Whakahoi

Weaving Culture Through Architecture

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Master of Architecture (professional)
An exegesis submitted to
Auckland University of Technology
in (partial) fulfilment of the requirements for the degree of Masters of Architecture (professional)
October 19, 2022.

Attestation of Authorship
I hereby declare that this submission is my work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgments), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

_____ _____
Signature Date

Abstract

This research intends to gain insight into the importance and history of whakatoi raranga (Māori weaving). In doing so the following questions are asked- What are the cultural aspects of the art of making? How can they be intertwined into the realm of architecture? How does whakatoi raranga connect the Tangata Whenua (people of the land) to Papatūānuku (mother earth)? as well as considering the benefits to mental health and well-being through the interaction of Harakeke raranga (flax weaving), and the experience of raranga (weaving) and its incorporation into the design of the building.

What materials can we use to bring the important motifs and kaupapa of raranga into architectural projects? What are the ecological advantages and disadvantages they bring into our environment and how can we work together, with our surroundings as a co-design ecology to ensure that we are doing as little as possible in contributing toward the carbon footprint of our built environment?

The intent is also to consider my family history of Middle Eastern cultural weaving and how this connected us as a community, through the act of intertwining one yarn with another to create rugs, pillow covers, throws, and many other useful fabrics for our everyday survival in the scorching hot desert sun. I would also like to investigate and gain experience on what it would have been like for my ancestors to go through the laborious work of collecting materials, drawing up patterns, and weaving those ideas into their finished pieces of woven items.

I want to gain an understanding of whether they had found enjoyment in the process of harvesting the tools and making the product out of the materials they collected, or did they perceive it as more of a labouring chore that they didn't enjoy doing. What was the experience of working under 50 degrees Celsius weather day after day to create these beautiful and vibrant masterpieces? Some to be worn as garments and others to be walked over as rugs?

Looking at these two cultures together, side by side, I aim to interconnect the values in these two cultures through our built environment and provide evidence to prove that although they are two separate cultures, they share similar values and respect in terms of the focus they put into harvesting, collecting and making and the tools or processes they used to get this done.

The methodology includes a personal journey experience with Harakeke raranga through participating in embodied research through collaborating with a traditional Māori community weaving workshop to advance my knowledge and skill of Māori Tikanga (practices) as well as gain hands-on experience in the form of art of making, as well as interviewing and speaking to my Middle Eastern elders and understanding the experience they went through by gaining ancestral knowledge and skills that they can teach back to their children and for their children to pass on the custom traditions of weaving.

This workshop allows me to bring the skills I learn to the Co-design project and it is the knowledge that I then can pass down to my peers for them to gain an understanding of the proposed design and material that will be presented to the Hawke whanau as an option for the final Façade outcome.

Pepeha

Tena koe,
Ko Rana Fatoohi toku ingoa
Ko Baghdad taku wahi whanau, Iraq
No te pito raki o te Middle East toku whanau
Ko te reo e korero ana ahau ko Mislawee Arabic(dialect)
I kauhoe ahau i roto i te awa o Uparati
I kake ahau i te maunga o Halgurd
I haere ahau i te whenua maroke o oku tupuna
Ko taku whenua tenei, ko taku iwi enei, ko taku korero tenei.

Greetings,
My name is Rana Fatoohi
My birthplace is Baghdad, Iraq
My family is from the northern part of the Middle East
The language I speak is Mislawee Arabic (dialect)
I once swam within the Euphrates river
I once climbed the Halgurd mountain
I once walked the desert land of my ancestors

This is my land, these are my people, this is my story.

تحية،
اسمي رنا فتوحي
مسقط رأسي هو بغداد ، العراق
عائلتي من الجزء الشمالي من الشرق الأوسط
اللغة التي أتحدثها هي اللغة العربية ميسلاوي (اللهجة).
سبحت ذات مرة في نهر الفرات
لقد تسلقت مرة جبل هالجورد
مشيت ذات مرة في أرض صحراء أجدادي
هذه أرضي ، هؤلاء هم شعبي ، هذه قصتي.

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I would like to take this moment to acknowledge my co-design group/peers, Lana, Holly, Allan, and Rory, and my lecturers Fleur and Kathy for their hard work and continuous effort and support in assisting and guiding me throughout this journey and for their skills and in-depth knowledge which inspired me to push through and continue to explore my research in great depth and detail.

To my co-design group/ peers, this has been a beautiful journey together, thank you for your kindness and support, this wouldn't have been possible without you.

To my supervisors, Fleur Palmer and Kathy Waghorn who stood alongside me throughout this exe
gesis and helped to guide me in the right direction and keep me on the narrow path to success.

To my whanau and friends who have supported me every step of the way and continued to cheer me on throughout the obstacles and struggles I encountered along this journey, I truly appreciate every one of you for your aroha (love) and atawhai (kindness).

My good friend and mentor Yenegh Badimay who helped me with the editing and proofreading of this exegesis, and has stood by me from beginning to end, I truly appreciate your determination and support.

To my best friend Fatima Abbas, who encouraged me and pushed me to keep trusting in myself, and made sure I stayed focused throughout it all, I couldn't have done it without you.

And finally, a big thank you to Andrew Burges (Head of the Department of Architecture) for answering the questions I had and always promptly replying to my concerns.

Chapter 1

whakataki

“Hutia te rito o te Harakeke
Kei hea te Komako e ko?
Kī mai ki ahau
He aha te mea nui o te ao?
Maku e kī atu
He tangata, he tangata, he tangata”.

“If you pluck out the heart, the new shoot of the Harakeke
Where will the Bellbird sing?
If you ask me
What is of most importance in this world?
I will answer
It is the new shoot, the mokopuna, it is people”

(White Tania, 2017)

Fig 1. Harakeke plant (representing parents and child surrounded by extended whanau)

1.1 Context

What? Why? Who? Where? and How?

This exegesis is based on investigative research, site analysis, case studies and findings of the proposed site, and an investigative scope exploring how architectural design and our ecological environment and materials can be collaborated to improve overall health and wellbeing within built environments.

The consideration of case findings from this research and case studies is used to generate a collaborative design for an integrational medium-density housing complex for the Hawke whanau and Orange Tamariki. The proposed concept building is named “He korowai aroha kia maumahara o te whare - A loving cloak that houses memory”.

The Hawke whānau, a hapu of Ngāti Whātua Ōrākei located in Tāmaki Makaura Auckland, have dedicated their lives to helping and assisting their communities and young mothers and children get out of difficult living situations. They do this by offering a safe space to stay while they take care of their children and help them to get their life back on track, The Hawke whānau has cared for wahine (women) and tamariki (children) over the years and would like to continue helping other people by providing a larger space to house and assist the needs of their whanau and community.

This project aims to design a 5-story apartment building complex for the whānau with integrated facilities appropriate for assisting those in need. The aim is to propose an interactive solution to support health and wellbeing within the environment and activate the sustainability of natural elements within the exterior environment of the building to support the overall health and well-being of the occupants and surrounding community by incorporating Māori traditional patterns through the built façade, balcony, and breezeways.

Who are Ngāti Whātua Ōrākei?

Ngati Whātua have a powerful connection to the whenua (land) of their ancestors and take pride in their iwi (people) and future whakatipuranga (generation). Ngāti Whātua o Ōrākei, are tangata whenua who originated from and reside in Tāmaki Makaurau, they hold strong in self-governing their whenua, history, identity, and language (Ngāti Whātua Ōrākei, 2022).

Ngāti Whātua o Ōrākei have nearly 6000s registered family members throughout Aotearoa and all around the world, mainly located in and around the Tamaki region, who take great pride in celebrating their whanau lineage and the legacy left to them by their ancestors. The strong and everlasting connection to their whenua was established through this great inheritance (Ngāti Whātua Ōrākei, 2022).

Ngāti Whātua occupation of the land in Tāmaki Makaurau began in the 17th century while under the leadership of Māori chief, Rangatira Tuperiri. For this reason, every member of Ngāti Whātua Ōrākei can locate their whakapapa through the history of Tuperiri, they are descended from the 3 sub-tribes, Te Taoū, Ngā Oho and Te Uringutu who are cooperatively known today as Ngāti Whātua Ōrākei (Ngāti Whātua Ōrākei, 2022).

The Ngāti Whātua o Ōrākei Trust Are the organization that takes care of and looks after the affairs of the sub-tribe (Ngāti Whātua Ōrākei, 2022).

Fig 2. Section of Māori land owned by Ngati Whatua Orakei

1.2 Background/History

Māhuhu-ki-te-rangi is the waka that came from Hawaiki. Rongomai was the captain. of The waka sailed down the south of the east coast, returning north to Parengarenga before sailing down the west coast. Rongomai tragically drowned in the Kaipara Harbor when the waka capsized. This area eventually had an abundance of tribes, hence the decision to move further down to Tamaki Makaurau with Tuperiri leading Ngāti Whātua o Ōrākei. Tuperiri was Āpihai Te Kawua's grandfather, and it was Āpihai who signed Te Tiriti o Waitangi as the Chief of Ngāti Whātua Ōrākei (Auckland University of Technology, 2021).

Fig 3. Ngati whatua whakapapa

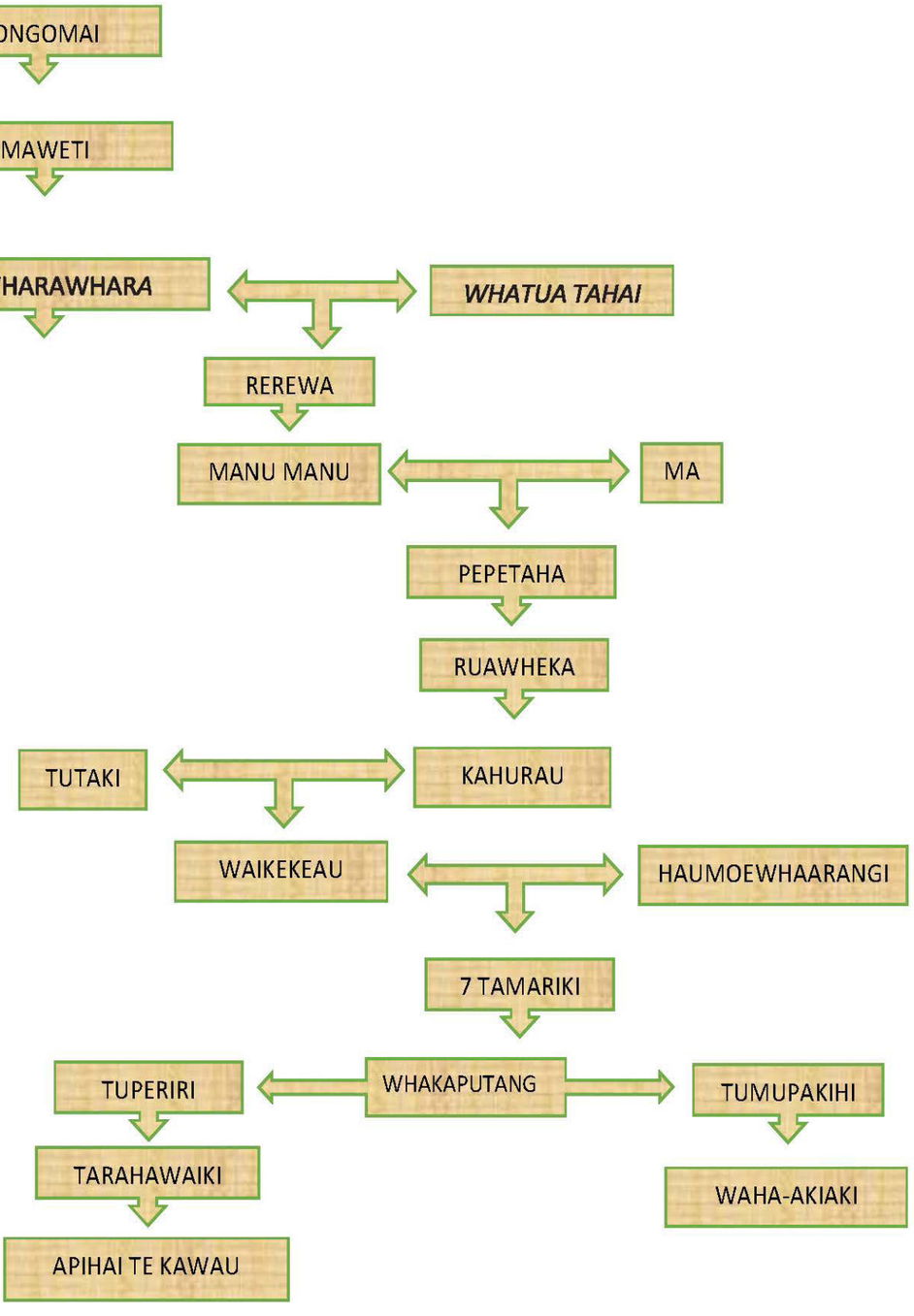


Fig 4. Ngati whatua lineage tree

The Signing of Te Tiriti o Waitangi

Before colonization took place, Māori considered land as sacred and a gift from Papatūānuku (mother earth), they saw themselves as the guardians of the Land rather than owners of it, this outlook on nature was passed down from their ancestors and through their genealogy as part of a spiritual interconnection to nature, so the idea of buying or selling land was not something Māori ever considered or thought of before colonization (Palmer, 2016).

The Te Tiriti o Waitangi was signed on the 20th of March 1840 by Ngāti Whātua chief, Āpihai Te Kawau at the location of Manukau Harbour. During this period the capital of Aotearoa was Kororareka (Russell) - the trading and commercial hub of New Zealand (Auckland University of Technology, 2021).

Before Āpihai Te Kawau signed the treaty, he welcomed William Hobson to settle in Tamaki Makaurau and promised him land where he will have a safe place to live. This gesture made by Āpihai was in the hopes that their whanau and tangata would be protected, as they were previously defeated by Ngāpuhi in 1825 . This was also seen as a good opportunity to grow their trade business (Auckland University of Technology, 2021, p17).The invite was accepted by William Hobson and he relocated all his trade and commerce into Tamaki Makaurau in September 1840 making it the new capital of New Zealand and renaming the city Auckland as we know it today (Auckland University of Technology, 2021).

Fig 5. Signing of Te Tiriti o Waitangi 6 February 1840

Bastion Point

In 1914 part of Okahu bay, Orakei was turned into a sewage system, which highly impacted the Ngāti Whātua and their traditions of fishing due to the pollution of the sea, this made a large impact on their connection to the whenua (Ministry for Culture and Heritage, 2017).

In 1951 Ngāti Whātua were evicted from their homes in Ōkahu Bay, their homes, meeting houses, and gardens were all burned down (Ministry for Culture and Heritage, 2017).

In 1977 a crowd of protesters occupied Bastion point in hopes of gaining rights to having their ancestral given land back to them after the NZ government had announced that expensive residential homes would be built on former Ngāti Whātua reserve land. The land had been massively reduced in size by compulsory acquisition, this left Ngāti Whātua ki Ōrākei tribal group with rights to less than 1 hectare of land. This led to a protest by the Ōrākei Māori Action Committee who refused to turn their back on the land that had belonged to their ancestors for many generations and decided to occupy Bastion point for 506 days in the protest to win their land back (Ministry for Culture and Heritage, 2017).

Ngāti Whātua attempted and succeeded to make a treaty claim for their losses of the land in 1980 which granted them $3 million in compensation and resettlement of their marae area on the territory (Ministry for Culture and Heritage, 2017).

Ngāti Whātua worked with determination to win back land that was rightfully theirs. On the 1st of July 1988, the government of New Zealand announced that it had agreed to the Waitangi Tribunal's recommendation that Takaparawhā (Bastion Point) on the southern shore of Auckland's Waitematā Harbour be returned to local iwi Ngāti Whātua this is according to NZ history (Ministry for Culture and Heritage, 2017).

Fig 6. Occupation of Bastion point 1977

1.3 Location

The site for the proposed whānau whare (house) is 31 Kitemoana Street, Orakei.
It currently holds a single-story residential home owned by Hawke Whanau. It sits on Māori-owned land. The house itself was built in 1990 (OneRoof, 2022) and was later expanded and renovated over the years by Bob Hawke to allow for extra room to house extended family members and help to accommodate other people in the community. Ahi Ka (continuous occupation) of family descendants is the only way to maintain ownership rights of the land.

The image pictured below shows the proposed site location and the landmarks and important areas around it.

