He Korowai Aroha Kia Maumahara: The Force of Mana Motuhake

In the context of a national housing crisis, how can the mana motuhake - self determination - of tangata whenua be used to combat issues rooted in colonisation?

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The Hawke Whānau

From Left: Arohanui Hawke, Kema Hawke, and Bob Hawke outside their whare at Kitemoana Street.

Abstract

In an ideal world, every person's living environment would reflect their identity. We should have autonomy over our home as we have autonomy over our bodies.

For Māori, wairua and mauri are spiritual concepts that underpin well-being. Sadly, our entrenched capitalist system has encouraged us to commercialise elements of our life source and spirit. However, by listening to and learning from those who have different traditions and values, we can begin to build a better future. This thesis is an exploration of how the mana motuhake of Tangata whenua in Tamaki Makārau and beyond, can be utilised to establish better living environments for both Māori, and Pākēha.

Our ropū have been given the unique opportunity to engage face-to-face with the Hawke whānau of the Hapū, Ngāti Whāua Ōrākei. By way of challenging Aotearoa's current standard of housing, we intend to design a whare that embodies the Hawke whānau's needs and deepest values.

This thesis is based on an extensive co-design process which combines aspects of mātauranga Māori, and Western architectural knowledge.
In order to design more holistically, we need to consider the extended life and function of a building and its connection to the past through the whenua it stands on. The outcome is houses or developments that reflect where we have come from, who we are now, and where we are heading. Alongside our co-design journey, I explore design strategies that allow occupants to have greater autonomy - for example, participatory design features, and building versatility. By considering our living environments as a part of us, we can build shelters that restore communities and enable more sustainable lifestyles.

Acknowledgements

Firstly I would like to sincerely thank the Hawke whānau and the extended Ngāti Whātua Ōrākei hapū for the energy and time they have put into this project, for the knowledge they have imparted to us and for their trust in us to produce an outcome that reflects their core values.

Secondly, I want to thank Reuben Araroa for his amazing contribution.

Thirdly, I would like to thank Fleur Palmer, my supervisor - who without, I would have never developed the level of passion I have for these topics. Her dedication to uplifting our indigenous communities is inspiring beyond words.

I would also like to thank and acknowledge the members of my research cluster for their teamwork and passion. Each one of them has contributed equally to the development of this project.
I especially need to thank Lana Webster for her constant support and aroha.

Finally I want to thank my parents (Juliet and Andrew) for their endless aroha and support - without them this thesis would not be possible.

OUR RESEARCH ROPŪ

From Left: Rory Norton (author), Holly Anaru, Lana Webster, Fleur Palmer (supervisor), Rana Fatoohi, Allan Phan (Boa Chung)

This year, I was extremely lucky to share this project with four other passionate and devoted M.March Prof Students. Although our main mahi was focused on developing the Hawke whare, we branched off into seperate areas of research.

RORY NORTON (AUTHOR):

TITLE: He Korowai Aroha Kia maumahara: The Force of Mana Motuhake
RESEARCH QUESTION: *In the context of a national housing crisis, how can the Mana Motuhake - self determination - of Tangata whenua be used to combat issues rooted in colonisation?*

LANA WEBSTER

TITLE: Towards Mauri-Ora in Medium-Density Architecture
RESEARCH QUESTION: *How can mauri-ora be protected, enriched and enhanced in medium-density residential architecture while maintaining high building performance?*

HOLLY ANARU:

TITLE: Housing in Aotearoa: Creating regenerative environments to support Māori and their Whenua.
QUESTION: *How can an exploration of Te Ao Māori influence the development of the Hawke Whānau Whare to create sustainable housing on iwi land that supports Māori and whenua?*

RANA FATOOHI:

TITLE: Whakahoi – Weaving Culture Through Architecture
QUESTION: *How can we bring culture into the built environment through sustainable and eco-friendly building materials to improve the mental health and well-being for the occupants and surrounding communities?*

BAO CHUNG PHAN:

TITLE: Whānaungatanga in co-living: toward sustainable living for Māori
QUESTION: *How can Whānaungatanga – a Māori core value be embedded in a co-living approach to form a medium-density housing for Māori that promotes a sustainable lifestyle?*

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PEPEHA

Ko Rory Norton toku ingoa

Ko Hikurangi o Waitakere te maunga

Ko Waitangi te waka

Ko Ngāti Pākehā te iwi

No Piha ahau

Rory Norton is my name

Hikurangi of the Waitakeres is my mountain

The ship Waitangi is my waka – This was the ship my Great great grandfather sailed from England to New Zealand in 1863

I am Pākehā

Piha is my home

Figure.0. Ruru captured in the bush at Piha, (Andrew Norton (my dad), 2022)

GLOSSARY:

Mana motuhake: Self-determination or autonomy.

Mātauranga Māori: Māori knowledge and wisdom.

Kaupapa Māori: Māori underlying customary practice and ideology.

Tangata whenua: Indigenous peoples of Aoatearoa, otherwise known as Māori.

Pākehā: A European New Zealander.

Iwi: An expansive Māori community.

Hapū: A sub-community of a Māori iwi.

Whānau: An extended family group.

Ropū: A group or organisation.

Tikanga: Māori customary behaviors and practices.

Toanga: Sacred Māori acts or possesions.

Te Ao Māori: The Māori world view.

Whare: House or residential dwelling.

Whare Hui: A building for used for meetings or gatherings.

Whenua: Sacred Land

Mauri: Life force or essence.

Kōrero: Honest meeting or discussion.

Tūpuna: Ancestor.

Whakataukī: Māori proverb

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Whakataka te hau ki te uru,

Whakataka te hau ki te tonga,

Kia mākinakina ki uta,

Kia mātaratara ki tai,

E hī ake ana te atākura,

He tio, he huka, he hau hū,

Tihei mauri ora!

Cease the winds from the West,

Cease the winds from the South,

Let the breezes blow over the land,

Let the breezes blow over the ocean,

Let the red-tipped dawn come,

With a sharpened air, a touch of frost,

A promise of a glorious day!

Part 1
INTRODUCTION

1.0 POSITIONAL STATEMENT

I am Pākehā. As I grow older I am constantly re-learning of the gravity and connotations of this identity. As a child I grew up, for the most part, unaware of my privilege. I was sheltered and lifted up to the world, and the world seemed to smile back at me, granting me opportunities not everyone gets to have.

I entered architecture school in 2018, an insecure and anxious teenager. Like any design student, I loved visually beautiful things and was fascinated by how a space can produce a feeling of belonging. I am eternally grateful for my university education, as it has taught me so much more than just the principles of architecture. It has helped to define my strengths and provided a me with a strong foundation of confidence. It has shown me the complexities of the world, the immense inequality of it, and most importantly, informed me of my generation's obligation to combat systems of oppression.

I will never completely understand what it is like to be a minority within a white society. Not on any level have I experienced the direct discrimination that racial minorities are subjected to.
However, growing up as gay has given me a glimpse into the world of feeling inferior. Like all people, there were periods during my adolescents when I felt like I had no place in the world. I would like to believe this sense of separation as a young person has given me a deeper capacity for empathy. Consequently, being queer has opened up my capacity and desire to learn and respond to problems beyond materialism.

I am incredibly grateful for the opportunity to work with the Hawke whānau over the past year, as it has given me the chance to look into a world that I am not accustomed to and learn how my position of privilege can be used to restore such environments.

1.1 MANA MOTUHAKE AND THE DECOLONISATION OF AOTEAROA

Mana motuhake can be translated as a person's right to spiritual self-determination and autonomy over their daily life. It is the powerful act of outwardly expressing one's core being, resulting in a deep sense of well-being and self-reliance.

The concept of 'mana motuhake' became established during the 19th Century, when Māori autonomy over their land and way of life was being completely uprooted by colonialism. For the first time since their arrival in Aotearoa over seven hundred years ago, Māori were being stripped of their most treasured life force. When Māori lost their land, they lost their foundation. They were forced to integrate into a society where they were considered outsiders. As a result, Māori cultural identity began to disintegrate, dividing communities and perpetuating racism.

Ngāti Whātua representatives have told us they need a more spiritual connection to their homes. Accordingly, Iwi need to have final say in the form and purpose of their buildings that fit within a kaupapa Māori framework. One way to achieve this is to follow a practice of co-design. If this can be approached respectfully and carefully, architects can play an authentic role in enabling mana motuhake to solidify cultural identity and increase well-being.

1.2 INDIGENOUS VS WESTERN PERCEPTIONS OF THE EGO

Indigenous peoples consider themselves to be a part of the land, a spiritual belief that reduces the perception of self as separate from the natural world. Consequently, the ego subsides.

Western civilisation is based on constant economic growth rooted in capitalism, resulting in the need for ownership to determine self-value. Therefore western ideals tend to put the individual at the centre of everything. This belief system has created a vast and rich society for some, but inevitably results in inequality. Accumulated wealth stays within families over generations, while others remain trapped in low-wage work. Through the materialistic expanse of our own inclusivity and social structures, we forget our interconnectedness to each other and the natural world that supports us.

"KO AU TE WHENUA, TE WHENUA KO AU"

I am the land and the land is me (whakataukī)

It is important to consider that oppression and social issues correlate when the human population increases (Hedberg, 2020). A growing population increases pressure on resources, which can drive practices bent on acquiring more land and the labour to work it. While Māori indeed fought to defend and acquire resources, the population was still relatively sparse compared to other parts of the world. In addition, the fact that many indigenous populations were isolated from Western urbanisation allowed them to maintain a stronger sense of community and interconnectivity to the universe.

It is, therefore, no wonder that western concepts of architecture are heavily based upon surface-level qualities which appeal to a "look good" society, seeking to maximise the financial value of a building. This is explored in Jeremy Till's 2011 book 'Spatial Agency'. Till explains that "architectural culture tends to prioritise aspects associated with the static properties of objects "(Till et al, 2011, p. 27) - in other words, the aesthetics or visual aspects of a building. Till instead promotes the "volatile aspects of buildings: The processes of their production, their occupation, their temporality and their relations to society and nature."

(Till, 2011, 27).

This perspective aligns strongly with the direction of the Hawke development as it promotes a sense of self-autonomy that cannot be present through standard, westernised architectural practice.

Till suggests that to produce holistic- architecture, professional architectural practices must shift focus from 'individual agency'. It is here that Till introduces the concept of 'spatial agency', which implies "the idea that withdrawing from a situation might be as appropriate an action as intervening..." This could be seen as a vital part of the co-design process.

In the current state of our industry, it is very easy to focus on surface-level outcomes by applying professional knowledge that has appeared to work in the past. Till continues: “It is through the notion of empowerment that the word ‘agency’ can be taken at face value, in terms of acting as an agent with and on behalf of others; not in the sense of simply reacting to the often short-term market-led demands of clients and developers.” (Till et al, 2011, 32)

The sociological issues of our current living environments are constantly evolving and in order to combat them, architects must be prepared to let go of egoistic control and preference.

1.3 MĀORI PERCEPTIONS OF WHENUA

Māori perception of whenua is an entirely different concept compared to Pākehā understanding of land ownership. Māori consider humans to have originated from the land itself, and therefore, believe that Whenua cannot be permanently possessed by any person.

In his book ‘Living by Māori Values’, Hirini Moko Mead (2016) explains that:

“The relationship is not about owning the land and being master of it, to dispose of as the owner sees fit. The land has been handed down the whakapapa line from generation to generation.” (p.289) Mead explains that many tikanga practices and cultural mechanisms were developed in response to Māori relationship with the land.

“This relationship is about bonding to the land and having a place upon which one’s feet can be placed with confidence.” (Mead, p. 289)

In this context, it is easy to understand why the Māori word for the afterbirth or placenta, is “whenua”. Mead is highlighting the stark disconnection that European perception of land ownership has had on Iwi relationships with Whenua. To Māori, the land isn’t just a commodity to be sold and sectioned like a loaf of bread. Whenua is something that is intrinsically entrenched within Māori life. Mead stresses the importance of whenua as a cultural life-force: “The land and the environment in which people live become the foundation of their view of the world, the centre of their universe and the basis of their identity as citizens or as members of a social unit.” (Mead, p. 288)

The moment that Europeans chose not to respect Māori perceptions of land, was the moment that Māori as a cultural identity began to falter.


Figure. 1. Tui Bird, (Andrew Norton, 2022)

“The Māori concept of ‘Kaitiakitanga’ or ‘guardianship’ flips the logic of capitalism around to ask, ‘what can we do for our lands and waters?’ rather than, ‘what can these natural resources do for us?’”

(Hutchings et al, 2017)

Part 2
CONTEXT & HISTORY

Figure 2: 'Māori pā in Okahu Bay', Ōrākei, 1880s, (Auckland Libraries)

Figure. 3. Map of the upper North Island showing the voyage path of Ngāti Whātua Ōrākei (author/cohort collaboration, 2021)

2.0 Ngāti Whātua O Ōrākei

To be able to understand Aotearoa's current social climate, it is important to explore the deep relationship between Māori and Pākeha.

Human settlement in Aotearoa dates back to the late 13th Century. Māori ancestors voyaged from as far as Taiwan, initially reaching Polynesia between 1500 -1200 AD. Throughout the next hundred years, they expertly navigated their way through the vast Pacific in search of new land. (Te Tai, 2021)

The tūpuna of Ngāti Whātua Ōrākei travelled across the sea from Hawaiki. They arrived in Muriwhenua, eventually moved south, and made their home in Tamaki Makaurau. Their land included the Ōkahu Bay village, where the ancestral house Te Puru o Tāmaki stood, and the Takaparawhau ridge, where the Ōrākei marae now stands. (Te Tai, 2021)

For over 400 years, Māori thrived in Aotearoa, developing a rich cultural identity through the use of storytelling and spirituality. Resources were plentiful in many areas, but there were regular seasons of war when different tribes would seek to extend their land base and acquire new food sources.

Based on their prior relationship with the Crown, who had committed to protecting indigenous independence, some Māori rangātira requested European control over the growing disorder. In February of 1840, the Treaty of Waitangi was written in a bid to resolve land conflict and assure Māori Tikanga would be upheld. The terms of the agreement were translated poorly, and the exact content and translation of the treaty have long been debated.

Redacted.

Figure. 4. 1870s Tamaki Makaurau - displaying fast-growing British settlements, (John Hoyte)

Over 500 Māori chiefs signed the agreement but it has been widely agreed that many were misled into believing they would retain control over their land and other resources. In addition, the majority of settlers likely had no intention of honouring the intent of the Treaty, and were quick to dismiss its authority.

Pākehā moved south from Russell to form settlements Tamaki, an area that became known to Pākehā as Auckland. By 1850, a decade after the British pledged to uphold Māori Tikanga, almost all Ngāti Whātua land had been seized by the Crown or sold to settlers in sometimes illegal deals. Many Paheka could not resist the opportunity for personal gain and many purchased Iwi land cheaply and sold at a premium to the Crown. To this day, all that remains of Ngāti Whātua land in Tamaki is a 700-acre section in Ōrākei.

2.1 INTERNATIONAL TREATY CORRELATIONS

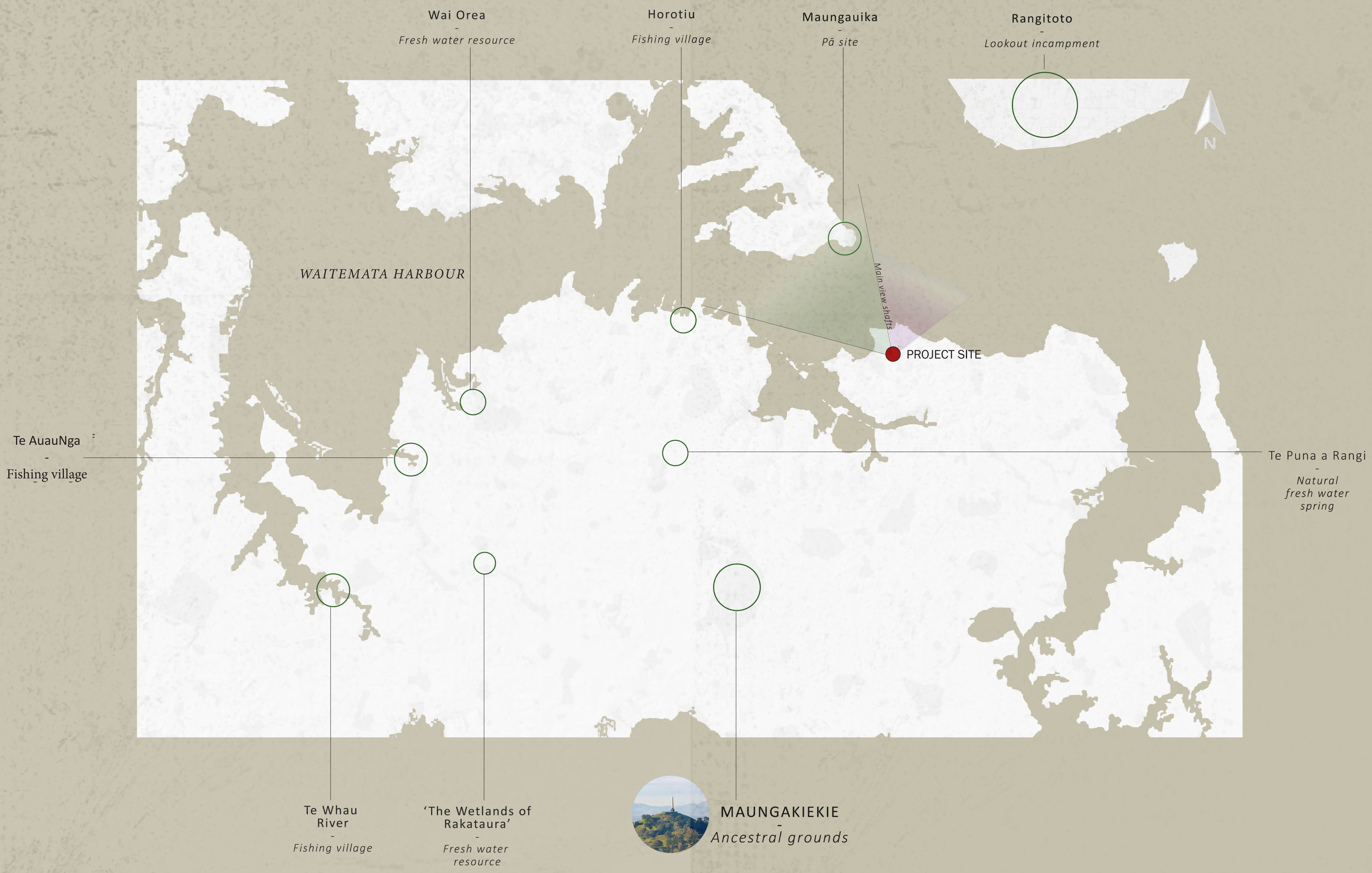
Cultural misunderstandings between colonial and indigenous groups are a common historical pattern. In his book 'Indigenous Peoples and the State', Carwyn Jones (2018) discusses the similarities between Māori and Native American perceptions of agreements such as Te Tiriti. Similar to Māori practices, Jones explains that Native American nations derive understanding and peace from various forms of storytelling. Jones says, "Treaties themselves can be seen as a form of creating a story of relationship and mutual benefit between the parties." (Jones et al, p. 26) Jones discusses the findings of Richard Delgado within Native American treaty-making;

"Delgado has noted that storytelling and narrative devices can be an 'effective means of overcoming otherness, of forming a new collectivity based on a shared story.' In the context of indigenous treaty-making, that meant telling a "special kind of story, a story that imagined a world of human solidarity achieved according to an American Indian treaty vision of law and peace.'" (Jones et al, p. 26).

