





Asylum 2022

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Introductory OUTLINE

Welcome to the 2022 edition of the Unitec School of Architecture's architecture design research journal, *Asylum*. For a third year, the journal combines student work from across the architecture, landscape architecture, landscape design and interior design disciplines. The journal seeks to draw attention to the development of understanding of design as a vehicle for research, alongside academic peer-reviewed papers looking more generally at architectural design research. As ever, the publication is designed and brought together by a team of enthusiastic and creative students that turn their emerging architectural training to one of interrogating the boundaries and relationships of text and imagery on a two-dimensional page.

The year 2022 is one in which remote learning has begun to cease as Covid restrictions and lockdowns have lifted. After nearly three years of disrupted learning we are seeing the outcome of this in the way students are engaging with their learning and understanding the role their education will play in their lives ahead.

Undoubtedly, lockdowns and remote, online working in physical isolation have had an effect on students and their tertiary education experience. The lack of a shared experience and focus, alongside external pressures, has meant that what is usually a time to explore, learn and understand your interests, and to create lifelong connections with your peers, has become something else. I see opportunities missed and the need for an adjustment in approach moving forward.

Calls for the flexibility established through Covid often miss this critical aspect of studying towards a vocation. It is not just the material that you learn that is important, but the friends that you find along the way, the shared passions, the ideas you form and the personal growth made on those formative steps towards your professional adult career that set a foundation for your future. This is difficult to achieve through a laptop screen as one small rectangle among many, or watching lectures back at night at one-and-a-half-time speed.

This year the students have used the concept of metamorphosis to guide their design of the journal. They give emphasis to the more constrained rigour of the foundational years of study through a tight formatting of the page, before allowing images to flex and grow as a student's personal journey develops a fuller understanding of the field they are entering and their place within it.

The dictionary definition of metamorphosis refers to attaining an adult form through two or more distinct stages. Echoing this analogy, now that you have started to attain knowledge in your field in a largely isolated way, I encourage you to consider the connections that you have made, and the ones that you are yet to establish. As we come back into the world and interact with real people again, it's important to take that time to reconnect, create new connections, and to allow ourselves time to make these adjustments.

"We are social beings, and the fields that we practice in are about creating better spaces and places for people to inhabit."

We must be cognisant of our interactions with others, how our behaviours affect others, and move forward with new learnings about ourselves, our world, and how we can interact to effect positive change.

Peter McPherson Head of School School of Architecture



Editors' NOTE

In 2022, we present the third end-of-year issue of the *Asylum* architecture design research journal published by the Unitec School of Architecture – Te Pūkenga, and ePress scholarly publishing house. Our *Asylum* journal has been published as both a printed and an online open-access publication, dedicated to designled research and engaging design as research and its methodology.

"Architecture should speak of its time and place, but yearn for timelessness."

As in the previous two years, the student-focused endof-year issue of *Asylum* includes a double-blind peerreviewed section of academic papers written by School of Architecture staff, students, and associates.

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. We are pleased to share with our readers that the journal now has DOI numbers for all peerreviewed papers and the journal as a whole. With the unique identifiers for our digital version of the journal that help readers to locate the source reliably, we hope to continue to grow the *Asylum* journal to a broader audience in Aotearoa and internationally.

The peer-reviewed section of *Asylum* 2022 begins with an introduction on page 262.

Further, for this 2022 edition of Asylum, a team of three students came together and discussed their educational journey at the Unitec School of Architecture. They considered what it might be that unites students across disciplines in order to represent the wider student body and establish an intent that would be fundamental in driving the design outcome of this year's Asylum journal. In doing so, the team of three surmised that students assume a metamorphosis. Not in the traditional sense, but one that applies to students from varying backgrounds undertaking an advanced and progressive pathway that critically examines their ideas and interests, resulting in academic development with support from the broader communities of practice. The student team concluded that the metamorphosis, as experienced throughout their academic journey across the disciplines of architecture, interior design, and landscape architecture, is an educational transformation combined with one of personal growth. This is an unexpected transformation, as it focuses not only on a practical and educational metamorphosis but also a personal revolution of sorts, and a major step forward into the professional realm.

Asylum 2022 illustrates a graphical and cognitive representation of this metamorphosis – something that has become ingrained, innate, obsessive, and cellular.

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







Design TEAM

Asylum 2022 embodies the idea of metamorphosis. And the journey we, the design team, have experienced has also been a form of metamorphosis. With a smallerthan-usual team of three, we aimed to work on individual design interpretations from a brief we developed together, to infuse the idea of Asylum with our personal styles and perspectives. This was sometimes difficult, especially regarding the final design, as at times it meant compromising and disrupting a cohesive vision in order to move forward. However, we practised transparent decision-making to inform a unified journal design by staying true to our collective design intentions.

We didn't at first realise the scope of work and learning that would be involved with producing *Asylum* 2022. Being the first uninterrupted academic year since 2019, we made sure to restore connections across the school's cohorts in order to diversify the journal and its significant connections with the broader community. The turbulence of previous years had hindered such connections and students' willingness to share their

work. Therefore, we sought to reinspire students to be proud of their work and to encourage submission of their projects to *Asylum* to pave an easier path for future journal design teams and also to help recreate an engaging culture for students across the School of Architecture.

'The actions that we carry out, the cultural objects that we produce, or with which we seriously identify ourselves reveal something about ourselves." - ICS Universidad de Navarra, "Emotions and Identity."

We could never have imagined the impact *Asylum* has had on our architectural academic learning, from communications to visual hierarchy and spatial organisation, and connecting with staff and students across the school. This project will no doubt impact the trajectory of our architectural careers.

Jessica Hartley, Connor Le Quesne, and Jessica Tregidga

BACHELOR OF ARCH



















ITECTURAL STUDIES



Vear D N E

This year-long course comprises a series of simple thematic and typological design problems that address fundamental architectural issues such as context, space, light, scale, form, and composition. Combining these fundamentals in a studio environment provides an initiation into the practice and discipline of architectural design. Projects progress from rudimentary principles and small-scale interventions, and culminate with a complex multi-programme design. An introduction to both material and conceptual experimentation and development is made through physical model-making, photography and analogue drawing. The studio offers a foundation for the Bachelor of Architectural Studies and paves the way for a career within a variety of design-related industries.

"Architecture is the thoughtful making of spaces." Louis I. Kahn (1969). "Louis I. Kahn: Talks with Students."

Students learn to see, think and understand the world around them in new ways, acquiring tools and sensibilities which prepare them for generating and describing "thoughtful spaces".

Hamish Foote and Phillipa Newman Course Coordinators





Joshua Hamilton Form and Inhabitation

The third brief in Studio One focuses on the concept behind our previous designs. My model represents a moment of tumbling mass, falling from high up the hill, at the rear of the site. We were asked to use 1D, 2D, and 3D elements to explain our concept. I used thin galvanised steel wire, white card, and large laminated card masses, suspended in the air, to create a sense of contrast and tension. It made it feel as though, were one of the one-dimensional elements to be knocked, it would allow for the large mass to come crashing to the ground. Users of my design may feel as if they are frozen in time, while waves and birds continue to move. It is a place to pause. We were later asked how we might allow the three activities – sitting, standing, and lying – to occur within our design. This led me to consider what I might enjoy about a place where I could perform each activity: sitting on a ledge, high up, exposed to the elements with a small dose of adrenaline in my body; standing with a view, something to keep myself stable; lying in an isolated, safe space.









Parizad Wood Form and Inhabitation

Melting Gelato is a largely planar, linear structure set against a solid rock mass. The composition represents the dripping of gelato – the creation of a smaller body, slowly pulling away from the parent.

The four angular panels set within the towering landmass pay homage to the four sides of the parent cube-like structure and natural landform. The cascading panels, with their vertical timber grain combined with the undulations of the mesh, represent fluidity. The change in densities of the composition from solid rock (cardboard), to bamboo veneer and, finally, to perforated steel mesh demonstrate the parental concept of new entities and growing forms.



This project explores the idea of creating a structure that serves three simple purposes; to sit, stand and lie. These spaces are only accessible once a mountainous landscape has been ascended. The structure itself is located at a halfway point; should the journey continue it will culminate by reaching the ultimate destination, the mountain's peak. For many years, visitors have made the pilgrimage to this location, paying homage to the striking mountain; the structure is where they now rest before and after their ascent. The tall eave pointing southwest symbolises the mountain's peak, but also reminds us to thrive. A pivot door features centrally within the structure and enables the layout to transition, dynamically meeting the needs of visitors. When the door is open, it serves as a wall separating private and public areas, enhancing an occupant's privacy and security. It also introduces a new circulation route from the north and west. When closed, the door blocks the prevailing winds coming from the west, ensuring thermal loss is minimised during colder nights and winter months. The viewing platform sits by the water, facing east and featuring a ceiling of reflective material, meaning occupants can enjoy the sunrise as the water ripples in the lake, reflecting above and creating a 'submerged in water' atmosphere.

Eric Zhu Threshold and Aperture



Harry Jeon Threshold and Aperture

The purpose of this project is initially to explore structure. This began as a one-dimensional representation of a conceptual form. As this form began to develop it became reminiscent of a bird's nest – a twig-infused structure piled up to create an organic platform, a safe place, yet often at a dramatic height. The idea of form was explored through a working model – perching, balancing, almost extruding from the mountain edge. A rectangular space was developed and is set for rest and security. It is sheltered and quiet. This area is contrasted by a perilous triangular space, with merely a pointed edge resting upon, and supporting from, the landscape. A timber hanger adds to this dramatic effect of height and insecurity. The final consideration was that of aperture. My design development began to highlight the dramatic and expansive view of rugged green mountains from several vantage points – some safe, some precarious. The journey to the Bird's Nest is long and physically challenging; however, this allows for the discovery of many diverse and intriguing views of the birds' environment. And once safe under the roof, the journey completed, there is freedom to explore and enjoy.













The flipping of the waka provides a fortress in moments of a journey's adversity. The inverted, deconstructed nature creates an internal space of reflection to reassess and repair. The anchor (punga) of natural, solid mass is gripped beneath the earth's surface, grounding to its place in rest while providing a bearing point. Extruded out of the mass are rib-cage-like linear elements. While seemingly exposed in solitude, they form a secure structure when aligned. Inverted sails (rā) meet the structure's curvature to acknowledge the topography of the ridgeline. Firmly lashed to the cliff's surface, they provide shelter in weathering the external elements.

The waka prow (ihu), intimidating and vast, leaps out, guiding attention to its due course. The concaved hull mirrors the cliff's surface, expressing vertical undulation. This project seeks to provide an idyllic space of refuge for the people of the whenua by developing apertures to communicate light quality and provide points that set a visual connection to the whenua. Interior programmes of sitting, standing and lying are arranged so as to be exposed to daylight and the surrounding cliff edge, while introverted spaces are more enclosed. Apertures at every level provide views to reflect on the journey taken and to assess what lies ahead.

Myke Te Momo Threshold and Aperture



Myke Te Momo *Materiality*

This project proposes an exploration of materiality and the relationships between materials. Relationships are explored through timber, copper, and sandpaper, coinciding with three methods of connection - mechanical, chemical, and geometrical. The connections between presented materials are investigated through a visual representation of three specific sounds - splitting timber, white noise, and dial-up internet connection. Each sound is represented with a balance of all three materials, yet one is dominant. Each material's physical limitations and textures, combined with ease of connection, manifest how each sound could be conveyed through a physical entity. Existing within each design lies a juxtaposition of physical connections realised through an underlying sense of metaphorical disconnection.