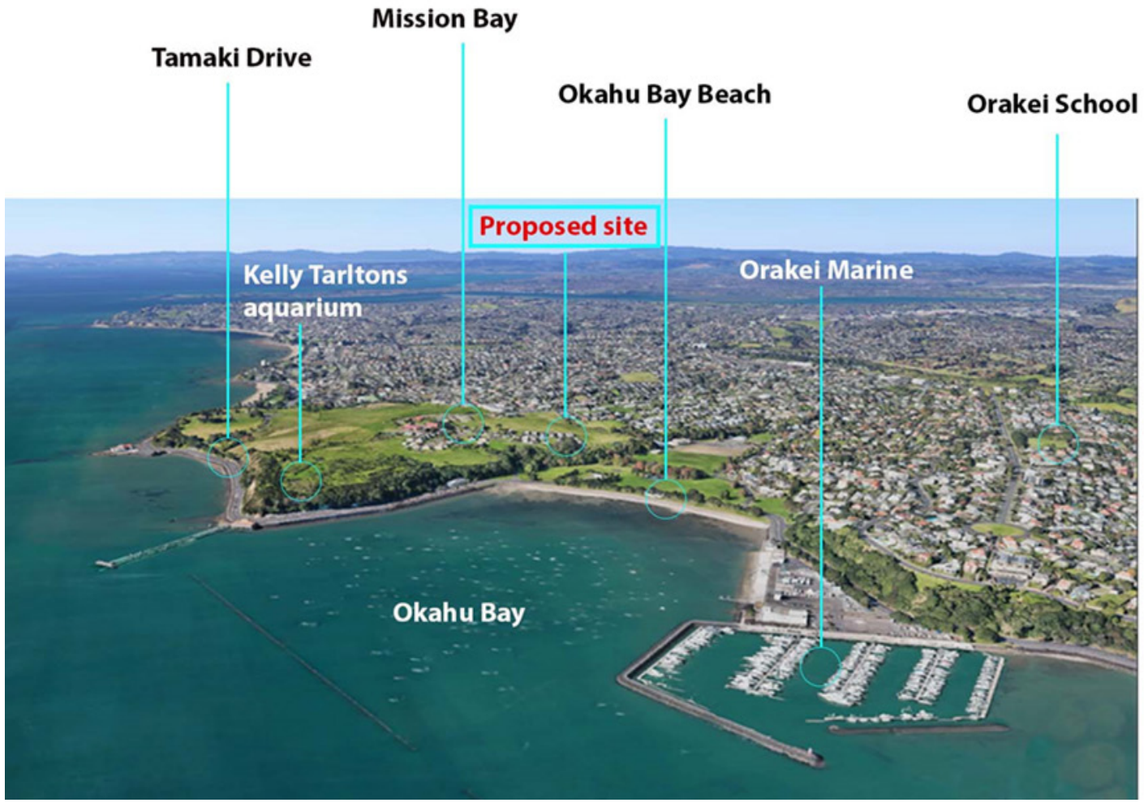


Fig 7. Orakei Site location and surrounding landmarks

Fig 8. The history of Orakei development, water pollution, and land expansion over the years

1.4 Research Focus

Through Harakeke raranga this exegesis intends to promote Māori culture and ethics through analysis of cultural and traditional values and patterns. As well as broadening the range of architectural approaches that should be considered or put into practice to enhance our well-being and health in our urban environment and reduce our carbon footprint. Another aspect researched is how to design a building that incorporates ideas and concepts of raranga from Te Ao Māori by using sustainable and environmentally friendly materials that leave as little of a carbon impact on the environment as possible, this is being approached by focusing on the 7 principles of the Living Building Challenge tool to research into my findings and ensure that these requirements are being met. These principles include the following aspects…

PLACE - Where the building is located, the history of the land it is located on, and the position it faces.

WATER - To ensure the building respects the amount of consumption of water it uses and to be considerate of recycling water for reuse.

ENERGY- To ensure the building is energy efficient to achieve a good energy rating.

HEALTH + HAPPINESS – To consider a building that is designed to ensure a healthy and happy environment to live in or occupy.

MATERIALS- To use sustainable and environmentally friendly materials for the benefit of our environment.

EQUITY – To ensure the building is inclusive of all individuals from all walks of life with different types of physical and mental abilities.

BEAUTY -To design a building that is aesthetically pleasing and visually attractive to people.

The wider questions I ask in this design research are

1. How can we humans benefit ourselves and our planet by incorporating sustainable and eco-friendly materials into our built environment?

2. What are the design building strategies we need to consider putting into place to normalize designing rich Māori indigenous culture through the materiality of our built environment?

3. What are the benefits of introducing the history and art of weaving into our architectural world? What health benefits can this provide to the individuals that interact with or observes this?

4. How can we enhance our connection with one another through the act of Harakeke raranga, and improve mental health and well-being through the art of making and bring traditional Māori aspects back into our built environment through cultural practices and pattern making?

1.5 Research Methods

A two-part research technique was used to research for this exegesis to collect the information and expertise required to produce this exegesis. To learn more about Māori culture, health, and well-being, and to instigate and identify the most suitable materials to use to better our environment through architecture, part two of this method involves theoretical research and literature review.

Part one of this method involves embodied research and practice through the act of making, Harakeke raranga and experiencing the cultural atmosphere that went along with the experience.

Fig 9. Harakeke raranga wall hangings made at the raranga workshop

1.6 Embodied research

The embodied research for this exegesis took place over 8 weeks, the research method consisted of attending a traditional Māori weaving class once a week to learn the cultural values, traditions, practices of Māori, and the harvesting process of Harakeke.

Over these 8 weeks, I gained skills to harvest, prepare, and traditionally weave with Harakeke, keeping sacred practice in mind when handling the plant. What I observed during my 8-week experience is that Māori hold a high level of respect to whaea whenua (mother earth), all that she provides is considered sacred and valuable to the people, and they show gratitude towards nature in the way they handle and care for what it gives them.

Harakeke is harvested in a way that protects the plant and allows it to continue growing and
producing even after it has been harvested. The middle leaf shaft of the Harakeke plant and the two other shafts surrounding it are left untouched as these are a family (mother, father, and baby), while the outer, more matured leaves are cut carefully in an angled position, always cutting away from the plant.

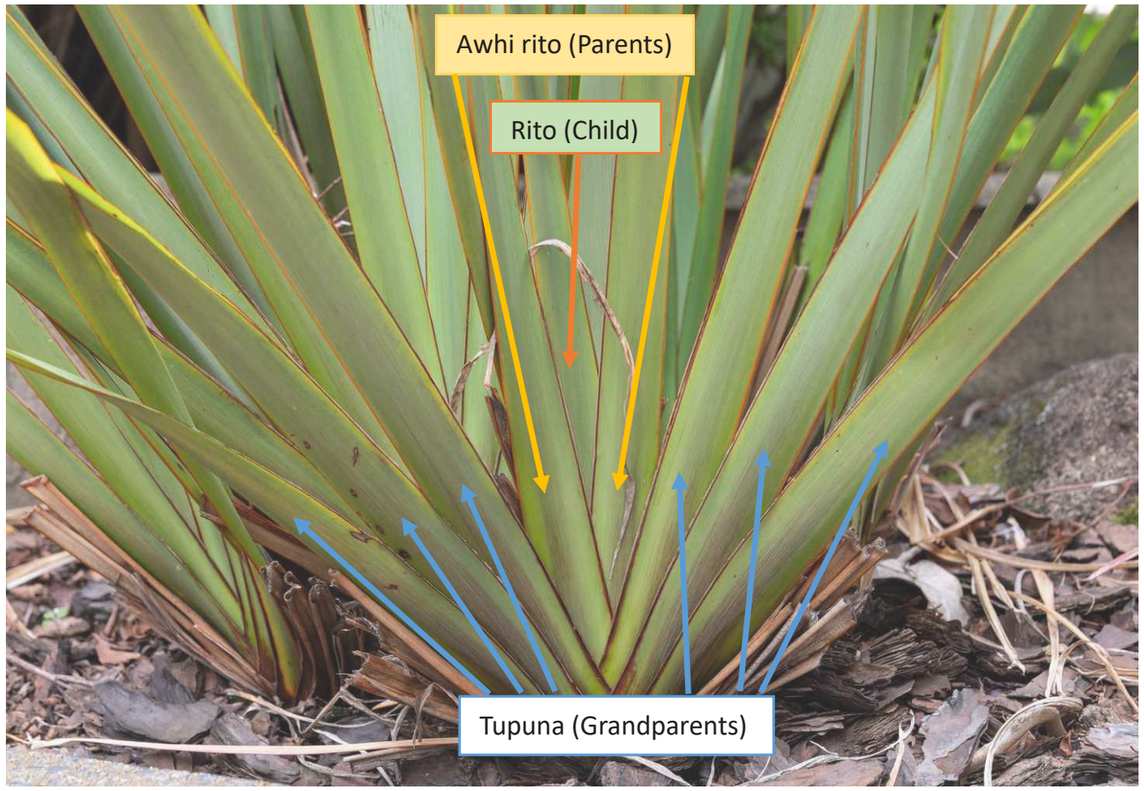


Fig 10. Harakeke diagram showing the different shafts and what they represent to Māori

This allows rainwater to penetrate the cut-off leaves and give life to the rest of the plant, allowing it to grow and flourish. Harakeke (flax) is never to be harvested during rain, or by hapu (pregnant) wahine, or wahine on their monthly cycle, it is to be harvested by someone else and given to them to be woven. Harakeke is one of the most sacred plants to Māori as it provides the people with a path of living, granting them resources to make and produce everyday household products and cloaks for their families or to sell for financial gain.

While on this journey, I experienced what it was like to practice weaving through a different lens. In the Middle East, we were taught to weave at a young age, using animal hair, sheep wool, silk, and sometimes torn-up fabric, a lot of focus and determination went into mastering this skill which was used to make products for use or sale, to provide an income for our families. The practice of Harakeke raranga brought back a lot of nostalgic aspects in terms of practicing a similar art of making, while using a different material that I was not yet familiar with.

During the 8 weeks I learned to weave different things including kete and wahakua, the wahakura was something that stood out to me as it is seen as an article that is used to house or protect a newborn baby, it holds a great connection to the weaver as it allows them to interact with nature, Hapuri (community) and their whanau through the element of Harakeke raranga (White Tania, 2017).

Though I am not Māori, I sensed a strong connection to the culture that the wahakua represented, it brought back memories of how the people of the Middle East would wrap a newborn baby tight in a traditional woven swaddle cloth, carefully put together by the grandmother of the newborn, this technique was used to give the child the sensation of being held by his/her mother creating the atmosphere representing when the child was still in the womb, giving them a sense of comfort and security, it is a custom that has been used for many years and is still being used today.

Fig 11. Hand-woven Harakeke kono

Theory vs experience

While both aspects have been experienced and studied in this exegesis, the learning outcome between theory and experience gives two very different results.

When reading through many articles, books, websites, and other mediums of educational materials, you are fed knowledge without practice. It is the knowledge of someone else who has gained that knowledge either through practice or through research, you gain knowledge, but it is not practiced by you as an individual.

I found that gaining knowledge through reading is very beneficial in understanding what it is that you are researching, however, I found myself lacking the skill of practice and making. To fully understand a culture, I positioned myself around its atmosphere and experienced the practices they practiced, understood the feel of the materials they used, the scent of those materials, and the history and traditions of why these materials have been used and are still used today.

While on my 8-week weaving journey I learned that weaving is not something you can just read about to understand, but rather it is a practice that needs to be experienced in the right atmosphere and surroundings to fully understand and experience its cultural value to its people.

Although the theory is an important part of learning and gives the right knowledge to grow intellectually, the act of practice is equally as important, without practice, an individual will never reach their full potential to learn about the subject in a way that can be spoken about from a personal point of view. I believe practice brings theory to life and teaches us value towards the skills we have learned through the action of experience.

Fig 12. Hand woven Harakeke raranga wahakura (baby basinet)

A Woven Journey Through Harakeke

Standing on the outskirts, observing through a lens as though I am staring into another world, inhabited by a different culture than the one I am so familiar with. A foreign feel of what it is like to experience a similar art through a different lens.

As I Walked through the wide open doors of the inhabited space, being welcomed in by individuals who share so many similarities with my own ethnicity, I began to envision a sense of belonging.

I was escorted by a Māori elder into a space dressed up in hand-made woven wall art, carefully thought out and crafted by the many talented wahine who occupied this space week after week, using Harakeke to produce and create beautiful works of art. I realized that what we share is more than just culture, it is respect, honour and commitment.

Taking off our shoes at the entrance of te whare pora (house of weaving), and entering the threshold, I came to observe and understand the sacred connection and respect Māori have with whaea whenua (mother earth).

As we sat on the ground of the entrance space, we were welcomed with a warm karakia, and the beautiful melody of a waiata performed by a group of Māori youth, a sense of sincerity came over me as I felt a connection, joining me to the space I now occupied, being surrounded by heritage, culture and traditions of Māori nga tupuna (ancestors).

Harakeke karakia (Prayer)

Te Harakeke

Te korari Nga Taonga

Whakarere iho

O te Tangi

O te Whanua

O nga Tupuna

Hamai he oranga mo matou

Tehei Mauri Ora

Amine

After karakia and waiata we were led into the weaving space, here we were taught the tuku iho (tradition) and Tikanga (method) of respectfully harvesting Harakeke, the feeling of connecting with nature through the sound and harmony of native birds that surrounded the Harakeke plants.

Soon after our lesson in harvesting, we headed back to the te whare pora were bundles of Harakeke leaves that had been previously harvested and collected on our behalf, for us to us as we began our new weaving journey into the art of Harakeke weaving.

Prior to beginning our weaving process, we prepared our Harakeke by stripping the spine of the leaf, splitting each leaf into 4 equal parts, and using a sharp-edged took to soften the strips. Being attentive to how the texture of the harakeke shifted gracefully as we transitioned between the stages of preparation. This prepared the strips for the weaving process to being.

I was advised of certain traits and protocols to follow. Flax was not to be stepped over as this action is considered disrespectful to the plant. Māori hold a high level of respect for whaea whenua (mother nature) and all that she willingly provides for them.

As I proceeded to weave, I quickly came to recognise the amount of concentration, connection and cultural value and technique that goes into the art of making, weaving began to trigger my senses of smell, feel and observe.

There's something distinguishing about the smell of fresh natural Harakeke that brings such a sense of relaxation and comfort over the weaver, nature tends to freely connect with us as much as we allow ourselves to connect with it.

Weaving with Harakeke brought a glimpse of nostalgia, a sense of belonging, and an experience of travelling back in time to my hometown in Baghdad, in the Middle East and being taught as a child how to weave rugs, pillow cases, handbags and garments, cheerfully learning the fine art of making by my beloved grandmother, who was taught by her mother, and her mother's mother. This is the heritage of my ancestors and my future offspring.

1.7 Weaving across cultures

Though there is a significant difference between these two cultures, in theory, we have many similarities in terms of practice, culture, tradition, and family values which are woven together through the common practice of the art of making.

Both Māori and Middle Eastern cultures revolve heavily around uara whanau (family values) and relationships with a close-knit community in both cultures.

Manaakitanga (hospitality and catering to others) plays a large part in everyday life within Māori and Middle Eastern cultures, strangers become friends, neighbors become family and community becomes the heart of our environment.

Weaving is something that is practiced within female communities, bringing women together in friendly gatherings, while enjoying a cup of tea and proudly showing the progress of their weaving to one another, exchanging advice, and helping one another to learn new ways of stitching patterns together.

Young girls quickly pick up the skill of weaving, taught to them by their mothers and the elders in their community, just as weaving in Māori culture holds a large significance among Māori wahine.

One difference is in the approach to materials. Unlike the Middle Eastern culture, Māori holds great value towards mother earth and what is provided to them, their approach to the Harakeke plant is part of this. In the Middle East, we tend to use materials such as animal hair, sheep wool, and other fibers without looking deeply into where they came from or if the product used is affecting the environment and ecosystem around them.

Māori hold a much higher value towards the wider environmental context. However, similarities between the two cultures are woven together through community and family values, how both cultures value the people they interact with and bring people into their home, helping one another by providing a hospitable and accommodating environment for their guests.

To investigate the possibilities of raranga in this project, it was necessary to position myself by comparing Te Ao Māori weaving methods to those of my own culture. This taught me the emotional and spiritual connection Māori have with Papatūānuku.

My goal has been to incorporate this evolving raranga knowledge in the context of Te Ao Māori into the Hawke whanau's building design.

1.8 Co-design process and documentation

In 2021 our research cluster, along with a few undergrads teamed up and took on the Hawke whanau project. The aim was to design a 6 story apartment building to house the Hawkes and also to be a safe accommodation for mothers and babies, and young boys.

The whanau have been along with us during the entire journey and process. We began having a hui with the whanau about their ideas and to get a feel for what they wanted to achieve for the outcome.

We began by recreating the site contour and building parcels with simple block models and to get the whanau to interact with the us through the design and build process of their new whare. Throughout this process we each presented our own designs and the whanau chose one that they were happy with.

I chose to focus on the interior layouts of the spaces and creating an indigenous feel within the interiors as well as focusing on bringing in nature through incorporating biophilic design through the facade of the building.