In contrast to Western agendas, these are not instruments of cultural assimilation, but instead promote co-existence and interdependence.

The correlation between these global conflicts shows how Western colonies have repeatedly displayed a distinct ignorance and disrespect for indigenous experience. Such patterns serve as sound evidence as to why Te Tiriti failed to maintain any form of equal co-existence between Māori and Pākehā.

NGĀTI WHĀTUA GEOGRAPHICAL MARKERS



WIDER SITE PLAN:
Displaying hawke whare in relation to orakei marae and surrounding whenua.

Figure. 5. Social Housing on Kitemoana Street, Ōrākei, Google Earth

HOUSING IN AOTEAROA

2.2 THE CURRENT STATE OF LIVING IN NEW ZEALAND

Aotearoa is in the depths of a nation-wide housing emergency. Not only is housing barely affordable for the vast majority of New Zealanders, but many are without any shelter at all. The causes of our housing shortages seem to always be clouded in a political mirage, with years of development restrictions limiting the construction of the types of housing needed to combat such an issue.

In 2018, more than fourty-one thousand people said they were housing deprived (StatsNZ, 2020). That same year, one in nine said they were living in overcrowded living circumstances, the majority of those affected being Pasifika and Māori communities. Such dwellings are the root of adverse mental and general health outcomes, and are not safe environemnts for children to be raised in. This is displayed by the fact that Māori and Pasifika rate two times higher than NZ European children in relation to hospitalisations and debilitating diseases (Howden-Chapman, 2015).

At the crux of this issue is Aotearoa's distinct economical divide driven by accumulated wealth. Such statistics are put in perspective when considering wealthy New Zealander's are often living in houses that are too big for them. Even though the size of such households have decreased by half over the past century, the square meterage of new housing has more than doubled; the wealthy among us are now living in much larger homes. The majority of newly constructed homes are marketed towards either the wealthy or retirees. Few young families can afford to rent an apartment or buy a house. Thus, those who can afford to purchase - often with the assistance of their parents - are in a much more stable financial position (Howden-Chapman, 2015).

Housing issues in Aotearoa are complex, ever-evolving and ultimately out of the hands of the average architect. However, we do have the power and responsibility to assist however possible, at least at a comparatively micro level.

INTERVIEW WITH REUBEN ARAROA

MANAHAUTU TE RUNUNGA O Ngāti AWA

2/10/2022

As Pākehā, it is important to listen and understand indigenous issues at a face to face level. Scholarly research can only provide context for such ideas, and can in no way deliver the outcomes necessary for change.

This emphasises the importance of Co-Design, which will be explored at a deeper level in later chapters of this work.

Through a family connection, I was deeply humbled to be offered the privilege of talking to Reuben Aharoa, Chief Executive of Ngāti Awa Rununga, regarding the topic of my research. Reuben over-sees a range of business and affairs based around the area of Whakatane, including housing.

Question:

In the context of a national housing crisis, how can mana motuhake - self-determination, be used to combat issues of colonialism?

It's going to be quite challenging for mana motuhake to overcome what I would see as the 'primary ideology' of private ownership. Private ownership is something that was never part of the Māori ideology - land was shared. Things like natural resources were there to provide for all. We may have had mana whenua over something like a river, but it was seen as a gift given to us all. Capitalism shifted this - "This is mine, and I own it." When generations of people have been exposed to this type of thinking, it's hard to break that primary fundamental.

Unless there is a complete ideological shift, mana motuhake will struggle to combat issues of housing. I don't think we can un-do the system of ownership we are in.

What we can do is use Māori ideology within the restrictions of private property. Through this, you may be able to influence others to follow.

Māori priorities don't lie with capital gains. However, when everything around us continues to benefit from the system, we find ourselves in a dilemma of wanting to live by 'our' ideology, but being influenced by 'your' ideology.

CONTINUED...

Question:
When it comes to building houses on your land, how might the design of these be more beneficial to the well-being of your people generally?

The most obvious change to papakāinga versus a normal development is that there are no fences between houses. This goes back to the (Western) word “private” - meaning – “My house my fence-line - stay out.” Whereas papakāinga are a whole series of houses - no fences, so we act and behave as a community, within the same shared whenua. We go back to a marae style of living - i.e. my kids cross your driveway because they’re allowed to. However, within the houses, we still maintain a level of privacy.

Question:
So does this mean the design of papakāinga communities will incorporate shared communal facilities?

Correct.

Another important thing to consider is whether or not the buildings themselves reflect the multiple levels of hierarchy within an iwi. Firstly, what’s the Iwi narrative? How is that reflected within the development? Secondly, how is the hapū narrative reflected (referring to the context of the immediate whenua), and finally, the whānau narrative - what happened to them as they lived there?
In my opinion, that’s the best way to acknowledge mana motuhake in the design is to ensure you have the hierarchy right - to make sure the narrative is reflected not as ‘Māori’ but as iwi, hapū and whānau.

One of the key principles that I request when working with our architects is: whatever you do from an architecture perspective, it has to enhance - not just tell a story - but enhance the local features that are already there. “What does that building do for our river mouth? What does that building do for our whare.” Not: “How does this building overtake the beauty that already exists.” It should empower these things that are important to us. A lot of architects like to use modern / contemporary design to tell a story, rather than: “How can this enhance the surrounding environment?”

REFLECTIONS
Parts 1-2

Throughout my time at AUT I have had the privilege of being introduced to ideas that I had little exposure to in the past. When I started my architecture studies at Unitec in 2018, I had not considered that architecture had the potential to transform our living environments beyond visual appeal and neighbourhood character. Researching the background of our current social and cultural environment has expanded my interest in practising architecture to improve community well-being, something I certainly did not envisage in 2018. Understanding the differences between western and indigenous cultures has taught me that traditional Western approaches to architecture have lost touch with the importance of the natural world to our well-being. I can also now recognise the need for Māori communities to reconnect with their land if we truly wish to create a more equitable society that seeks to address the injustices of our colonial history.

Issues surrounding housing are ever-growing and evolving. Although architectural design can only ever be part of the solution to our housing crisis, we can make a vital contribution by widening our understanding of what makes a livable home. This will require a more holistic, less euro-centric approach with greater emphasis on connecting people to nature. Rather than considering solely the potential to maximise future capital gain, let us also consider the day-to-day experience of the family or group that will occupy the building - what will bring them joy and a true sense of “home” both now and into future generations.
As discussed in my interview with Reuben Araroa, it is very unlikely that our society will ever return to traditional Māori views of guardianship over property rather than ownership. However, this does not prevent us from designing buildings that reflect mātauranga Māori. By doing so we may inspire others to follow this path and I believe this will be to the benefit of all.

RESPONSE TO RESEARCH QUESTION:
In the context of a national housing crisis, how can the mana motuhake - self determination - of tangata whenua be used to combat issues rooted in colonisation?

As discussed within my interview with Reuben, mana motuhake which although is a powerful force, alone, can only do so much in terms of solving Aotearoa’s housing crisis. However, when utlised in conjunction with supporting forces, building better communities intrenched in kaupapa maori values can provide solid foundations for future generations.

CO-HOUSING;
THE WAY OF THE FUTURE

WHY CO-HOUSING?

As our cities become denser, it seems our desire to live apart from each other remains. This is arguably the reason why our cities are becoming increasingly less livable. By 2050, it is estimated that 68% of the world's population will be living in cities (Dove, 2020). This means, at this rate, we will all be living in one big lonely city by the end of the century. This is unless, of course, we shift our understanding of what it means to live in the twenty-first century.

One and two-bedroom apartments have become the most common type of housing in our urban areas because there is a tendency to build smaller homes in order to meet housing demand. If these box-like homes could be joined together, even though a few shared amenities, housing could become more economical and livable.

Despite our desire to live separated from others, it is common fact that humans thrive through social connection and community. Therefore, it could be argued that our current spike in mental health issues is a result of isolation, only further proved by the recent pandemic. In March of 2022, The World Health Organisation recorded a 25% increase in the prevalence of anxiety and depression globally since the beginning of the pandemic. Although there is a range of factors that contributed to this statistic, there is every reason to believe that disconnection from community was an underlying cause of this (World Health, 2022). On top of all the lessons our society has learnt from the pandemic, it is a clear reminder of the importance of human connection. Introducing a more communal approach to living is an obvious way of responding to this.

All signs sugguest that living communally benefits the mental health of occupants, however co-housing also provides opportunities to combat other social issues. With the increasing population of older generations, it is becoming harder to find comfortable housing solutions that do not segregate older people into 'dorm-like' retirement developments. Humans have been living multi-generationally for centuries. (Dove, 2020) Historically, community elders often had a big role in providing care to children while primary carers were working. By designing homes that cater to all ages, we can provide care for our elders, while they may be able to offer things like occasional child care.

Such schemes are becoming increasingly common across Europe, many involving multiple generations that aren't necessarily from the same family. An example of this is displayed through the 'good- neighbour' agreement. This is a service that provides young people with subsidised housing on the agreement that they will provide informal support to older residents in a shared complex. Although it could be assumed that young people may not see spending time with elders as desirable, these are the kind of systems that need to be introduced if we are to start building for a better future (Dove, 2020).

(CASE STUDIES IN APPENDIX 1)

Part 3
CO-DESIGN

Context and Research

Figure. 6. Co-design meeting, September 2022

3.0 CO-DESIGN: A CONCEPT IN IT'S INFANCY

'Co-Design' is the abbreviated term for collaborative design - a way of bridging the gap between professional knowledge and user experience. Although the exact terms of the practice have not been formalised, Co-design usually follows the structure of a series of meetings that form an integral dialogue between practitioner and client. This dialogue results in a design outcome that is crafted perfectly for the user's needs. Co-design is especially relevant when approaching issues of equity. Western architecture follows the common thread of imposing a formula onto projects that should be approached through a more personal and responsive lens.

Co-design is relatively new within the architectural industry and is more prevalent throughout the health sector. Only in recent decades has the industry begun to approach architecture as something that can be used to combat intrinsic social issues. This is demonstrated by the comparative lack of research available on the topic. (Hagen et al, 2020)

Co-design is a practice that hasn't yet found it's footing within the architectural world. Such is discussed within Dr. Simon Mark and Dr. Penny Hargen's review 'Co-Design in Aotearoa New Zealand: a snapshot of the literature'. Mark and Hargen (2020) stress that although co-design can be extremely beneficial, it also poses a number of risks. To honour the essence of what co-design could be, there needs to be more than just practical insight involved. Mark and Hargen explain that through delivering co-design, professionals need to be prepared to set aside regimented notions of design, "policy, procurement and services." (Hagen et al, p. 5) The authors explain that "While the intent of co-design is promising, there is still a lot of work needed to close the gap between the potential, and the capability, conditions and, in some cases, the commitment needed to follow through and deliver on this potential." (Hagen et al, p. 5)

Mark and Hargen warn that co-design risks being an "imported" process that instead of defining a common ground, further imposes colonial ideals. This suggests that in the case of housing, co-design could be used as a vessel to undermine Te Tiriti o Waitangi. 'Good-will' developers might approach Iwi on the premise of collaboration, just to disregard any semblance of power sharing. The only difference between this and other instances of land theft, is the illusion of equity. (Hagen et al, 2020) M/H continue: "many in the community already distrust the term 'co-design', and are experiencing a form of 'co-design fatigue', and can consider the term to be devalued of meaning." (Hagen et al, p. 6)

Considering the opportunities for discreditment within co-design, M/H explore the various ways professionals have implemented to ensure validity. Some suggest there is a need for a standard, trusted set of frameworks to be introduced into the field. Currently the majority of these outputs have been produced within the context of the health sector, however, I believe some still hold credit when applied to housing projects.

One such model introduced by Auckland CO-Design Lab (2017):

1. How deeply do you understand the cultural context of the people you are working with?

2. Have you dedicated the time and the right people to develop a relationship with the whānau/community members you are working with?

3. Have you considered how you can include whānau/community in decision-making processes? This can include setting the rules of eNgagement.

4. Do you have the right expertise/advice to ensure a culturally appropriate environment/process?

5. Have you considered how you will make people feel welcome within the process and in working spaces?

6. Have you ensured a working space and process in which people will be able to see themselves (their culture and values) in?

7. Have you considered how you will keep the whānau/community updated as the process progresses?

8. Have you thought about how the contribution of the whānau/community can be acknowledged?

REFLECTIONS
Part 3 CO-DESIGN RESEARCH

It is worth noting that co-design is a method of practice that can't always be defined by a strict framework. Every design project is completely different and will always require an exclusive process, unique to the people and customs that are relevant. Within the case of the Hawke meetings, it was clear that we needed to foster a relaxed environment, one that took into mind their level of architectural literacy.

RESPONSE TO RESEARCH QUESTION:

How is co-design an example of mana motuhake?

Co-design the most direct way of promoting self determination within a mana whenua housing development. This is because it is putting the power into the hands of iwi by allowing them to dictate their living environemnts without interference.

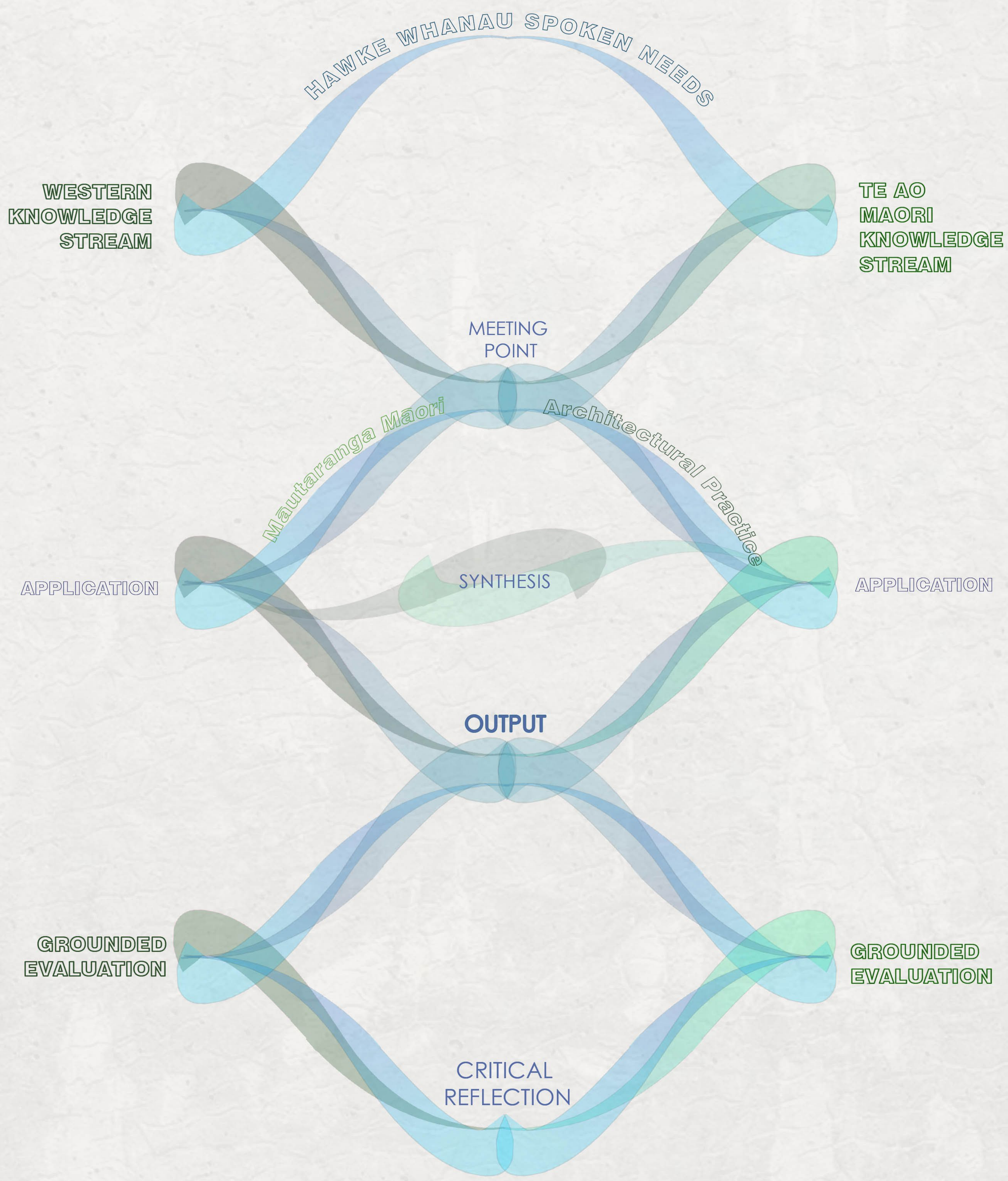
How can co-design be used to combat our housing crisis?

