional practice was ranked the most important subject area (along with design studio) by practitioners, but not as high among academics, while the opposite is true for architectural history.

Where does this leave the study of architectural history as it applies to the profession? This project aims to show that, though commonly understood as detached from practice, history can teach us valuable lessons and provide solutions for contemporary design challenges. With a little effort, architectural history could be reinvented by researchers and educators, reflecting all of the latest demands, pressures and priorities of higher education and the architecture profession throughout the world, enhanced by the accreditation process (NZRAB and AACA). In doing so, the teaching of history would produce knowledge that will stand the test of time and help equip students to practice architecture with confidence.

Further avenues of research in this area might include updating Ford's work to include the roles of other construction consultants and their relationships with the architect, and how much, if at all, the architect's relationship with the client has changed in the last one hundred years. But perhaps more fundamentally, and certainly outside the scope of this paper, is a careful consideration of architectural value. For Ford, the value of architecture lies in its beauty. He even frames the search for beauty as an ethical imperative, an architect's duty. It follows that such a closely held belief demands the effective communication of that belief to others who are also responsible for the delivery of the project. This begs the question: What fundamental principles are architects communicating in today's world?

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11 Ibid.

12 C. Reginald Ford, "Architect and Client (II)," *Progress* 16, no. 12 (August 1, 1921): 278.

13 C. Reginald Ford, "Architect and Client (III)," *Progress* 17, no. 1 (September 1, 1921): 14.

14 Ibid.

15 Ibid.

16 Alex Maroya, Gill Matthewson, and Louise Wallis, *Architectural Education and the Profession in Australia and New Zealand* (Sydney: Architects Accreditation Council of Australia [AACA], 2019), 50.

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Enigmatic Assemblages

Follies at the Intersection of Architecture and Photography

Annabel Pretty

Abstract

Hyperreal architectural photographic assemblages proliferate within contemporary media: artists, photographers and architects envision digital worlds that operate at the intersection of hyperreal architectural renders, artistic media and photography. The manifestation of these assemblages can be examined in the works of French artist Zacharie Gaudrillot-Roy (1986–), and Canadian artists Carl Zimmerman (1951–) and David Trautrimas.

Gaudrillot-Roy's assemblages from the series *Façades #3* interrogate the notion of architectural form, how buildings impose and connect with their environments. The photographs present the buildings in a superficially twilight aesthetic; the viewer's immediate glance registers a possible reality, but a second glance confirms the flattened buildings can only be a discourse on the enigmatic notion of spatial qualities. Zimmerman's photographic practice questions the notion of imagined environments by using the mechanism of the folly or ruin within a utopian world. In contrast, Trautrimas's assemblages use pastiche, montage and collage to extend on both Zimmerman's and Gaudrillot-Roy's images, creating surreal utopian possibilities that transform an actuality by creating and manipulating spatial qualities, redefining how we conceive and perceive space.

These pluralistic assemblages draw insights and multiple narratives, as digital architecture has become pervasive and ubiquitous in the search for spatial properties. Unique and enigmatic narratives are constructed, allowing investigations to further the Deleuzian concept of 'assemblage' (in French, agencement). This paper aims to shed light on how this contradiction is a central engine for the articulation of relevant discourses and narratives, which have a significant impact on contemporary spatial conception and practices, and push the creative research beyond the limits of the mere superposition that one experiences daily with the digital augmentation of reality.

Introduction

Photography and architecture share an uncomfortable co-dependent relationship. Paradoxically, architects need photographic imagery to showcase and describe buildings in a rational and comprehensive manner prior to the built form (a rendered image, as precognition of potential future vision of architecture), and invariably architectural photographers are contracted to create compelling marketable images post-construction to both promote the architectural practice and as consumable accessible evidence of the building to wider audiences. Spanish architect and writer Jesús Vassallo[1] writes, of this consumable evidence, that once an architect completes a project, it is handed over for someone else to translate its consumption – "Photography then certifies the ossification of the project" – indicating that the representation of the building, therefore, becomes rigid and unimaginative as a singular viewpoint – an antithesis of the hyperreal assemblage[2] image. Philosopher and cultural theorist Jean

1 Jesús Vassallo, "Seamless: Digital Collage and Dirty Realism in Contemporary Architecture," in *Seamless: Digital Collage and Dirty Realism in Contemporary Architecture*, ed. Jesús Vassallo, 165–90, Architecture at Rice University (Zurich: Park Books, 2016).