This is the process that led me to developing the façade into something that invites culture through pattern and Harakeke raranaga while connecting it to my own culture through the art of making through weaving.

This section will explain the process from the begining of our journy to the present progress of our design.

Fig 13.Co-Design team (laft to right: Rory Norton, Holly Ananru, Lana Webster, Fleur Palmer (team leader), Rana Fatoohi, Allan Phan

February INITIAL Hawke Feedback (via email)

Ground floor

1 - Welcoming area but must include a wheel-accessible ramp
2 - Wharenui
3 - Courtyard
3.1 - Fenced off pool
4 - General accommodation with adjoining showers and toilets (min 2 of each)
5 - OT communal kitchen
6 - OT communal lounge area
7 - Storage with room dividing doors in the lounge
8 - Workshop (we absolutely love this idea)
9 - Hawke Residence - 2 bedrooms, 1 bathroom

First floor

1 - Rentable private apartment
2 - Communal library
3 - Office space & toilets for library
4 - Communal laundry
4.1 - Gym with 1 toilet and 1 shower
5 - Compost system
6 - Media room for the Hawke Residence
7 - Hawke Residence

Second floor
As per Rory's plans

Third floor (last floor) solar panels on the roof

As per Rory's plans but only 3 studio rooms with ensuites.
This will make the rooms larger for the mothers and realistically we could better care for 3 mothers at a time and not 4.

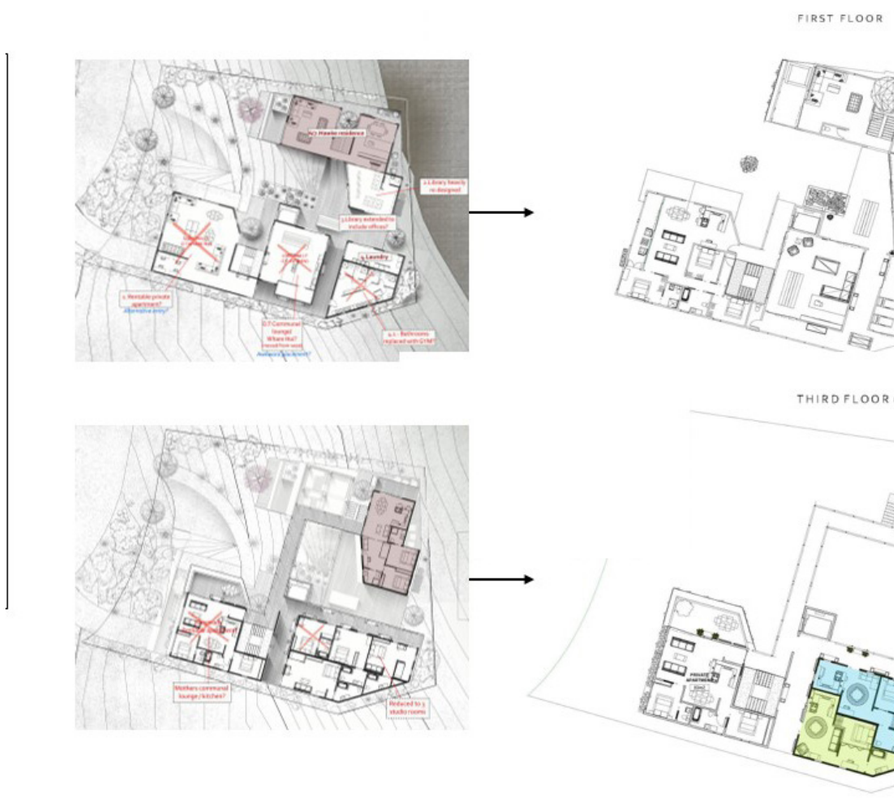
Forth level rooftop on the Hawke residence only

5 - Communal garden and greenhouse
4 - Communal patio

MILESTONE 1: (EARLY MARCH)

In the first two weeks of the semester, our team focused on responding to the feedback given by the Hawke family regarding the sketch design that was provided at the end of 2021. This is an integral starting point to the re-design process of 31 Kite Moana Road. As designers, we have a duty to cater to the client's desires as our vision and ideas will not always align perfectly with the practical needs of the client. In order to respond to the Hawke family promptly, in order to continue a tight co-design environment, we provided a rough re-design of the elements brought up.

At this stage, it is important to mention that these changes will by no means be the final outcome. The changes mentioned are simply rough examples using only my base knowledge in order to provide a foundation to implement in-depth research and iterations further into the semester.

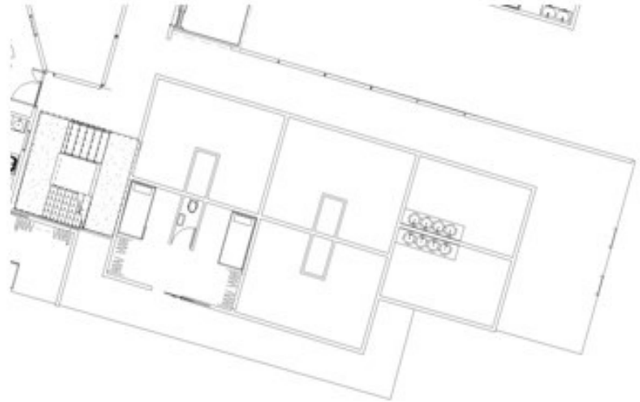


Ground Floor: Whare hui + host area, Gym, Workshop

Level 1: Renters, Communal kitchen + living, private Hawke residence

Level 2: Renters, OT boys, Private Hawke Residence

Level 3: Renters, OT mothers, Private Hawke Residence



MILESTONE 2: (Mid March)

Online korero with Roimata Hawke discussing initial re-design alterations.

In the weeks following our meeting with Roimata, we worked on tightening the design further in order to make it more economically viable for the family.

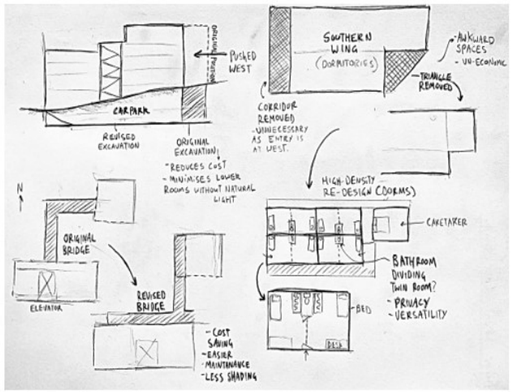
Key re-design outcomes focused on following initial meeting with Roimata Hawke:

•Shifting the original footprint of the scheme to minimise the amount of site excavation needed andbto reduce below ground spaces which aren't naturally lit.

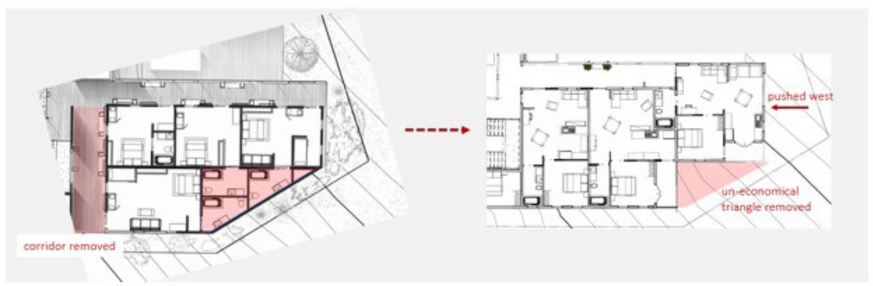
• Re-shaping triangular form of southern building for a more practical and economic layout.

•Re-design of dormitory areas to optimise high density living.

•Re-design of apartment spaces + addition of fifth floor apartment to replace communal living area.



Output example



MILESTONE 3: Co-design Korero with the extended Hawke Whanau

In Thursday's studio session we met with the Hawke Whanau in person for the first time since August of last year. The motive of this Hui was to discuss and confirm the initial changes made to the original design proposal in relation to the feedback received at the start of the year. In a previous online meeting, it had been confirmed that the initial removal of the top floor apartment had been reclaimed, however the interior layout was to be re-designed for efficiency.

In Thursday's meeting, as well as confirming changes made in reaction to early feedback, we discussed various new redesign directions. This meeting focused on communicating the various re-designed iterations developed over the weeks prior. (Late march)

Key outcomes of this session:

•Reduce the size of underground carpark and push ground floor facilities West to reduce excavation and cut considerable cost.

•Centralise stair / lift access.

•Glazing on southern façade minimised + southern external corridors scraped.

•Versatile dormitories.

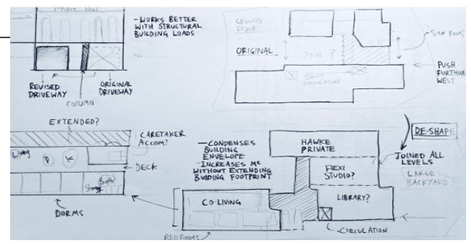
•Plumbing components stacked vertically where possible.

•Maximise number of bedrooms to increase living density.

•Enclosed entries / foyers to all apartments to increase privacy.

MILESTONE 4 APRIL

Although we hoped to have reached a semi-finalised planning scheme by this time, we have just received additional feedback from the Hawke Whanau. This means that our team will continue to produce plans until we land on a preferred outcome.



MILESTONE 5: Early MAY

In person meeting:

-Basement lowered
-Ground level floor to ceiling extended

Level 1: O.T Living expanded North and West
-Library switched with appt?

Meeting (10th may)

Oranga Tamariki Floor re-design:

-O.T bathroom expanded
-O.T bedrooms made bigger
-Kitchen moved east
-Exploration of option that allows for O.T care-taker accommodation

Meeting with Tui: 16th of May

In order to produce a sense of Tino Rangatiratanga within the Hawke development itself, it is pivotal that the family has firsthand involvement in the visual language and atmosphere of the home.

To engage this notion, we met with Tui Hawke, who represents the wider Hawke Whanau. Prior to our meeting,
we had asked her questions relating to personal visual symbols and artwork that hold importance within the whanau.

Firstly, she mentioned the significance of native birds. This instantly brought up a conversation about incorporating the colours of individual birds into the various spaces throughout the development. For example, a floor that uses a subtle colour pallet that referenced the feathers of the Kererū.

She also mentioned that each room would be named after a native plant or animal.
Tui then continued by discussing how the development was to be divided into two figurative sections. One side would represent the male essence of the family, and the other representing the female essence.

Tui explained how this relationship between masculine and feminine energies held significance within her whanau.
The female side should incorporate visual elements that represent the whakapapa of Aroha Nui; (Ruapehu, Ngati Rangi, Wanganui River). While the masculine side represents Bob Hawke's whakapapa; (Ngati Whatua, etc…).

Tui explained that the house should be a representation of masculine and feminine energies merging harmoniously together as a singular entity. These notions stood out to me by highlighting the stark contrast between Eurocentric beliefs and Māori spirituality. Tui's resposes helped me to understand how Te Ao Māori saw buildings as living beings that should be granted a similar level of respect and ability of expression.





Fig 14.whanau hui: Model itterations of the new design concept to allow the whanau to interact with the design idea

Fig 15.Final Hawke whanau hui with special guests Boronia Scott (master weaver) and Lawrence Makoare (Master carver and actor)

Fig 16. Personal belongings of the Hawke whanau and family heirlooms

Fig 17. views of Orakei taken from the Hawke whanau residence

1.9 Precedent research

Scope of precedent research

Due to the connection, they make with my research, the following precedents have been investigated. Projects have been selected because they respectfully introduce Māori design aspects into the built environment through visual elements, as well as bring in durable, sustainable, and environmentally friendly material which is used in the construction and design of the building. These aspects are what I aspire to research and incorporate into my design idea for the He korowai aroha Kia maumahara o te whare.

In addition to the chosen precedents, we also aspire to collaborate with Māori master weaver, Boronia Scott, and Māori carver, Lawrence Makoare to incorporate their wisdom of Māori tikanga into our proposed design outcome.

Omah Boto House, Indonesia by Andyrahman Architect

The omah boto house is designed around the idea of bringing indigenous Indonesian culture into the built environment through the materials and design of the building.

The site which is located close to the Pari Temple and Sumur Temple, Sidoarjo, East Java brings this design idea to life in the way which is designed and built, the architect made sure to bring in as much indigenous culture into the space in a subtle and elegant approach by incorporating traditional Indonesian patterns into the façade and interior walls of the building (Pintos, 2019).

The red brick used in this project has a history with the location that this building is in, going back to ancient times since the Majapahit kindgdom era, East java has been the home of red brick manufacturing, and is still currently striving in this field of the red brick industry (Pintos, 2019).

The designer incorporated indigenous patterns all throughout the building on different surfaces using different materials. The floors were laid with herringbone ceramic tiles to create Indonesian patterns, the walls used brick internally and externally, bathrooms were also laid with ceramic tiles to incorporate the patterns and so on. Looking throughout this entire space we can evidently see the Indonesian culture coming to life through the laying of patterns all throughout it, by careful positioning and precise measurements of the materials used (Pintos, 2019).

This project truly spoke to me through the in-depth design thinking of the architect and designers who contributed towards bringing culture and tradition through the built environment by the materials used and the positioning and carful layout of each brick and tile used in this project.

Te Rau Karamu Marae, Puke Ahu, Massey University by Athfield Architects

Te Whaioranga o Te Whaiao's design tells the mythical legend of a higher power and their role as Tāne Whakapiripiri and Hinewaonu in the creation of a magical tree translated as Te Rakau Tipua. The theory is that anyone who enters beneath the covering of this tree will experience a spiritual connection to all things (Design institute of New Zealand, 2021).

The wharenui is visually designed in a way that connects itself in many aspects to the tree by displaying its roots through the back wall, its trunk through the ridgepole branches through the rafters, and its covering through the exterior of the wharenui (Design institute of New Zealand, 2021).

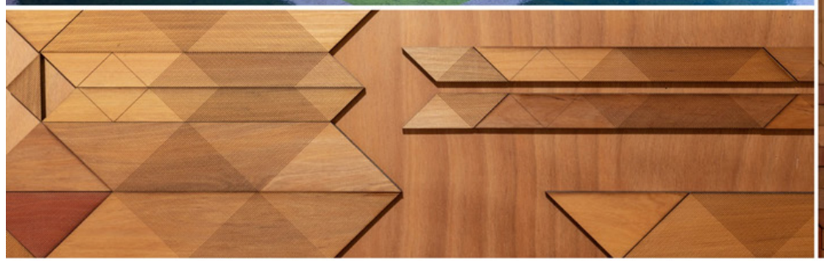
The architecture shows itself as a living entity through the physicality and mauri of the tree and the connection it gives to other living elements such as birds, insects, waters, sun, moon, etc, as well as connecting wahine/tane through this aspect to allow its visitors to regain a sense of identity or belonging to their nga tupuna (ancestors) (Design institute of New Zealand, 2021).

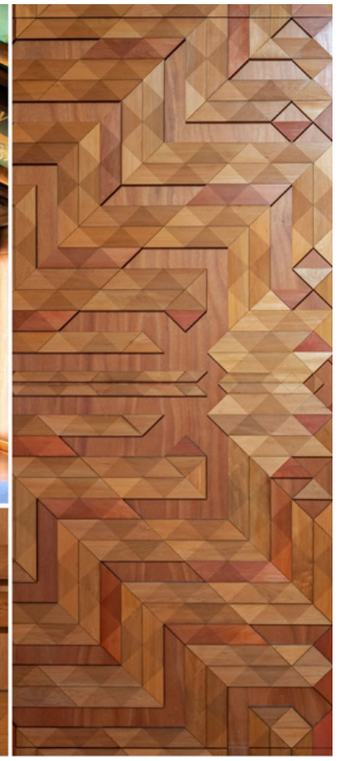
The pou-tokomanawa standing vertically represents the signing of the treaty and the growth and connection between two people, their government, and their upcoming generations (Design institute of New Zealand, 2021).

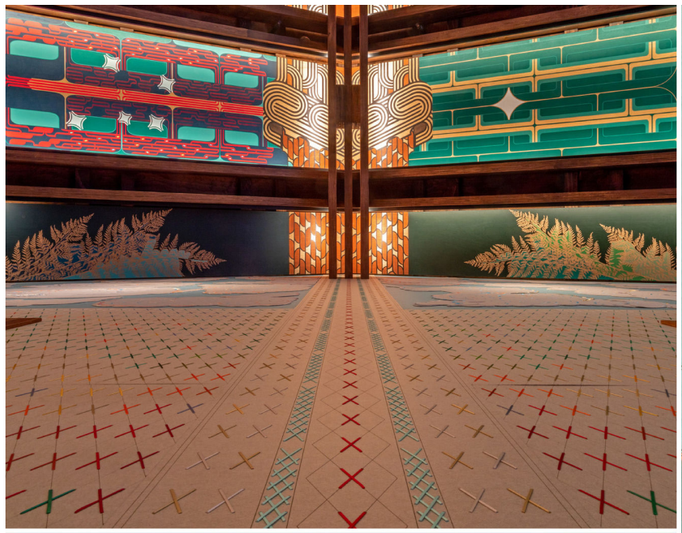
The wharekai 'Te Whaioranga o Te Taiao' speaks of the role of atua, a higher power that connects mankind to water and land. A lot of thought went into the quality of the materials used for this design to ensure it culturally relates to the narrative and space it is portraying (Design institute of New Zealand, 2021).