Co-design is still in it's infancy within architecture. However, it holds tremendous potential as a tool to combat impoverish housing. If the people who are directly effected by these issues have a part to play in the restoration of their living environements, outcomes will be naturally more effective and desirable.

As a way of visualising the co-design relationship between our research cluster and the the Hawke Whānau, I utlised a 'braided river' approach. This methodology was developed by Dr Angus Macfarlane of Ngāti Whakaue descent. This methodology is characterised by two separate streams of knowledge converging into one main river of shared intent. By acknowledging both western and indigenous knowledge as of equal importance, Macfarlane argues that it is inefficient to look for answers to Indigenous problems only within Western knowledge streams. He suggests that fusing Indigenous and Western bodies of knowledge results in a strategy that may be more effective than what any stream could produce independently (Macfarlane et al, 2019).

In accordance, I have produced a diagram that illustrates this synthesis of knowledge streams. (Fig.6)

Figure.6 A BRAIDED RIVERS APPROACH
Based on the model by Angus Macfarlane



Part 4
INITIAL PROJECT
Feasibility Study and Initial Development

Figure.7. Perspective of initial project displaying communal gardens, 2021

Figure.8. 31 Kitemoana Street, Ōrākei, July 2021

4.0. INITIAL PROJECT

Over the second semester of 2021, our cohort had the privilege of working closely with the Hawke Whānau of Ngāti Whātua Ōrākei descent. The aim of this engagement was to design a large whare to house their Iwi and to host a multitude of guests. The family have partnered up with with Oranga Tamariki (Ministry for Children) in an effort to provide a warm, safe environment for young at risk boys who are in need of guidance and love. Additionally the whānau will offer accommodation to mothers with new born babies in need of refuge. The goal of the project was to build a welcoming and economically sustainable whare that offered housing and care for up to 40 residents (including the Hawke whānau). Our goal was to strengthen the already-existing relationship between Oranga Tamariki and the Hawke whānau and to offer a residence that can help support hauora for all residents.

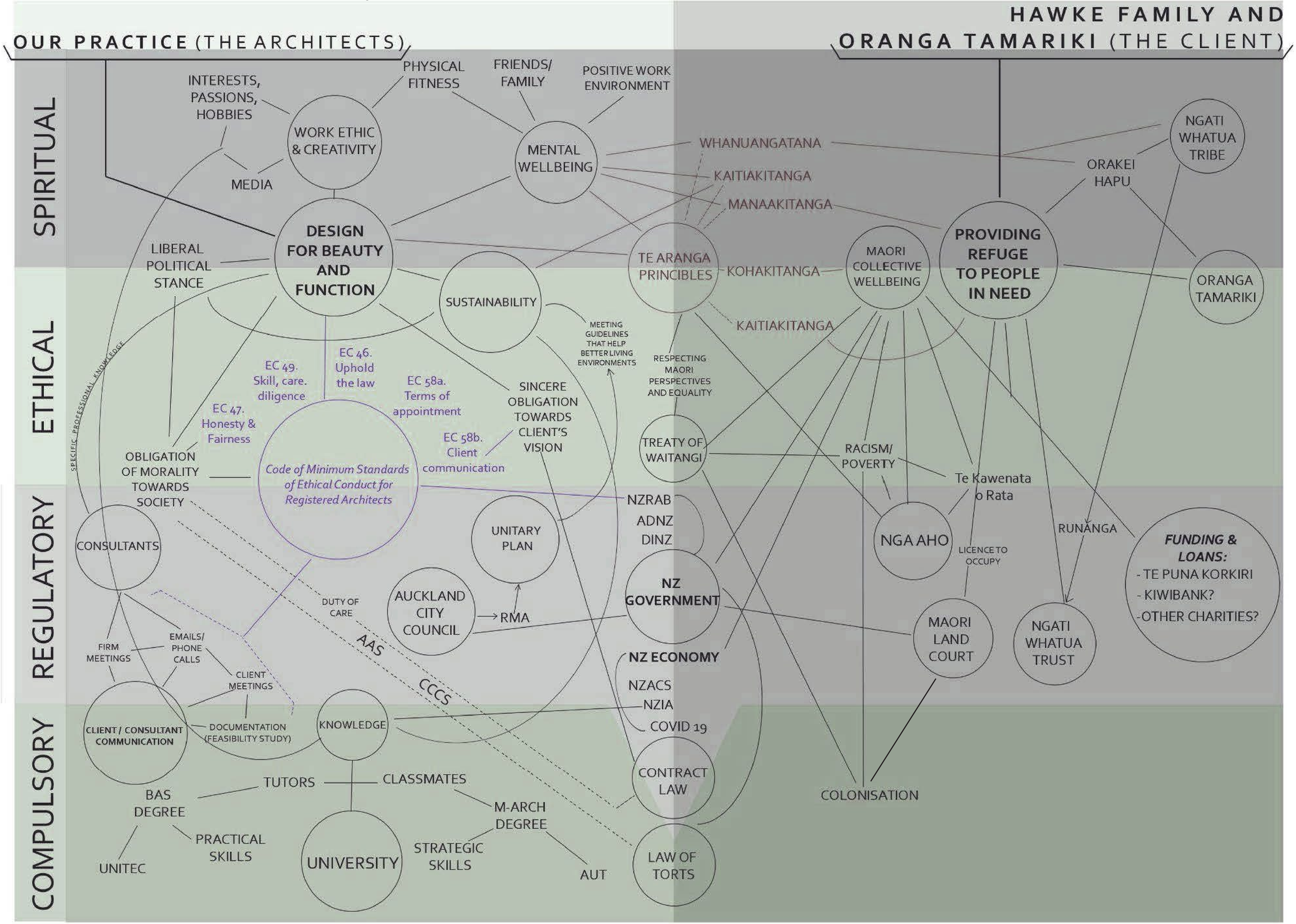
In July 2021, we first met with Aroha Nui Hawke at 31 Kitemoana Street. (fig.8) We learnt that her current whare struggles to provide accomodation to the constant stream of whānau and Iwi she wishes to provide for. Aroha stressed to us the importance of whānau. Her family wanted a development that would maximise interaction between guests and hosts - emphasising parallel - not seperate living.

Together, we developed a feasibility study, exploring the surrounding site, case studies, and sustainability options (fig.9). Using this report as a base, each student set out on developing their own design concept for the Hawke whare in August of 2021. Over 20 iterations of the development were produced, each with unique and valuable results. At the end of 2021 I was humbled to learn that the Hawke whānau had selected my design to be progressed through to the resource consenting stage. My inital design will be presented throughout this chapter and a disscussion of the feedback recieved by the Hawke whānau will provide context for the re-design process that is the basis of this thesis.

Figure.9. Author / cohort collaboration, Feasibility Study, 31 Kitemoana Street, AUT, 2021

Figure.10. Mothers Communal Living at 31 Kitemoana Street, 2021

Figure.11. FRAMEWORK AND ACTORS DIAGRAM



4.1. ACKNOWLEGDING CULTURAL NARRATIVE

As a Pākehā approaching this field of research, it is integral that I acknowledge the distinctions between western culture and matauranga Māori (Māori foundational knowledge). Early Māori ancestors arrived in Aotearoa with cultural practices that would be challenged and shaped by its unique natural environment. To orient themselves within everyday life, Māori relied heavily on all aspects of the natural environment. This reliance became deeply interwoven with creation myths that illustrated that all living species and natural phenomena are intrinsically interconnected. Over time, these views formed a distinct set of knowledge, establishing a culture deeply rooted within the physical and spiritual realms.

This belief system is what grounds Māori Tikanga within a defined set of principles that strive for social equality and a profound respect for the natural environment. In constrast, such concepts are infamously neglected within Western customs.

As discussed in my interview with Reuben Araroa (pages 25-26), when designing a building in the name of a specific hapū, it is important to acknowledge the unique narrative of that Hapū - not all Māori as a whole.

Although most Māori hold similar beliefs, it is important to respect the unique values of the people you are designing for. This is an integral aspect of upholding mana motuhake. If the values of the Ngāti Whātua Ōrākei Hapū are not reflected in the building, the entire premise of the development is nullified.

The Values of Ngāti Whātua o Ōrākei

These values underpin our research and design process, guiding us to create a resilient and thriving outcome

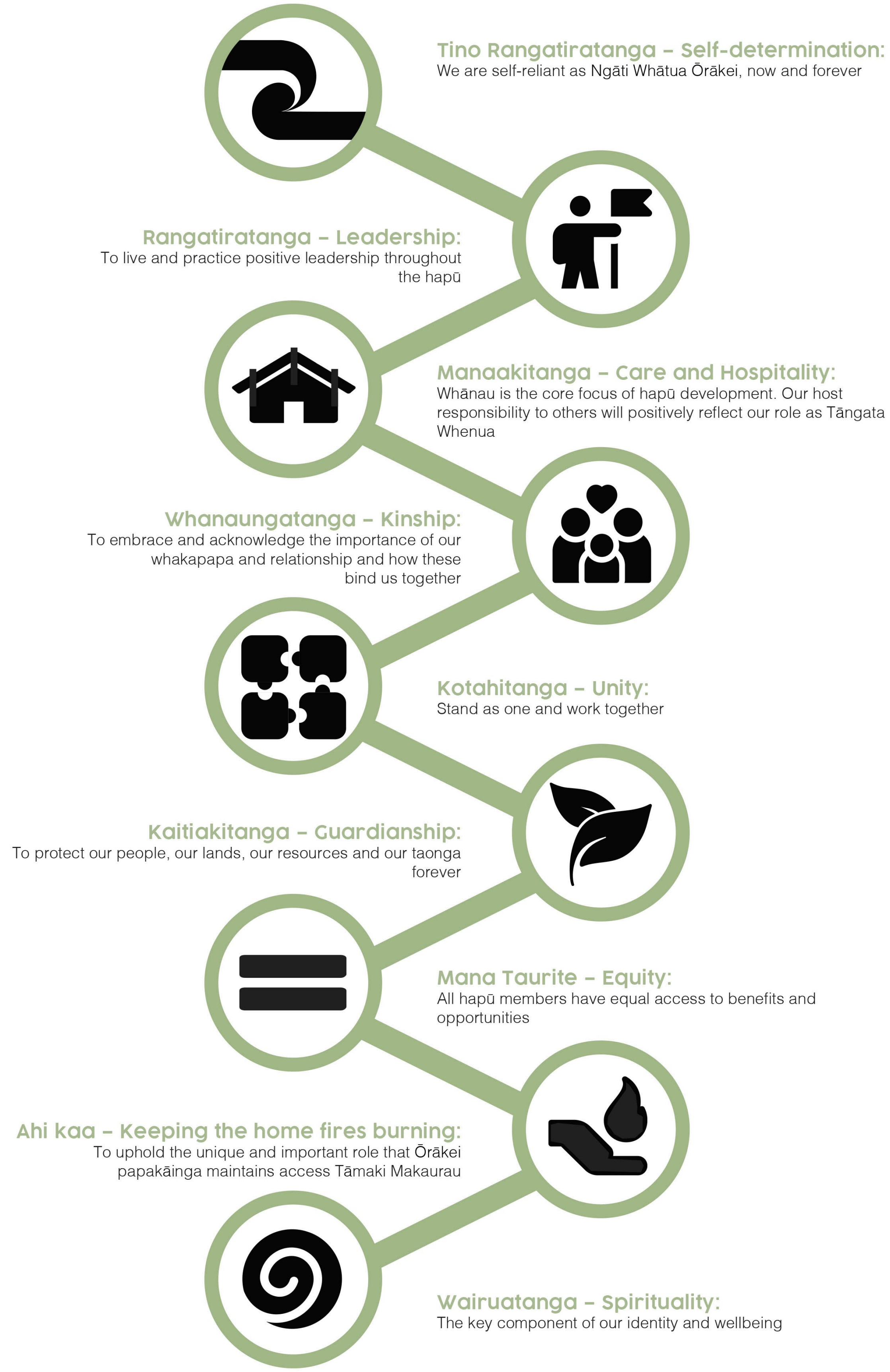


Fig.12. The Values of Ngāti Whātua Ōrākei, collaborative, AUT, 2021

Wider Site Context Fig.13. Base map: (Ngāti Whātua Ōrākei, 2021)

Site Analysis: Zoning (author/cohort collaboration, 2021) Fig.14.

- Site
- Special Purpose – Maori Purpose Zone
- Residential – Mixed Housing Urban Zone
- Residential – Mixed Housing Suburban Zone
- Residential – Terraced Housing and Apartment Buildings Zone
- Open Space – Sport and Active Recreation Zone
- Open Space – Informal Recreation Zone
- Open Space – Conservation Zone

The site is situated within Māori Purpose zoning, which encapsulates an extended area within Ōrākei, Tamaki Makaurau. Outside the Māori Purpose zone, properties to its East, South and West are zoned intermittently as Residential – Terraced Housing and Apartment Buildings, Residential – Mixed Housing Urban and Residential – Mixed Housing Suburban.

To its North the land is zoned largely as Open Space – Informal Recreation Zone and to its South-West it is zoned as Open Space – Sport and Active Recreation.

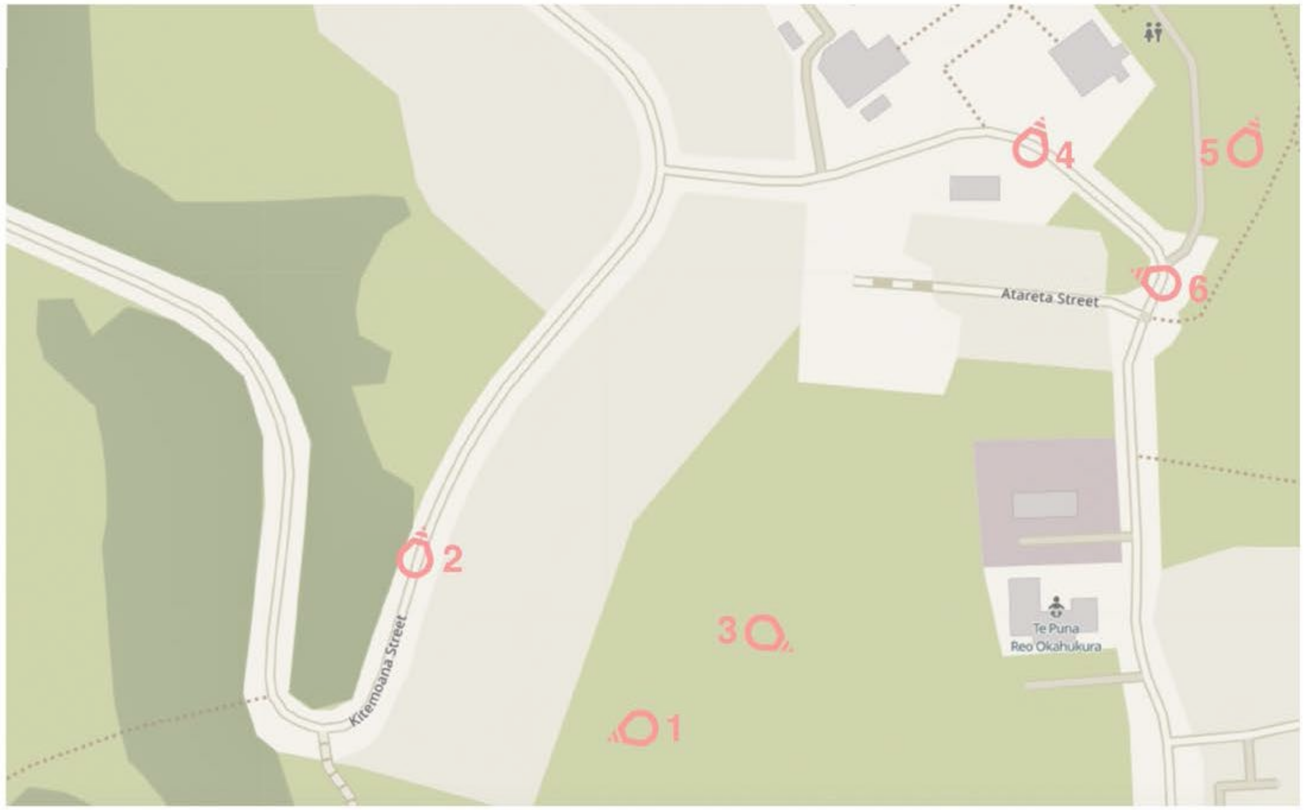
Fig.15. **Neighbourhood Visual Analysis** (Author/cohort collaboration, 2021)

Surrounding Local Context

BEHIND SITE 1

STREET VIEW 2

APARTMENT VIEW 3



MARAE 4

HIGHEST POINT 5
OF HILL

STATE HOUSING 6

Figure 16: Ōrākei before evictions took place. (Auckland Star historical Archive, 1949)


Maori Shacks Go Up in Smoke

Figure 17: A clipping from the Herald showing the distruction. (New Zealand Herald, 1951)

Ōrākei throughout history

In the early 1900s, the land was a greenfield site consisting of a marae, urupā, and other Māori community buildings and homes. (Fig.1) Due to the systemic racism beginning from the colonisation of Auckland, most of these buildings were in a severe state of disrepair. Ngāti Whātua were not granted consent for infrastructure connections or building amendments. With increasing pressure from wealthy neighbouring suburbs and an impending visit by the British monarchy, Ngāti Whātua experienced extreme persecution. From 1940 to 1959 a series of events took place which would eject mana whenua from their ancestral lands: a series of fires burnt their homes and marae down to scorched earth.(fig.1) The council had built state houses with the idea that displaced Māori would occupy them, though there were conditions: they needed to pay rent and needed to be "of a certain character".