Natalie Lambourne *Materiality*

The three materials selected for use in this project – timber, cork and linen – are all organic in their origin. They were once living, growing plants or trees, and this shared biological quality has inspired the form of the models.

Each model expresses a past moment in the material's life cycle. In the first model, linen takes on a 3D form, driven by the idea of a flax flower bud. The second model embraces the pliability of cork in its 2D form and

visually references the harvested cork tree bark, which is stripped in long curved lengths and stacked atop one another. The third model utilises timber in 1D form to create an organic composition, inspired by the idea of movement through a forest. The intention with the models was to consider and reflect on the provenance of materials and bring elements of their original forms to life. Through these moments, new spaces are discovered.





Natalie Lambourne

Residency

The unique landscape of Anchor Bay, on Tāwharanui's north coast, was the driving inspiration for this artist residency. The underpinning idea of the site intervention is to acknowledge the importance of this headland, both culturally as a former pā site, and as an iconic view in the current landscape, which many people walk around during their time exploring the regional park. The gallery and studio structures directly respond to the landscape by aligning with and mirroring this void through their form and arrangement. The dwelling also plays with the idea of a void, with a cut-out courtyard and series of windows that creates a continuous visual space that bisects the structure. The residence is designed for a photographer interested in exploring sustainability in their creative process. The studio space is equipped with a darkroom to encourage experimentation with

non-digital image-making that explores and utilises the rich natural resources of Tāwharanui – for example the red ochre, harakeke seed-pods and water from the river and sea.

Due to the delicate nature of the site, the materiality of the three residency structures is primarily timber, to sit lightly on the land and work harmoniously with the natural surroundings. The cladding is intended to be a timber that ages and develops over time, like a photograph. Exploration of cyanotype image-making and painting with red ochre were valuable elements in the development of this project and strongly influenced the project's presentation, incorporating resources found at the site.

Meymey Nam *Residency: Leaflet House*

The idea behind Leaflet House is to provide a space where the public can link with the artist's private space. This is to highlight the relationship between artist and audience. Each artist has their own unique way of creating art that resonates with an audience, which immediately sparks a connection between the artist and the audience.

Leaflet House is designed for a tea master, a person who makes tea and is known to experiment with different

flavours to create specific tastes. In this scenario, the artist's occupation influences the structure, which takes on the shape of a leaf, representing the tea leaf, and the circular platform connecting public and private space represents the teacup. The journey to the structure, located in Tāwharanui Regional Park near Anchor Bay, takes the visitor from the beach to wander alongside a small stream and through to a bushy area, which helps disguise the structure and makes it more intimate when occupied.



Zane Chang

Residency

This project involved visiting a site on the Tāwharanui Peninsula, in the Auckland Region, which will be developed to accommodate an artist's residence, specifically for a nature photographer. The name Tāwharanui translates as the abundance of the climbing vine kiekie, and, subsequently, forms of kiekie were used to create a two-building complex They contain a gallery and studio within the top building and a dwelling in the lower building, in order to create distinctly private and public spaces. Kiekielike curves wrap around the building to give a sense of weaving, reflecting the traditional practices of local iwi. Furthermore, the kiekie curves create apertures into the gallery, allowing southern light to enter the building and offering natural light to the photographs. The studio will be placed below the gallery to create a private area for the artist. The dwelling arrangement guides the user straight into the living room. The bedroom is elevated to create a space for storage, and a ladder accesses it. The gallery arrangement has the public enter from the eastern side of the building, revealing a photograph upon entry. Visitors are drawn to it and progress up the stairs, where a window is placed, guiding visitors with light.



Critical STUDIES ONE

Learning the process of drawing and understanding a drawing as an essential representational tool of architectural design is one of the main aims of this assignment in the Critical Studies One course.

"Architectural drawings - generative instruments for design studio solutions and future practice."

Bachelor of Architectural Studies Year One students are assigned one building they have been exploring throughout the semester, to develop hard-line architectural drawings in scale (site plans, plans, cross-sections, elevations, and details). The students gradually move from understanding architectural drawings as analytical devices used to depict existing buildings, to seeing architectural drawings as generative instruments for their design studio solutions and future architectural practice.

Dr Renata Jadresin Milic Course Coordinator



Michael Xu Sant'Ivo della Sapienza



Keller Ren Ren Palazzo Medici Riccardi







Kania Virgilia *Santa Maria degli Angeli*



Alejandro Fernandez Almendra *Hagia Sophia*



Meymey Nam Cologne Cathedral







Myke Te Momo *Il Redentore*



Myke Te Momo San Giorgio Maggiore

$\begin{array}{c} \text{Year} \\ T & W & O \end{array}$

Design Studio Two is focused on the massive integration of Design Studio One explorations – the description of a context and of fitting into that context, the geometry of a three-dimensional object, the exploration of its interior space through drawing and modelling, its notional construction, the use of that interior space by humans, the entry into its space from the context, inbound light and transient air through those spaces, all followed by a deeper exploration of structure and materials and, finally, a first simple building design integrating all of this material.

"It's time to get serious - playschool is over."

This integration starts immediately in Semester One. The material, like the idea of human use, increases significantly in detail, moving on from lying, sitting and standing to encompass the complexities of the functionality of a residential building. This includes overarching ideas of intimacy gradients, three realms for family, and the challenges of multi-generational living, subsequently taking the planning and practicalities of a simple dwelling far further.

This continues throughout the year with growing complexity added, layer upon layer. Students are now designing the context by reorganising contours to accommodate roads and buildings. Now increasing the size of the building so that a structure becomes a new planning element. Now using context in order to relate external rooms to internal by placing buildings so the spaces between are designed simultaneously.

Design Studio Two fosters the understanding that neither a computer nor pencil and paper design anything on their own, but that pencil and paper interfere less as you coax your brain to be creative, to be less shy, nervous and risk averse. Some students, who cannot yet do this, believe that neatly coloured drawings produced by a computer are the archetype of design. But all students now begin to learn to record design digitally, taking further steps towards professional employability.

David Chaplin Course Coordinator







Sam Amadeus Nuclear Family Complex

This project was designed for a 'nuclear family' consisting of two adults and two children. The site is sloping downward to the north, and there is an existing tree standing on the west side that will not be removed. The design provides spaces for guests where they can socialise without invading the more private areas of the house, as well as a space for guests to wait before entering the home. Several spaces are provided for children's activities, notably the area in between the kitchen and living room, so the adults are able to monitor them with ease. There is a small courtyard downstairs that has a level of privacy, and next to the small courtyard is an indoor seating area where the family can relax, capturing a 'Zen' view. Aesthetically, this house delivers a unique architectural promenade that people can experience as they move around the spaces. One of the examples of this is when people



enter the house from the west and are guided by a pathway located between a wall and a reflecting pool. The pathway was designed to take advantage of the existing tree that will act as a shade. Visually, the tree branches and leaves are overhanging onto the reflecting pool, creating a reflection enjoyed from the pathway. Audibly, wind ripples the leaves throughout the day, acting as a guide for the pathway. Those on the pathway will experience heightened emotions as the journey captures a sense of emotion through perception.




Sam Amadeus Glen Eden United

This project is a redevelopment of an existing sports club located on West Coast Road in Glen Eden. The redevelopment required an extended soccer field, two grandstands, changing rooms for the home and away teams, an improved car park, and a multi-purpose sports centre. There are two parking areas on site – the western side of site contains the main parking area with ample space, and on the eastern side, in between the soccer field and the sports centre building, is the smaller parking area. Both parking areas are connected through a road located to the north of the soccer field. Two grandstands have been developed at the west and south ends of the field, ensuring the structures block the prevailing winds from the south west. The changing room for the home team is located on the eastern side of the field adjacent to the sports centre, creating ease of access, and the changing room for the away team is located on the western side. Upon entry to the sports centre, stairs lead visitors up to be greeted by an external courtyard in the centre of the building. The courtyard is the heart of the centre, where people can view all activities happening on site. This includes a view of the indoor field, also visible from outside owing to the glazing, which captures a sense of openness between spaces. Passersby can also see what is happening inside, as an invitation to participate.









Isaac Rakich Glen Eden United

This project envisions a multipurpose sports facility in the grounds of Singer Park, Glen Eden. The brief required us to consider which spaces were necessary and consider arrangement to maximise coherence. We were tasked with creating a complex that would benefit all stakeholders, including the home football team, the rival team and spectators, and those using the main building. The building includes a basketball court, squash courts, a gym, a boxing and gymnastics room, private offices, and a café.

Simple wood-cast concrete panels and exposed steel beams emphasise the form of the building, which fans out from the football field. Large, slanted columns along the northern face pierce into the ground while acting as louvres, protecting the court from direct sunlight.







Renee Veltman Glen Eden United

The intention of this brief is to design new clubrooms for the Glen Eden Soccer Club, while providing ample space and flexibility to accommodate other sports and community activities. My approach was to mimic the axes apparent within the site's natural contours. This also created a northern egress point, opening out towards the sports fields. The angles created are further reflected in the wind and sun protection developed along both the northern and southern façades. This protection ensures a sympathetic outcome between external and internal aspects of the development.

Jessica Tregidga Verong Avenue

The focus of this project is to design a residence that can accommodate multiple generations of one family. This unique project brief contains a set of challenges surrounding privacy and socialisation, and placement of open space. An additional challenge is restriction of design geometry to parallel to site length and 120 degrees or 60 degrees from such.

The family environment required separate dwellings to accommodate each family dynamic: an older couple, and a family and their middle-aged daughter. The older couple's space, is placed at the front of the sloping site, with private circulation spaces and an outdoor area. The more public realms of the house lead toward the centre of the site, where residents can travel through the shared socialisation space that holds a workshop and greenhouse. At the back of the site, the daughter has their own home, shared with their young family. This dwelling is spread over three levels, allowing for the creation of realms within the house. This project was a great learning exercise in future housing arrangements, particularly in high-to-medium-density housing areas.





Arlene Sisarich Verona Avenue

This kooky, multi-dwelling housing design is in response to a complex, modern-day housing brief. Located at 23 Verona Ave, Mount Albert, the property is occupied by one extended family. The central courtyard and glasshouse are the nucleus of the design, encouraging social interaction between dwellings. Central to the brief is the obligation to design the floor plan using only 120- and 60-degree angles, placing importance on the use of materials to achieve unity and elegance. The simple use of wood and concrete, and the rhythm of repeating pitched roofs help achieve a modern feel to a very unorthodox project. These homes roll intimately down the site, providing a sense of connectivity.













The John Markham Gallery is a project for Classical Studio within the Design Studio Two course. The project brief asked students to design a public, double gallery space using size restrictions from classical architectural techniques, inspired by a classical architect. My gallery design is significantly influenced by the Italian villas of Andrea Palladio. His works use arches and columns, in addition to more uniform areas of plastered walls for contrast, which are elements I have included in my design. My gallery is constructed of plaster-coated stone and is comprised of two gallery spaces, an exterior loggia, and a central hall topped with a lunette barrel vault. The structure is designed with two entrances, a direct entry off the main road and another within the loggia on the opposite side for those entering directly from the train station north of the site. The site has exterior garden spaces that provide additional areas for sculpture displays and a place of rest for visitors. My project is designed with considered elements, inspired by Palladio, which ensure the John Markham Gallery expresses a simple yet elegant form.