2 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, ed. Félix Guattari, trans. Brian Massumi (London: Athlone Press, 1987); Manuel DeLanda, *Assemblage Theory* (Edinburgh University Press, 2016).

Baudrillard (1929–2007), in *Simulacra and Simulation*,[3] establishes the notion of the hyperreal as "the generation by models of a real without origin or reality" and further illustrates the valuable successive phase most fundamental to the understanding of hyperreality, that of the blend of reality and representation characterised by Baudrillard's concept of the simulation, where simulation no longer takes place within the physical realm.

The simulation thus "envelops the whole edifice of representation itself as a simulacrum,"[4] and is not a copy of the real but a truth in its own right and thus creates four steps of reproduction: (1) a reflection of a profound reality; (2) a mask of reality; (3) an absence of reality; and (4) simulacrum, which "bears no relation to any reality whatsoever."[5] Hyperreal images sit at the intersection of these preconceived images (the hyperreal render as a possible building): the hyperreal post-built image (the slick hyperreal marketing image, heavy with Photoshop); and the hyperreal, photo-montaged, digitally assembled possibility. Artist–architect–photographers blur these boundaries and create a sort of fantastical hyperreal hybrid possibility, also termed by architect, curator and writer Pedro Gadanho (1968–) as 'architecture fiction'[6]: believable, unbuildable, but questioning spatial relationships; manifest as Enigmatic Assemblages.

Assemblage Follies Framework

The plethora of hyperreal, photo-montaged, digitally assembled images that proliferates within contemporary visual architectural media would indicate that image makers (artists, photographers, Photoshop artists, architects, et al.) do not require architects to generate plausible spatial constructs. These spatial constructs – or rather hyperreal collaged/assemblage images – break normative boundaries of spatial attributes, causing the viewer to reappraise and rethink their relationship with architecture, imagining a pluralistic view of spatial qualities. Within the context of this paper, these fantastical speculative-hyperreal spatial constructs (assemblages) will use the synecdoche of the folly[7] as a mechanism or instrument to describe these hyperreal assemblages, similar to that of the painter's strategy of the 'architectural capriccio.'[8] Architectural follies have an extensive history of the un-contextual building within the picturesque landscape (illustrating power and wealth) as well as the double entendre of the meaning of the word: folly being foolish, extravagant, somewhat transcendent, or delightful with little practical purpose. A folly, therefore, is one of the most extreme embodiments of a conceived system of desire and representation[9] and is the vehicle by which to bring forth new ways of interpreting relationships of space, landscape and architecture. These spatially subversive hyperreal virtual follies deploy a type of spatial transduction,[10] for the production of images of incompatible juxtapositions of heterogeneous elements, creating Enigmatic Assemblage follies.

The intention of this investigation is to compare and contrast the spatial interpretations of such artist–architect–photographer–designers who represent the hyperreal follies: Zacharie Gaudrillot-Roy (1986–), David Trautrimas and Carl Zimmerman (1951–). All three pay homage to a previous generation of artist–architect–photographers working within this intersection, such as Filip Dujardin (1971–), Victor Enrich (1976–) and Dionisio González (1965–). Filip Dujardin is ubiquitously associated with the genesis of these hyperreal assemblage image-makers. Writer Stefan Devoldere,[11] in the book *Filip Dujardin: Fictions*, quotes Dujardin speaking about his hyperreal images: "Without reality, there's no fiction. I detect building types and mechanism in real architecture, which I then enlarge or make more extreme in my imaginary architecture but always bounds of plausibility." These hyperreal images are also described by Enrique Encinas, Sara Božanić and Oleg Šuran as "high-fidelity fictional artefacts,"[12] and in the writing of Anthony Dunne and Fiona Raby[13] they are designated 'speculative'; however, Ivice Mitrović et al. expand this to encompass a vast constellation of adjacent terms from Sjef van Gaalen, including Design Fictions, Futurescapes and Speculative Fictions to name but a few.[14]

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3 Jean Baudrillard, *Simulacra and Simulation* (Ann Arbor: University of Michigan Press, 1994), 1.