The images below show aerial photographs of the site both before the Queen visited after she had visited, and a recent image. The left picture was taken in 1940 showing the Iwi village in place. The middle image shows the area stripped of the Māori community with only the urupā left and the last image showing the site in 2017. (Author, cohort collaboration, 2021)

1940 1959 2017

Figure 18: Ōrākei aerial photos over history, (Geomaps)

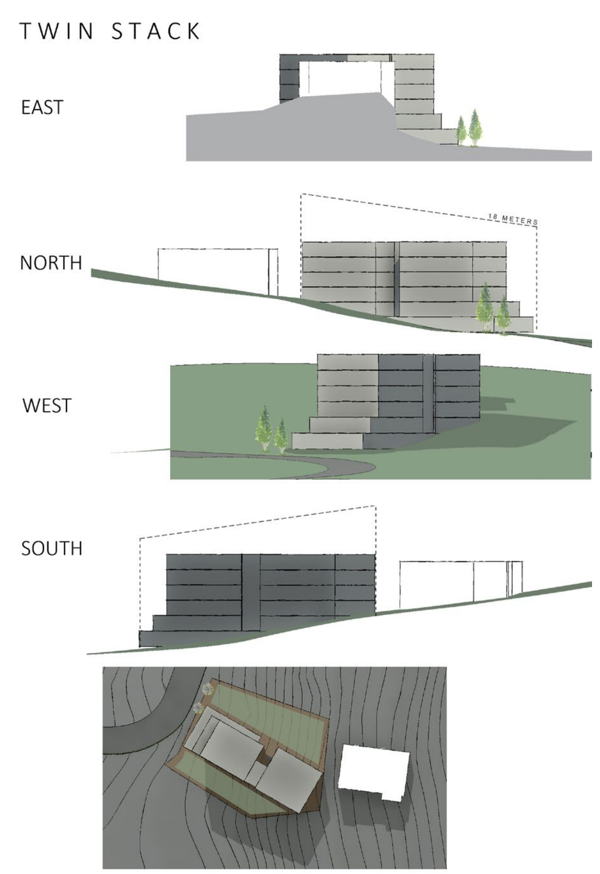


Fig.19. TWIN STACK: This concept pushes the structure to the South of the site - a large open lawn is made available to the North, allowing for sun penetration and protection from Southerly winds.
Although this massing isn't the most appealing visually, it provides the most economical use of land.

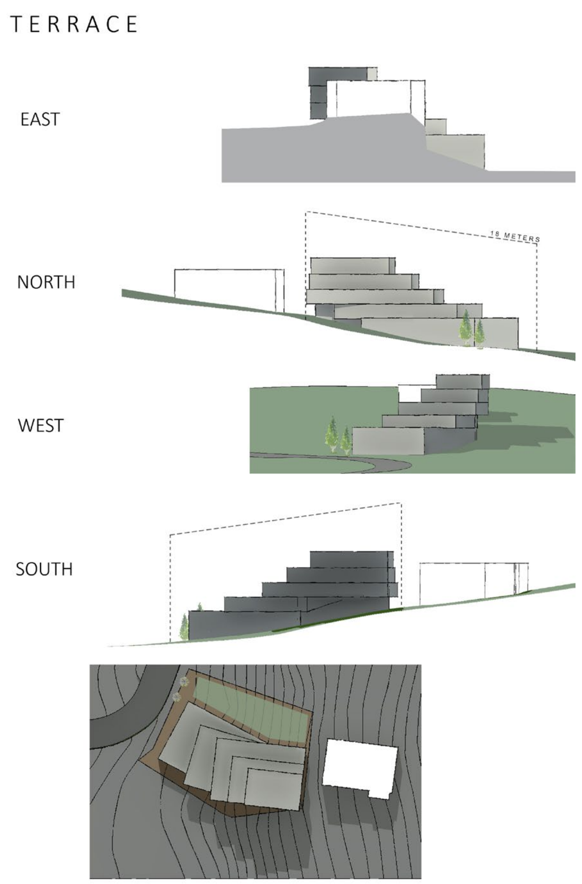


Fig.20. TERRACE: This concept was developed through the design to integrate green space within every development floor. By creating a connection to the surrounding environment, the overall well-being of occupants is increased. This also offers the opportunity for terraced gardens.
However, this form may not be the most economically viable option.

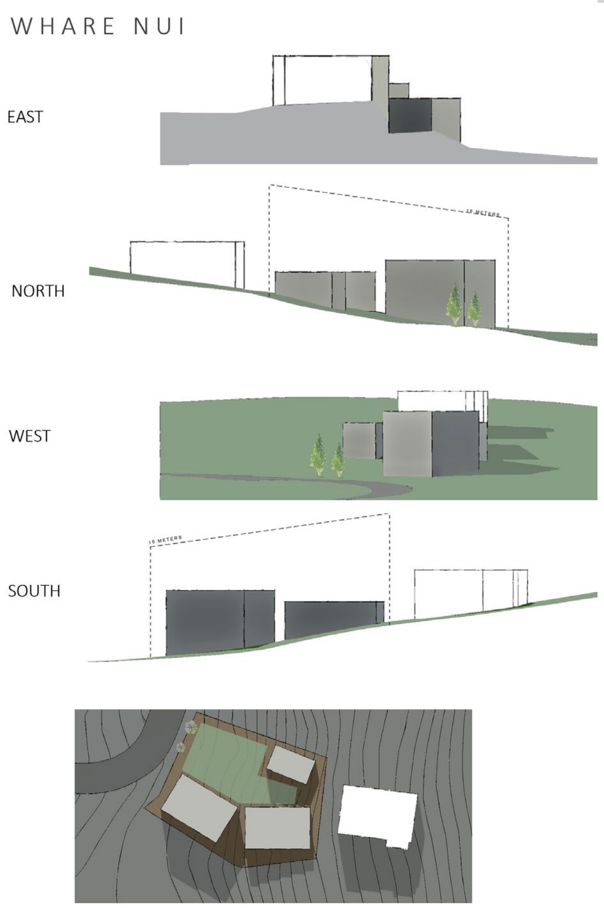


Fig.21. WHARE HUI: This iteration explores the placement of a whare nui at the rear of the site. A ceremonial walkway would act as a whare atea. This provides the Hawkes with a lower density option.

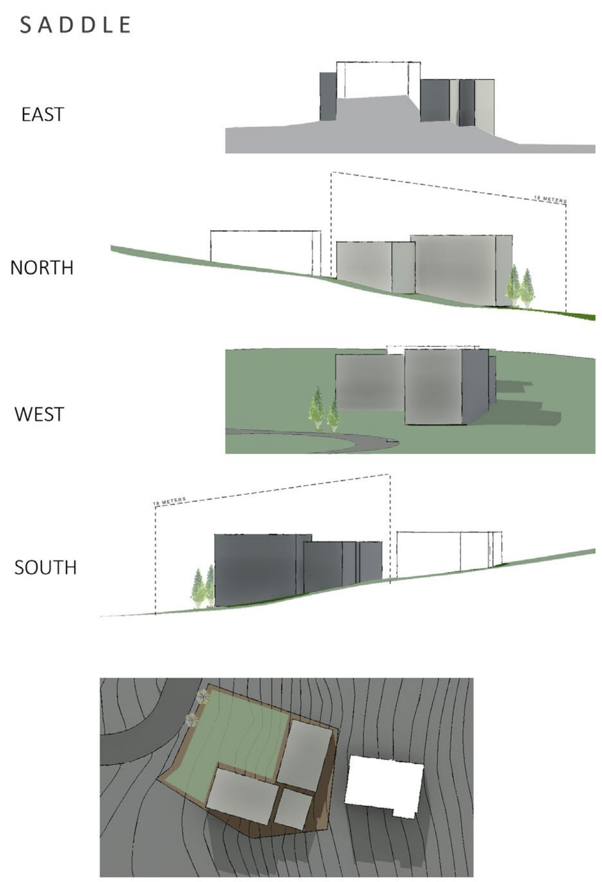


Fig.22 SADDLE: This concept pushes the mass to the very back of the site - allowing for a vast lawn to the North. Although this provides space to develop a vibrant natural atmosphere- it isn't the most economical use of the site. Additionally, the Southern corner will be devoid of light.

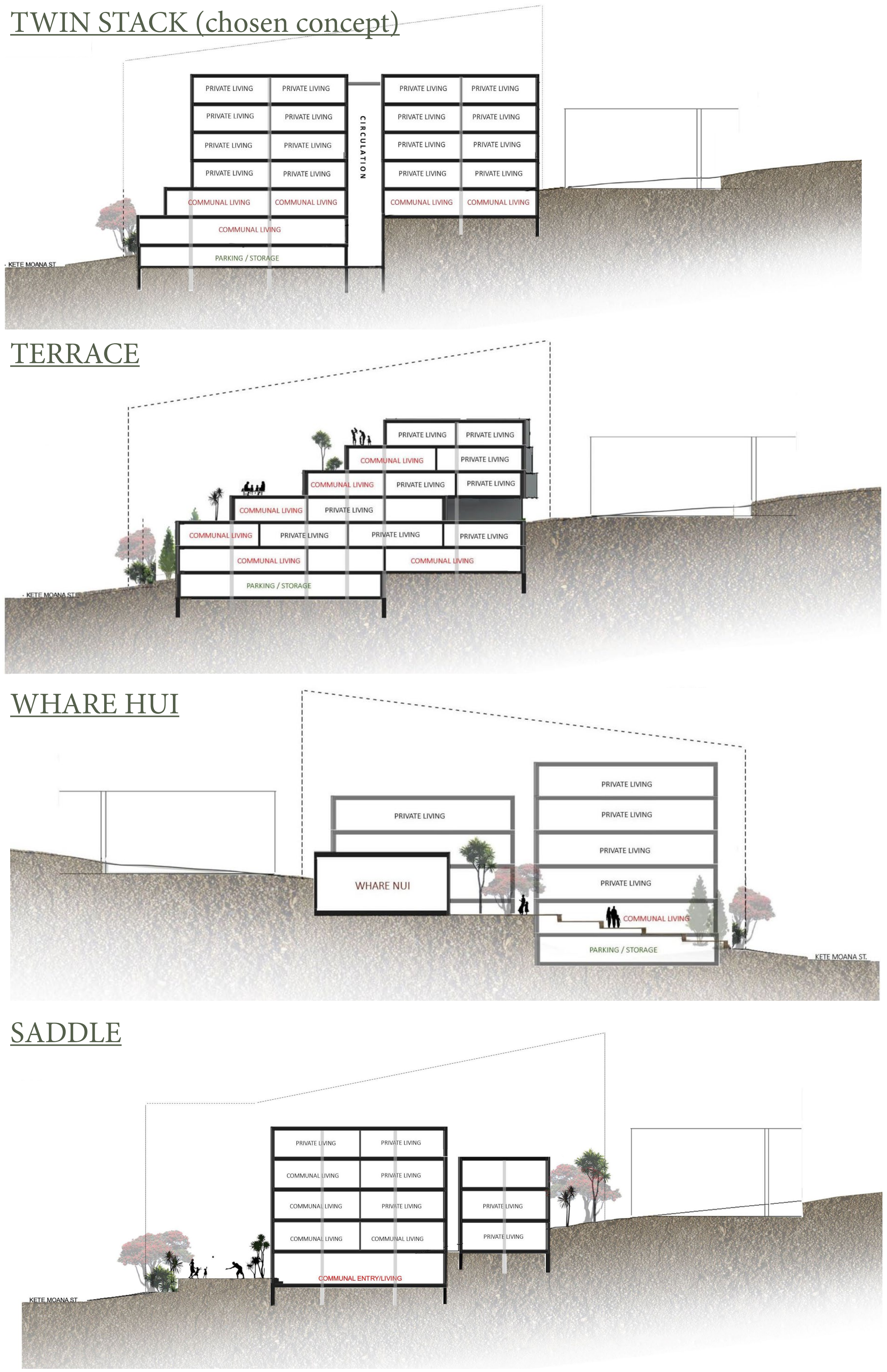


Fig. 23. Conceptual sections, 2021

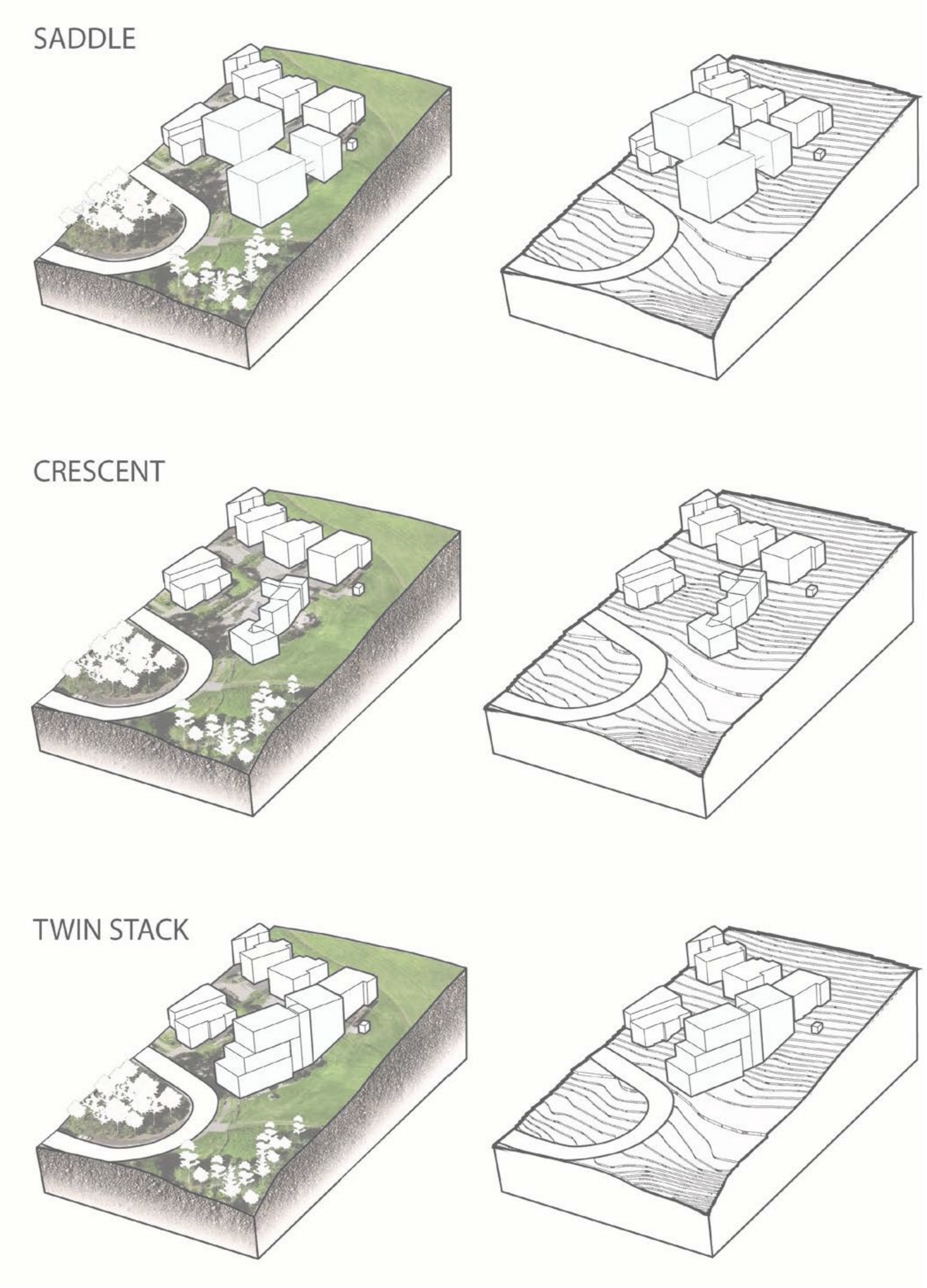


Figure 24. 3D Conceptual massing, collaborative, 2021

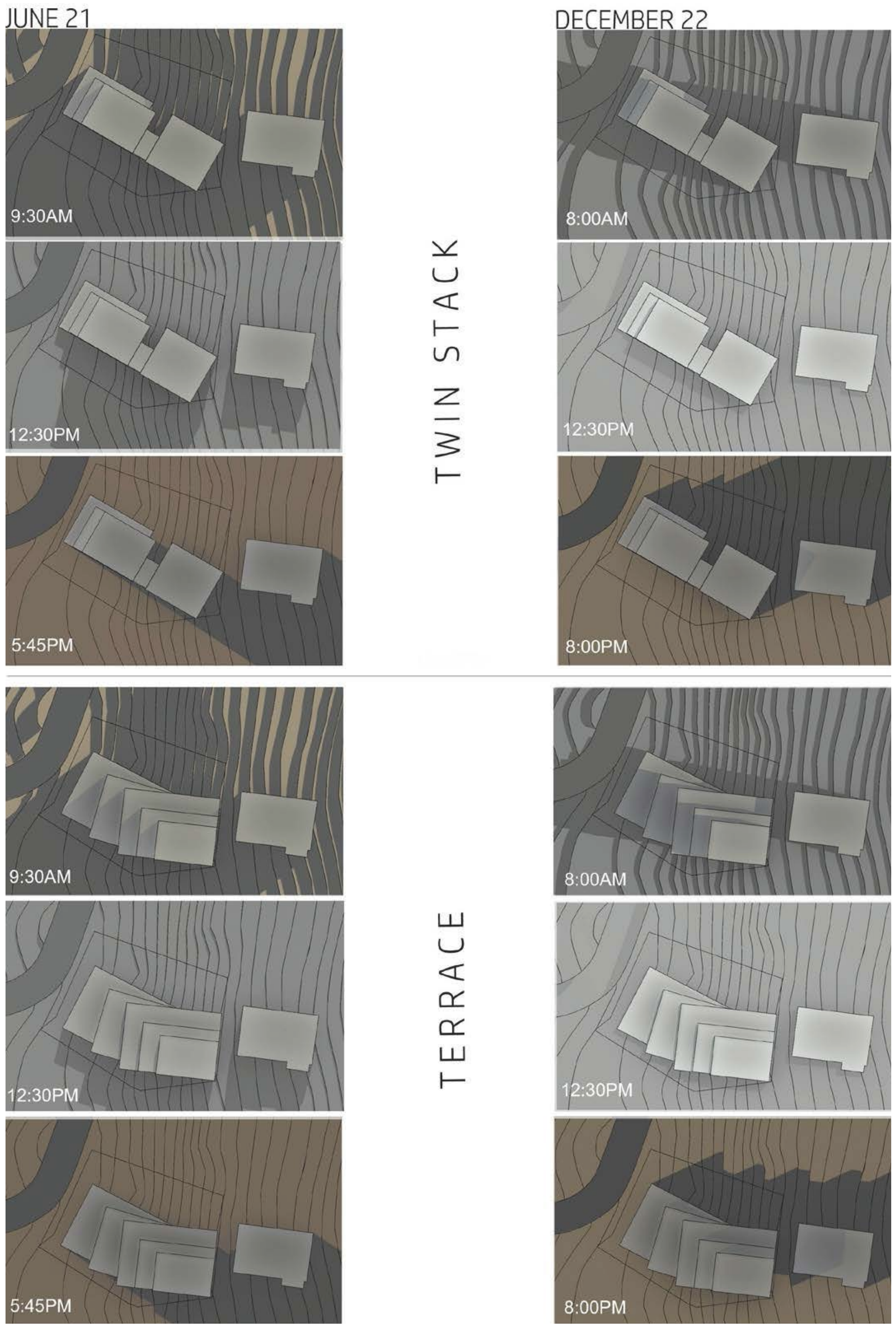


Figure 25. Conceptual massing - Sun Studies, 2021

CLIENT CO-DESIGN HUI WITH THE HAWKE WHĀNAU

In August 2021 we met with the extended Hawke Whānau to discuss their needs and ideas for the development for the first time. This meeting was an amazing opportunity to understand what was needed in the design and gave me insight into what real world client engagements are like. As a way of communicating and story telling, we crafted together a set of site models and massing blocks so the Hawke's could get their needs across to us in a tactile way.