A large team of artist-designers collaborated and were supported by tangata and other tribal leaders and were guided by traditional Māori experts of knowledge to design and create the immaculate artwork for this project. The respect shown by the artists towards Kaupapa, spatial and material aesthetics helped drive the project and give a result with such deep cultural meaning to the architecture built (Design institute of New Zealand, 2021).

The relation in which the Te Rau Karamu marae has to my proposed design is the idea of finding a deep connection between Māori culture and the spiritual aspects of koapapa through visual design, cultural understanding, and respect for nga tupuna through the creation of visual art, the Te Rau karamu project brings light to the mythical Māori narratives that have been told to tamariki for many years through the art of visual making and the process of design. This is an aspect I strongly relate to as a large portion of my project connects people through the art of design and making.







26 Aroha Avenue apartments by Jazmax Architects

High-quality, durable materials and environmentally friendly design elements are used in this medium-density building to save energy and water use. 26 Aroha apartment complex is one of the first local projects to make use of medium to high-density modifications to the Auckland Unitary Plan. There are thirteen furnished flats of different sizes where there previously stood a single home. The four-story structure is a great example of what could be built on a site measuring 900m2, close to public transportation and facilities, where having a car becomes unnecessary (Jazmax, 2020).

The building's close proximity to resources like public transportation, schools, and other establishments supports the practicality of a low-carbon lifestyle and itself by being a secure, friendly, and neighborhood-focused building. A 10 Homestar rating was given to this building which marks it as being the 2nd apartment building to be granted this achievement. The building's design has cut down on carbon emissions by 73% while also reducing its occupant's utility costs by 53% when compared to the average costs in Auckland according to carbon lifecycle analyses (Jazmax, 2020).

The limit to having three rentable vehicle spots on the property means it encourages its occupants to replace cars with electric scooters or bicycles by providing bike and scooter storage and e-bike charging stations to accommodate. The amount of water and energy consumption is reduced by providing photovoltaics, solar hot water, and rainwater collection on-site (Jazmax, 2020).

This precedent is relevant to my proposed research and design in terms of the careful amount of thought that has gone into the building design, as well as the steps taken to ensure that it provides its inhabitants with the tools and means to live efficiently while keeping environmental values in mind, which is accomplished by ensuring that the materials utilized in the project's construction are self-sustaining, durable, and environmentally friendly.

From the site visit, we attended at the beginning of 2021, we learned that the architecture itself provides its occupants with opportunities to save power, and water, and generate less harmful waste by recycling grey water, using organic soils for planting through in-house worm farms, and reducing their carbon footprint by providing a minimum number of parking spaces and increasing the convenience of storage for bikes and electric scooters, encouraging residents to choose healthier transportation alternatives and putting in place a waste-sorting system.

We aim to design a façade system that incorporates sustainable, long-lasting, and environmentally friendly materials such as clay brick while also allowing natural elements such as sunlight and fresh air to enter external/internal spaces such as balconies and breezeways, to create a calming overall environment for the Hawke whanau and occupants of He korowai aroha kia maumahara o te whare, and introduce materials that leave minimal carbon footprint and have little impact on the environment.

Woolston Community Library, Christchurch by Ignite Architects

Woolston is a small mixed-use development with a reputation for the working-class character, it was utilized as the space to house the New Zealand rubber industry over 100 years ago. It included a residential complex and Community Library which was designed in a sense to depict the essence of the industrial past of Woolston (Archdaily, 2019).

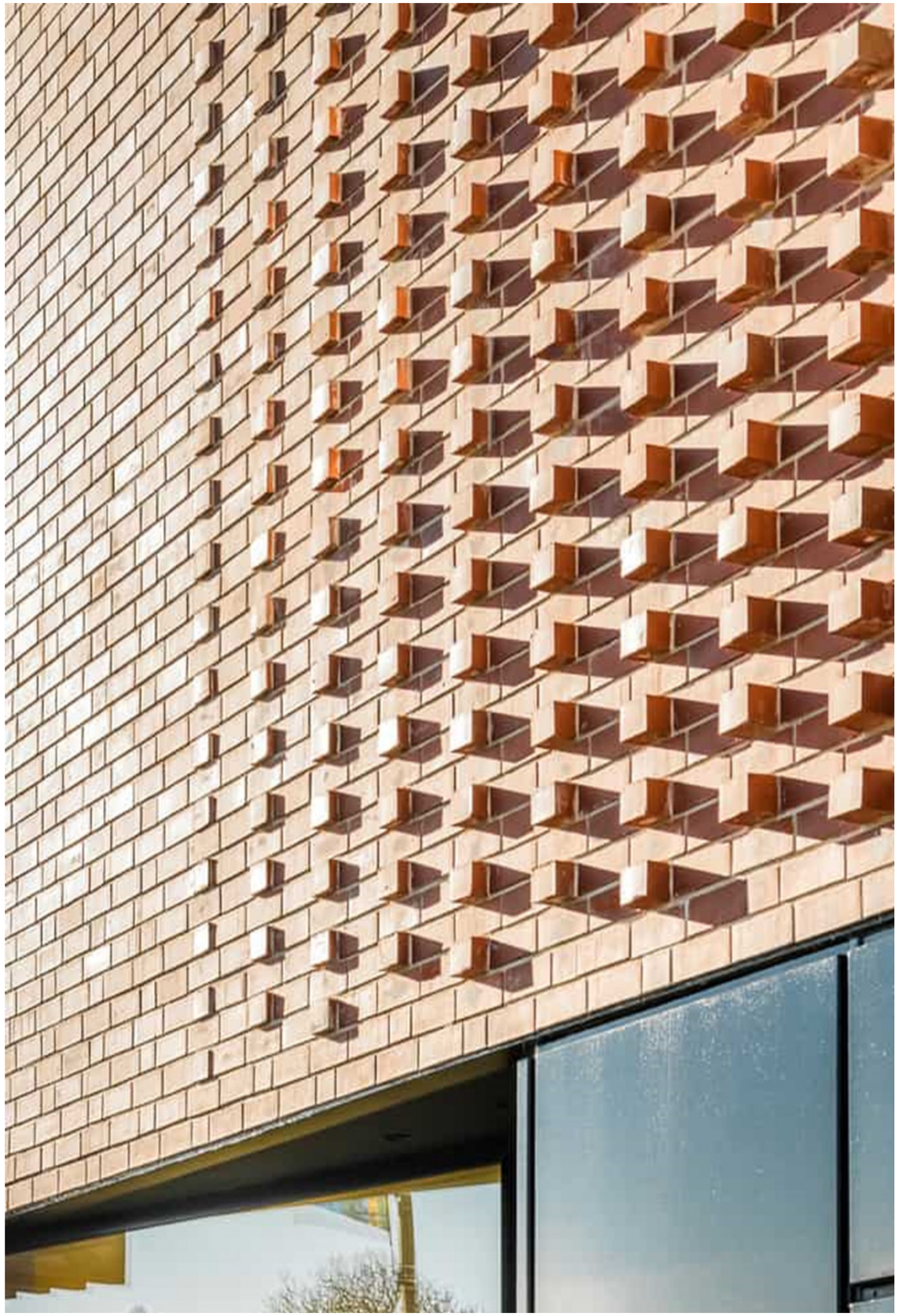
The original building which was designed from brick was a masterpiece of its time, displaying the fine work of bricklaying which is now depicted in the new building's brickwork layout of its façade, to display the history of the previous building through this aspect (Archdaily, 2019).

How the brick façade is designed shows the artistry in which the bricks are laid out, the implications of projecting bricks to create a unique art form by placing the bricks in different extrusions as well as the position of them being horizontally and vertically placed to add to the uniqueness of the façade design itself (Archdaily, 2019).

Ensuring that the communities demands were met, the main goal for this project was to make sure that it is cost-effective while also keeping in mind the functionality of the building to ensure it is still fully useful and functional as well as aesthetically pleasing to its visitors (Archdaily, 2019).

The materials used for this project were all locally sourced and available on demand, they were affordable and perfect for use within an urban location (Archdaily, 2019).

This project relates to my project in a sense of creating an intimate nostalgic space within a pre-existing architecture or landscape, it speaks of the past and history of the area where this new building has taken place. My project nests this idea into the façade design of the building by inviting the past through nostalgia through the ancestral connection of patterns and harakeke raranga being metaphorically embedded into the façade of the building through patterns and pattern marking, and through the earthly materials being used (brick) which connects people through mauri and traditional Māori Kaupapa.



Justice and Emergency Services Precinct (Sculpted metal Veil), Christchurch, New Zealand by Lonnie Hutchinson

The largest Justice and Emergency service facility in Australasia is the Christchurch Justice and Emergency Service Precinct (CJESP). It was the first government-funded project constructed as a result of the recuperation of the Christchurch earthquakes in 2010 & 2011 (Warren and Mahoney, 2017).

This building holds 19 courtrooms, an operation centre, and new and improved police facilities, corrections and fire services, and includes emergency services teams as well as council services, it measures around 40,000 meters squared in size (Warren and Mahoney, 2017).

The precinct is specially designed in a manner to make sure it can withstand a considerable amount of movement without being affected structurally while staying operable to ensure it provides its services to its community (Warren and Mahoney, 2017).

The name Te Omeka was gifted to the ministry of justice by Ngāi Tūāhuriri the local Iwi of Christchurch as a symbol of their gratitude for the service they provide and the importance they hold within the community and beyond (Warren and Mahoney, 2017).

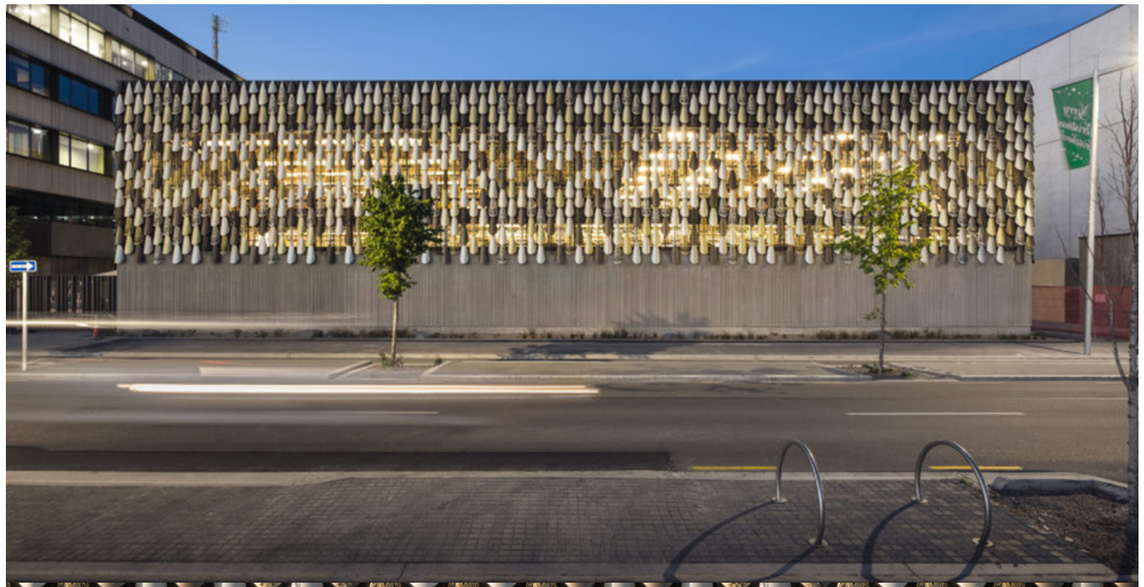
"The Omeka is a legacy left by the people of Ngāi Tūāhuriri. It asks that our hearts and minds and different faiths be bound as one to the law of Crown and Queen so that the Treaty may speak to us all," – Dr. Te Maire Tau, Upoko of Ngāi Tūāhuriri.

Ngāi Tūāhuriri participated in the consultation of the design of the Precinct, Bespoke artwork was assigned to be produced by two Ngāi Tahu artists which were incorporated into the textiles of the building, allowing it to connect and relate to the region in which it serves (Warren and Mahoney, 2017).

A sculpted metal veil was designed by artist Lonnie Hutchinson for the exterior of the precinct which draped over the carpark building for the emergency services. Hutchinson's design represents a Kakapo feather cloak which is a Māori wearable item that holds great significance and sacredness to the Māori culture due to the near extinction of the native bird (Warren and Mahoney, 2017).

The facade sculpture is placed along the elevation of Durham Street, west-facing windows, the feathers store solar energy from the afternoon sun, some of the metal feathers are imprinted with a custom style image of the huia birds feather, referencing an alliance which was formed in 1936 between Ngāi Tahu and the crown (Warren and Mahoney, 2017).

The feathered elements include designs that are specific to and recognizably of Ngāi Tuahuriri origin, providing a comforting familiarity to those visiting and using the precinct (Warren and Mahoney, 2017).



Chapter 2

Koha o te natura

The benefits of natural air and ventilation

According to research, having access to natural ventilation and airflow is important for daily healthy living in developed environments (Kellert, 2008b).

Drinka et al found an 87.3 percent reduction in influenza cases in the building with 100% natural ventilation and local filtration per room, compared to the other three buildings, which only had a 30-70 percent recirculated air and filtration system, in a field study conducted on 690 residents at a Wisconsin nursing home facility with four buildings in 1996, in comparison to only three positive influenza cases gathered from a building built with a 100% natural air and filtration system.

A total of 65 positive cases of influenza cultures were taken in buildings equipped with recirculating air and central filter systems, revealing a 12% attack rate, compared to only three confirmed instances of influenza from a building built with a 100% natural air and filtration system, indicating a low 1.6% attack rate (Kellert, 2008b).

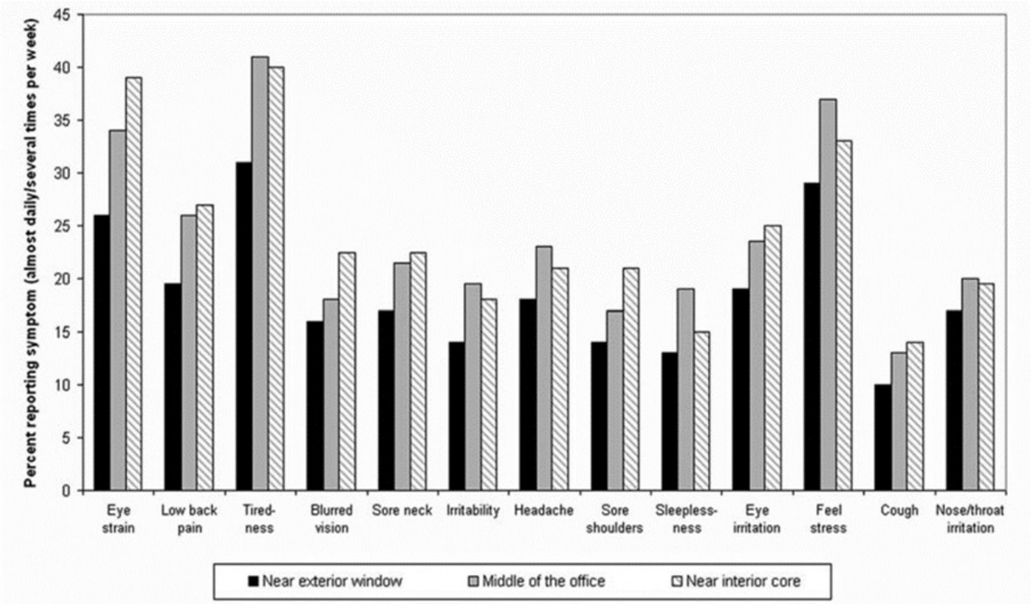


Fig 18. Graph showing comparison between window proximity and the position of an individual and their body reaction according to the distance they are positioned to the windows

The benefits of daylight

Since the beginning people have naturally connected with nature. Humans intentionally and unintentionally incorporate nature into their everyday routines and lives because it helps them unwind and relieve stress in the hectic world they live in.

This is accomplished by weaving natural elements through the built environment and by exploring and experiencing the benefits of nature through sight, smell, and touch of the surrounding natural environment, giving them a sense of stress relief and relaxation to the mind, body, and soul. Designers frequently try to create openings in internal and external living spaces to allow for the flow of nature to enter in. Humans are frequently found building spaces to shut out natural elements only to create openings within the same space to allow for controlled natural elements to flow into the space. Advocates of biologically inspired design must establish the psychological and physiological reinforcements that sustain these relationships and ensure success (Kellert, 2008a).