4 Ibid., 6.

5 Ibid.

6 Jan De Vylder, Stefan Devoldore, and *Pedro Gadanho, Filip Dujardin: Fictions*, trans. Robrecht Vandemeulebroucke (Brussels: Hannibal, 2014), 6.

7 Pedro Gadanho in De Vylder, Devoldore, and Gadanho, *Filip Dujardin: Fictions*, 7.

8 The painter's 'architectural capriccio' is a device to construct an architectural fantasy or fiction by an assemblage of composites of building ruins and other architectural agents, as evidenced by Giovanni Battista Piranesi (1720–1778).

9 Sophia Psarra, *Architecture and Narrative: The Formation of Space and Cultural Meaning* (London; New York: Routledge, Taylor & Francis Group, 2009).

10 'Spatial transduction' coined by Gilbert Simondon (1958). Gilbert Simondon, *Du mode d'existence des objets techniques* (Paris: Aubier et Montaigne, 1958); Paulo de Assis, "Transduction and Ensembles of Transducers: Relaying Flows of Intensities," in *Transpositions: Aesthetico-Epistemic Operators in Artistic Research*, ed. Michael Schwab, 245–66 (Leuven, Belgium: Leuven University Press, 2018).

11 De Vylder, Devoldore, and Gadanho, *Filip Dujardin: Fictions*, 60–61.

12 Enrique Encinas, Sara Božanić, and Oleg Šuran, "Methods, Approaches and Tools: Ambiguity, Tensions and Scopes," in *Beyond Speculative Design: Past – Present – Future*, ed. Ivica Mitrović, James Auger, Julian Hanna, and Ingi Helgason (Split, Croatia: SpeculativeEdu; Arts Academy, University of Split, 2021), 84.

13 Anthony Dunne and Fiona Raby, *Speculative Everything: Design, Fiction, and Social Dreaming* (Cambridge, MA: The MIT Press, 2013).

14 An online survey by Sjef van Gaalen of the names of adjacent design practices identifies 80 different names, from Design Fiction, Future Design, Antidesign, Radical Design, Interrogative Design, Discursive Design, Adversarial Design, Futurescape (van Gaalen, 2018, in Encinas, Božanić, and Šuran, "Methods, Approaches and Tools," 70). De Vylder, Devoldore, and Gadanho's 2014 book is titled *Filip Dujardin: Fictions*.

The Intersection

The gap the research addresses is that of architecture-fictions being created without architects by utilising hyperreal assemblage to test, develop and expand spatial qualities. Three central concepts are used strategically – firstly that of the Deleuzian assemblage, secondly Henri Lefebvre's notion of 'perceived' and 'conceived' space, and finally that of the 'bricoleur'[15] from Norman Denzin and Yvonna Lincoln – to critique and analyse the three case studies of Gaudrillot-Roy, Trautrimas and Zimmerman. The philosopher Rosi Braidotti[16] (1954–) discusses the notion that an assemblage can be a montage, not a given point in time or space but rather a 'quilt' of retrieved material that buttresses into Denzin and Lincoln's notion of the 'bricoleur' as someone who borrows from many disciplines, creating new understandings of the blended, overlapping, new representations: an intersection. Lefebvre further reiterates within this context the notions of plasticity and assemblage,[17] the nature of photography and its relationship with architecture, which is particularly evidenced within the speculative-hyperreal folly as encompassed by the images of Gaudrillot-Roy, Trautrimas and Zimmerman.

> Cutting things up and rearranging them, decoupage and montage – these are the alpha and omega of the art of image-making. As for error and illusion, they reside already in the artist's eye and gaze, in the photographer's lens, in the draftsman's pencil and on his blank sheet of paper. Error insinuates itself into the very objects that the artist discerns, as into the sets of objects that he selects.[18]

Lefebvre examines within this quote the issue of 'error,' which is very perceptive and pertinent to the hyperreal folly, and woven into the intersection of the bricoleur and within the general understanding of assemblage theory.