KEY TAKE AWAYS

- A six story build is currently unaffordable but if the design offers apartments for rental, then enough money could be raised to meet the costs.

- Communal space to be situated at the top level of the building,

- Concept of 'Parallel Living' is important. The Hawke family need to live seperately from Oranga Tamariki Guests, but are easily connected through communal areas - reducing the concept of division and hierarchy.

- Versatile open indoor areas for guests sleeping on mattresses.

- Whare Hui to be situated at the front of the property.

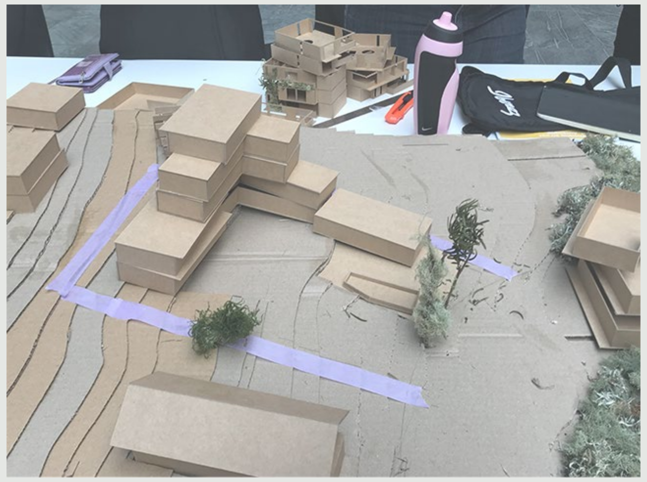
- Space for bookshelves or a library.

- Space for indoor recreational activities.

- Underground parking.

Fig.26 Co-design kōrero August 2021, Arohanui and Tui Hawke standing left, 2021

Fig.27. SKETCH MODELS USED WITHIN THE CO-DESIGN SESSION



In this massing model, a North facing lawn is emphasized. Pushing the taller main buildings towards the back of the site to maximise green space. Although green space is integral, using so much of the ground level of the site isn't the most economical option. This could be revised through roof gardens.

In this model, the development is shown as a village of low-rise buildings, spread randomly across the site. Although I respect the idea of not wanting to creating an overally tall structure that dominates the site, this type of layout will struggle to practically house the high number of guests that are esitmated to be living on this small site.

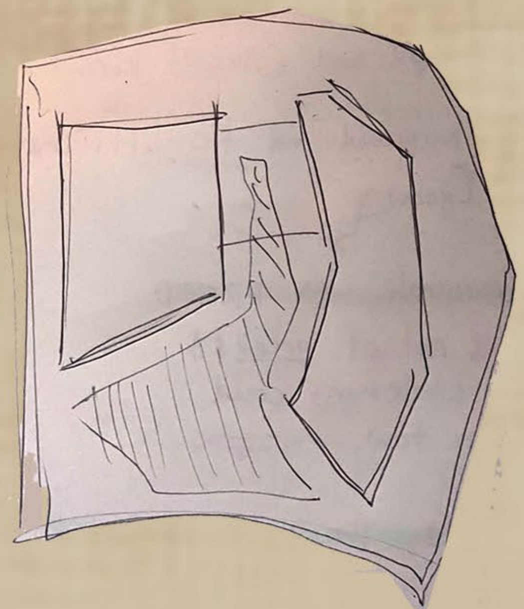
In this model, a terraced mass is pushed to the back of the site. Terraces allow for outdoor areas that are an efficent use of space. The positioning of the two main masses allows for sunlight to penetrate effectively. However, this massing may not be enough to house all estimated guests.

DESIGN PROCESS

INITIAL CONCEPTS

CONCEPT DEVELOPMENT 2021

In my initial sketches, I explored the 'Twin Stack' conecpt by playing with more abstract shapes that referenced organic geological forms, referencing the importance of Whenua and the earth. However, I soon realised that to design an economical and realistic project, such sharpe angels weren't going to work. I also considered such angular forms might appear out of place and dominaring on the site.



I started by dividing private and guest accomodation by with a channel that forms a central courtyard. The idea behind this was to allow for privacy and seperation, but have each level connected with a patio area. To emphasize the concept of Manaakitanga, I wanted the entrance of the site to be welcoming guests like a pair or outstretched arms.

In this sketch, I have tried to display how by deviding the buildings and by designing the northern wing shorter than the Southern wing, sunlight is able to penetrate into the lower floors and northern facades of the Southern spaces.

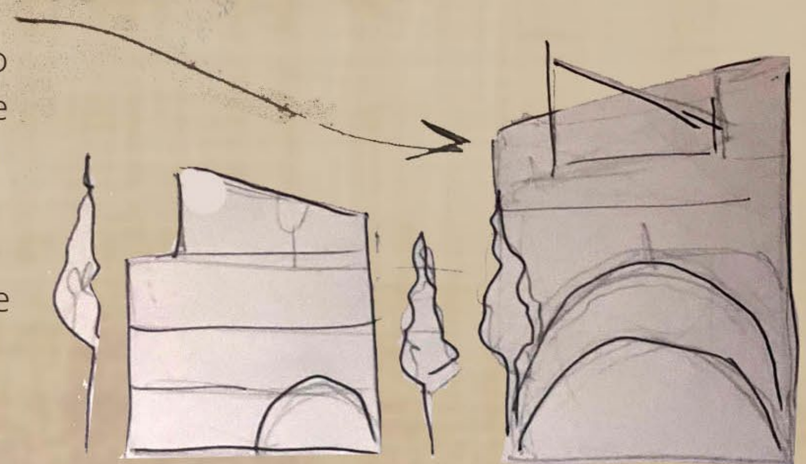
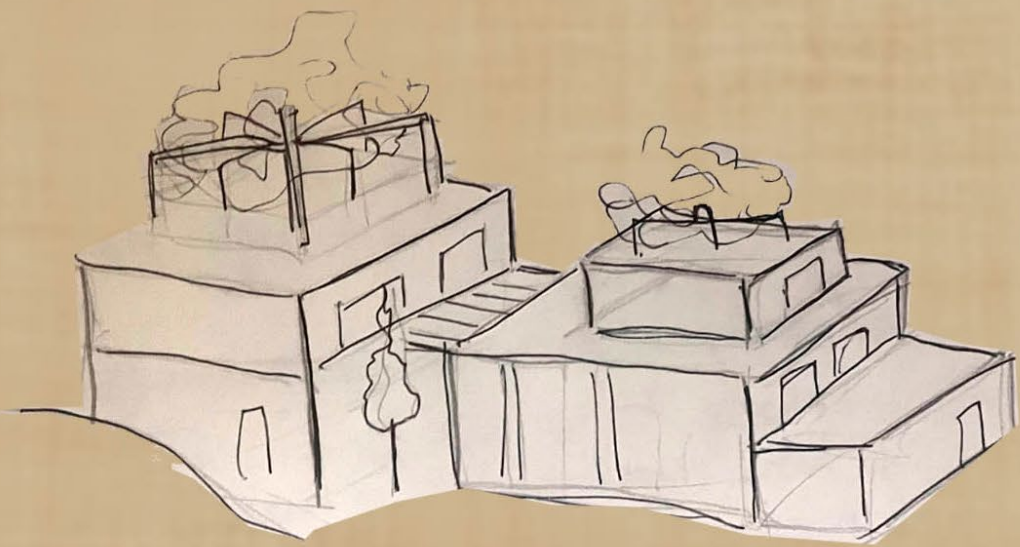


Figure 28. Conceptual Development, 2021

In my more developed concepts I tended toward a more sensible form. By dividing each wing into rectangular sections that helped form a simple interior plan and defined a more uniform outdoor arrangement. At this stage, I started to integrate roftop canopy structures that could be implemented as a shading device for rooftop gardens and patios. The vegetation would also help to draw native birds to the site - strengthening the Te Aranga value of Mauri Tu.



I played with the idea of a more complex development that involved a series of singluar structures nestled amoungst dense bush, connected by a web of bridges. This was in an effort to veer away from the 'boxiness' that the Hawke family wanted to avoid. However, this idea again didn't seem the most economical - nor the best way to keep guests and hosts connected.

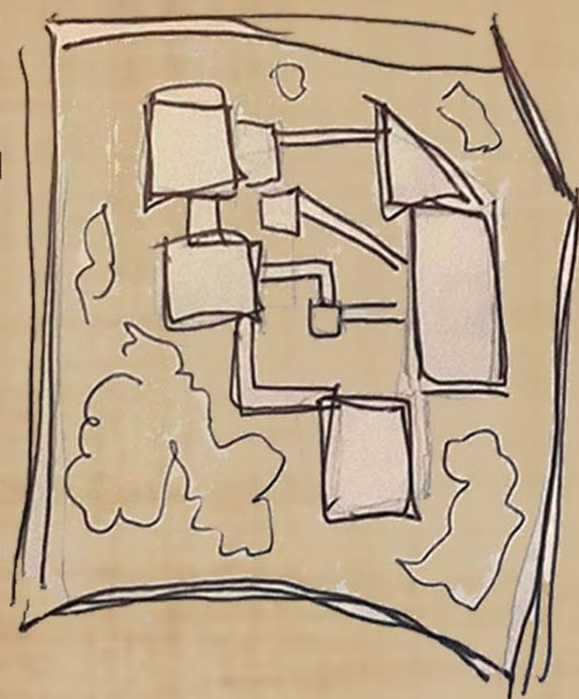
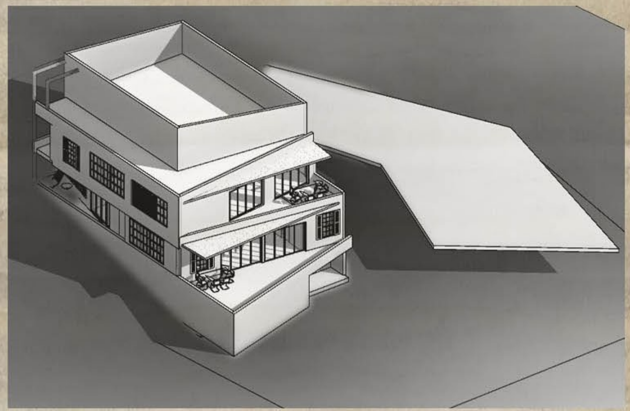


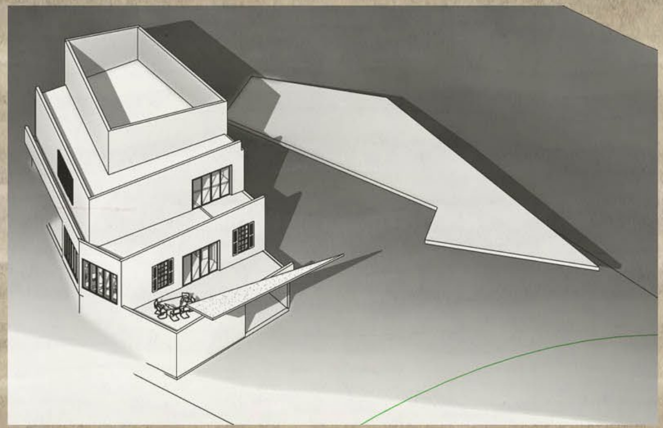
Figure 29. Conceptual Development, 2021

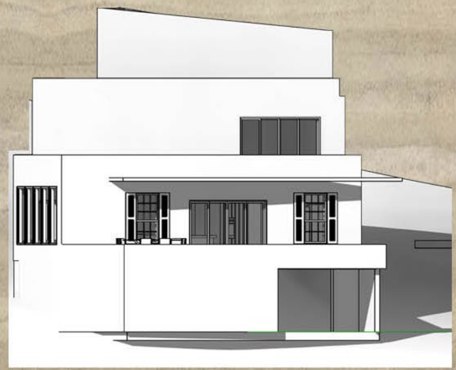
CONCEPT DEVELOPMENT 2021

INITIAL REVIT MODELS



NOTE: IN THESE MODELS I HAD ONLY STARTED DESIGNING THE HAWKE RESIDENCE TO THE NORTH OF TH SITE.





DEVELOPED CONCEPT

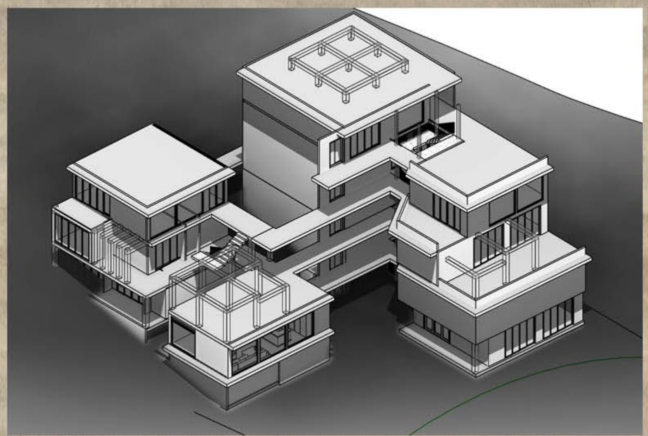
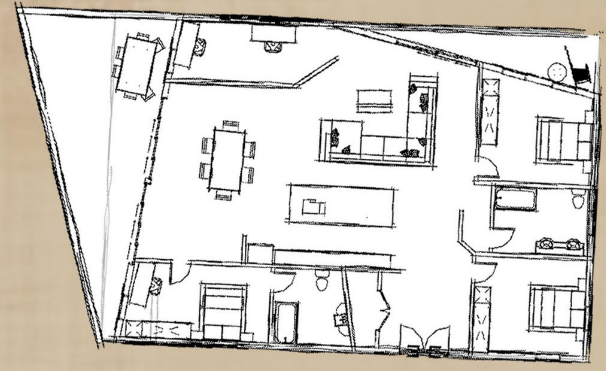


Figure 30. Conceptual Development, 2021

INITIAL PLANNING

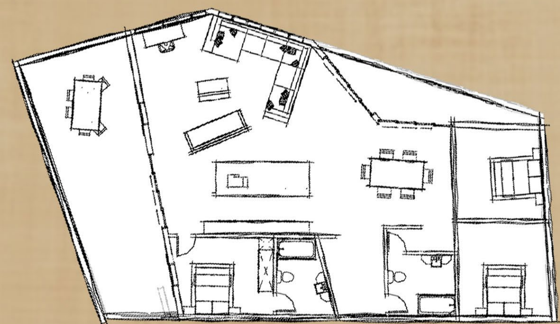


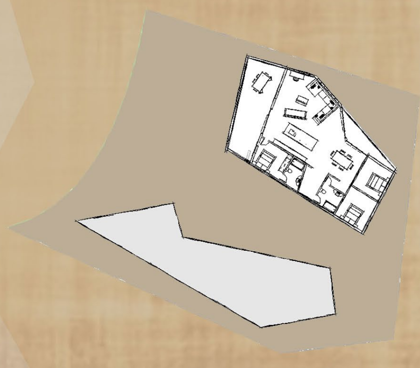
In the plans of my first concept, I have attempted to smartly organise living and bedrooms in order to minimise hallways and unnecessary space. To the North-east of the plan I have drawn a North facing patio space that allows for private outdoor space for the Hawke residence - providing a break away from loud children. - This concept remains in my final design.

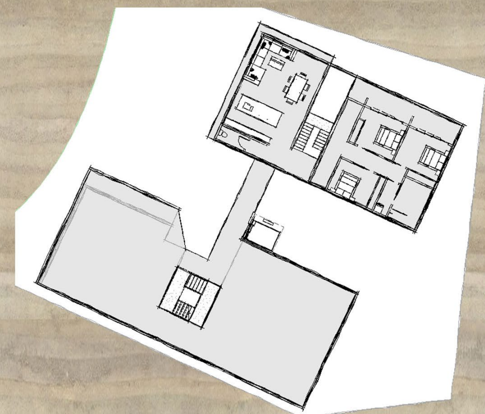
Part of the reason I didn't chose this concept was because of it's blocky form and the fact it overshadowed and dominated the Southern accomodation block.

In this concept, I have tried to emulate this same productive design within a more abstract form. I emphasized a prominant entry space to allow for welcomings and shoe storage.