Brittany Familton

Classical Studio: John Markham Gallery

Based on a 1921 design competition, the Classical Studio brief is to design an art gallery in the Italian style. Donated in the will of Mr John Markham, a building containing two gallery spaces is proposed as a gift to the Ōwairaka community. A design strategy was developed with the intention of creating an art gallery – but also providing a place that celebrates Ōwairaka and its people.

The two gallery spaces were created as curves, following around the form of a circular focal point where outdoor habitation occurs. The curved galleries that highlight this focal point are consolidated through the presence of an opposing portico, also of circular form. A hall between the two galleries welcomes visitors from New North Road. The hall's shape, in context with the curve, resembles a keystone piece, tapering towards the centre and drawing occupants to further experience the site.

The form of the building is complete with two spaces on either side: the book exchange, located at the intersection of New North Road, and the pedestrian train access. This amenity is intended for those in the community to share books, bring their own, or borrow from the shelves. It aims to create a sense of place within Ōwairaka, connecting the community through site, art and literature.









Arlene Sisarich

Classical Studio: John Markham Gallery

The Classical Studio brief requires the design of a small art gallery in Mt Albert, to house a few sculptural pieces of art and a small number of paintings, acquired by a donor in Italy. It was therefore fitting to be designed in classical Italian style.

The use of light is the essence of this design. Light within a gallery plays two important roles. Firstly, it allows viewers to see the work (without light, form and colour do not exist), and secondly, helps protect the work. Within the Gallery of Art in Mt Albert, the light plays a third role – it adds a sense of theatrics to the space, elevating the art into a dramatic setting, creating a memorable experience for viewers. The skilfully designed circular roof light ensures a natural spotlight highlights the main sculptural piece and attracts viewers into the sculpture gallery. The golden hue of the central dome not only creates a sense of warmth but adds to the theatrics. The garden area is bathed in morning light and is open and inviting, while the afternoon sun wraps itself around the back of the building and allows the patio to come to life, seen by commuters on their way home from work.

The works of well-known classicist architecture firm McKim, Mead and White, and English architect Sir Christopher Wren, were used as precedents for the design, while Italian architect Carlo Scarpa's work was used as a precedent for the gallery's interior.

Orlando Burdon Māori Studio: Ake Ake Ake

The proposed café and farmers' market seek to reconnect the people with the whenua and are situated near the entrance to Tāmaki Makaurau Auckland's Ihumātao Quarry Road.

Acknowledging the cultural significance of the land, the buildings' roof forms take inspiration from the triangular rā (sail) found on waka, as do the booms that extend past the roof edge. Wooden pallets make up the northern façade of the café, referencing the impromptu pallet structures erected during recent occupation of the whenua. Acting in conjunction with the western fins, the pallets assist in filtering direct sunlight, thus ensuring interior comfort.

The materials used are simple and raw, with timber featuring heavily – a product that sequesters carbon while providing warmth to interiors.

Beyond the café's sunken outdoor seating area, a farmers' market thrives at weekends, selling local goods and organic produce from Ihumātao and the surrounding area. Providing protection and as a place marker, ultralight tensile shade sails spiral into a koru form, symbolic of creation.

The intention of these lightweight structures is to ensure they are portable, can be developed and made permanent, or easily deconstructed – creating flexibility for future use.









Don Mafi, Drisana Brown, Isaac Rakich, and Sinead McClay *Māori Studio: Ihumātao Markets*

Ki te kotahi te kākaho, ka whati; ki te kāpuia, e kore e whati.

If a reed stands alone, it can be broken; if it is in a group, it cannot.

Located on the slopes of Ōtuataua at Ihumātao, this project offers a sensitive development to a site scarred by recent controversy. The purpose of the development is to host WWOOFers (Worldwide Opportunities on Organic Farms Collective) and temporary workers who come to work on and learn about the land. It also extends its welcome to those walking Te Araroa trail, which leads hikers directly down Ihumātao Quarry Road. Our approach was to repurpose an existing home on the site, adapting it to serve as a communal hub for the workers. A large, covered deck stretches from the building, extending its footprint. A range of small cabins nearby offer a warm bed and private ensuite. At the heart of this development is a circular courtyard wrapped around a central fireplace, a place of community.

Orlando Burdon, Joannah Inocentes, Joel Hewlett, and Zeina Samak

Māori Studio: Ihumātao Markets

The farmers market and café design for Ihumātao is based around the significant history of agriculture and of battle with Fletcher Living over land. The building is comprised of two separate structures, connected by a courtyard. The larger structure, the farmers' market, is oriented towards the maunga Puketāpapa, while the café is oriented towards Ōtuataua maunga. The roof structures of the buildings are influenced by the traditional Māori whare. The stalls and benches that populate the interior and courtyard area of the farmers' market are inspired by the pallet forts that protesters created during the peaceful protest that took place on the land from mid-July 2019 until late December 2020. The materials are pared back and honest, predominantly timber accompanied by the necessary glazing. The structures were developed so as to enhance the unique landscape and to not visually impede local vistas, and are devoid of flashy or bold design that might draw attention away from the natural beauty of the area.





Mitchell Roos

Kingsland Library

This Design Studio Two brief requires students to design a gallery, library, apartments and public space on a small site in Kingsland. From the initial site visit I knew I wanted to create a space that would use natural light to invite people to move through it. The sharp inclines of the surrounding contours, including those of Mount Eden, are echoed in the angles designed into the building. For the apartments, considerable skylights bring southern light directly into the private spaces, and mezzanine floors provide each with extra floor space.

For the gallery, I wanted to create a space that the visitor can easily navigate and be truly present within. The gallery inhabits floors on each side of the building, separated only by glazing, giving the impression that visitors who move through the space are one with the art pieces. The large library floor exists, as if floating, yet grounding the apartments above.













Connor Le Quesne *Kingsland Library*

This project involves designing a mixed-use public and private building within Kingsland, Auckland. The purpose of this multi-use building is to create a public library, gallery and link between New North Road and Kingsland railway station. The private aspect of the design is a series of apartments.

My concept involved designing a uniquely shaped building by ensuring both front and rear façades contain no parallel lines. The slight bend along the front and rear façades allows for light to enter at different angles, providing moments of shadow and moments of light. These moments require the public spaces to be open, but private as required, such as the meeting rooms and reading areas. The gallery is open to the circulation space so those walking through the link can view the art on display. The apartments in my design follow a different shape to the public spaces below, in order to create a separation between the public and private use of the building. Each of the six apartments has a large north-facing balcony, allowing the residents to enjoy the sun throughout the day. These apartments are accessed through a private lift and stair lobby within the link.

The overall concept is finished with modern materials – bagged stone brick and timber claddings. The placement of materials allows for the building's shape to be redefined from different angles. This concept is to be a new public hub within in the Kingsland area.













Kania Virgilia *Rotherham House*

The intention of this project is to create a visual representation of the Rotherham House in Auckland, which was designed by Group Architects and built in 1951. The house is a two-storey structure with a mezzanine bedroom accessible via a central brick staircase. The project outcome was achieved by building the Rotherham House using Revit software, and placing it into the site I had previously created. The project was then rendered using Lumion, which helped to generate the immediate environment. This included using the landscape tools and a content library to add vegetation, lighting, and furniture. The Rotherham House then underwent a final edit in Lumion using the materials editor and FX to bring the project to life. The rendered image was then exported into Photoshop, where finishing touches were added.



Don Mafi

Rotherham House

The aim of this assignment is to improve overall skill and ability when rendering structures that were designed using CAD software. Students were tasked with rendering the Rotherham House in Stanley Bay, Auckland, which was designed by Bruce Rotherham of Group Architects in 1951 for his family. Three renderings were completed, each showcasing newly learned skills, and thus demonstrating an understanding of the rendering software Lumion.



Aaron Mack

Materiality in Context

A generic Autodesk Revit house in the Nordic style contains both unlikely and impossible materials. The brief requires the input of materiality onto a building and that building into context using Photoshop. This particular Revit house perches precariously on rocks sitting slightly above high-tide level in the small fishing village of Hamnøy on the island of Moskenesøya, located in the Lofoten archipelago, Norway. The rendered structure communicates a similar language to the primitive red-and-white cabins seen in the surrounding area, but displays a more modern and complex form, which is comprised of both unlikely and impossible materials.





Aaron Mack and Joel Hewlett

Case Study No.8 - The Eames House

The Eames House construction was revolutionary in demonstrating the ways in which industrial elements can function positively in residential architecture. This celebrated landmark, located at 203 North Chautauqua Boulevard in the Pacific Palisades neighbourhood of Los Angeles, California, is enjoyed year-round by numerous visitors. The façade alludes to a Piet Mondrian composition, and its position amongst the eucalyptus trees ensures a symbiotic approach to

its surroundings. The contextual scaled model of the Eames House and studio includes black card representing the primary external frame containing the glazing. Sections of the black card have been removed to allow segments of coloured card and thin timber veneer to be inserted. These varying aspects of colour and texture are important in symbolising those notable within the Eames House, which provide a distinctive visual appeal.







Jessica Hartley and Nicola Wheaton Jewish Museum Berlin

The extension to the Berlin Museum, otherwise known as Between the Lines, was designed by Daniel Libeskind in response to the 1989 competition Extension of the Berlin Museum with a Jewish Museum Department. The competition required thoughtful articulations of the urban design objectives of a historical ground of remembrance concerning Lindenstrasse, meaningful connections to Kollegienhaus (Supreme Court Building), and minimisation of above-ground volumes. It was therefore imperative to incorporate an abstracted Kollegienhaus in the context model. Additionally, the building features many emotionally provocative spaces, including the integral Garden of Exile and the Holocaust Tower; therefore, these were also important elements to include in the overall model.



The architectural qualities of Between the Lines are an enigmatic blend of architectural form and cultural reflexivity. One way this can be experienced by passersby and museum visitors is within the façades. This projects Libeskind's ideas in plan of the mapping and extrapolating of significant places and people. This invokes the sense of dislocation felt by those affected by the Holocaust and reminds visitors of the harsh realities they face. This is explored in the detail model, with a particular nod to the impressive building structure and detailing on the zinc façades.



Zeena Al-Sheikh and Yue Zhang *Villa Savoye*

Based in the Parisian suburb of Poissy, Villa Savoye was designed by Le Corbusier as a paradigm of the phrase he coined – "a house is a machine for living in" - in which the functions of everyday life inside a home become critical to its design. The design is informed by the movement of cars and the internal access. These main routes create a sense of exchange and movement and add to the vitality of the space. All the elements Le Corbusier created for this building had a specific function, just as components of machinery all have their purpose. The brief for this assignment was to build a 1:100 scale model. Our model showcases the building, its immediate environment, free plan, roof garden and pilotis, highlighting Le Corbusier's five points of architecture. It also demonstrates the raised building, highlighting the independence of the villa from its garden below.