A building environment can benefit greatly from daylight exposure throughout the year by adding well-designed windows or openings. Even while exposure to daylight can have numerous positive effects on a person's health and ability to do visual activities at work and home, too much exposure can have negative effects also, there for a plan needs to be put into place to control the amount of sunlight exposure in the built environment. Natural sunshine has been proven through studies to significantly improve the treatment of bipolar illness and seasonal affective disorder (SAD), as well as shorten the amount of time patients need to recover after major surgery (Kellert, 2008a).

The 8 benefits of natural sunlight

1. *Improves sleep*
2. *Increase shappiness*
3. *Reduces depression*
4. *Improves health and well-being*
5. *Reduces anxiety*
6. *Insulin sensitivity*
7. *Improves immunity*
8. *Strengthens bones*

(Benson, 2021)

Chapter 3

Te raranga i roto i nga tikanga

3.1 The history of Māori weaving and patterns

When Māori first arrived in New Zealand in the years in the early 1300s, they quickly learned that the aute plant they had used to manufacture fabric in the Pacific islands could not be produced or thrive in the drier environment of Aotearoa. When they came across Harakeke plants, they decided to utilize them in place of their former native plant. The leaves were carefully clipped to ensure the center stem was uninjured, and they were then allowed to develop and flourish into larger leaves for later harvest.
To extract muka (the leaf fibre), the chopped leaves were peeled (fibre). The muka would be hand-rolled into thread after being washed in the river, hammered with a stone, and prepared for use in making rope and other valuable materials. (te Kanawa, 2014).

Te whare pora is a designated area where weaving is practised by most weavers, most of whom are women. There, they also study the ceremonial and spiritual parts of Harakeke raranga. (te Kanawa, 2014).

Kākahu – woven cloaks

Whatu is a form of finger weaving that the Māori quickly invented. It involves placing a cord between two pegs so that threads may hang down from it while finer threads flow between the vertical cords (te Kanawa, 2014).
Kākahu (cloaks) were worn by the higher-class Māori members. These cloaks consist of kahu kurī (dog-skin cloaks), korowai (cloaks decorated with woolen pompoms or tags), and kahu huruhuru (cloaks made with bird feathers). Well-woven kākahu can take years to complete due to the amount of work and detail that goes into it. Kākahu are valuable heirlooms that are treasured and often gifted or exchanged for significant items or services (te Kanawa, 2014).

Fig 19. European man in a Māori Kākahu holding

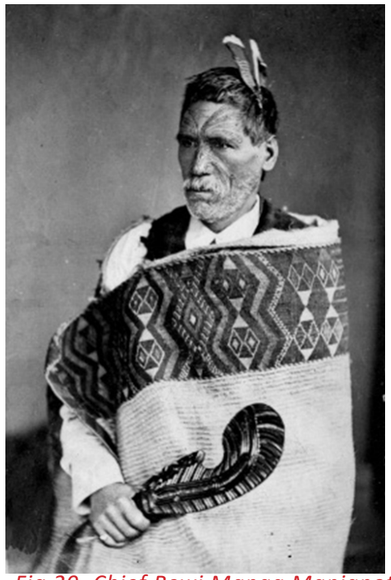


Fig 20. Chief Rewi Manga Maniapoto wearing a Kākahu 1878

“Aitia te wahine i roto i te pā Harakeke”
“Marry the woman found in the flax plantation”

This quote is a proverb amongst the Māori society, which highlights the importance of the art of weaving among Māori wahine (women), a Tane (man) value and holds high standards to a wahine that has inherited the fine arts and techniques of Harakeke raranga, it determines that she is rooted in her cultural values and its practices (te Kanawa, 2014).

Te whare pora

By Māori custom, a newly hired weaver would be chosen and instructed in the fine skill of weaving. This activity was conducted in a particular structure known as “te whare pora,” which means “the home of weaving.” With a significant ceremony performed, the weaving instruction was given under very rigorous guidelines. Through karakia (prayer) and graduation rituals, the new weaver would first learn the techniques of weaving. (Kanawa, 2022).

Fig 21.Maori wahine with freshly harvested Harakeke 1800’s

Patterns of Māori

The Taaniko

Taaniko designs are highlighted in single lines of white, which is the colour of bleached flax fibre. In most cases, only two colours are used: white for the design and black or dark brown for the backdrop. There were several different designs implemented, including single oblique lines, diamonds, chevrons, scrolls, and oblique vertical and horizontal parallel lines. In certain taaniko borders, it is believed that human hair may have also been woven into the pattern (Mead, 1968).

Taaniko represents the weaving together of perspectives, priorities, ideas, and stories that bind us together as a nation. Classifying the Taaniko Sir Peter Buck, a Māori doctor, and inventor of the classification system of taaniko patterns claimed that there are three main types of taaniko patterns (Mead, 1968).

1. Triangle-based patterns use large, varying-base triangles as the primary motifs. These patterns are known as aronui (base aspect).

2. Chevron-based patterns within this category, there are two variations: aramoana (ocean path), which consists of simple zigzags in red, white, or yellow on a black backdrop, and tukemama, which has zigzags with serrat teeth or teeth (eyebrow).
   The serrations are known as “niho” (teeth).

3.Diamond-based patterns, called whakarua koopito (to make two points).

For over 50 years, Buck’s classification scheme remained constant. His pioneering work continues to serve as the foundation for all future classifications and serves as the point of departure for all discussions of the topic (Mead, 1968).

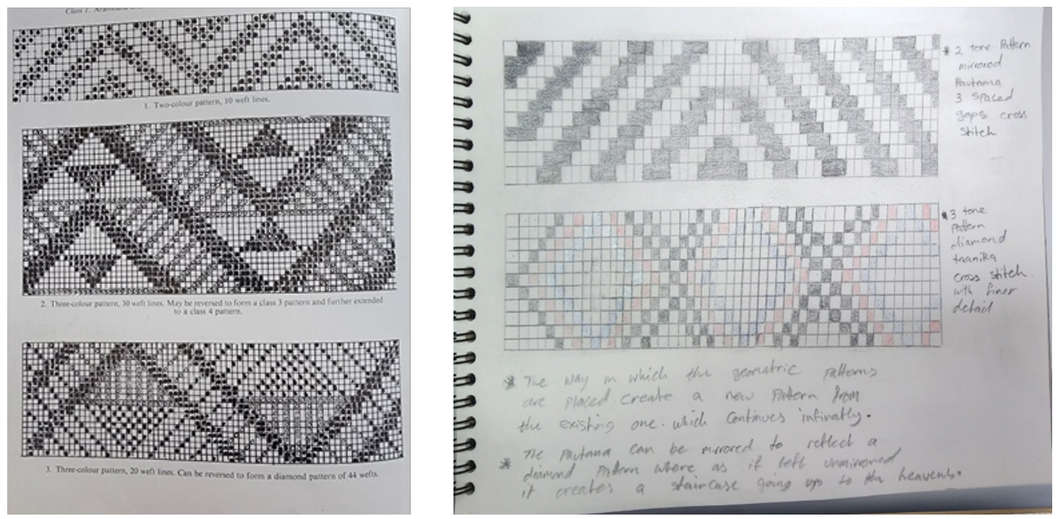


Fig 22. Hand drawn taaniko/poutama patterns in 3 tone colour based of taaniko graphic patterns made for stitch work

The Poutama

In Māori weaving and plaiting the Poutama (stairway to heaven) Poutama has important spiritual and academic connotations. The stepping design represents the progress of a person, their rise to greater heights, and their journey for improvement. It has its roots in the mythology of Māori culture and represents the spiritual strength of Tāne Mahuta or Tāwhaki (the god of humanity and the forest domain), who had to overcome challenges at every stage of his climb to the highest heavens to bring back sacred knowledge for Māori and mankind, this is observed in the narrative of the Kete (baskets) of knowledge…

Fig 23. Pautama pattern made with feathers on a Maori cloak

The legend of the kete (baskets) of knowledge

The Poutama also tells the Māori legend of Tāne and his journey to the stairs of heaven to collect the baskets of knowledge for his kind, which leads to a battle between Tāne and his older brother Whiro, who felt he earned the baskets as he is the older sibling, however, it was Tāne who was favored by Io, the supreme power and Tāne ascended to the twelve heavens. Whiro was furious and sent plagues to stumble his younger brother, but he was not successful, Tāne later with the help of the wind kept climbing until he reached the summit of all the heavens. He was then welcomed by Io and received the three kete of knowledge and two stones.

**The kete-aronui which held all the knowledge that could help mankind*
**The kete-tuauri which held the knowledge of ritual, memory, and karakia*
**The kete-tuatea which contained knowledge of makutu(evil), which was harmful to mankind.*

The stones or whatukura held the power of knowledge and added mana to the teaching of knowledge(Keet J, 2018).

The Poutama symbolizes bloodlines from the whanau ancestral lineage and heritage. Incorporating the Poutama into the designed facade of the proposed building honors the legacy of their late father Bob Hawke and carries a deeper meaning to each of the family members in remembrance and memorial of Bob Hawke and his many years of dedication to preserve and assisting his whanau and tangata whenua.

There are many other additional patterns also used by Māori such as Kaperua, Koiri, Mangopare, Ngaru, and Patiki to name a few, however, the focus is on the Poutama as this is the pattern that holds great significance to the Hawke whanau.

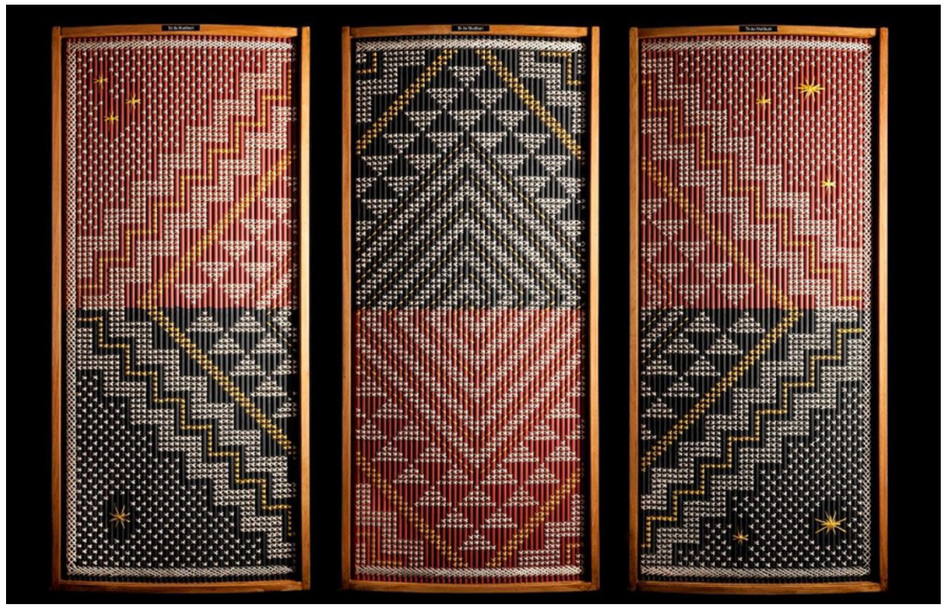


Fig 23.1 Tukutuku panels with Poutama mix detailing (Schuster, 2014)

3.2 The ecosystem through the Māori lens

An ecosystem is a collection of living and non-living species, including a variety of plants, animals, and microorganisms. According to some, people are a crucial component of ecosystems. Māori saw themselves as integrated into rather than apart from the ecosystems. Humans need the bare necessities, excellent health, relationships, social engagement, safety, and freedom of choice. The ecosystems frequently cater to these fundamental human requirements. Although people are often largely dependent on ecosystems for survival, they also actively support these ecologies via the use and management of land. This mutually beneficial alliance between humans and ecosystems, which includes both manaaki whenua (land maintenance) and manaaki tangata, may be regarded as one of interdependence (Harmsworth & Awatere, 2013).

Mauri and Mauri-ora

Mauri is known as the essence or life spark which exists in all living things which the ancestors have passed down through whakapapa, it is described by Amanda Yates as components of a modern framework which is labeled as Mana Kaitiakitanga, it translates to a Māori understanding of health and wellbeing through the concept of wairua (spirituality), hau (breath of life), and mauri, where these three mechanisms are interconnected into mauri as a singular concept of wellbeing, this perception is known as a life force (Yates, 2016).

The environment in which humans are surrounded affects and can be affected by mauri. Through mauri, humans can be influenced to change and bring change to the world through a spark of interest and the realization that change can be possible, mauri-ora is an action-driven stage directed a being motivated towards a full potential (Teorongonio, 2014).

Taking care of the living world through mauri or mauri ora was practiced by a combination of social and cultural factors through the interconnection with iwi and whakapapa through natural landscape aspects such as awa (rivers) or maunga (mountains) which links them to the concept of place and belonging to land through their genealogy and ancestral joining (Yates, 2016).

(Harmsworth & Awatere, 2013)(Harmsworth & Awatere, 2013)A natural order to the universe was acknowledged through the traditional Māori worldview, a diverse system built around the living and non-living. The contemporary use of the terms ecosystem and ecosystem services can be defined through the traditional Māori knowledge and interwoven concepts of whakapapa, mana, and kaitiakitanga, and ownership of the spiritual qualities of tapu (sacred), mauri (life essence), and wairua (soul) (Harmsworth & Awatere, 2013).

The Māori concept of ecosystems

The interrelationship of all parts of the environment is reflected by this belief which is the process that Māori use to maintain resources. Māori relate ecosystems or ecosystem services to their traditional understanding of whakapapa, mana, and the spiritual values of mauri. In the last 15 years, several well-developed cultural models have been established, based on mātauranga Māori, traditional concepts, and Western scientific knowledge, to equip Māori with assessment and monitoring instruments to express and articulate their perceptions and values, by documenting and noting down the changes that they observe done to the environment and ecosystem. These tools allow the connection of humans, activities, and use to the ecosystems. The mauri model shown in figure 34 delivers a useful framework for a large number of assessments linked to ecosystems and human well-being. These approaches, among others, form the foundations for Māori environmental monitoring in New Zealand, especially regarding fresh-water ecosystems (Douglas 1984; Tipa 2006a, b; Harmsworth et al. 2011) and the restoration of biodiversity /cultural values (Harmsworth & Awatere, 2013).

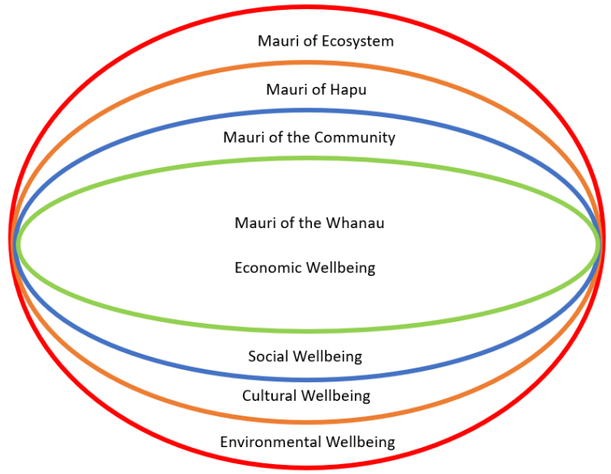


Fig 24. A decision-making tool for assessing the important cultural concept of mauri (Morgan 2003)

The biodiversity, diversity of life, and life source are explained in the term “Te Ao marama” which translates to a world of light and opening based on whakapapa. This term explains the different life forms that are interconnected together through whakapapa, the genes they hold, and the ecosystems they generate. A desire is held by te ao turoa (the universe) and taonga tuku iho (treasured possessions) to want to keep natural treasured resources to be passed down from one generation to the other without losing their value. This proves that there is an understanding of the interconnection between people and the environment as being an important source for human survival elements such as water, food, shelter, reproduction, wellbeing, culture, and other essential aspects needed for human existence (Harmsworth & Awatere, 2013).

3.3 Weaving through the Middle Eastern lens

Textile manufacture emerged as a women's occupation early by the nomadic populations throughout the majority of the Middle East and Asia. Women manufactured home items using a wide range of textile traditions and its items for trade and sale in various bazaar districts, allowing them the chance to support their families financially (Deacon & Calvin, 2014).

Domestic weaving was not a practice that was widely used in central Asia since felt manufacture and embroidery was preferred because felt was frequently used to make tent covers and furnishings, hats, clothes, and boots. By the fifth millennium, felting was a pervasive ancient method used in the Middle East and Asia. Initially, camel, goat, horse, and sheep wool were used to make all or some of the threads that were used to create textiles. Silk and cotton were also introduced to the textile business as the fourteenth century drew near. To dye the fibre used for needlework, colours like red and black were created using natural plants, including pomegranate (peel), madder plant root, and a combination of pomegranate peel and iron was used to create the colour black (Deacon & Calvin, 2014).