I decided against using site layout as I it still failed to allow light effectively into the Southern corner of the boundary.







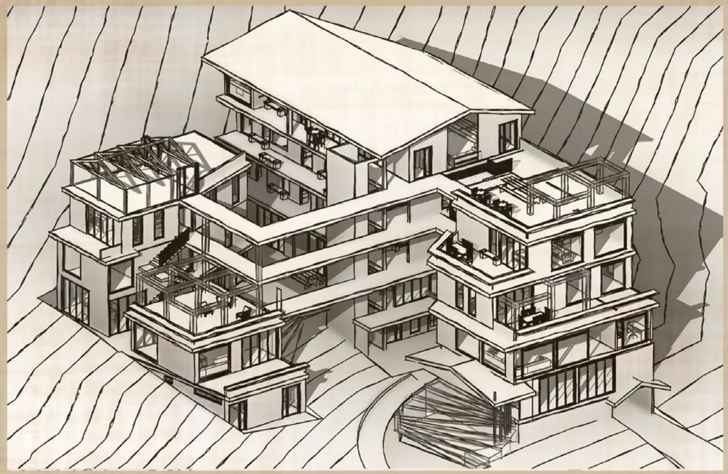
In my developed concept, I tried to think sensibly about how I organised space. I ooked into oriental design methods which used simple, square spaces and sliding doors to maximise space.

I added an courtyard to seperate spaces, allowing for privacy, sound resistance, and cross ventilation.

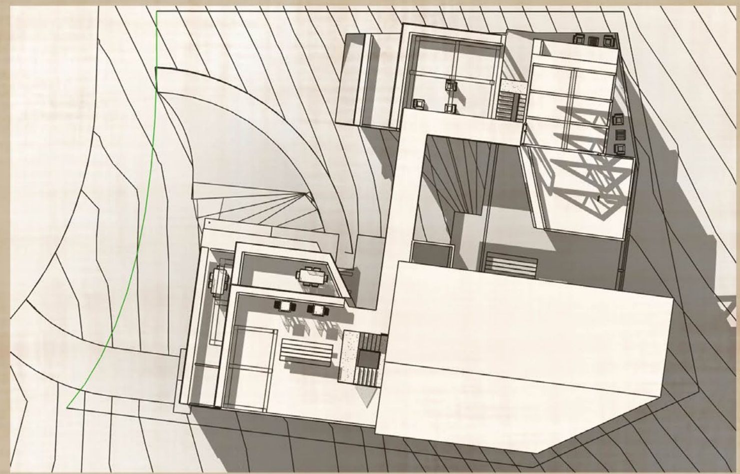
Figure 31. Conceptual Development, 2021

DESIGN PROCESS

RESOLVED DESIGN



My final design focuses in on creating a welcoming central courtyard area to act as common ground between the private Hawke residence and Co-living guest areas. To do this, I have minimised the dominance of the Hawke residence by pushing it up against the Northern edge, creating a wider channel between the two buildings.



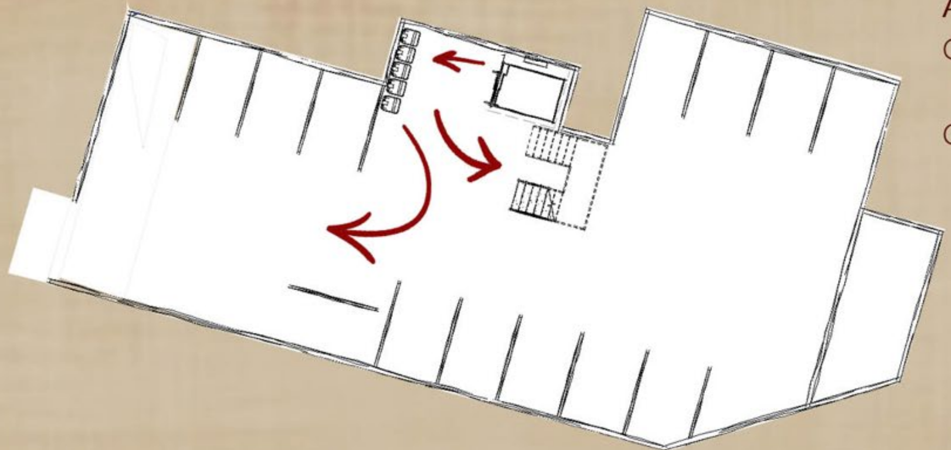
The layout maximises parallel living by connecting Co-Living and private residences with roof top patio areas that create a middle ground for groups to meet, creating a sense of oneness within the design.

FLOOR PLAN DEVELOPMENT AND EXPLANITORY NOTES

UNDERGROUND PARKING

I maximised space in the basement level to park up to 14 vehicals. This allows for parking for both guests and residents and helps to increase the rentabilitythe private apartments.

ARROWS DISPLAYING CLOSE PROXIMITY OF WASTE DISPOSAL TO CIRCULATION. AND PATH OF BIN DISPOSAL.



GROUND FLOOR

The ground floor of the development is all about integrating a deep sense of Manaakitanga when visitors and guests are introduced to the site. Welcoming ceremonies are an integral aspect of Maori culture. I attempted to respect this notion by providing an exterior space which would gracefully guide visitors into an interior that emulated Whare Nui. The Whare Nui to the West of the site is seperated from a general use hall space that can be opened up into a large open space or be shut up into seperate compartments. This is to maximise the versitility of the space.
General accomodation is placed to the south - acting as emergency accomodation for large events or overflow for displaced people in need.

ARROW DISPLAYING ENTRY PATH.
SCRIBBLES DISPLAYING PRIVACY BARRIERS.
ELLIPSE DISPLAYING VERSITILE HALL SPACE

Figure 32. Conceptual Development, 2021

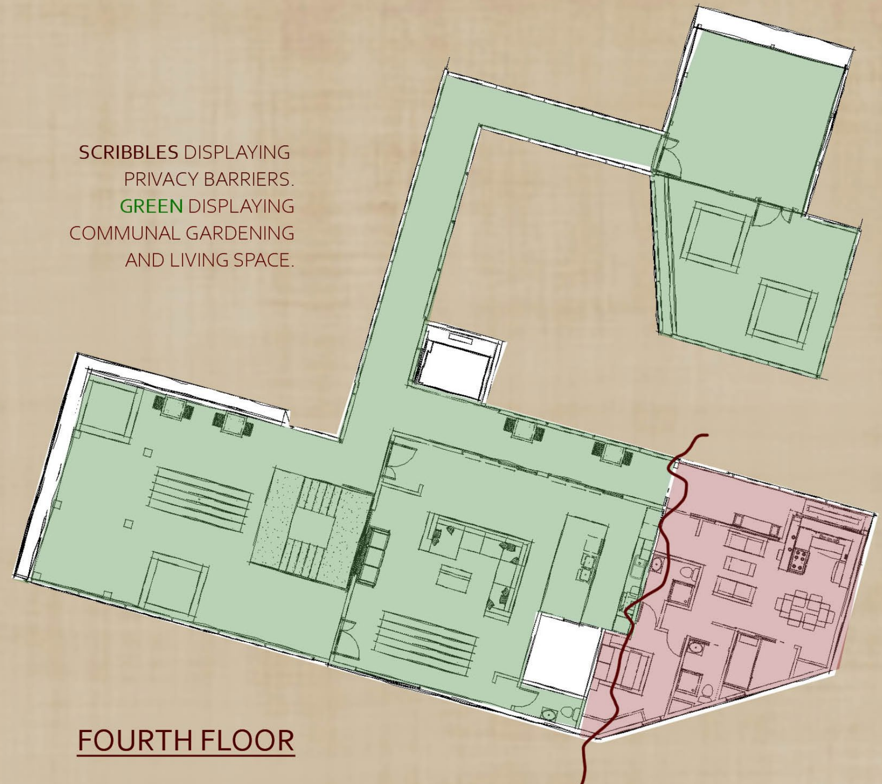
CONCEPT DEVELOPMENT 2021

THIRD FLOOR

The third floor is dedicated to mother accomodation. There are four spacious studio apartments available to mothers. Each has their own private bathroom to allow for adequate privacy for care of new born babies. Although the apartments are spacious to allow for the option of privacy, mothers are encouraged to socialise in the communal living area on the top floor. Mothers accomodation strategically placed above OT living to allow for privacy and vertical sound barrier.
To the North, the final floor of the Hawke residence provides a secondary living space for cousins or family friends. To the West is another private rented apartment. This apartment is placed in the prime location of the site to increase profitability.

SCRIBBLES DISPLAYING PRIVACY BARRIERS.
ELLIPSE DISPLAYING VERSATILE BEDROOM / LIVING SPACE.

SCRIBBLES DISPLAYING PRIVACY BARRIERS.
GREEN DISPLAYING COMMUNAL GARDENING AND LIVING SPACE.



FOURTH FLOOR

The fourth floor is a rooftop communal space for mothers and general guests to gather and enjoy the views across the Waitemata Harbour and towards Rangitoto. An interior living and kitchen space opens up onto a generous deck that leads to a rooftop garden and greenhouse to the North. Gardening will be an inegral element of the Manaakitanga of this development as it will not only provide food for the masses, but create a sense of team work and community spirit - it will also allow for an opportunity for OT guests and mothers to mix.
To the South is another private apartment that can double as extra mother accodation.

Figure 33. Conceptual Development, 2021

2021 OFFICIAL CONCEPT

WEST

Figure 34. West Elevation, 2021

EAST

Figure 37. East Elevation, 2021

NORTH

Figure 35. North Elevation, 2021

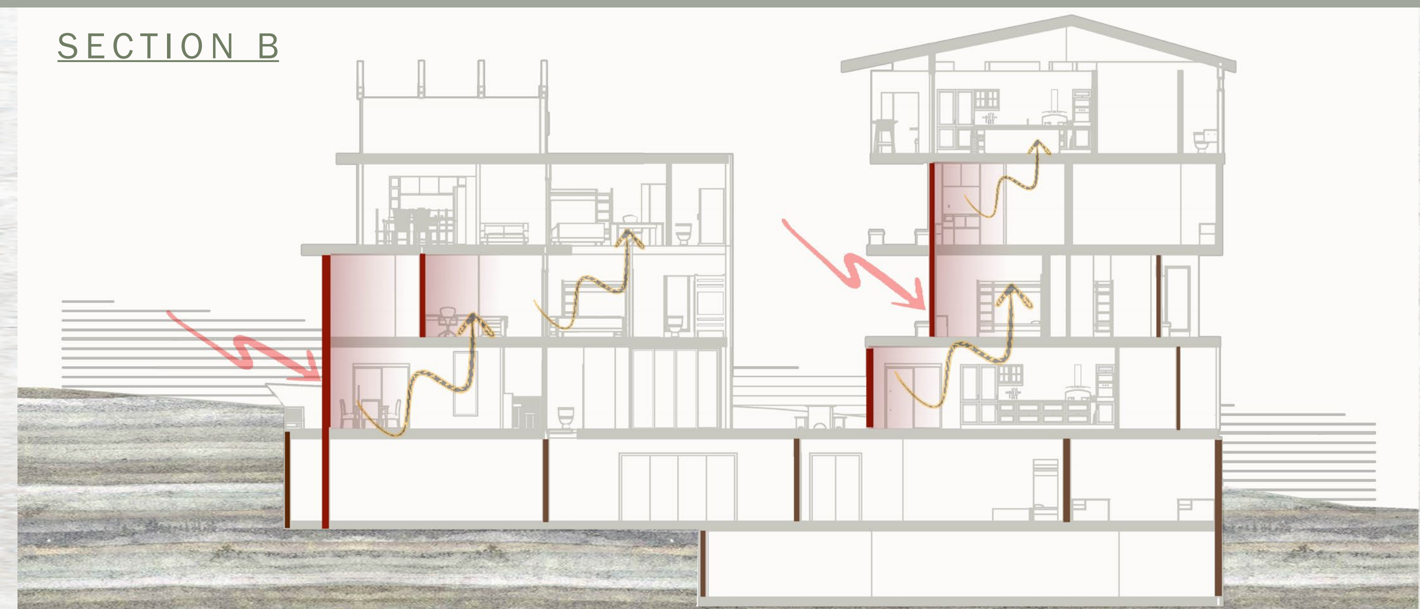
SOUTH

Figure 38. South Elevation, 2021

SECTION A

Figure 36. Section A, 2021

SECTION B



(Diagram of Uku Wall System)

Figure 39. Section B, 2021

Figure 40- ‘Street View,’, 2021

Figure 41 - ‘Looking South from exterior walkway towards communal living block and shared courtyard’, 2021

Figure 42 - ‘Looking West, view of OraNga Tamariki co-living area,’ 2021

INITIAL CONCEPT PERSPECTIVES 2021

Figure 43- ‘Looking West, showing mothers apartments - displaying communal patio,’ 2021

Figure 44- ‘Looking West, view of Mothers co-living area,’ 2021

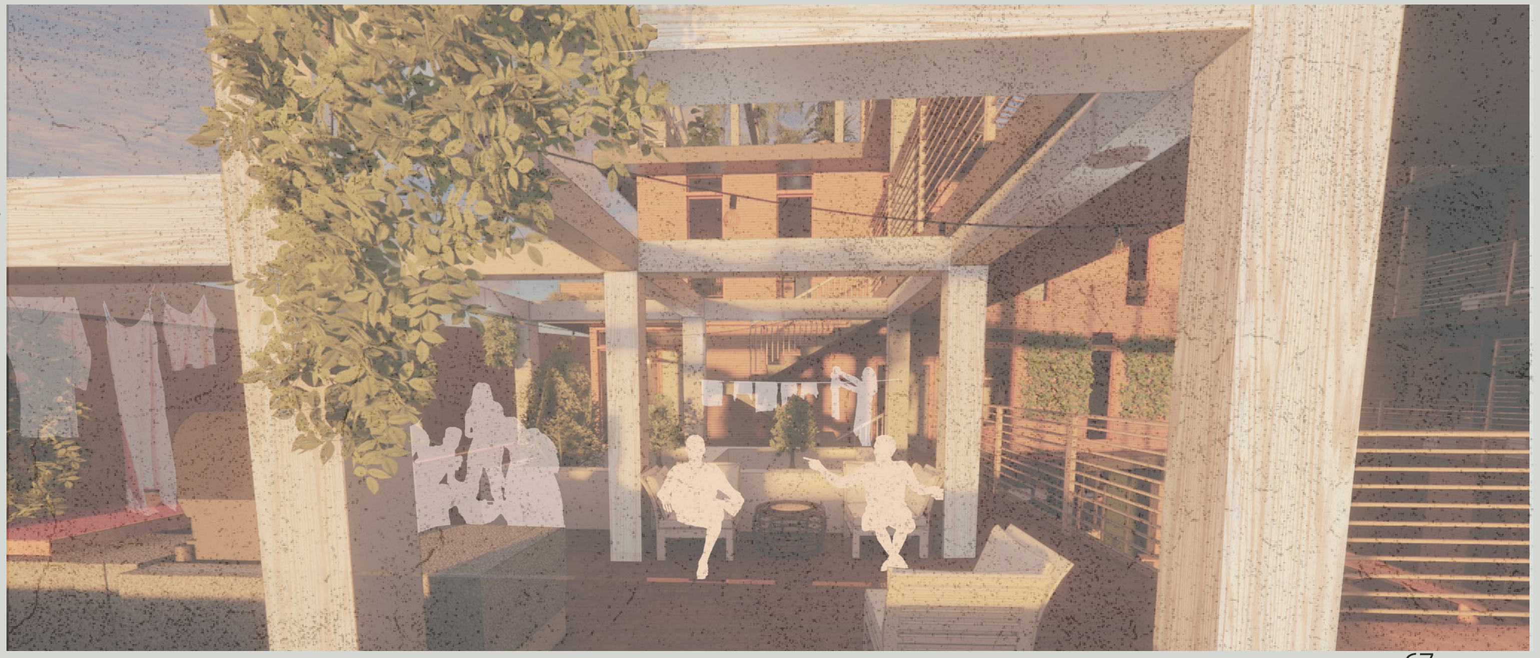


Figure 45- ‘Looking East, towards communal patio,’ 2021


Figure 46- Kereru, Piha, (Andrew Norton, 2022)

REFLECTIONS
Part 4

Developing a this initial scheme has been the perfect precedent needed to develop 31 Kitemoana throughout 2022. Learning that my design had been chosen to be progressed this year was incredibly humbling and it was nice to have my hard work validated.

However, producing this concept has taught me exactly what was missing, and how I would approach things next time. We were only able to meet with the Hawke whānau once during the development of this scheme (partly due to lockdown). This meant that the whānau could not be involved every step of the way. This is a crucial step to approaching the design of a building with roots deeply imbedded within whenua and history that a 21 year old Pākehā student will always struggle to appreciate fully. In order to affirm and utilise mana motuhake, the Hawke whānau must be present throughout this entire development.

Part 5

CO-DESIGN PROCESS

2022

Figure.47. Co-Design meeting in September 2022

NGĀTI WHĀTUA ŌRĀKEI COLLABORATVE MEMBERS:

AROHANUI HAWKE

TUI HAWKE

ROIMATA HAWKE

KEMA HAWKE

BERONIA SCOTT

LAURENCE MAKOARE

Figure.48. Co-Design meeting in early 2022, Holly Anaru

From March, we aimed to meet in person with the Hawke whānau at least once every week, depending on availability and the stage of the project. Due to the limited amount of co-design literature and guidance available, our rōpū began engagement with the Hawke whānau without applying a strict structure or methodology.

Each time a new member of the whānau was present we would introduce ourselves through pepeha as a way of providing personal context and establishing connection.

Although we hadn't applied a strict structure at the beginning of the project, it is interesting to compare our process with an official co-design framework created by the Auckland Co-design Lab. It is important to note that this is a general guide and is not specific to architectural co-design. However, it is clear that most of the guidelines it contains are relevant to all design contexts.