The approach taken towards this detail model was to express and explore the nature of light, space and materiality experienced in Tadao Ando's Church of the Light. Built in 1989, the Christian church is located in Ibaraki, in the Osaka Prefecture of Japan. Light plays an important part in religious buildings; it's use within a space bridges the mortal realm to the divine. Ando creates a strong sense of this in Church of the Light, creating a 1:3:1 concrete box void of light. The exception is an opening in the shape of a cross, giving invited light and the divine a strong presence within the space. A sectional model of the church is taken with a focus on the cross façade. Concrete panels form the shape of the building, and the attention to materiality is also expressed in the wooden flooring. Pews are added, to give the viewer a sense of scale inside the 5.9-metre-high walls. As light penetrates the cross void in the façade, materiality and space are further depicted. As a result, Church of the Light's most significant architectural qualities and attributes are realised in this model.

Cecilia Kuang and Brittany Familton Church of the Light

Year THREE

A piece of architecture adopts a language, or creates one of its own, speaking to both people and the environment – establishing a lifetime relationship with both. To thrive, these relationships must be nurtured by future generations.

"Architecture contributes to the formation of our memories, and our city's identity and future."

Subsequently, the focus of Design Studio Three is to create architecture that reflects a high level of sustainability and resilience, including economically and socio-ecologically, and to assist in tackling the emerging challenges our cities face – primarily, climate change. We aim to create architecture for the people, by reflecting on their needs, challenges, tastes and histories, in a manner that highlights the cultural diversity of the Auckland populace. Architecture plays a large part in our lives. Our intent is to encourage and guide each other while developing the skills required to design architecture for all – an urban village in an existing metropolitan area.

تَتَبَنَّى العمارَةُ لَغَةً . . أَوْ . . تَخَلُّقُ واحِدَةً.. العمارَةَ تَتَحَدَّتُ إِلَى النَّاسِ . . . إَلَى إَلَيْبَةِ . تَوَسَّسُ عَلاقَةَ أَبِديَّةً مَعَهُمْ، وَلِكَيْ تَسْتَمِرَ هَذِهِ العَلاقَةُ، ينصَبُّ تَرْكِزُنا فِ السَّنَةِ الثَّالِيَّةِ عَلَى إِنْسَاءِ بِنِيَة تَعْكسُ مستوَى عَالِ مِنْ الاسْتِدامَة وَالمُرُوفَة اجْتَمَاعِيًا - إيكولوجيًا وَاقْتَصَادِيًّا ، لَلْمُسَاعَدَةِ فِي مُعَالَجَةِ التَّحَدَياتِ النَّاسَتَة المُتَزَايِدَةِ التَّي تُوَاجِهُهَا مُدُنَّنَا، مَا فِي ذَلِكَ تَعَيُّرُ المُناحِة وَالمُرُوفَة التَّزَايَدَةِ التَّعِي تُوَاجِهُهَا مُدُنَّنَا، مَا فِي ذَلِكَ تَعَيُّرُ المُناحِة يَا التَّقَدَةِ فَي مُعالَجَة الثَّالِثَةِ أَيْضًا عَلَى إِنْشَاءِ عمارةً لِلنَّاسِ ، وَهَذَا يَعْنِي التَّقْكُمِ فِي الْحَيَاجَاتِهِمْ وَتَحَدَياتِهِمْ وَأَذْواقِهُمْ وَلُعَاتِهِمْ وَلُعَاتِهِمْ وَلُعَمَاعَةِ بُعَالِقَا وَحُرُنا مَدينَةِ أُوكَلَائُذُ الْنيوزيلَئُديَّة، تَلْعَبُ العَمارَةُ دُولاً يَعْنِي التَقْوُع الثَقَاقِ لِسُكَّانِ مَدينَة أُوكَلَائُذُ الْنيوزيلَئُديَّة، تَلْعَبُ العَمارَةُ دَوْرًا كَمَرًا فِي حَلَيْ المَدًا وَحُرُننا مَدينَة أَنْكَلَائِهُ فَي تَكُوينِ ذاكرتنا الفوتوغُرافيَّة وَهوا عَلَقَقَا لِسُكَّان مَدينَةُ فَرَائِنَهُ عَلَيْ فَذِي السَّعَاقَةُ مَنْصَبُ مَرْعَلَيْنَة ، تَسُعَمْ مُعَانِي أَنهُ عَلَيْ الْنَهُ مِنْتَقَاعَ مُنْ مَتَقُوعَ أَنْوَا وَلُعَنَا وَحُرُنا مَنَا مُتُعَافَعُ عَلَيْكَانِ المَائِنَةُ مَا لَمَا الْمُنْعَادَة مَن مَعْمَانُ مُوالَّعَا وَمُانَا وَحُرُنا مَدَينَةُ فَي السَّتَهِ فَوَا الْمَائِنَةُ مَا سُنَا فَي السَّتَة وَالْعَامَ الْنَائِة ، تَصْميمُ معْعَارَي أَنْ الْتَي الْتَوْمَ وَالْعَلْنَا الْمَالَةُ مَنْ مَنْ مَعْنَا مُنْنَا الْعَانَةُ الْنَاقَا الْعَالَةُ اللَّائِنَةِ الْنَاسَةِ مَنْ الْمَا الْتَوْقُولُنَا الْنَائَة مَا لَعُنَا الْتَعَانِ الْنَاقِي الْعَاقِ الْنَاقَعَامَ الْتَعَامِ الْنَعْمَةِ الْعَائِقَانِ الْنَاقِي الْعُنَا الْنَاقِ الْنَاقِي عَالَيْنَا وَالَا مُنْتَائِنَة الْنُونَةِ الْنَاقِ الْعَالَي الْعَانِ الْعَاقِ وَالْعَاقُولُونَا الْقَائِقُونَا الْعَاقُولَةُ الْنَائِي الْنَانِي الْعَاقَا الْمَاعِنَةُ الْتَابِ الْعَاقِ الْعَائِقُولُ الْنَا الْعَاقِ

Sameh Shamout Course Coordinator







Diego Marangoni Unlocking Henderson

This project, developed for Design Studio Three, seeks to investigate new possibilities in mixed-use developments, with social and environmental resilience as core values. The project is to reimagine urban living within two existing car parks and catalyse urban life in Henderson.

Interface and context are holistically considered through form and overall massing. Site 1 stands at the intersection of Alderman Drive and Edmonton Road. where the buildings are lowered towards an existing heritage building and eastern boundary. This ensures the development interfaces with single- and two-storey dwellings of suburban character. The buildings are positioned along the boundaries to promote groundfloor activity while preserving the street edge, dictated by The Falls Bistro. A generous semi-public courtyard maximises sunlight while addressing the flood-prone area by retaining, purifying, and releasing clean water back into the Waikumete Stream. On Site 2, along Alderman Drive, the buildings are positioned to maximise the site's elongated nature, stretching along the north-south axis, parallel to the Waikumete Stream.

Here, a public boardwalk and linear park promote a deeper connection to the stream while creating a safe shared path for pedestrians and cyclists.

On both sites, the buildings share a common architectural language and materiality: white and recycled-brick veneer, and thermally modified timber weatherboards, topped by gable and mono-pitched roofs. This is a nod to the architectural vernacular expressed by the nearby Corban Estate Arts Centre buildings, conferring a level of domesticity to the otherwise large structures.

The structures employ mass-timber elements to reduce the buildings' embodied carbon: cross-laminated timber panels are adopted for walls and floors, gluelaminated for beams and columns. The rooftops are accessible to all apartments, offering opportunities for communal living with vegetable gardens, seating, and shared laundry on Site 1. The rooftops also sustain an array of large photovoltaic panels, rendering the buildings net-zero energy. Rainwater is harvested and stored underground for irrigation purposes.













Kieron O'Halloran Unlocking Henderson: Flat 50

The main objective and design intent for this project is to encourage natural light into all fifty units of a mixeduse, multi-unit residential sustainable development in Henderson, Waitākere. This is achieved by elevated windows, light wells, strategic orientation and utilising a ready supply of local materials, including timber and recycled concrete. In conjunction with this, the development makes use of passive thermal design and stormwater retention that showcase the buildings as an effective example of sustainable design. My methodology was to encapsulate the surrounding greenery within the building, so as to harmonise with the existing environment. The building services were designed to retain water from the roof gardens, providing to surrounding facilities, and to maintain water features and plants located on site.

The design of modern parks was used as inspiration to not only intertwine and surround the building with an urban park-like atmosphere but to act as a flood-protection barrier. The flood-protection barrier is constructed using grass hills and covered cycle/ running lanes to disguise what would normally be a concrete wall. I wanted to create a balance of local cultural elements and have included local art within the two large sites and more intricate spaces found within, that cater for the community's needs. The mesh façade is the most striking feature of this design. It acts as a sun-shading device and creates solar-energy gain that reduces the overall energy costs to residents. The façade transitions the outside environment up the building and continues the effect into the rooftop gardens. Throughout the creation of this project, I have explored sustainable design strategies and urban villages to generate a low-rise, mixeduse residential building in the heart of Henderson.



Scarlett Cibilich

Unlocking Henderson: Living Line, an Urban Village along Henderson's Waikumete Stream

The 'Unlocking Henderson' project brief asks students to design an urban village: a minimum of fifty dwellings as part of a mixed-use complex on a busy corner site in Henderson, Waitākere. The two sites are divided by an arterial road that links Corban Estate Arts Centre and the Waitākere Ranges to the west, and the Whau River to the east. The sites are also at a position between Henderson railway station to the southwest and the Northwestern Motorway. As a starting point, the design draws on two key aspects of the site: the project's location at a congested traffic intersection and its proximity to the Waikumete Stream.







The design intent was to mitigate the constraints imposed by the intersection on pedestrian foot traffic by designing the complex as part of a wider pedestrian network along the stream's edge. The resulting working model tests a staggered configuration of residential and commercial typologies along the stream's contours: gradually shifting in orientation to maximise views to the west and forming a pedestrian linkage between Falls Park, Pioneer Park and Henderson railway station.

The staggered configuration created intermediate spaces of varying scale, form and orientation, which led the project to consider how diversification could safely activate the street level and intersperse commercial, residential and community space typologies across multiple levels. This diversity is further echoed in the complex's glass shafts and roofs that act as light 'beacons', marking out entry points and aiding pedestrian navigation along the living line: the urban village along the Waikumete Stream.



Rahul Garad Unlocking Henderson

This is a challenging project in which students were tasked with creating spaces, both public and private, to draw new life into the heart of the Henderson community and, in doing so, carefully reconfiguring existing parking and open spaces while prioritising the care of the existing ecosystem, including the areas surrounding the Waikumete Stream. The site, being centrally located in Henderson, is required to provide mixed-use residential and retail space, parking and market facilities. In addition, active social spaces and transport opportunities are showcased in the hope people will commune and celebrate community, while maximising public-transport links in and out of the area. Sustainability is a key feature of this project. Parking was retained on the site, within the basement areas.

A glass façade was designed in conjunction with sun shading comprised of energy-generating algae biopanels that suck up carbon dioxide and pump out biomass for use as fuel or fertiliser – ensuring cost efficiencies. The design further incorporates rooftop allotments where produce is grown year-round. Solar panels are included in the build to generate electricity for the common spaces in the building, again ensuring cost efficiencies. Finally, the bridge connection is vital in creating a convenient connection for Unitec staff and students to efficiently navigate from campus to train station, which includes crossing the Waikumete Stream.