During the fourteenth century, cotton and silk was first presented to the Middle Eastern region. The two most common colours used in textile production were red, made from the madder plant's root, and black, made from a combination of pomegranate peel and iron. Embroidery or appliqué was used to add decorative components, which featured abstract geometrics, floral patterns, the sun, moon, and actual and legendary monsters that functioned as totems for many ethnic and tribal groups. (Deacon & Calvin, 2014).

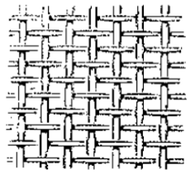
In the Middle East, family-woven rugs hold large significance between tribes, they are passed down from generation to generation and are usually repaired, added to, or woven back together if they are ever damaged over time. Family rugs are considered heirlooms and tell many personal stories as they get passed down through the family.

A traditional family rug can date back as far as 200 years old and would have been passed down through many generations as well as it would have travelled with different families all around the world.

The typical family rug is around 3 meters square and it usually covered the entire lounge floor area. The family rug provides a comfortable floor-based environment where most household activities take place, including food preparation, dining, entertaining visitors, playing family card games, and even serving as a spot for the family to snuggle up together as they sleep. The rug serves as a mobile residence and is seen as a secure place where the family can interact and spend quality time together. The rug goes everywhere you and your family go and is considered a part of you.

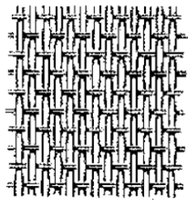
Fig 25. The family rug heirloom that has been passed down for 5 generations

Plain weave



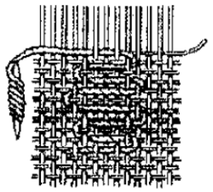
Plain weave is the simplest type of weave. A single weft is progressively passed over one warp and under the next warp, working across the width of the loom. The weft is then passed back through warps in the opposite direction alternating from the previous over-and-under pattern. Variations are possible by using double or tripled warp or weft threads in a variety of combinations.

Warp-faced weave



Warp-faced weave fabric has greater number of warp threads per centimeter, while weft-faced weave fabric has a greater number of weft threads per centimeter. When both the warp and weft threads are equal in number per centimeter, it is termed balanced weave. All textiles fall into one of these categories.

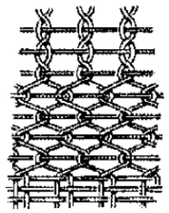
Brocade



Brocaded textiles use two weft threads in each passage: one to create the foundation fabric or "ground cloth," the other to create the design. This additional (or supplemental) weft thread used in creating the design is woven at the same time as the ground cloth. The supplemental thread may extend the entire width of the textile or it may cover only a portion of it.

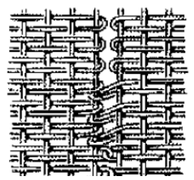
Double cloth (below) is composed of two plain-weave, superimposed layers of fabric that share the same warp or weft. Designs are created as warp or weft threads interchange from one layer of fabric to the other.

Double cloth



Complimentary weave utilizes warp threads to create the design. A complimentary weave is created by alternating two warp threads of different colors, bringing the desired color to the front, while leaving the other color to create the design on the opposite side. When complete, the same design is seen on both sides of the fabric, only the colors are reversed.

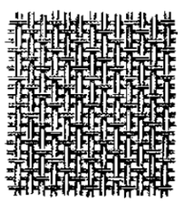
Tapestry



Tapestry is a woven textile in which the wefts of the textile conceal the warps. instead of one weft crossing the entire width of the fabric, however, a number of wefts of different colors are used, each crossing back over any number of warps, as often as needed to create the design. Slit-tapestry and dovetailing are two examples of tapestry.

Twill weave is similar to plain weave in that the weft passes over and under warp threads. However, warp yarns are skipped at predetermined intervals to create a diagonal rib in the weave.

Twill weave



Diamond twill is one type of twill weave. In this technique the diagonal ribs move outward in opposite directions from a central point, forming a "V." The pattern is then reversed, creating an upside down "V," resulting in the shape of a diamond. Diamond twill Two-faced or Double weave creates one pattern on one side of the rug, and a different pattern with different colors on the opposite side of the rug. Although all weft colors are being used on both sides, the wefts on one side pass over a greater number of warps than the opposite side and are packed so tightly that the undesirable colors are hidden even though they are being used.

Fig 26.Diagram showing commonly used rug weaving techniques (Brigham Young University)

Fig 27.A hand-made cushion mande and embroyded by my 3rd great grand-mother in the 19th century, Iraq

Chapter 4

Kawea ki te ora

New Zealand's history of brick

Timber was primarily used in early colonial New Zealand buildings as it was simple to obtain, abundant and affordable for the first colonists. Brick buildings began to emerge after the first bricks were imported from Australia and the UK, and local businesses set up their brick baking ovens to start creating bricks in the 1840s, and over time the popularity of brick buildings began to grow (Archipro, 2021).

The Brickery, New Zealand's largest brick distributor, has a history dating back to 1862, when a kiln in New Lynn, Auckland, began producing bricks under the Monier brand. Since then, it has produced bricks for both commercial and residential projects in a variety of colours, shapes, and sizes (Archipro, 2021).

In a wide range of typologies, including homes, schools, warehouses, churches, hotels, and government buildings across the nation, many of New Zealand's landmark brick buildings still stand today. In terms of carbon and lifecycle costs, the historic stock of brick buildings are well over 100 years old, demonstrating a benefit in terms of carbon impact. Buildings can last hundreds of years longer after seismic upgrades, which are much easier to complete than many people realize (Archipro, 2021).

Brick application with seismic wall ties and fixings and the teqniques in which bricks are now layed have been highly considered throughout the architectural and building industry now more than ever, especially since the in earthquake incident back in 2010 which left many buildings destroyed due to lack of use of seimic wall ties and fixings applied to brick buildings and/or facades.

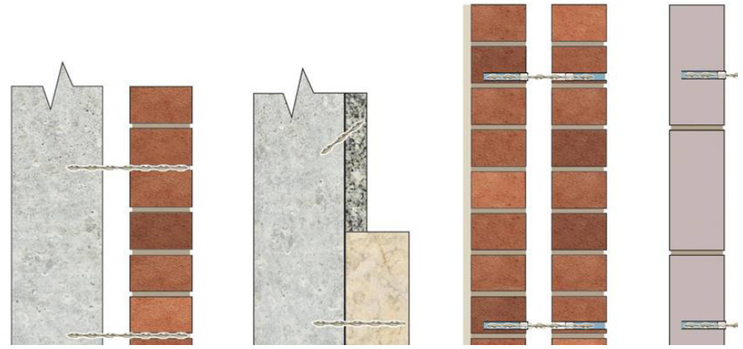


Fig 28.Diagram of seimic wall ties and fixings applied in different teqniques to brick facades

The use of bricks has been widely used in commercial, industrial and residential builds due to the materials being durable, long-lasting, and insusceptible to fire, making brick useful for all sorts of projects, large and small including fireplaces, outdoor baking ovens, and brick barbecues, etc (Dale, 2021).

Burnt Clay Brick (first class grade), Sand Lime Brick (Calcium Silicate Brick), Concrete Brick, Fly Ash Brick, sun-dried clay brick, and fire brick are the six types of brick used in construction (Dale, 2021).

While all bricks have their benefits they also come at a cost, like everything else, bricks have their advantages and disadvantages when it comes to architecture and construction.

4.1 Sustainability

The advantages of using clay brick as a material to build are that they are made to create air cavities between the inner and outer later to allow the building façade to breathe, avoiding dampness and mold from infiltrating a building and making it an unhealthy living space. Brick buildings built this way are more flexible making allowing for movement during earthquakes which means they will move rather than collapse, if cracks do occur, they are easily repairable (Archipro, 2021).

Clay brick is an incredibly environmentally friendly building material with a long lifecycle, low carbon footprint, and minimal energy usage, according to Pamela Dziwulska (Archipro, 2021).

Previously how brick was laid was in an interlocking layout that connects bricks to create a wall-like structure, this method of laying is called “bond pattern”, this results in a uniquely generated decorative finish known as “English bond” or “femish bond”. Due to traditional bricks and mortar being porous elements, they allow for moisture to move through them rather than constraining it. A cavity was created to enhance indoor air quality and keep moisture outside by separating the inside and outside leaves of brick. This technical advancement in which a brick is made led to an aesthetic evolvement (Archipro, 2021).

“My philosophy is to understand building materials, how they have lasted for hundreds of years, and how they can future-proof design. We don’t need to settle for buildings that only last for 15 years—longevity is vital and brick will be here in 500 years,” as quoted by Dziwulska.

Her concerns are that the government houses being built now are not made to last due to the use of low-cost materials which can cause structural and maintenance issues for the tenant which can lead to stress and mental health problems for the occupants causing the houses to eventually be deemed unhealthy to live in, causing them to be demolished and ending up in landfill which will highly impact carbon footprint levels causing pollution to land in the long run (Archipro, 2021).

She also advises the government to construct houses immediately that have a longer sustainable life span, require less maintenance, and won’t gradually develop structural problems, this will reduce the risk of occupant’s stress levels and mental health and wellbeing becoming impacted by ongoing maintenance and structural problems by keeping maintenance costs down to a minimum for homeowners for the coming years. (Archipro, 2021).

Over the years, architects and designers have recognized and harnessed the rich character and aesthetic value of brick and developed building methods that have allowed their inherent beauty and decorative qualities to shine. For example, the Northcote apartment developments for Kainga Ora have integrated taaniko patterns into their facades by introducing traditional Māori tikanga to the built environment through the material of brick, using different coloured bricks to create an indigenous pattern within the building’s facade.

Fig 29.Kianga Ora northcote housing developments 2022- 3 tone Poutama pattern

Fig 30.Kianga Ora Northcote housing developments 2022-3 tone Taaniko pattern

Fig 31.Kianga Ora Northcote housing developments 2022-3 tone patiki pattern

4.2 Benefits and durability

Brick versus other materials
Clay, sand, water, air, and fire are the five basic natural elements that come together to form brick. Bricks do not contain any toxic additives and are also a passive material, meaning they rarely react to other substances and don't hold toxins or allergens making them eco-friendly to the earth not only as a material but also when being made they are manufactured in a way that leaves little carbon footprint in our environment (Brickarchitecture, 2017).

clay bricks are both visually beautiful and a sustainable choice as they don't require constant upkeep, are heat-sufficient, and have colours that don't dull or fade over time, this is due to them being baked into the brick when manufactured, this enables the structure to be self-sufficient and easy to upkeep (Brickarchitecture, 2017).

Though alternative materials such as wood, plaster, or other cladding materials may be lighter in weight, which adds less weight to the building structure, they also have many disadvantages to them when compared to brick cladding or facades. Brick has a good fire-resistant rating which means fire does not spread as fast through as building as it would with a wooden, plaster, or other façades/cladding system, as well as brick, being low maintenance in comparison to other façade system materials (Archipro, 2021).

4.3 Affordability

One of the greatest misconceptions about brick veneer is that it is more costly than other cladding options, this is untrue. In today's market, brick veneer is reasonably priced. For a typical single-level home, the cost of paint is around $1300 per year, when maintenance expenses of alternative cladding systems are taken into account, this excludes the ongoing cost of other maintenance needed such as cleaning and repairs (Oliver, 2014).

According to the source, the price for brick veneer varies from $90-$170 per m2. The cost comparison of various cladding systems is straightforwardly shown in the table below. The price of the brick veneer is calculated using a single-story home's typical brick unit (Oliver, 2014).

4.4 Availability

The Brickery, the largest brick supplier in New Zealand, has been providing clay bricks under different business names for more than 300 years. They possess the largest supply of brick, servicing the entire country of New Zealand and Australia as well as exporting to other countries across the globe, making them reliable for supplying brick locally. It is fair to say that it is very unlikely that there will be a lack of brick supply for any local projects in the present and future, making the availability of the product very accessible to builders and other design professionals.

4.5 Mortar and joining bricks

There is more to brick surfaces than simply the brick; there is the method the bricks had been laid and, more importantly, the mortar joints. The size of the joints, the colour or differences in colour, the types of joints used, and the way it has been finished all have an impact on how the entire surface looks. Because mortar joints account for 17% of the surface area, so they occupy a significant role in the overall presentation (Oliver, 2014).

Joint Thickness

The mortar joint serves three important functions: bonding the bricks to form a structure, accommodating variations in the bricks, and providing a means of securing fixings, specifically brick ties to the structural frame that supports the brick wall. As a result, the thickness of the mortar joint must be enough to secure the brick tie above and below the tie, as permitted by NZS4210:2001. A mortar joint's minimum legal thickness is 7mm and legal maximum thickness of 13mm (Oliver, 2014).

Mortar colour

The colour of the mortar joints does have a significant impact on the overall appearance of the bricks. Even in standard grey mortars, it is critical to mix the mortar by quantity to achieve an even colour consistency. If mixed incorrectly, it can cause colour inconsistency, resulting in an undesirable aesthetic outcome of multiple varieties in the colour of mortar, leading individuals to assume two different brick batches or even two different brick types were used. As a result, it is critical to mix mortar in large quantities to maintain colour consistency (Oliver, 2014).

4.6 brick veneer height restrictions

A brick veneer is a non-load-bearing cladding attached to a structural framework, which might be made of steel, concrete, or regular wood framing. Normal foundations shouldn't have any trouble supporting the weight of the veneer under normal conditions; hence the issue has no bearing on the height. The New Zealand building regulations determine if the performance is sufficient based on the ratio of rigid brick veneer being kept in place by a supporting structure to brick veneer (Oliver, 2014).

Close to a timber frame, the height of brick veneer under E2/AS1 masonry is limited to 4 meters. Simple engineering demonstrates that the higher the wall, the greater the degree of movement, and thus, the greater the possibility of damage occurring (Oliver, 2014).

4.7 brick façade versus brick veneer

When it comes to a brick façade versus a brick veneer, it is evident that a façade is much stronger in terms of holding up the structure as it is laid right down into the foundation, whereas a veneer is a skin that is laid over other cladding material to give the look but is not as strong in supporting the structure of the building.

Bricks have always had both a structural and a decorative purpose in construction. Their faces may be exposed to form their architectural look, creating facades rich in texture and colour, owing to the iron contained in the clay they are made of, while still serving as an efficient and durable modular solution in building constructions.
Currently, some products make it possible to combine the appealing appearance of bricks with other structural systems, separating their functions and giving the required design freedom so that the facades can adapt imaginatively to the circumstances of each project and the needs of its users (Franco J T, 2019).

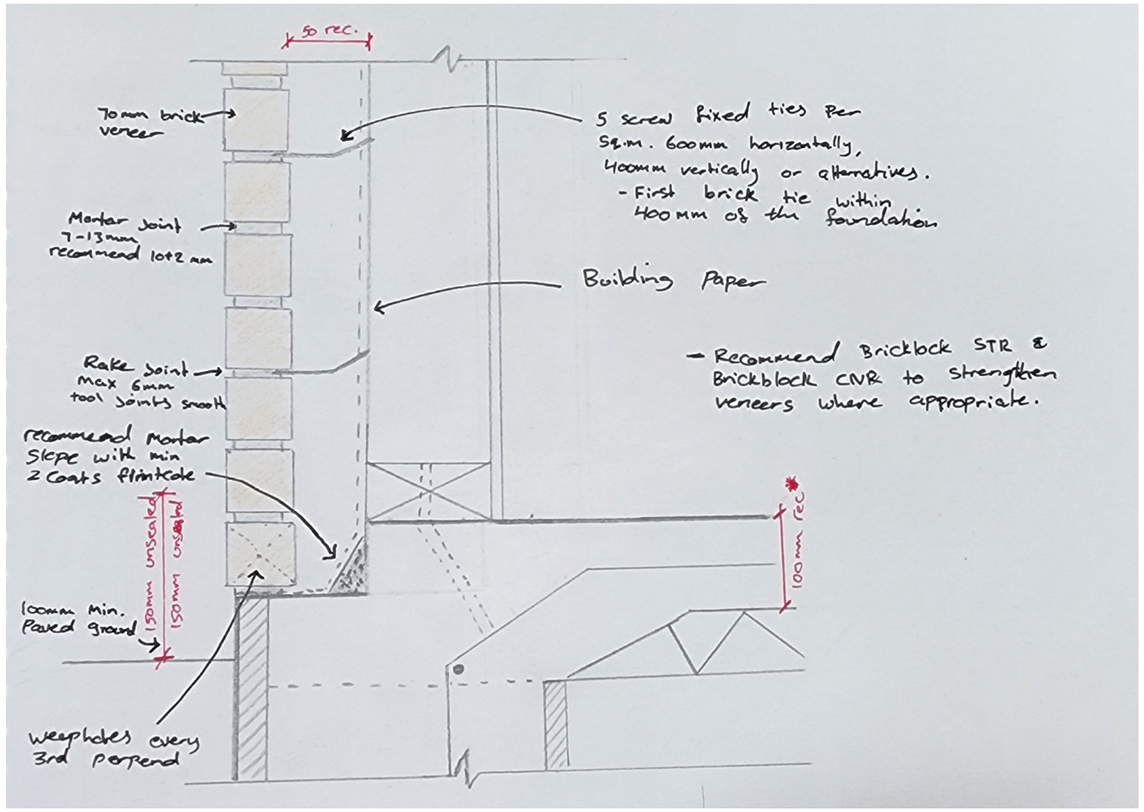


Fig 32.digram showing built structure of brick and the use of brick ties

4.8 Pattern detailing

The ability to incorporate superb brick detailing into a brick veneer gives the architect or designer a design choice that is just not possible with the majority of other cladding materials. For the details to have a noticeable effect on the aesthetic of the brick veneer structure, they need not be elaborate or extravagant. It might be as easy as altering the way the bricks are laid to make a pattern or using different colour bricks to create a band all around the structure. There are countless designs one can make with brick, or they may just arrange the bricks at various extrusion levels to create a 3D shadow design effect with the natural sunlight (Oliver, 2014).