Auckland Co-design Lab Framework (2017)

1. HOW DEEPLY DO YOU UNDERSTAND THE CULTURAL CONTEXT OF THE PEOPLE YOU ARE WORKING WITH?

Our rōpū can never fully appreciate the lived experience of the Ngāti Whātua Ōrākei Hapū. The people of Ōrākei have experienced generations of deprivation that have severely impacted their community. However, through in-depth historical research and kōrero with the Hawke whānau themselves,we are beginning to appreciate the fortitude and strength required by generations to reclaim their whenua and assert mana motuhake.

2. HAVE YOU DEDICATED THE TIME AND THE RIGHT PEOPLE TO DEVELOP A RELATIONSHIP WITH THE WHĀNAU/COMMUNITY MEMBERS YOU ARE WORKING WITH?

At the beginning of this project, we met with Arohanui Hawke on-site at Kitemoana Street. Being able to see the site in person and talk to Arohanui face-to-face allowed us the chance to connect in a way that could never be done through online communication. Over the last year and a half, we have had regular meetings with Arohanui and the extended Hawke whānau the majority of these meetings have been in person. Connecting with the Hawke whānau has given me a deep appreciation for matāuranga Māori - a set of values that have assisted me, not only professionally - but throughout the navigation of my personal life.

3. HAVE YOU CONSIDERED HOW YOU CAN INCLUDE WHĀNAU/COMMUNITY IN DECISION-MAKING PROCESSES? THIS CAN INCLUDE SETTING THE RULES OF ENGAGEMENT?

At the beginning of our meetings, we wanted to make the whānau feel as comfortable as possible; therefore, we didn't set a specific structure for our sessions.
The meetings generally followed this informal structure:

IN-PERSON KŌRERO

- Presentation of our development progress/response
- Hawke feedback/discussion
- Sketch exploration of feedback discussed
- End of session
- Design response development
- (Process repeated)

4. DO YOU HAVE THE RIGHT EXPERTISE/ADVICE TO ENSURE A CULTURALLY APPROPRIATE ENVIRONMENT/PROCESS?

Over the past 18 months, our rōpū have had the privilege of being led by Dr. Fleur Palmer of Ngāti Awa decent and affiliations with Te Rarawa and Te Aupōuri tribes from the Muriwhenua district in the Far North.

Fleur has dedicated her research and practice towards uplifting Māori communities and their living environments. In 2016, Fleur completed an award-winning PhD investigating the practical implications of discriminatory legislative practices on housing outcomes in Aotearoa, in response to homelessness and the displacement of Māori communities through colonisation. Under the guidance of Fleur, we have been provided with the knowledge and confidence required to approach such an environment.

5. HAVE YOU CONSIDERED HOW YOU WILL MAKE PEOPLE FEEL WELCOME WITHIN THE PROCESS AND IN WORKING SPACES?

At the beginning of each meeting, or when a new family member joins our discourse, we practiced whakawhānaungatanga (the process of establishing connections). This involves each member of the group introducing themselves through pepeha. It is a way of providing personal context, finding common ground and gathering insight. Although common for Māori, it was new for many of the AUT group, but we found it a very effective way of 'breaking the ice.'

We also make sure there is tea and coffee available during each session. We would also provide a plate of kai when possible - although it was often the Hawke whānau who generously kept us fed.

6. HAVE YOU ENSURED A WORKING SPACE AND PROCESS IN WHICH PEOPLE WILL BE ABLE TO SEE THEMSELVES (THEIR CULTURE AND VALUES) IN?

At the beginning of each session, a student led a karakia. This is a method of invoking spiritual guidance and intent. No matter what spiritual beliefs a person holds - this is a way of unifying everyone and setting a productive tone for the eNgagement.

A KARAKIA WE RECITE AT THE BEGINNING OF EACH SESSION: (Hohua, 2005)

Whakataka te hau ki te uru,	The wind swings to the west
Whakataka tō hau ki te toNga.	then turns to the south, settles down.
Kia makinakina ki uta,	Making it prickly cold inland
Kia mataratara ki tai.	Making it piercingly cold at sea.
E hi ake ana te ata kura	The glowing morning will rise
he tio, he huka, he hauhuNga.	on ice, on snow, on frost.
Haumi e! Hui e! Taiki e!	Join! Gather! Intertwine!

We would then recite a unuhia (closing karakia) to end our sessions.

7. HAVE YOU CONSIDERED HOW YOU WILL KEEP THE WHĀNAU/COMMUNITY UPDATED AS THE PROCESS PROGRESSES?

After each phase of re-design development was complete, we would either email the whānau the revised alterations, or meet with them in person to discuss them. We would never carry through a piece of design without confirming it with the whānau first.

8. HAVE YOU THOUGHT ABOUT HOW THE CONTRIBUTION OF THE WHĀNAU/COMMUNITY CAN BE ACKNOWLEDGED?

We recognise and deeply admire the amount of time and energy the Hawke whānau have put into this endeavour. On top of our co-design meetings, numerous family members spent many hours relaying information to extended whānau and collecting site surveys. We sincerely hope that the final outcome, a liveable, aforable new housing development, is adequate recompense for Ngāti Whātua Ōrākei. We also plan to acknowledge the detailed input of the whānau through all future project presentations.

CO-DESIGN MILESTONE 1:

Initial Feedback/Response

Early March 2022

Figure.48 . 31 Kitemoana Street, Initial concept design, , 2021

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 for the re-design process of 31 Kete Moana Road. As designers, we have a duty to cater to the client's desires, as our original vision and ideas will not always align perfectly with the client's practical needs. In order to respond to the Hawke family promptly, we developed a rough re-design of the elements brought up in the feedback we received in late February.

The full list of feedback will be available in the appendix as it details the re-organisation of the entire scheme extensively.

At this stage, it is important to mention that these changes will by no means be the final outcome. The changes displayed below are rough responses that will be further developed throughout the year.

NOTE: BASEMENT AND LEVEL 4 NOT INCLUDED IN THIS SET AS THEY REMAIN UNCHANGED

Figure.49. Re-design Concepts, 2022

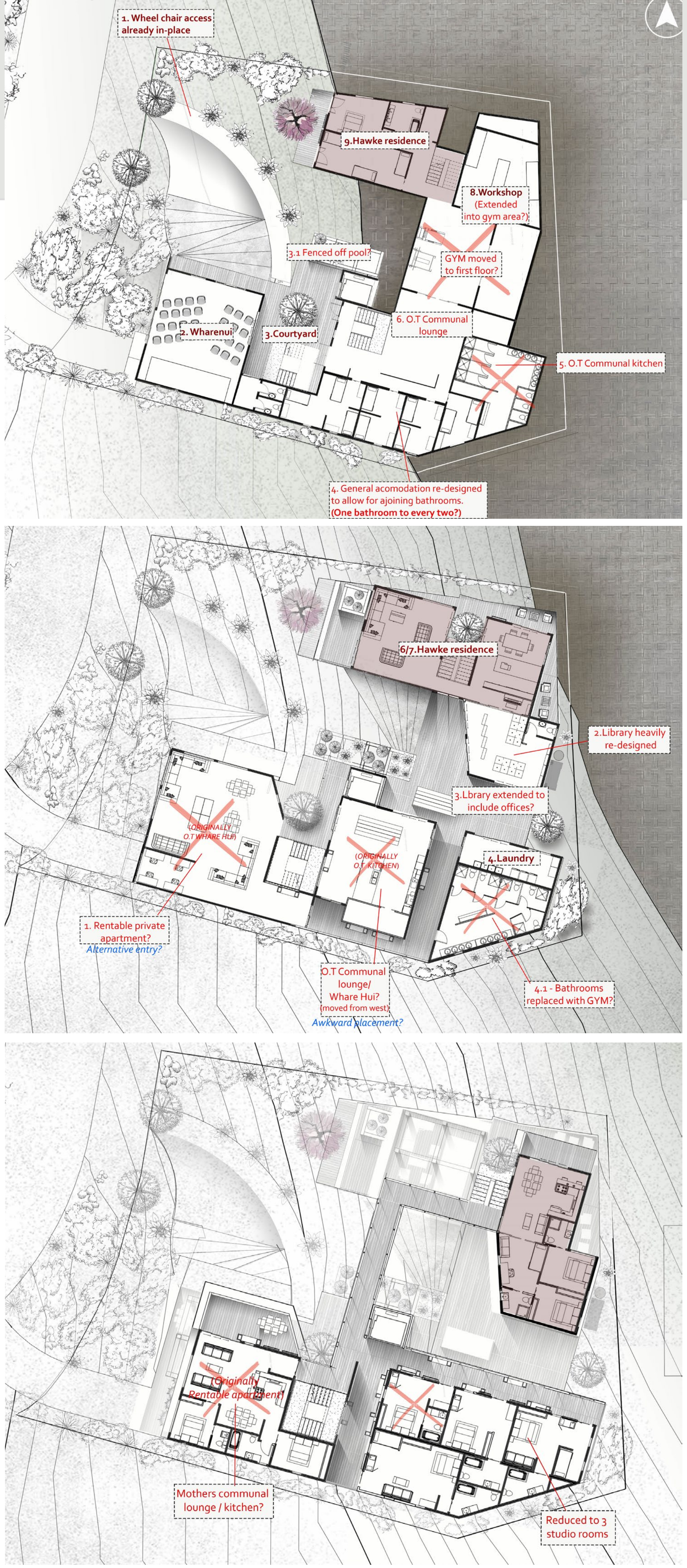
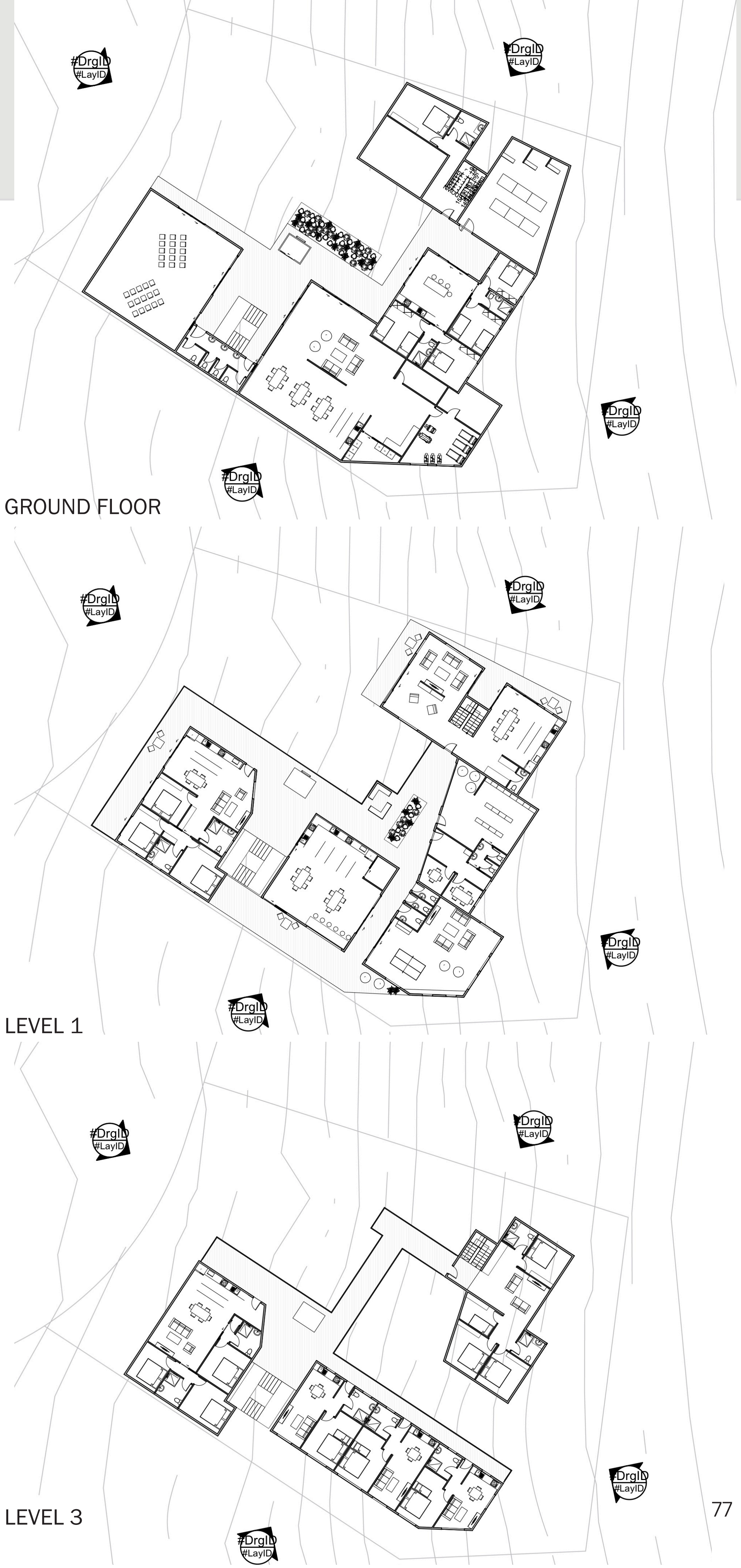


Figure.50. Re-design Concepts, (Holly Anaru, 2022)



CO-DESIGN MILESTONE 2:
Online kōrero with Roimata Hawke

Mid March 2022

In mid march we had an online kōrero 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 OUTCOMES OF THIS SESSION:

- Shifting the original footprint of the scheme to minimise the amount of site excavation needed and to 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.