Shene Strydom Unlocking Henderson: The W

Treehouses

A low-rise, high-density, multi-residential development, The Waitākere Treehouses are proposed to aid in accommodating those residents within the Henderson area in need of housing. They are also proposed to appeal to those in the wider area seeking a safe, accessible home within a new community. It was apparent early in the design phase that a major practical challenge was the need to provide a popular, community-focused, urban multi-use space, but without the need for a multitude of car parks. Commercial areas such as cafés, restaurants, offices and childcare are located within close proximity to each another to allow the space to establish centralised, alternative transportation links. This ensures the space caters for all generations including the elderly, young families and university students, through ease of access, and a sense of security and community. The Waitākere Treehouses are inspired by the connection between urban living and the natural ecosystems around us, evoking joyful childhood memories and feelings of excitement from the days when we played in treehouses, climbed trees and experienced nature at its best. The design is a representation of a happy, joyful, urban community, and memories of being among the trees play an important part in that experience. The building's unique spirit is derived from allowing nature to inspire and influence form, texture and function. Major elements of the The Waitākere Treehouses are connected by vines that form an intertwining network, providing a pedestrian link within the development and a sense of cohesion throughout. Apartments are orientated in a way that draws inspiration from native Aotearoa New Zealand flowers. This allows each apartment to receive either northeast or northwest sun, while maintaining privacy. The passive design of The Waitākere Treehouses includes light wells, which provide continuous light into each apartment and also encourage natural ventilation. Residents are encouraged to walk, explore, and experience the light wells, circulation and community spaces, ensuring the development is not just a place to dwell, but a place to grow.



Jack Culloty Unlocking 31 Customs Street: Kauri

Kauri is New Zealand's most ancient tree species and one of only three native conifers. A mighty species that has graced our lands for over 150 million years, kauri often emerges over the canopy of other native trees such as tōtara, tānekaha and tawa in its immediate environment. At the same time, kauri acknowledges the fauna below, providing fertile nutrients. This hybrid building, Kauri, rises over the top of others in its environment while at the same time integrating with the buildings on its northern, eastern, and western flanks. The building is orientated in such a way as to allow for maximum, passive, solar gain on the western flank, with the additional feature of two light wells within the commercial precinct. Kauri has twenty-nine levels, which include four levels of existing car parks situated in the southeast corner.





As visitors rise from the ground level to the top, they will pass Levels 1–2, which contain hospitality and retail precincts, Levels 3–13, hosting commercial/office space, Levels 14–29, containing three-bedroom residential apartments, and the penthouses located on Levels 26 and 28.

The proposed building is a hybrid structure with Levels 1–12 being constructed predominantly of concrete, Levels 13–19 having a steel-frame structure, and the top nine levels being made from structural timber – rising mightily above all others.





Taoitekura Eruera Unlocking 31 Customs Street: Te Whare Whanake

The ingoa of Te Whare Whanake consists of two main kupu: whare and whanake. Whare means house and whanake has a more varied definition, meaning to rise, grow, or develop. Therefore, the concept of Te Whare Whanake is about personal development by providing for physical, mental and social growth through the architectural representation of habitable vertical living spaces that incorporate sustainable living practices. The various housing options available range from one-bedroom to three-bedroom dwellings, which provide a multi-generational living environment that accommodates singles, couples and small or large families. The precedent used for this project was Te Whare Tapa Whā, which is a model that symbolises a wharenui with four dimensions of Māori wellbeing.

The four dimensions include taha tinana (physical health), taha hinengaro (mental and emotional health), taha wairua (spiritual health) and taha whānau (family and social health). These four pillars are acknowledged through the spaces and experiences of the building. For example, taha hinengaro is symbolised through the ground-level atrium with a waterfall feature visible upon entry, symbolising healing in Te Ao Māori. In addition, the water feature also symbolises the historical shorelines that once ran through the site. In essence, the atrium is designed as a healing zone for the people of Tāmaki Makaurau Auckland, including the homeless.

Regarding physical health, residents and the public are provided with several outdoor natural environments to support mental and physical wellbeing. For example, a ground-level external green ramp moves through three levels until it reaches an outdoor accessible green roof. In terms of social health, the 35-storey skyscraper is divided into multiple social spaces that promote social wellbeing. The intention aims to offer residents dedicated social zones for storytelling and knowledge sharing while providing visual access to Tāmaki Makaurau Auckland's key landmarks, including Rangitoto Island and the Harbour Bridge.



Yang Jiang Unlocking 31 Customs Street: Hybrid High-Rise

This final studio design brief gave students an opportunity to explore a brand-new design concept: a hybrid, high-rise building integrated with vertical urban farming. The proposed site is where the current Downtown Carpark is situated, at 31 Customs Street, one of central Auckland's premium locations. The site's surroundings are full of marine culture, including the Auckland Maritime Museum, the Team New Zealand America's Cup base, Westhaven Marina, the Royal New Zealand Yacht Squadron, the Auckland Ferry Terminal including the historical Ferry Building, and the Ports of Auckland. I felt my design should reflect what is, essentially, a huge part of the city's culture.

My concept design was inspired by a sailing boat. This idea was born from my second visit to the Auckland Maritime Museum, which resulted in the development of a form reminiscent of that of a sail, specifically a spinnaker, refined during the developed design process. From a functional point of view, the spinnaker form acts as a wind shield to protect the vertical, outdoor urban farm from the prevailing wind. A large opening orientated north between two wind shields allows for adequate solar catchment and natural ventilation. The wind shield consists of aluminium blades alternating with transparent photovoltaic blades at a 90-degree angle. In this way, while ensuring the north sun penetration, the wind shields can mitigate the potential for overheating.





The community farm sits high, in a large open area. It is well sheltered from wind, yet strategically exposed to those weather elements required for plant photosynthesis. The building is designed as a selfcontained urban village where people can live without an external food supply for a month or two. The building is mixed used, but all building typologies are essential activities, including residential, shared office space, after-school classes, preschool, sports centre, farmer's market, eateries and retail shops. In the case of another pandemic and the city being in a lockdown situation, the building will be resilient and residents can live healthily in this bubble.











Lepakshi Jaiswal Serial Vision Drawings: Karanga Plaza

Critical Studies Four explores the urban environment and associated theories that inform the design of livable cities. The sketches here are based on those theories and convey the interactions that occur between people and the urban fabric. Specifically, this project involves Karanga Plaza, which forms part of Wynyard Quarter's social and cultural waterfront precinct and is surrounded by retail and entertainment activities. This section of the waterfront forms a major axis both as a pedestrian and cycle route serving the surrounding areas. It is the plaza's unassuming design that brings it to life it diversifies the landscape and allows for a complex ecology to emerge, alongside lively environments for the public and local business. The area is distinctive, with character and a visual. Benches and outdoor seating, cycle paths and trash receptacles, as well as tree planting, are all utilitarian and aesthetic components that give a community amenity and utility. People spend more time in the spaces due to these elements that allow for, and encourage, activities to take place on a regular basis, bringing the area to life.













The major project undertaken for Critical Studies Four was an exciting opportunity to spend time at an urban site, taking the role of the flâneur while recording my response to site through a sequence of drawings. The urban area selected was Auckland's Wynyard Quarter precinct. The initial attraction to this site was its proximity to the water's edge – the precinct is characterised as a unique liminal zone that shapes a strong sense of place within the CBD. Through a sequence of drawings, I walked the path set out by the water's edge; from Wynyard Crossing over to where Karanga Plaza meets Waitematā Harbour, and then along North Wharf. The more 'abstract' the sketches became, the faster I found myself walking, taking in the smell and sound of the harbour, or trying to quickly sketch pedestrian activity by the water. The drawings that followed these sketches were hard line perspectives trying to convey the visual clarity of the open space I encountered, as well as the legibility of the site's old silos seen in the near distance.

Scarlett Cibilich

Serial Vision Drawings: Wynyard Quarte









The walk from Emily Place to Britomart in Tāmaki Makaurau Auckland is a popular pedestrian link from Albert Park to the waterfront. Emily Place is characterised by high-rise apartments and commercial buildings, with a small park at the southern end of the street. The park is sloping and primarily grassed, with large established pohutukawa trees along the south boundary, and is also surrounded by streets on all three sides. This creates a sense of enclosure and limits its fluidity as a passive area. Recently, Auckland Council has increased pedestrian engagement with Emily Place by adding seating, street art, and planter boxes where there was previously car parking, thus creating a welcoming and safe area now utilised by residents and local workers. Emily Place continues downhill, with a European sentiment where the narrow winding street

connects the buildings through their proximity, while directing pedestrians through the meandering street. Britomart is a revitalised part of the city that has been transformed over the last twenty years. Scale and space vary as the journey through Britomart progresses, providing interest and diversity. The shared pedestrian and vehicle spaces are softened with planter boxes and lighting provides a visual break from the buildings, enveloping pedestrians.

The journey culminates in Britomart's Takutai Square, where the space is well proportioned and open to a variety of users. Children climb over street furniture, cyclists stop for a break, grabbing a coffee or something to eat, visitors bustle throughout the Saturday morning markets, and local eateries brim with custom.

Suzanne Aitken Serial Vision Drawings: Emily Place



Shene Strydom Serial Vision Drawinas: Ga

The drawings showcase the impressions I experienced in the urban context. The most appealing and confronting features are made prominent with shading, while features that faded into the background are merely outlined. The experience left me with a lot of emotions – some spaces left me feeling a sense of calmness and tranquility, and other spaces created a lively and energetic environment that was quite infectious. As I approached Takutai Square, the wide-open green space seemed to dwarf the towering buildings overhead. This area allows for a communal gathering space, bringing people together and giving surrounding residents a place to escape the crowded inner-city space. Continuing onwards past Takutai Square towards Britomart Train Station, the urban consideration for the area brings the little street to life. The twinkling lights above lead me down the cobblestone street where children freely ride their bikes. The atmosphere feels free and calm, perhaps due to the vast amounts of greenery and neutral colours, and the organic textures from wood and stone. Through this, I learnt the importance of scale, material, space and greenery as it truly impacts one's sense of comfort and sense of place. The urban context within a city or a busy environment is essential. The need to escape a concrete jungle and find refuge within nature and open space is necessary for mental health and physical wellbeing. Galway Street and Takutai Square's urban surroundings are excellent examples of how architecture and the urban landscape/ context can talk to each other harmoniously.









Olivia Kay

Serial Vision Drawings: Four Goals, One Policy - Wynyard Quarter's Revitalisation

This assignment for Critical Studies Four aims to critically analyse a chosen journey in Auckland, enabling a thorough understanding of the urban fabric. Sketching the built environment and applying theories of urban design emphasises the impact these shared spaces have on our daily lives. There are four goals that need to be accomplished in order to create a high quality of life in cities. These four goals contribute to the success of Wynyard Quarter's Karanga Plaza, North Wharf and Silo Park. By fulfilling the needs of a lively, safe, sustainable and healthy city, the waterfront design offers a functional and cohesive social environment. Diversity, vibrancy, engagement and legibility interlace and work to form an urban fabric that attracts activity throughout the day and night. Although the council's plan will continue to develop the area in years to come, the existing infrastructure offers optimal conditions for the community to flourish. It is undeniable that the precinct's physical environment is reminiscent of its industrial history, enhancing the urban identity of the location. Arising from the revitalisation of this area, the space will progressively become more inhabitable as it adapts to the dynamic needs of the developing city, consequently improving the quality of life of those within this metropolis.