Fig 33.Kianga Ora Northcote housing developments 2022- pattern detailing

Fig 34.Kianga Ora Northcote housing developments 2022-pattern detailing

Chapter 5

Te Toi Ako

RESEARCH DESIGN AND METHEDOLOGY

5.1 design research, experiments, and findings

Brick design iterations using Poutama patterns

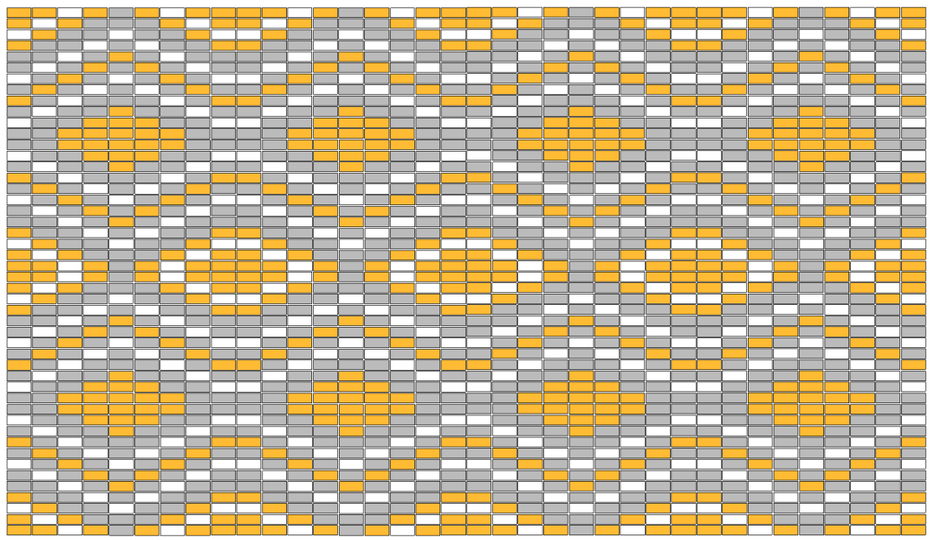


Fig 35. mirrored poutama/ waharua signifiying whanau growth

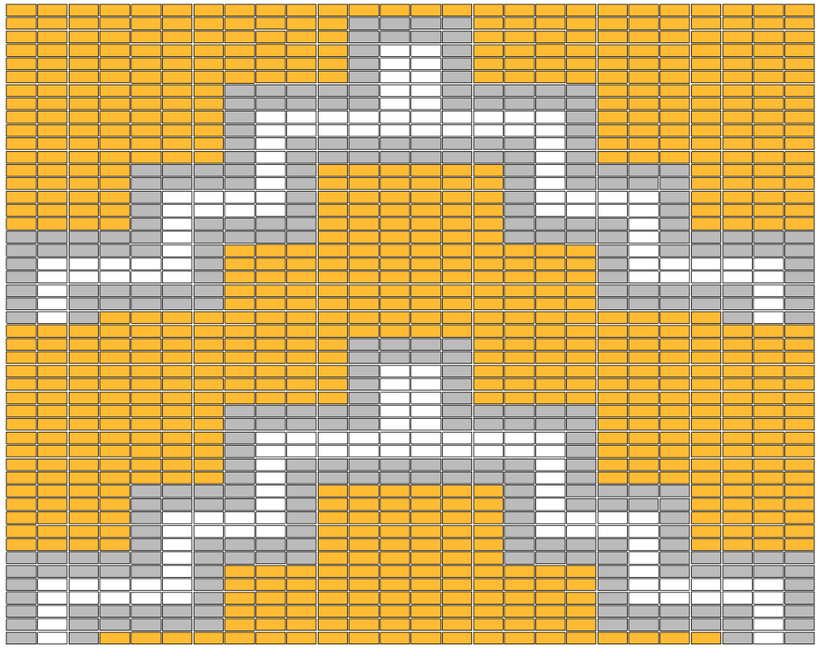


Fig 36.Poutama repeated pattern signifying line

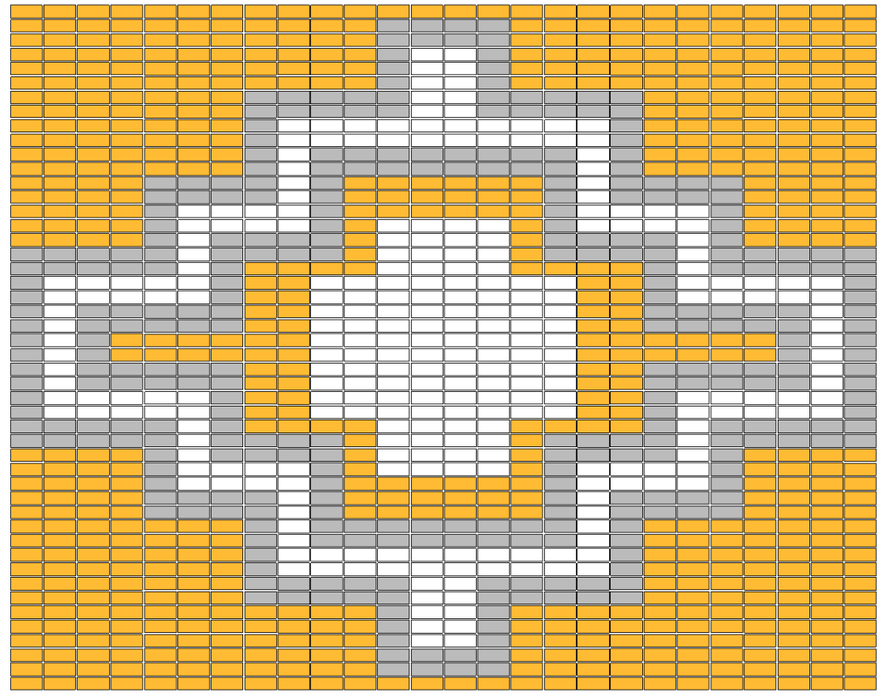


Fig 37.Poutama mirrored and repeated signifying procreating whanau

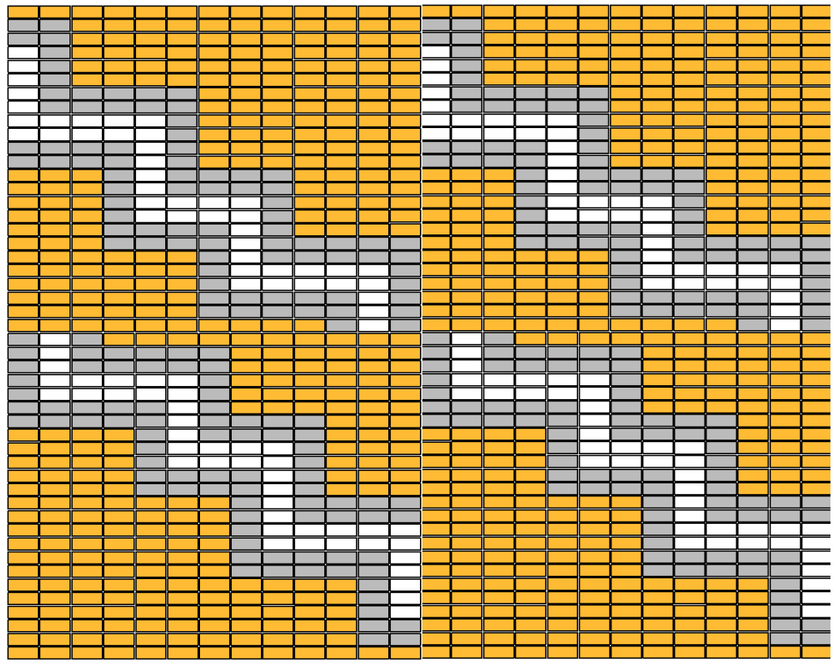


Fig 38.single Poutama signifying unity between whanau

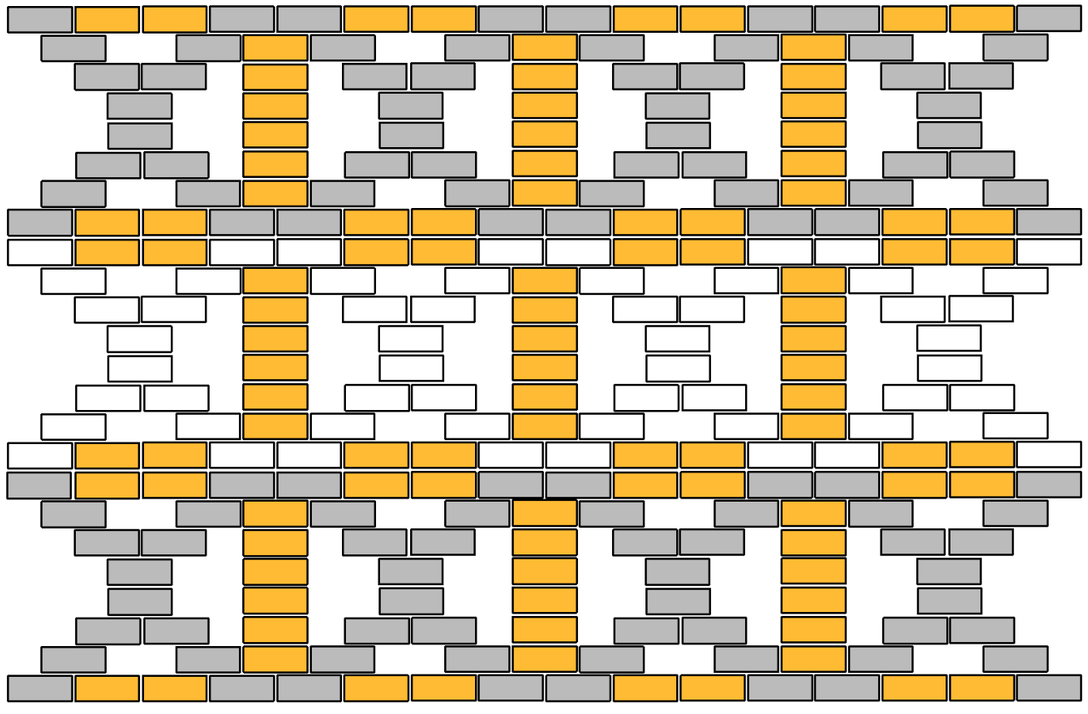


Fig 39.Tukutuku criss cross signifying interwoven family ties

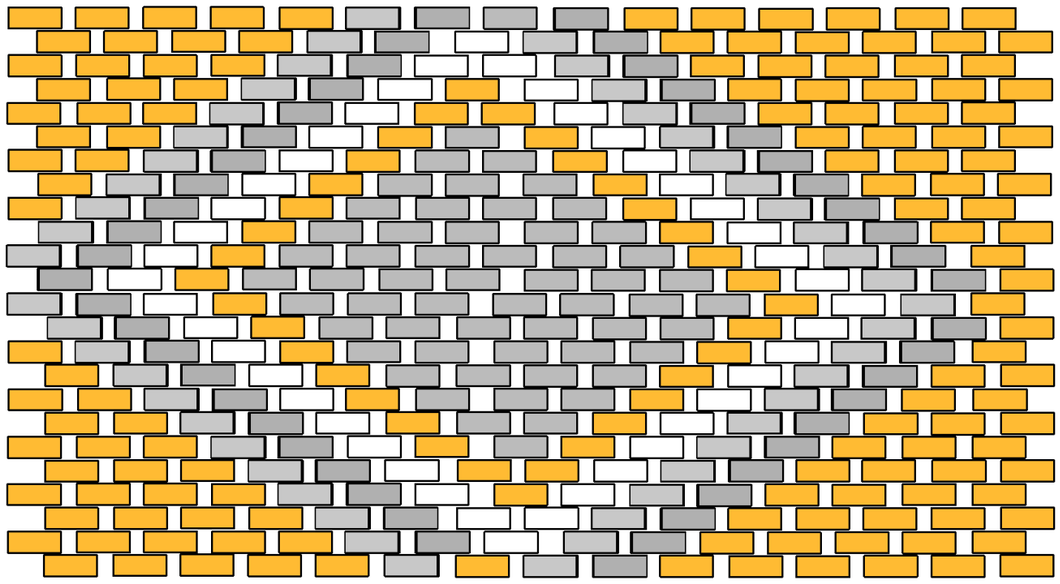


Fig 40.Taniko pattern breezeway signifying tribal lineage

Model making with clay miniture bricks testing struture, layout and positionating

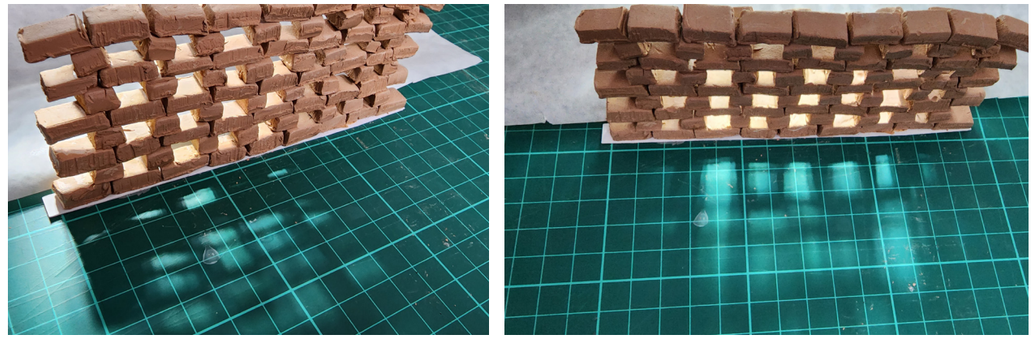


Fig 41.Shadow/light testing through perferated brick structure (breezeway)

Fig 42.Brick laying technique and structure study

Fig 43. Testing distance and colour to create poutama patterns in 1:1 scale brick






Fig 44. Hand making brick from clay to test out the making and drying process

5.2 Architectural design approach

In developing our design we looked at the traditional values that Māori hold and analysed architectural principles and configured ways in which Māori values can be introduced to the built environment by incorporating the metaphorical aspect of traditional raranga (weaving) and the interconnections it brings through its making process. The aim is to incorporate my experience and emotional interactions that I had learned when weaving and think of ways how it can become a tool used to bring people and communities together through the act of making.

The approach is taken through bringing the act of weaving into play but also thinking about the focus required when making these woven elements, the patterns that are imprinted into them, and the Māori tikanga which is embedded into each article made, while also keeping in mind the Hawke whanau and their values and commitment to helping their community.

The issue I have observed in the world of architecture is that indigenous values are not usually taken considered when it comes to the design of a building or `built structure, although in recent years there have been more projects being proposed that present cultural values well and take traditional aspects into account, it has only been recently that these values have started to become important to architects and other design professionals, especially in New Zealand.

We intend to address this issue by integrating design concepts that incorporate Māori mātāpono (principles) and uara (values) through metaphorically weaving Māori culture into the built environment with indigenous patterns embedded into the façade of the planned development and using indigenous Māori colour palettes to activate the memory of their iwi's history and lineage and honoUr their ancestors and the ultimate battle they fought against colonization and the rights to their land.

We have collaborated with Boronia Scott, a master weaver with close ties to the Hawke whanau, as well as Lawrence Makoare, a traditional Māori carving artist to generate a design for the façade of the proposed building, which holds significant importance to the whanau.

I aim on working not only with the façade but also with the balconies and external spaces of the building by using clay brick as a solid element on the exterior spaces to create breezeways and intimate balcony areas for the occupants to connect with natural elements such as air and sunlight/shadow whilst also experiencing a sense of relaxation when occupying these external spaces. We also feel it is culturally appropriate to ensure that the co-design concept generated encompasses all areas of Māori tikanga (practices) and respect for Māori people and their traditional beliefs.