Assemblage Follies – Zacharie Gaudrillot-Roy

French artist Zacharie Gaudrillot-Roy's assemblages from the series *Façades #3* interrogate the notion of architectural form, how buildings impose and connect with their environments. The photographs present the buildings in a superficially twilight aesthetic; the viewer's immediate glance registers them as a possible reality. But a second glance confirms the flattened buildings can only be a discourse on the enigmatic notion of spatial qualities. Gaudrillot-Roy discusses that the series offers a vision of himself as a 'flâneur' as he walks around the city; the first 'punctum'[19] points of initial interaction with a building are the pure façade without depth, and a type of 'other' where daily life is but a scenery. Gaudrillot-Roy further goes on to suggest that he is not

Figure 1. Zacharie Gaudrillot-Roy, *Façades #3* (12/14). Hyperreal folly.

Figure 2. Zacharie Gaudrillot-Roy, *Façades #3* (11/14). Hyperreal folly.

questioning the artificiality[20] of the scene but rather questioning the perceptions of a specific environment.

One may conclude that Gaudrillot-Roy's images question and expand on the concepts of spatial subversions pertaining to speculative-hyperreal follies by interrogating the notion of spatial subversions using assemblage theory.[21]

Assemblage Follies – Carl Zimmerman

Canadian artist Carl Zimmerman's photographic practice questions the notion of imagined environments by using the

15 Norman K. Denzin and Yvonna S. Lincoln, eds., *The SAGE Handbook of Qualitative Research*, 4th ed. (Thousand Oaks, CA: SAGE Publications, 2011).

16 Rosi Braidotti, "Lines of Flight + Suicide," in *The Deleuze Dictionary*, rev. ed., 2nd ed. (Edinburgh University Press, 2010), 151–152.

17 As previously discussed by Deleuze and Guattari.

18 Henri Lefebvre, *The Production of Space*, trans. Donald Nicholson-Smith (Oxford: Blackwell, 1991), §IV:97.

19 Roland Barthes, *Camera Lucida: Reflections on Photography* (1st American ed.), trans. Richard Howard (New York: Hill and Wang; Farrar, Strauss and Giroux, 1982).

20 Zacharie Gaudrillot-Roy, "Façades #3," ZGR, http://zachariegaudrillot-roy.com/en/portfolio-20289-0-0-facades-3.html

21 DeLanda, *Assemblage Theory*; Deleuze and Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*; Adrian Parr, *The Deleuze Dictionary*, rev. ed., 2nd ed. (Edinburgh University Press, 2010).

Figure 3. Carl Zimmerman (1951–), *Exterior with Windows, Cold City* [9], 2010–2014. Hyperreal folly.

Figure 4. Carl Zimmerman (1951–), *Exterior with Columns, Cold City* [5], 2010–2014. Hyperreal folly.

mechanism of the folly, or ruin, within a utopian world. Like Trautrimas, whose work is discussed in the following section, he, too, is harking back to the Cold War-era, however meshing with early memories of civic and industrial building within the town of Hamilton, Ontario.[22] Combining the use of neo-classical fabricated architectural models and digital post-production, plus in-camera techniques, in the series *Cold City* (2010–2014) he creates a type of monumentality in which he suggests:

> *Cold City* doesn't represent any literal place, but rather it is an amalgamation of gigantic parts – part Cold War memorial, part unchained industrial behemoth, part Stalinist Neo-classical temple, part Constructivist pipe dream, part past, part future.[23]

It is this dichotomy that is illustrated within Lefebvre as:

> Wherever there is illusion [which resides in the photographer's lens] the artist's eye and gaze, the optical and visual world plays an integral and integrative, active and passive, part in it. It fetishizes abstraction and imposes it as the norm. It detaches the pure form from its impure content – from lived time, everyday time.[24]

Lefebvre's opinion is further validated by Jesús Vassallo,[25] who states:

> This democratization of forgery shatters the indexical link of photography with reality. We are now much more vigilant when we approach an image, aware that we may be looking at something other than a registration of reality. In severing the umbilical cord between the photograph and its object, the introduction of the digital blurs the division between observation and action, between representing the world and proposing new worlds.

Assemblage Follies – David Trautrimas

In contrast, David Trautrimas's assemblages use pastiche, montage, and collage to extend on Gaudrillot-Roy's and Zimmerman's images, creating surreal utopian possibilities that transform an actuality by creating and manipulating spatial qualities, redefining how we conceive and perceive space. The bricolage[26] of elements merges sculpture, photography and Photoshop elements, such that each structure is composed from a constellation of disassembled household appliances: "devices of destruction are assembled from the very appliances that promised deliverance to a post-WWII paradise."[27] Each assemblage is based on the Cold War era of industrial design and its utopian promise, creating moody, futuristic-seeming, military-esque landscapes.