Karangahape Road is one of the busiest streets in Auckland, with a rich historical background. It runs east to west, connecting Grafton Bridge and Great North Road. A well-designed streetscape has made this road pleasant to walk, as various activities appear throughout, which in turn create a different awareness of spatial experiences. The generous pedestrian walkway and well-developed public transportation have encouraged people to walk, and perhaps linger, rather than pass through rapidly. The endless exploration provided by rich shopfronts, shared spaces and vibrant hospitality has made the street an enjoyable journey captured within these sketches.

Yingxi (Ruoyu) Liu Serial Vision Drawings: Karangahap Road

VASTER OF







ARCHITECTURE

(Professional)

Year D N E

A school of architecture must enable its students to become aware of the reality that surrounds them. This is achieved through debate and participation, forming not only graduates to serve the building industry but also thinking, active and, above all, critical citizens.

"Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody." Jane Jacobs, *The Death and Life* of Great American Cities. Being true to this premise, Master of Architecture (Professional) Year One Design Studio aims to contribute to the development and formation of future architects in sync with their time, and in tune with the responsibilities of their profession and community.

With projects ranging from medium-sized urban interventions in Avondale and Milan, Italy, to competitions for a national and a conceptual museum in Tāmaki Makaurau Auckland, this year's projects provide the ideal canvas for the training and development of these skills.

Cesar Wagner Course Coordinator











Abigail Spence

Regenerating Avondale: Te Whau Community Arts and Cultural Centre

Te Whau Community Arts and Cultural Centre is the response to a Studio brief that called for a sustainable building for the Avondale creativity community. A 250-seat theatre is embedded into the slope on site, while the reception and café relate to the street and adjacent square. In the centre a smaller performance space doubles as a studio, sitting above service spaces.

The curving roof form is made possible with a bamboo gridshell structure, and the roof is thatched with wheat

straw, a by-product from our food industry that would normally be disposed of. To one side, the roof swirls into a spiral, encouraging water run-off into a swale where it is filtered before being reused as the building's grey water. On the eastern side, a thick, rammed earth wall in the reception area moderates the building's internal temperature. The remaining walls are prefabricated straw-bale panels informed by the panels completed in Project Pātūtū, a research project led by Unitec School of Architecture lecturer Min Hall.











Alex Harrison

Te Papa North

Situated on Halsey Street Wharf in central Auckland, this project aims to produce a concept for a satellite extension of Wellington's Te Papa Museum. A key driver for this project was to find a sustainable outcome that references the landscape that once existed where Auckland's city centre is now located.

The design respects a broad variety of objectives from Auckland Council's Unitary Plan, specifically the addition of green space, water treatment, indigenous biodiversity, natural coastline references, flooding, and significant landscape views. The proposed complex has a low profile in comparison to the surrounding buildings, in order to retain as much of the existing vista as possible, while also introducing viewports underneath and through the skin of the building. The content of the museum is dictated by its context, focusing on the Māori history of the pre-existing city coastline, trade history, development for sporting events, and future direction of Wynyard Quarter, as well as providing waka facilities, which are currently scarce and lacklustre.

The project reinstates green space on a currently empty wharf, while facilitating a strong relationship between the public and the surrounding water with stepped and ramp access. This project was conceptualised through an iterative design process, tying in the latest in sustainable technology.



Victoria Carran Te Papa North: The Living Galler

This project proposes a new museum and gallery on the waterfront of Tāmaki Makaurau Auckland. The Living Gallery encourages creativity and exploration through artist residencies, workshops, and hospitality. Public art flows from the gallery into the park, activating the wider area of Wynyard Wharf.

The goal of The Living Gallery is to activate our historical archives and reframe them for reconsideration. The concept was inspired by Michael Parekōwhai's 2018 exhibition at Te Papa Tongarewa. Parekōwhai mined the museum archive to inform and supplement a contemporary installation. He used wit and a range of display methods to question the concept of exhibition. By reframing historical works, he brought the archive into the present.

The Living Gallery hosts six artists at a time and is located on the Waitematā Harbour. The residency provides artists with access to Te Papa Tongarewa's rich archive. Artists can select a range of items from the archive to display alongside their exhibitions and working studios. A connection to the water has been re-established through a central water feature, a wharewaka building for waka storage, a designated fishing area and a large wharf. Returning access to the water recognises the original use of this site and allows for future enjoyment of the harbour.

This is a culturally rich area with many important sites. Māori narratives are conveyed in the design through expressive timber columns representing Tāne, and an opening to the sky to honour Ranginui.







The history of gathering and catching kaimoana is essential to the wider context that this project exists within. The zig-zag shape of the building's footprint has been taken from the design of a kete pattern. The design recognises that the site sits in the rohe of Ureia and Horotiu, and honours them through a scale-like timber shingle that clads the building.

The artwork shown on the exterior of the building is by Nikau Hindin.







Rohan Sadhu

Reimagining Milan's Canals: La Galleria di San Marco

Milan's canals, currently buried beneath modern asphalt streets, are ripe with potential to become public spaces inviting huge interest. This project investigates the revitalisation of Via San Marco, a roadway through central Milan where a significant canal once reigned. A fundamental approach to designing public spaces is seeking out the needs of a local community. Any public architecture must be beneficial to its occupants. Removing a vehicle thoroughfare in an urban district is a controversial move, and this design must justify such a removal. Throughout this studio project, this design intention was investigated, and a solution was eventually discovered in the form of a rather unique typology. My design for San Marco is a pop-up gallery and exhibition space, funnelled into the form of an architectural folly. It is a bridge that expands across the newly uncovered canal, while also providing shelter, gardens and visual spectacle. Constructed of interwoven, latticed natural materials, this folly rises high above the canal, reminiscent of Basilica di San Marco itself, where inspiration was forged.











Image: image:

Remi Franz Romano Reimagining Milan's Canals

The assignment requires us to develop aspects of sustainability, resilience, construction, and technology through envisioning a future Milan with a symbiotic connection between the city and the navigli (canals). This is to be showcased by way of a long-span building with a structural span of at least 25 metres.

According to an earlier site survey, people in Milan regularly use public transportation, and this timber structure will be developed as a transit hub for trams and buses carrying passengers to the Darsena.

I incorporated a number of environmental design strategies within the development. Specifically, polycarbonate roofing, awning windows, double glazing, rainwater chain collection, photovoltaic panels, and a lightweight green sedum roof.

The roof comprises a timber lamella structure supported by steel and glulam tree-like columns. Incorporated within are ticket booths and a café, which are designed to showcase two distinct walls. The outer is a curtain wall supported by a glulam transom, attached to the roof structure using steel frame connectors, while the inner wall is made of bricks connecting to the concrete slab below.

Ronalyn Totañes Museum of Emotions: Suspense, Hobson Wharf

For this project I have conceptualised a museum of emotions, called Suspense. This design includes two main halls with contrasting emotions – one induces a negative emotion and the other induces a positive emotion. The main structure of the building is made of scaffolding, which makes it ideal for quick assembly and disassembly as the museum is designed to be a temporary structure.

The hall of negative emotion evokes the feeling of suspense and unease. Suspended from the ceiling is layer upon layer of red fabric. These veils block the user's view and will urge them to use their hands, touch the fabric, move it aside and clear the way. As the user progresses out of the negative space, the layers of fabric slowly diminish. The hall of positive emotion has yellow and purple fabric suspended from the ceiling, symbolising warmth and peace. The dimmed, gloomy space of the hall of negative emotion is contrasted with a bright, calm space that opens out, leading to the scenic view of the Waitematā Harbour.

Emotion within architecture involves body and mind. The spaces on offer are not the sole experience, but the form, materiality and surfaces provide a more holistic understanding. The interaction of these facets enhances the user experience at many levels, too often unacknowledged. The levels include the physical, cognitive, and emotional.











Felix Qi

Museum of Emotions: The Museum of 4D Emotion

Emotion only happens in linear time; it creates meaning for us as humans, it is a person's current state of mind formed from a series of events, it enables communication and expression, and is heavily influenced by a person's surroundings. In more urban environments, people may inadvertently forgo their emotional state, allowing logic to dominate their daily routine – emotions can be perceived as irrational and unprofessional. By allowing logic to constantly dominate, a person may find an imbalance in life. My solution is to design an experience where the public can engage and reflect. Their emotions will be evoked through a variety of architectural events, creating a meaningful experience in which to reflect on their daily lives in Aotearoa New Zealand.

The oppressiveness of the city environment was integrated as the negative emotional space. I reconstructed the mass of Auckland using Autodesk Revit software to act as a reference in forming the reflective space, while the entire structure was designed from this reference to evade the oppressiveness of the city environment. The space reflecting positive emotion happens in linear time, to be expressed and defined later by the public, and is the reason for the project's title - The Museum of 4D Emotion. It is not only the city environment that limits our emotional expression, but also ourselves who choose to deprioritise our emotions. By leaving the space of positive emotion blank, I attempt to convey the space of oppressive emotion as a large canvas, to express and display artwork, to break free of oneself. I imagine the space filling up with various forms of art from visitors, allowing individuals to reflect and evoke their inner emotions; ultimately allowing those who partake to appreciate the life they live and the emotions they have. Be human, be expressive.











Narelle McAllum

Museum of Emotions: Mirage Self-Reflection and Introspection

This floating light installation is temporary in the sense that its presence in any one location is fleeting. The abstracted structure recalls the significant landmarks across Tāmaki Makaurau Auckland that have been mined out of existence.

In the daytime the highly reflective surfaces make the structure almost invisible, reliant on the intensity of the sun to either reveal or conceal it. At night the structure is brightly illuminated by LEDs with fluid tones, creating a northern-lights effect. The pathway towards the structure slowly descends, creating the illusion of sinking. Inside, a floor made of an open metal grille connects visitors to the sea and dense acoustic panelling ensures only the sound of the water can be heard. Solar cells integrated into the roof membrane generate power for the lights, while the concrete hull of the structure can be decommissioned at end of life and used for floating homes, and the stainless-steel and aluminium elements may be recycled.




Yingxi (Ruoyu) Liu

Museum of Emotions: Lost in Translation

Cultures that do not share languages, values, frames of reference, or physical realities are often separated. This project develops a museum that consists of several halls created to provoke emotion and a central courtyard acting as a transitional hall. Located on a 6400-square-metre concrete platform sited at the edge of the Auckland Maritime Museum, the building reaches out into the harbour and provides a public space for the busy Auckland waterfront.

The building's primary access is via a ramp, with temporary timber and steel structures providing

flexibility for the future. The first half of the journey through the space concludes in the central courtyard, which hosts several seating areas. A covered walkway then leads the visitor to the next phase of the museum – three halls which are designed to open gradually, allowing nature in and introducing more light into the space with these much larger openings. The final hall is a place for people to stay and to connect, and not just with people. The hall is designed to reveal each element that is crucial to us: the land, plants, people, nature and the sky beyond.



Studio













Zara Deverell Museum of Emotion

This brief, titled Museum of Emotions, asks students to design a museum that induces two contrasting emotions. The museum is designed to highlight the delicate balance between people and nature. Historically, Auckland's harbour created a connection between people and the sea. The current site, however, provides minimal connection due to infrastructure. The projected flood zones in 2050 resemble the original coastline before the land reclamation of the 1840s, highlighting the notion that when we encroach on nature it will eventually encroach on us.