5.3 Creative Design Process

Unlike the typical generic architectural approaches, the design concept goes far deeper than merely material and beautiful physical architecture. The design approach executed is through the lens of my journey through life, learning the cultural values of weaving through my grandparents, who learned it through their grandparents, while growing up in the Middle East and soon after, moving to New Zealand, this life timeline taught me as a child that intimate connection holds a very strong promise to our ancestors.

Moving from one country to another, we always held onto what is most valuable to us as a family, which goes beyond a material matter, but rather it becomes a spiritual connection to our forefathers. Although the family rug is indeed a material object, it is not merely about the rug itself but rather about the nostalgic memories and stories it tells leading back to the generational lineage of my ancestors and the spiritual value it possesses.

The design process was taken into consideration through the deep indigenous connection the ancestors pass down through their whakapapa (lineage) and embed into their tamariki (children), which are carried on down the line for future generations to come, Whanau (family) are the protectors of them. This idea of protecting whanau is also observed through the harvesting and cultivation of the native Harakeke plant.

The inner centre of the plant (baby) and the two adjacent leaves on either side of the centre (parents) are always protected and left untouched so they can continue to nurture their offspring, while the remaining surrounding leaves are considered extended whanau (family) and are there to protect the parents and child by shielding them from harm (harsh weather).

The idea of bringing Poutama patterns into the design of the facade through a material such as brick tells a very powerful and rich story. The concept of adopting a harsh, hard, and cold material such as brick while laying incredibly warm, gentle, and profound indigenous Māori patterns through it communicates the narrative of love, growth, protection, battle, and honour through whakapapa (lineage).

The tough brick material plays a role in symbolizing the difficult battles Māori nga tupuna (ancestors) faced when the government confiscated vast swaths of land in the 1860s, and substantial sections of Māori land began to be lost as a result of the Native Land Court's influence (Orange, 2001). While the laying of traditional Māori patterns signifies the strong cultural and traditional aora (values) they held onto as a iwi (tribe) and passed down to their uri (offspring) even throughout colonization.

The way the pattern is designed tells a story of Courage and committment in the form of a waharua but also tells the naritive of lineage through the way in which it is designed to portray a subtle poutama pattern through the way in which the bricks within the pattern is layed out.

the poutama pattern is seen through the layout as consisting of an outer diamond shaped poutama design with a smaller inner diamond and lastly a single brick in the middle of the designed layout, this signifies father, mother and child as a whanau, with the child being protected by the mother, while the mother and child are both protected by the father, this reflects back to the significence of the harakeke plant and the way in which it is harvested to protect the parents and baby from being but, so that they continue to grow and produce.

the waharua pattern signified through the diamond shape of the way the poutama patern is placed signifies the importance of commitment and courage within the whanau, the strive and sacrafices made to allow for whanau to grow and thrive for many generations to come.

This pattern is layed out on the entire facade of the building using an extrusion offset technique to create a 3 dimentional effect using light and shadow, during sunright and sunset the shadows cast on the extruded bricks to create patterns on the facade, while during night time the walls are illuminated using lights which will cast shadow to reveal a vivid poutama/waharua pattern on the facade where it is illuminated while the non-illuminated areas of the facade show a more subtle pattern. The colour of the brick used is a light brown with a hint of yellow/red.

the breezeways are designed using a horizontal and vertial brick layout to create a perferated breezeway using green brick supplied from Venice, france. This particular brick has a smooth and glossy finish to it which allows it to slightly change shades during the different hours of the day, from dark green during a sunny day, to a more dark grey/black during sunset and a forest green shade during a coudy day, this brick gives character to the overall asthetic of the building. The green brick used for the breezeways represents the colour of Harakeke and the natural reserves that sorround orakei, it is a reflection of nature which is something i decided to bring into the design of the breezeways while the brick used on the building facade is a light brown with a hint of red/yellow tones to reflect the beauty in woven Harakeke after the plant used for weaving has dried up, this signifies the beauty left behind by the Harakeke plant after it dies.

I designed the breezeway in a horizontal and verticle layout to represent a woven structure in relation to my Harakeke raranga imbodied reseach and my personal experience with my Middle eastern rug weaving practices, the breezeway represents whanau and the close-knit woven relationship the runs within the Ngati whatua community and the history of their anscestors and the geneology they carry with them.

5.4 Methodology

As mentioned in chapter 1, section 1.5, the methodology used for this exegesis was a combination of embodied research and literature research. In this section, I go into detail about my embodied research experience with raranga Harakeke (weaving flax).

As discussed previously, an 8-week traditional weaving course was taken in the hopes of gaining in-depth knowledge and driving into the physical world of Māori and Harakeke raranga. Through this research, I gained an understanding of what it means to be connected to Mauri through raranga.

As I arrived at the community hall in Kapatiki, Northshore I was warmly welcomed in by a lovely Māori wahine named Michelle Wheu. Michelle introduced all the newcomers with a karakia (prayer) and began to tell the class about Harakeke and explained the basic laws of tikanga (practices) and the process of Harakeke harvesting.

I began to understand the importance of the plant, what it meant to Māori, and the respect that is shown towards whaea taiao (mother nature) for providing tangata (the people) with the plant to benefit from. Throughout the 8 weeks, I learned the fundamental mātāpono (principles) Māori hold for what nature freely provides a high level of respect is held by tangata (the people) towards what is given to them and treat it with great respect, I noticed this unique trait through the harvesting process of Harakeke.

When harvesting I was taught that it is important to say a karakia in thanks to whaea taiao (mother earth) for the harvest it has generously provided its people, it is also important to make sure, when harvesting, that Māori tikanga is deeply rooted and understood by the individual harvesting and to ensure that when cutting the Harakeke to cut away from the plant and to always leave the middle leaf (the baby) and the two leaves surrounding it (parents) untouched, to allow for the plant to keep producing. It is also important to never harvest during rain or when a wahine(woman) is on her monthly cycle.

As the weeks progressed, I began to prepare my weaving material, cutting up the Harakeke and setting it aside in preparation to weave my first Harakeke kete (flax basket). During this time, I began to interact with the other wahine (women) who attended the course, learning about their heritage background and family history, roots, and what it was like growing up, and learning about their ancestor's journey and battles through colonization. These interactions and hearing narratives of the past brought back my nostalgic memories of my home country Iraq, I began to remember the struggles my family and I faced as we were forced to flee our home country due to war and oppression. Like Māori, we also had no choice but to give up the land we grew up in and felt colonized in our own home, these personal interactions with my peers made me realize that although we are separated ethnically, we are very much connected through our cultures, family values, and lineages.

The reason I chose to investigate the art of Harakeke raranga through the method of embodied research is due to it being an attribute I deeply relate to through my ancestors and the knowledge gained through the act of making. In the Middle East, a young woman needs to learn how to weave at an early age.

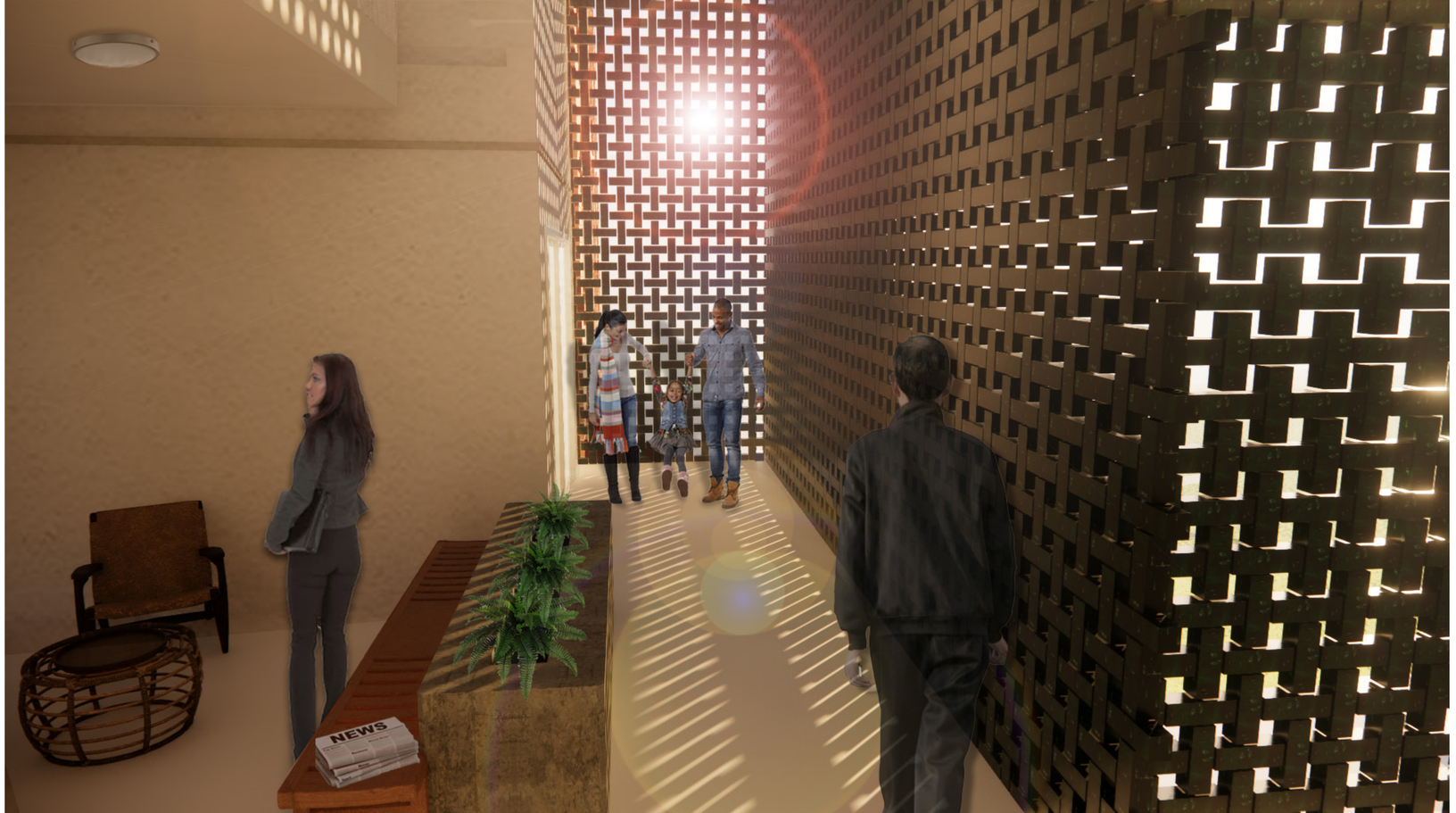
Just as a high level of value and respect is held towards Māori wahine (woman) who master the art of weaving, it is also just as important in the Middle East (Iraq) for women to be able to weave for their families and community, this is seen as a form of respect and maturity for the individual and their family.

Although these custom skills have slowly begun to sadly be forgotten over time, especially as technology has taken over, my aim through this research exegesis is to bring back the rich value, identity, and meaning that these cultural traditions brought to their people through nostalgia and physical interactions with natural elements such as Harakeke and interaction with
sunlight and wind.

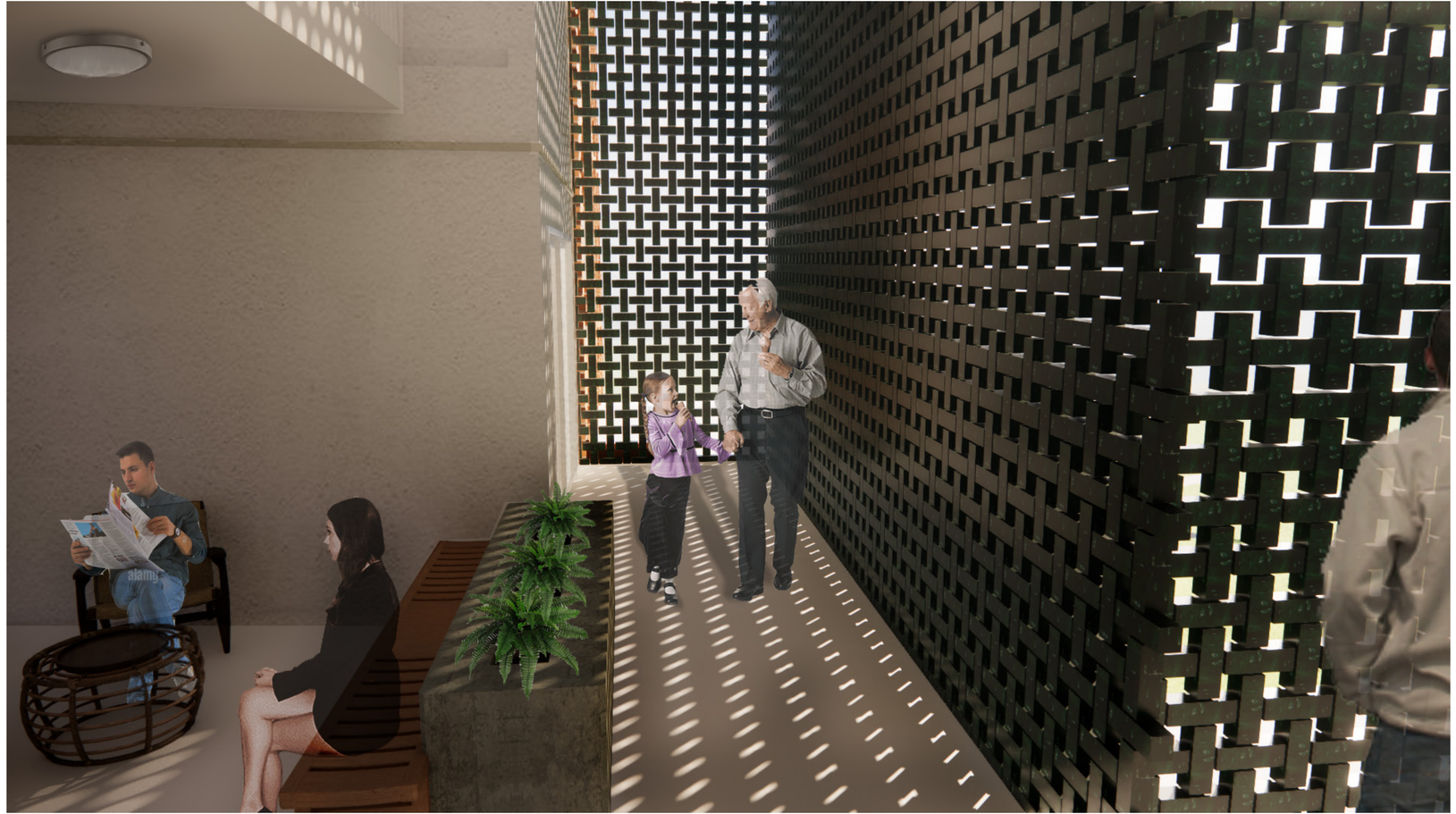
5.5 Concept design

Section perspective view

Interior level 1 perpective balcony look-out



Interior ground floor breezeway perspective view during sunset



Interior ground floor breezeway evening shadows perspective view

West exterior perpective view

Ground level whanau apartment deck look-out view

West elevation night view

Chapter 6

Waakata

6.1 Conclusion

In conclusion to my exegesis, my journy so far has been exciting and advanturous, to experience Harakeke raranga and the act of weaving through the Maori lens has been a huge eye-opener to reconnect with my heritage and culture. Arriving in Aotearoa and growing up at a young age I found i had adapted to a culture which is not my own, through the years i lost connection with my traditions and culture and the ways of my ansectors. While on this research journy I learned the importance of weaving and the precision and focus it requires, i went through the journy of learning Maori tikanga and the values Maori hold towards their lineage and their ansectrial heritage.

I discovered a new way to readapt to my own culture through the experience of Harakeke weaving, although different materials are used, the act of weaving and the cultural values that come from it a very much alike in their own unique way.

Seeing the value Maori hold towards their Iwi and whanau has expanded my design thinking in a way to adapt more towards bringing culture to our built enviroment through the incorperation of indiginous values and meaninful Maori patterns throughout my archtectural experience. I have come to the conclusion of realizing that architectural design is more than just a beautiful design but it can also have deeper cultural meaning.

My future plan is to bring more cultural values and aspects into the built environment through the incorperation of sustainable and environmentally friendly material, to think of designing a building in a way to contribute towards improving our ecosystem rather than the contribution towards environmental problems such as air polution, global warming and polution in our land.

lastly I conclude by giving my final thoughts on this 2 year journy that resulted in this exegesis outcome, understanding cultural values has largly impacted the way in which I think and has encouraged me to dig deeper into research on Maori and Middle Eastern culture combined, to learn more about the similarities and how I can improve our built environment by pushing for more indiginous designs to be brought into our design outcomes.

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