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22 Wayne Baerwaldt, *Untitled: New Work by Carl Zimmerman* (Sackville, Canada: Owens Art Gallery, 2001).

23 Carl Zimmerman, "Cold City (2010–2014," http://www.carlzimmerman.ca/cold-city.html

24 Lefebvre, *The Production of Space*, §IV:97.

25 Vassallo, "Seamless: Digital Collage and Dirty Realism in Contemporary Architecture," 171.

26 Denzin and Lincoln, eds., *The SAGE Handbook of Qualitative Research*.

27 Catherine Warmann, "The Spyfrost Project by Dave Trautrimas," Dezeen, April 26, 2010, https://www.dezeen.com/2010/04/26/the-spyfrost-project-by-dave-trautrimas/

Figure 5. David Trautrimas, *Seismic Conduction Tower*, 2009, color pigment ink print, 30 × 20 inches, edition of 14. Hyperreal folly.

Figure 6. David Trautrimas, *The Aurora Maker*, 2009, color pigment ink print, 17 × 14 inches, edition of 16. Hyperreal folly.

Since many of these follies are a pastiche or montage of multiple elements, is it anticipated that it is possible to generate innovative ways of perceiving and conceiving the architecture fictions, aligning with philosopher Henri Lefebvre's (1901–1991) notions of perceived and conceived space.[28] Moreover, by decoding the threads of the multiple spatial qualities of these sublime follies it is shown that their photographic representation cannot be considered a pure unbiased recording of intent but rather a means of sublime spatial production.[29]

Concluding Remarks

"Enigmatic Assemblages" is a research investigation that utilises a literary backbone to question the construal intersectionality of hyperreal photorealistic architectural representations. The necessity of this research is to survey these contemporary hyperreal sublime follies to untangle and appraise their connections within current architectural and photographic theories and discourse, and to find new ways of defining and interpreting the spatial qualities. American architectural educator and critic Cynthia Davidson (1952–)[30] proposed the belief of the dichotomy of the lived experience and its problematic digital representation within the field of architecture – what Lefebvre called 'social space.'[31] Davidson and Lefebvre, therefore, retrace our steps back to Baudrillard's concept of the 'simulation' being simultaneously a reflection of a profound reality, a mask of reality, an absence of reality and therefore a simulacrum. All of which can be evidenced in varying degrees within the works of Gaudrillot-Roy, Trautrimaus and Zimmerman. Davidson also raises corresponding awareness of these issues by wrapping into her below quote Walter Benjamin's speculations on the representation of the image thus:

> as Benjamin wrote … a new kind of ritual making, one that ensnares the original, or the 'real,' in the digital. The consequences of this are a return to privileging of the visual; in the digital, the image becomes the architecture.[32]

To circle back to the paper's introduction, which utilises a quote that refers to the tendency of architectural photography to create a particular type of 'ossification' of the actual representation of an architectural building: the quintessential iconic image. Nonetheless, the dialogues of such artist–architect–photographers as Gaudrillot-Roy, Trautrimas and Zimmerman counter this notion. They allow for new narratives and interpretations, creating a bricolage of circuitous interpretations of space and the reading(s) of the spatial qualities within the Enigmatic Assemblage folly, insomuch as Benjamin writes, "the image becomes the architecture."

28 Lefebvre, *The Production of Space*.

29 Fredric Jameson, *Postmodernism, or, The Cultural Logic of Late Capitalism* (Durham, NC: Duke University Press, 1991), 98–99.

30 Cynthia Davidson, in "Introduction Images of *Anymore*," in *Anymore*, ed. Cynthia C. Davidson, Thomas Weaver, and Anymore Conference (Paris, France, 1999), 8.

31 Stanek, Łukasz, "Architecture as Space, Again? Notes on the 'Spatial Turn," *Spéciale'Z* 4 (2012): 48–53.

32 Davidson, Weaver, and Anymore Conference, eds., *Anymore*, 8.

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