The proposed Museum of Emotions will act as a reminder of the delicate balance between humans and nature. The museum also provides public space to increase attraction to the site while ensuring users have a connection to the water in all seasons. The nearby Te Tara waka landing is reinscribed in the museum design through the shape of the tidal steps, along with the form of the building which helps celebrate waka within the area.









Joseph Bjelic-Webster

Museum of Emotions: Between Pain and Healing

The brief asks students to design a building with two spaces that are imbued with both positive and negative emotions. The central design challenge is to maximise the emotional impact of the architecture created. For my design I explored the idea of pain and healing. I architecturally defined healing as a soft sinuous fabric surface that is penetrated, stretched, and contorted using a steel grid, which in turn forms the spaces of pain.The pain and healing structures are co-dependent, they could not exist without one another. The healing space twists through the pain grid with great tension, as if trying to escape. The circulation between the spaces is independent of the pain or healing structure and the movement sequence oscillates between healing and pain, never dwelling in one experience for too long. This constant juxtaposition creates an ambiguity between healing and pain, positive and negative, and reveals that a true healing process is more complex and interrelated than conventionally understood. Although the building is situated in wide-open space on a pier at the western end of Tāmaki Makaurau Auckland's waterfront, light and views are tightly controlled to maximise the emotional impact of the structures. The form of the building from the outside expresses the dynamic tension and interrelatedness, with the pain grid surrounding but also supporting the healing form, which dynamically leaps out at various stages.















Abigail Spence

Te Hononga Māori Studio

The Māori Studio brief called for a farmers' market and an additional option for income generation on land called Puketāpapa, at Ihumātao. Confiscated by colonial forces in the 1860s in a breach of the Treaty of Waitangi, it remained in one Pākehā family until they sold it to Fletcher Building. After a lengthy protest, the land was returned to the New Zealand Government in 2021, and a five-year period set to establish long-term ownership and management between local iwi, Kīngitanga, and the Government.

The land was originally food gardens, and local iwi are restoring the whenua and replanting kai. The design of the farmers' market creates a U-shaped space for market stalls looking towards Puketāpapa maunga, while the covered parts of the structure house a mid-week café, kai packing area, weaving space and rongoa health centre. Three axes shape the building: a primary axis to Puketāpapa maunga, secondary axis to Manukau Marae and third axis to the historical site in central Tāmaki Makaurau Auckland where mana whenua food was sold over 150 years ago. The markets are located deep in the site to encourage people to engage with the whenua more strongly than they would if the markets were next to the road. A wetland must also be accounted for.

The structure sits on a concrete slab containing 40% fly ash, to create a strong connection to the ground. LVL timber beams and columns form the structure, with prefabricated XLam wall panels and translucent polycarbonate for the walls.



Beatrix Hegyi, Regan Harrison, Rohan Sadhu, and Victoria Carran

Peddlethorp Project: 17 Upland Road

For twelve weeks, our team of first-year Master of Architecture (Professional) students worked in Britomart with architecture firm Peddlethorp, developing mixed-use, community-centred, aged-living facilities for a real-world client. The design approach, which included initial site sketches to resource consent documentation, had to draw upon world-class trends in aged care. A high level of amenity, to aid in the wellbeing of residents, was the priority informing our design.

The project required an iconic design response that delivers luxurious and boutique spatial qualities as well as providing innovative and unique solutions to critical issues that affect independent and assisted living, and memory care. Through a research-based methodology, the team formed key design drivers for the development, followed by an iterative concept-design process. Special attention went into a community-focused centre with a centralised hearth, as well as public integration, and privacy gradients. There were two great challenges for the group: the intricacies of the site and the critical task of designing as a team.

The site, encompassing 3 hectares, includes a 19-metre drop across its topography, a gradient that would be too great for ageing residents to navigate alone. The team's planning was crucial to allow potential residents to navigate the site. This was done through level







pedestrian paths positioned along contours, while buildings provided vertical circulation.

The ability to have four different perspectives and insights for each component was a rich opportunity for learning from one another. However, the challenge of four designers with unique architectural styles and languages meant that initial designs were incohesive. It was only through communication and compromise that the team completed the final proposed design. A special thanks to Peddlethorp, especially Terry Barnes and Manuel Diaz for their generosity and support.











Detecting Construction: Dominus Winery

Herzog and de Meuron's Dominus Winery was thoroughly analysed through researching, deciphering, redrawing and finally via a scale reconstruction. The building's gabion rain screen cladding was the focus of this analysis. Herzog and de Meuron created what is anything but a simple box, responding to the climate through the gabion detail. The gabion density alters throughout – the areas that need to be cool are denser, and the inhabited areas are more open, allowing light and air to pass through. It is this gabion detail that tells the story of the whole design.

Through deconstruction and analysis, exploration was conducted to understand whether a building built in the late 1990s such as Dominus Winery would meet today's sustainability standards. Through research it was concluded that the thermal mass, locally sourced materials for the gabion walls, and passive cooling systems contribute heavily to the building being economical and environmentally sustainable.



Construction of the Dominus Winery model was detailed through careful study of published drawings, alongside written information and photographs. The drawings do not accurately represent the final construction. Many hours were spent interpreting and imagining how the building might have been constructed. The final test was to bring this knowledge into practice by constructing a 1:2 scale mid-floor detail. The translation from drawing to reality presented many challenges, not least of which was the attempt to be as faithful as possible to the materiality and construction of the building. To reduce the amount of material used and to highlight the detail's symmetry, a mirror was placed along the end of the model to give the illusion of a complete joint. Time was spent sourcing materials and ensuring they were the correct scale and an accurate design representation. The entire process, undertaken through deciphering, redrawing, reinterpreting and reconstructing, was invaluable.





Detecting Construction: Tauranga Campus of Te Whare Wānanga o Waikato

Detecting Construction is an Architectural Technology project that focuses on the structure, envelope and sustainable features of large-scale buildings. Our chosen building was the Tauranga Campus of Te Whare Wānanga o Waikato (the University of Waikato).

The Tauranga Campus, designed by Jasmax, harbours locally sourced rhyolite, precast concrete panels, and angled profiled aluminium fins that filter/shade each building façade. We were fortunate to visit the site in the early days of the build, allowing us to establish meaningful communications with project architect Jane Rickit.

Our assignment delved into the details of the eastern façade, which comprises a complex glass-andaluminium skin, including individual fins measuring 300 x 1500 x 4800mm each. Each component of the



envelope is suspended from a dead-load bracket on the concrete slab of the floor above, repeating vertically for four storeys. The cladding carries wind, seismic and horizontal loads, while the steel structure carries the building's vertical loads.

Our detail drawings, as well as a 1:2 detail model, highlight the connection between two fins on the eastern envelope with the concrete slab and loadbearing beam shown. The angled curtain wall and respective mullions were a challenging yet thrilling aspect to model and comprehend.

As a technology-based project, Tauranga Campus brought us many insights and new learnings regarding unconventional and unique building façades; and how these new techniques strive to create better, healthier and more sustainable architecture in Aotearoa.









Dylan Cardno and Joaquin Santico

Detecting Construction: Pixel Building

The requirement for this project is to research a building, anywhere in the world, that showcases architectural significance and complexity through structure, envelope assembly, related interior detailing, and external envelope attachments.

The building selected is the Pixel Building located in Melbourne, Australia. It was the first building in the world with a perfect LEED Rating of 105. It is Australia's first carbon-neutral office building and was awarded the perfect 6-Star Green Star environmental rating. To achieve this, the design successfully employed an array of sustainable design technologies and innovations such as an ammonia-based gas-fired absorption chiller, locally developed wind turbines, living edge planters supporting internal shade and greywater harvesting, anaerobic digestion tank, low-carbon concrete, track-mounted photovoltaics, night-purging window technology, a green roof consisting of native grasses, and colourful sun-shading panels mounted on the building's envelope – an innovation that caught our attention from the outset.

The process of making a 1:2 scale model to represent a significant detail within the building was challenging. There are numerous considerations when modelling from a 2D drawing. The process became long and carefully thought out, providing an appreciation of the innovations showcased, and the ever-evolving technologies available.





Beatrix Szabone Hegyi, Lanka Rajapakshe, and Abigail Spence

Detecting Construction: Scion Innovation Hub, Te Whare Nui o Tuteata

Studying a floor-to-wall connection inside the Scion Innovation Hub, Te Whare Nui o Tuteata, located on the edge of Whakarewarewa Forest Park, Rotorua, gives us an understanding of the high level of precision required to develop such a technologically advanced building.

One of the most notable challenges comes by way of the foundations, which are at risk from liquefaction should a seismic event occur. The timber diagrid structural frame is designed to move during a seismic event, while the steel U-shaped connectors are sacrificial, absorbing energy and twisting. The glazing and steel connections may need replacing, but the building itself is sturdy and was designed to remain so throughout seismic activity. This will avoid environmental costs associated with demolition and rebuilding, and the collection of sustainability awards the building design has received are thus validated.

By choosing not to use any external form of shading device on a building with a significant amount of glazing, the architects, RTA Studio in conjunction with Irving Smith Architects, created heating and cooling problems they then had to solve. The heating load is mitigated by recirculating warm air from the top of the atrium. For cooling, the architects claim the application of a frit pattern on the glass significantly reduces heat entering the building, which avoids overheating within the internal spaces. The power of the frit pattern is in the shadows it casts inside the atrium, creating the feeling of walking through the dappled light of a forest floor.



Year **W O**

As a year-long capstone research project, this is a unique course undertaken within the Master of Architecture (Professional) programme in the final year.

"One of the most captivating and stimulating propositions of working with MArch (Prof) students is the genuinely innovative and individual blend of topics that students are interested in. It is always a deep privilege to be part of a supervision team."

Students identify a research field from seven clusters: Art and Culture; Environment and Sustainability; Conservation and Heritage; Social; Technology and Fabrication; Urban and Housing; Te Hononga and Māori Housing. Within the first year of the master's programme, a research proposal is developed by students with guidance from their assigned mentor. The research proposal then forms the basis for the research project undertaken in the second year of the master's programme – the students' final year of study. Leading to a vast array of diverse projects instigated by the student's worldview, and based on the approved proposal, the supervision teams help to craft both the explanatory document/thesis and final capstone design, leading them well on their way to working within the professional field of architecture upon graduation.

In 2022 we have four examples of diverse projects selected as finalists for Te Kāhui Whaihanga Resene Student Design Awards representing the Master of Architecture (Professional): Alyssa Haley's thesis "Nuts and Bolts" investigates empowering communities through making. Ciarán O'Neill has created an inner city "Home for Your Worst Days" - an architectural response for substance rehabilitation. Keisha Rawiri completed an ethics application and has investigated an architectural response to the future-proofing of Tau Henare Marae in Northland, upholding the mana of Ngā Tau e Toru whare tawhito. Keisha received a highly commended at this year's Student Deign Awards hosted by Victoria University Wellington. Joe Yue Sun's thesis uses the metaphor of the famous Chinese painting, Along the River During the Oingming Festival (Zhang Zeduan, 1085-1145), for an urban regeneration project in the city of Fuding, in Fujian province, southeastern China.

Graeme McConchie and Annabel Pretty Course Coordinators











Myint San Aung 'ບ໑໌တိုင်းတောင် Pyit-Taing-Htaung - every time you toss it, it stands up

This project is named after a traditional children's toy from Myanmar that remains upright despite being knocked down. Consequently, the toy represents perseverance, resilience, and the ability to pick oneself up and never give up. This emblem of perseverance and resistance is essential to this project, which is infused with my personal experience growing up in the Thai Myanmar refugee camps. The project aims to understand how architecture can promote hope and assist refugees within the refugee camp. The question for the research is: How can the experience of a community based refugee camp, including the building and occupation of vernacular architecture, help address alienation and build resilience?

Currently, around 82 million people are displaced globally, and refugees are in need of support, being among the most vulnerable. Around 1.1 million refugees from Myanmar are situated in large refugee camps between Myanmar, Thailand and Bangladesh, many of them living in such conditions for as long as thirty years. Long-term design solutions are needed to solve this refugee crisis, and architecture holds the solution for creating meaningful place-making for the trapped refugees. With the undertaking of a comprehensive design vernacular, blended with holistic solutions, architecture can enhance the quality of life for refugees. The design intention of this project was developed through the mindset of refugees, fostering involvement and allowing the creation of their own rules, while encouraging the development and application of their own skill sets. With this, a traditional construction system was also developed to adapt to those skill sets and to be appropriate to site-specific conditions. The main objective was to realise an architectural solution that would provide for a better living environment for refugees while supporting their future prospects, as well as re-imagining current refugee camps to create a resilient and self-sufficient community where one feels a sense of belonging and can express, educate and prepare oneself for the future.

With this project Myint San Aung won the Te Kāhui Whaihanga NZIA 2021 Resene Student Design Awards.





illecture (FLOICESSIOILAI) Teal

Joe Yue Sun

A Day Along the River

China is developing at an incredible speed. The urbanisation process, derived from the west, is replicating economy and efficiency on a massive scale, crowding out traditional architecture and modes of living. We are losing our identity, and the images of our modern cities no longer accurately represent our culture. In 2010, the theme of the World Expo held in Shanghai, China was "Better City, Better Life." *Along the River During the Qingming Festival* is one of China's most notable handscroll paintings and was digitally presented at the expo in the Chinese Pavilion. The scroll was created by Zhang Zeduan in the twelfth century, based on the painter's memory and imagination. However, the scroll presents a traditional Chinese city better than

any real scene. This research examines the process of urbanisation and loss of cultural identity, which inspired me to use the painting as a design driver to create a new image of a Chinese city, based on reimagining traditional architecture. Fuding is the small city in Fujian province where I was born, and it is famous for being the home of white tea. This city is experiencing similar problems to other Chinese cities. A site for the new development was selected at a riverbank in the city centre. The predominant design method undertaken was drawing, carefully reimaging traditional Fujian architecture including the covered bridge and the traditional Fujian dwelling tulou. Through exploration, the colour palette, composition, and the variance of form and mass, the initial design idea began to respond respectfully to both traditional regionalist culture and the modern city. Although this project cannot fully address the loss of regional culture in China, it has provided a future vision. This has been achieved by providing an urban architectural intervention and subsequent precedent to inspire Chinese and other cities around the world, in the hope of rebuilding a cultural image in a way that we are truly proud of.

With this project Joe Yue Sun was a Finalist in the Te Kāhui Whaihanga NZIA 2022 Resene Student Design Awards.









Keisha Rawiri

An architectural response to futureproofing Tau Henare Marae and upholding the mana of Ngā Tau e Toru whare tawhito

Pepeha

Ko Motatu me Hikurangi me Manukorihi tōku maunga Ko Hikurangi tōku awa Ko Ngātokimatawhaorua tōku waka Ko Waikato-Tainui me Ngāti Hine i raro i te korowai o Ngāpuhi ōku iwi Ko Te Orewai ōku hapū Ko Te Horo me Tau Henare me Pipiwai te marae Ko Ngā Tau e Toru te whare tawhito me te kōhanga reo Ko Tau Henare te whare tupuna Ko Hineamaru te tupuna Ko Rawiri me Tairua te tāngata Ki te taha tōku pāpā Ko Ngāti Hamoa ōku iwi Ko Vaimoso me Faleapuna ōku hapū Ko Lauvale Paulo te tāngata

Ki te taha tōku māmā

This research project was initially developed from a korero with whanau, who expressed the need for their whare tawhito Ko Ngā Tau e Toru to be regenerated. Ko Ngā Tau e Toru was once an essential whare for Te Orewai hapū and was used as their first wharehui circa the 1890s. The essence of this research project is to explore the current and future opportunities for Ngā Tau e Toru and Tau Henare Marae, located in Pipiwai.

Through qualitative Kaupapa Māori methods, including interviews with wānanga and whānau, six key research themes were developed. The themes of inspiration, history, pūrakau, facts, aspiration and design informed an understanding of whānau aspirations today and for the future. Further to these themes, two key narratives encompassing tuna and hoiho were identified. They became the inspiration for the future masterplan and the spatial layout of programmes over the whenua.

Within Ngā Tau e Toru, the legacy of the ingoa continues by becoming the wharehui, whare taonga or kōhanga. Further consultation with whānau is required to reach a consensus. With regard to the essential functions of the marae, Ngā Tau e Toru served as the kōhanga function and this will be continued as part of the future marae design to maintain the sharing of knowledge between kaumātua and mokopuna. The whare taonga also acknowledges the essence of Ngā Tau e Toru whare tawhito. It is designed as a dedicated accessible whare that will hold historical marae archives and taonga, for whānau to access.

The values of kaitiakitanga, kotahitanga and manaakitanga are embraced within the essence of the new layout, allowing all functions to operate in harmony. The future marae design brings together tradition and innovation using several architectural responses, while maintaining the core values of tapu, noa and mana. Conversations with whānau continue to evolve in order to establish the current aspirations for the regeneration of Ngā Tau e Toru whare tawhito, inspired by the future masterplan designs, wānanga korero, and whānau interviews. Architectural projects need to consider future aspirations and implications for the distant future.

With this project Keisha Rawiri gained a Highly Commended in the Te Kāhui Whaihanga NZIA 2022 Resene Student Design Awards.













Alyssa Haley Nuts and Bolts

With the current state of over-consumption prevalent in society, the activities of making and crafting have proven to present an unparalleled opportunity to realign consumption culture in a way that emphasises the value of our possessions. The tools with which to partake in making remain outside the realm of democratised access in the communities needing them most. Subsequently, this project aims to alleviate the problems associated with consumerist culture by constructing a community-centred tool library and makerspace that promotes a sharing economy and a culture that values making over purchasing. This raises the question: How can a community maker's facility support empowerment on a personal and community scale? In conjunction with the anti-consumerist concerns of the project, a design for disassembly (DFD) approach presents itself as a viable architectural solution to reduce the production of materials and the wastefulness of the current construction-industry paradigm. This approach governs an opportunity for the facility to be disassembled, which raises the corollary that it can also be assembled elsewhere in new configurations, therefore extending the outreach of the building to further communities. This research explores the gap of portable making facilities and the benefits of such on a personal and community scale, within the domain of architecture.

This research aims to discover, primarily, the benefits of making for community members served by a littleto-no-cost making facility on both a personal and community scale. This coincides with a secondary aim to discover how temporary architecture yields the possibility of reaching a wider audience than that of its more permanent counterparts. These aims are explored through the fields of making, community and temporariness to discern their relationships to aid in designing a well-informed maker's facility – down to its nuts and bolts.

With this project Alyssa Haley was a Finalist in the Te Kāhui Whaihanga NZIA 2022 Resene Student Design Awards.





Ciarán O'Neill A Home for Your Worst Days: The Architecture of Substance Rehabilitation

Drug and alcohol addiction affects a significant number of New Zealanders. Not only can it destroy the lives of those addicted, but it harms the lives of those closest to them. People trying to recover from addiction need a place where they can get support for as long as they need, without burdening the other people in their lives too much. This project proposes an inner-city rehabilitation centre that will provide safe, healing spaces where addicts can stay amongst their peers for a period of time. By understanding what is needed for a successful recovery, this research project looks into the idea of healing architecture. Specifically, how salutogenic architecture and biophilic design can encourage a holistic recovery while supporting general human health and wellbeing through thoughtful planning and connections to nature. This project investigates how the philosophy of phenomenology might create a building where guests

feel relaxed and at home by considering spatial design and material selection that interact with people's senses. Furthermore, the facility aims to instil a sense of community for residents struggling with addiction, shame and depression while also forming a positive connection to the wider community and sympathetic fit within its urban context.

The final design aims to create architecture that forms a supportive backdrop for people on their rehabilitation journey, away from dependency on drugs and alcohol, away from anxiety and depression, and towards a positive new outlook on life.

With this project Ciarán O'Neill was a Finalist in the Te Kāhui Whaihanga NZIA 2022 Resene Student Design Awards.



Kalib Stewart Mending a Broken Heartlan

This project researched the potential of community architecture in a rural town marginalised by decades of neoliberalism, globalisation, growing inequality, and urbanisation, and asked the question: How can a community hub aid in the revitalisation of a small, declining rural town in heartland Aotearoa? Located in my hometown, Dargaville, Northland, the project is a comprehensive urban planning and programmatic response to the community's needs. A large-scale project, it consists of a hub with over 15 separate programmes amalgamated on an underutilised site. These programmes include a gym, sports court, art gallery and studio, restaurant, town hall and a new library with lecture theatres.

Although the town had some existing amenities, few had been designed or planned around promoting community participation, particularly much-needed rural and urban social integration. Infrastructural investment had also been abandoned by successive central and local governments, causing small towns and their residents to suffer and regress economically as urbanisation continued to undermine their communities. Addressing the above, the project's outcome is a spatial and functional organisation of spaces that work in unison and address many of the community's mental, physical, educational, social, political and economic requirements.

The design was influenced by Kaipara District Council's future Kaipara Kai and Poutō wharf development plans, Northland's dairy community, the vernacular New Zealand shed, Dargaville's rich timber and gum history, and the Northern Wairoa River's connection to mana whenua and, of course, the small town of Dargaville.




Rethinking: Humanising: Isolation: Aotearoa New Zealand (A Novel Approach to Design)

A large portion of my research focuses on explaining how the human race is vulnerable to re-emerging epidemics and, on a global scale, pandemics, and developing a set of design tools, methodologies and criteria for designing future pandemic facilities.

Consider what the world would be like if our institutions could break free from the cycle of short-term thinking - a shift away from designing for sickness incubation and towards sickness rehabilitation. Humanity has the ability to alter its course before it is forced to. The primary goal of this research project was to identify the methodologies needed to construct a dedicated isolation facility promoting wellbeing, and suggest integrating an isolation facility into the traditional city fabric as essential infrastructure. An environment should be designed to fit the purpose with humanising design principles. This design theory adapts the notion of salutogenic health theory, focusing on the positive attributes of regenerative health, promoting connectedness, coherence and empathy, and helping patients through a natural recovery.

Function, biophilia, wellbeing, architectural aspirations and materiality are all elements that must be considered when designing a successful humane facility where isolation is the primary function. The facility's focus on promoting holistic health and mental wellbeing ensures a second life in which the facility will respond to Aotearoa New Zealand's ever-present mental health issues as a mental health retreat in the absence of pandemics. This research could help reimagine how spaces are designed and operated using new design strategies, allowing the method to be replicated globally.