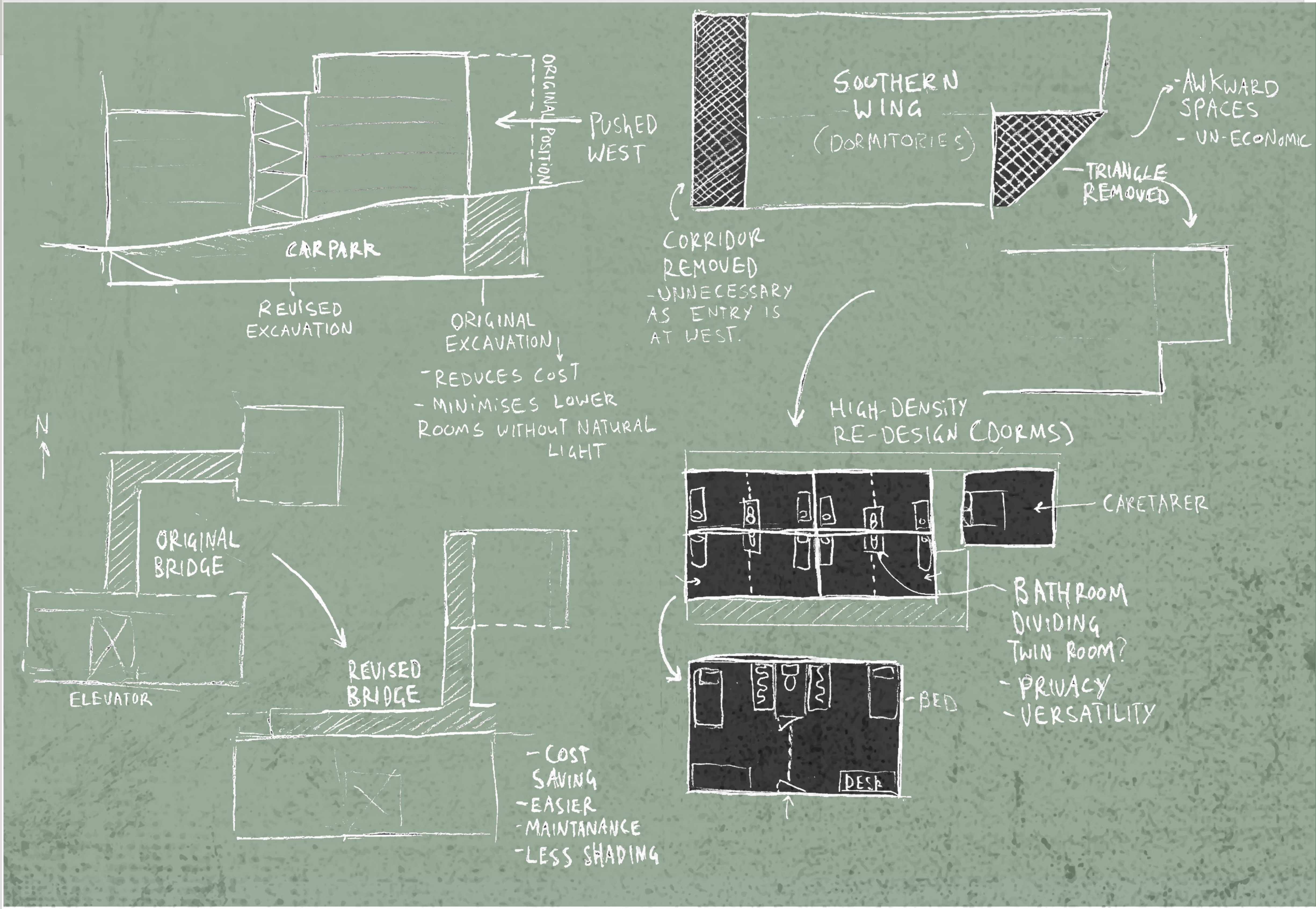


Figure. 51 . Conceptual sketches, March 2022

CO-DESIGN
MILESTONE 2.5: RESPONSE - CONCEPTUAL PLANS

NOTE: BASEMENT AND LEVEL 4 NOT INCLUDED
IN
THIS SET AS THEY REMAIN UNCHANGED

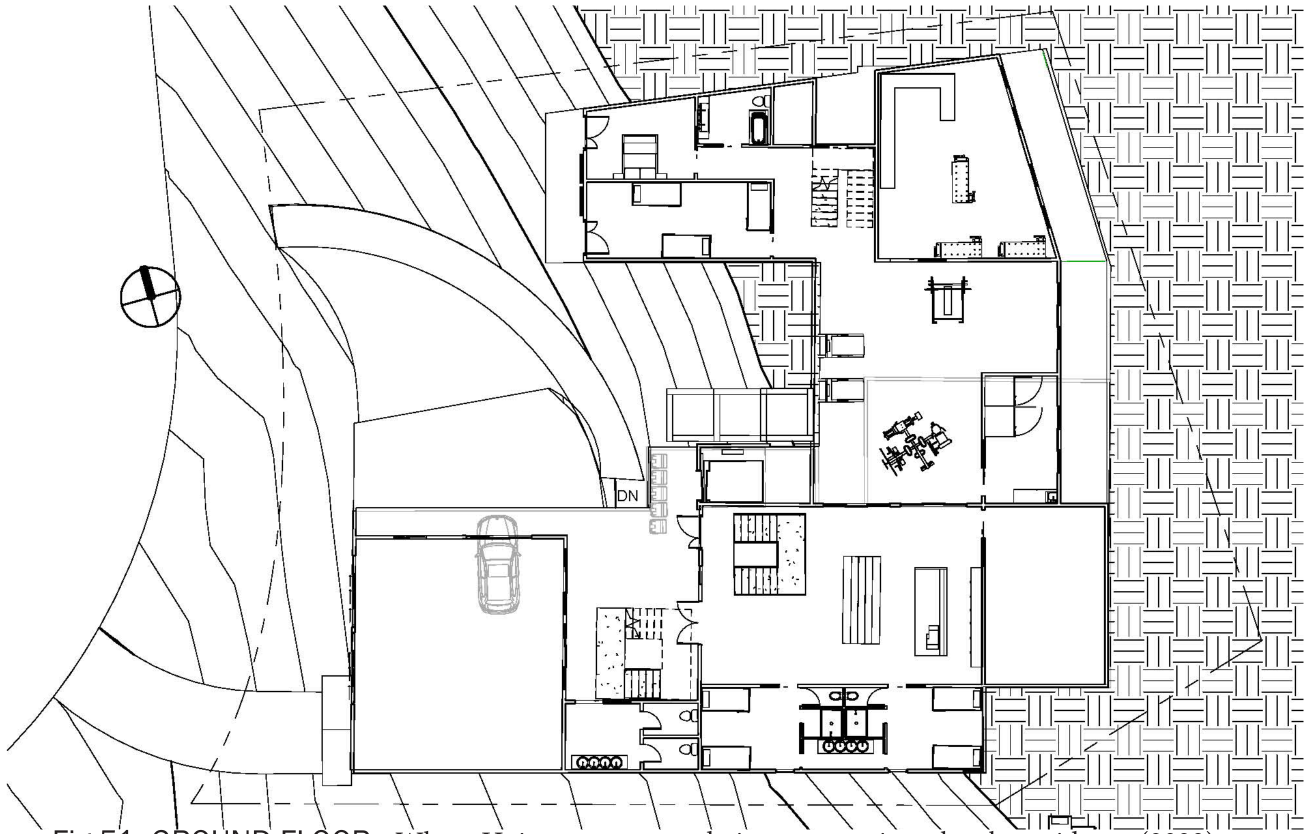


Fig.51. GROUND FLOOR - Whare Hui, guest accomodation, gym, private hawke residence (2022)

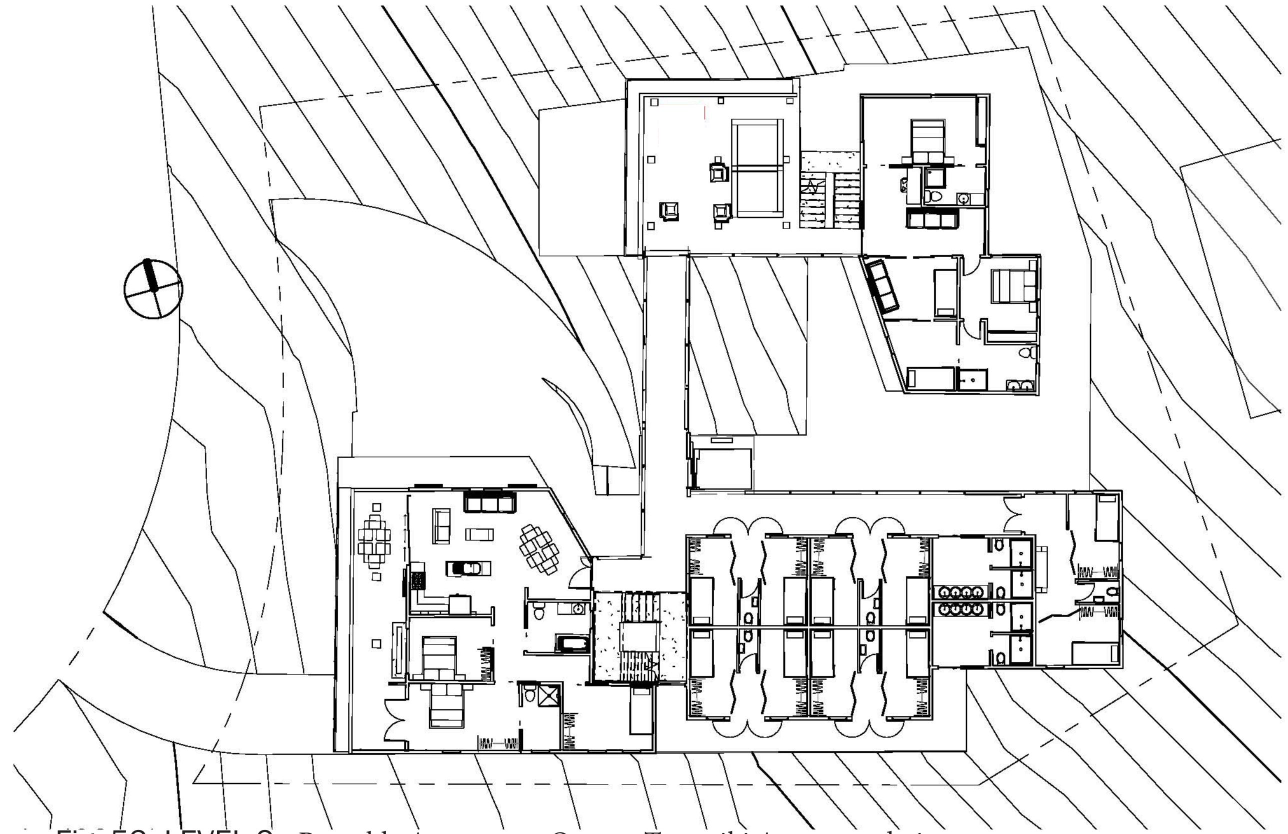


Fig. 53. LEVEL 2 - Rentable Apartment, Oranga Tamariki Accommodation, Communal Patio, Private Hawke residence (2022)

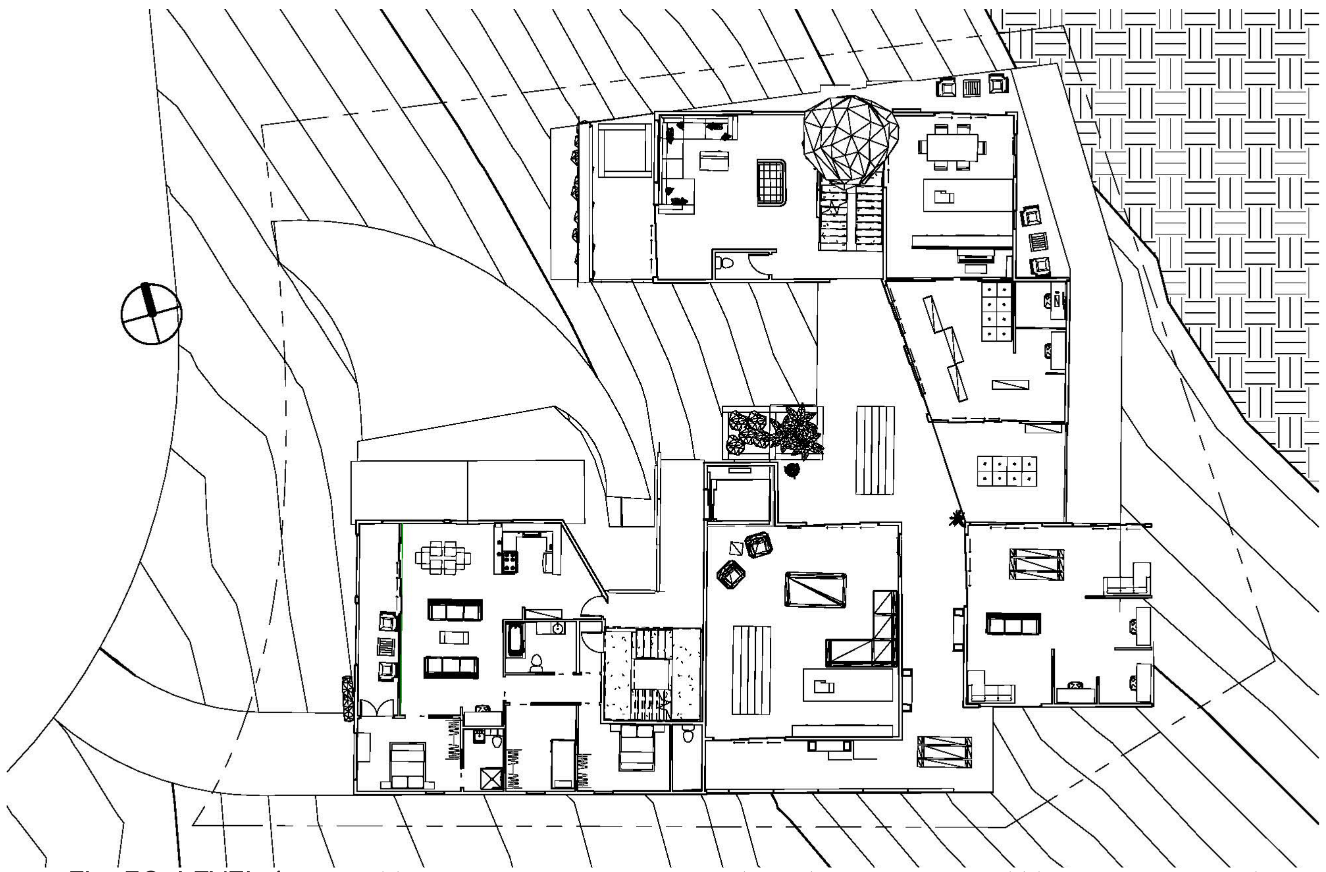


Fig. 52. LEVEL 1 - Rentable Apartment, Oranga Tamariki co-living, communal library, private Hawke residence (2022)

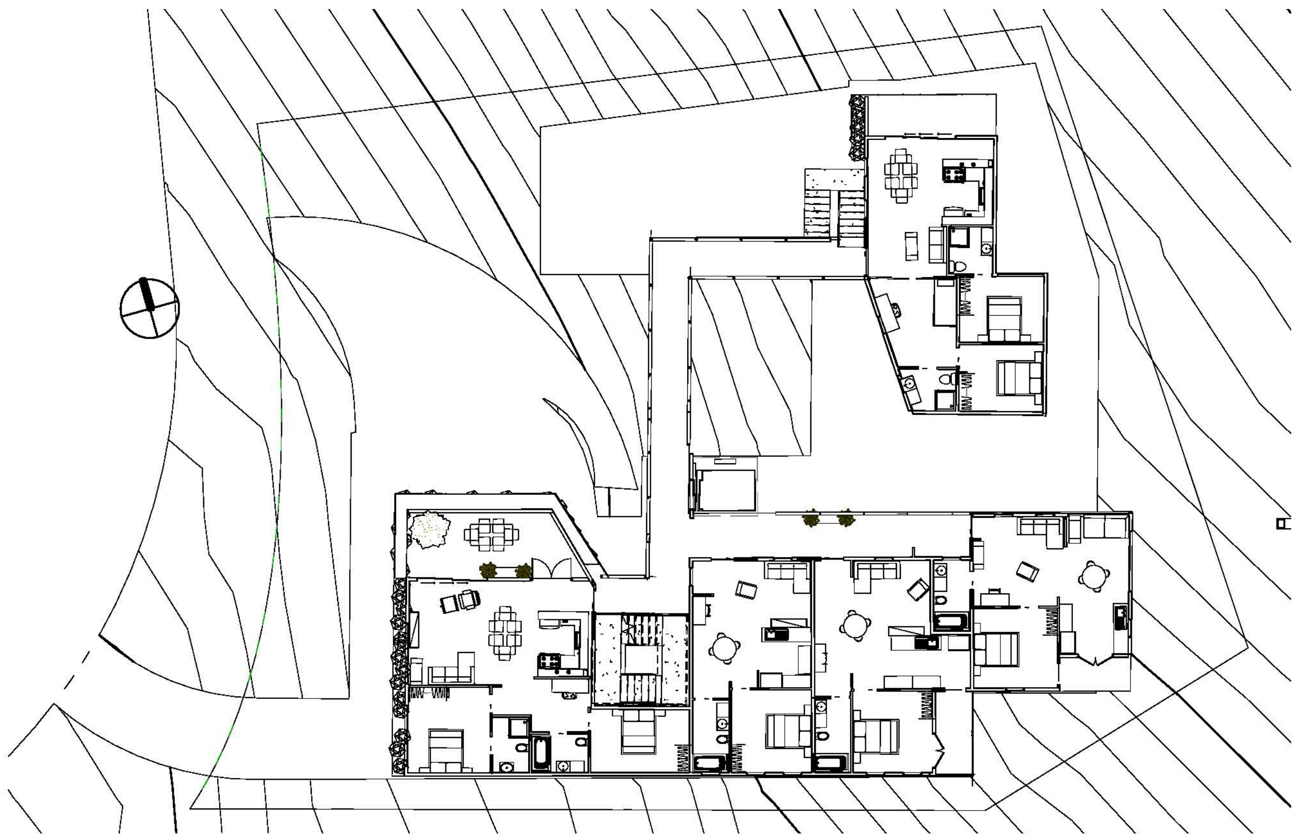


Fig.54. LEVEL 3 - Rentable Apartment, Mothers accommodation, private Hawke Residence (2022)

CO-DESIGN MILESTONE 3:
In-person Korero with Extended Hawke Whanau
Late March 2022

In Thursday's studio session we met with the Hawke Whānau 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.

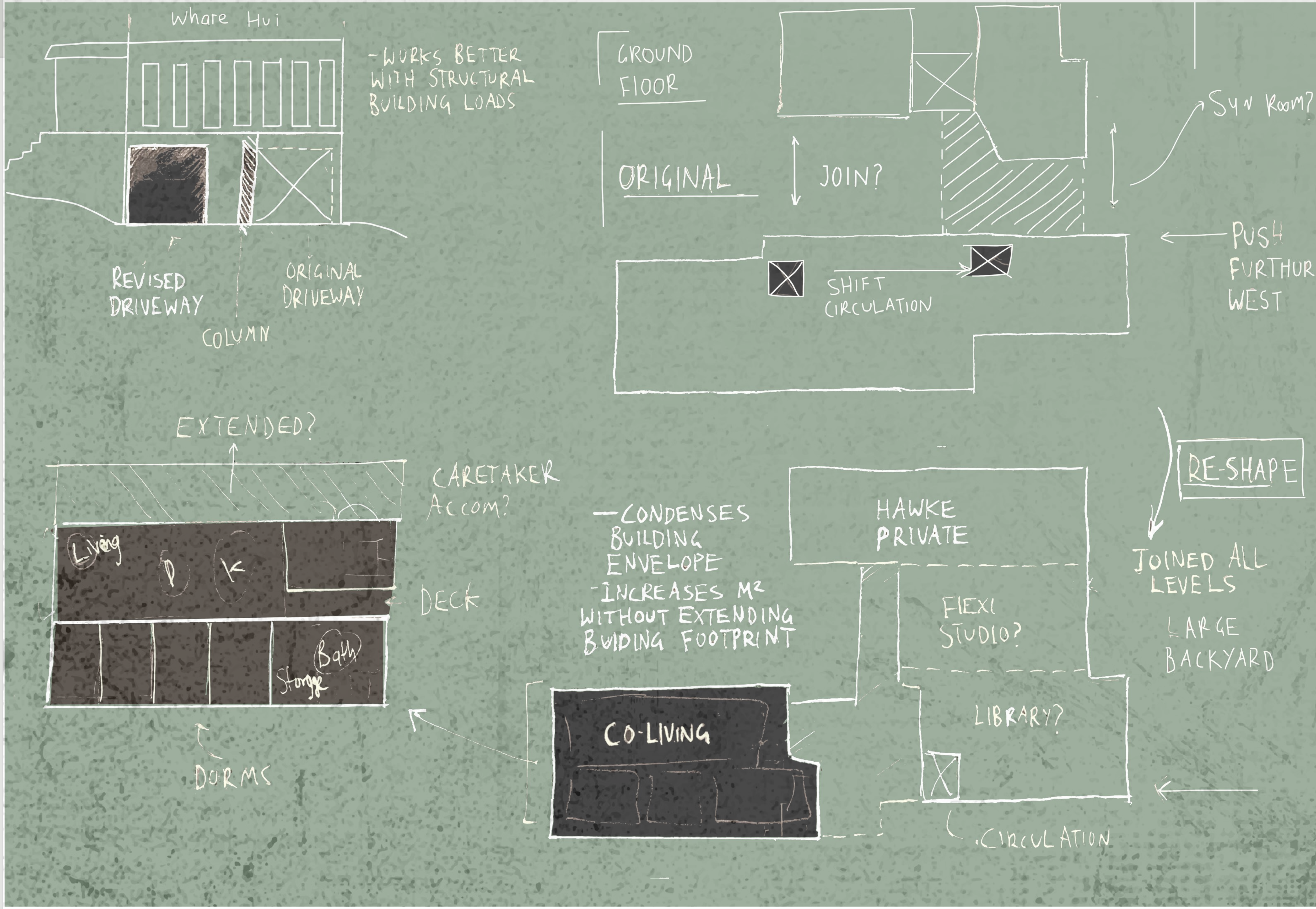


Figure.55. Conceptual sketches, (April 2022)

NOTE: After the meeting, we decided to re-shape the design to reduce it's overall footprint and merge the two wings together - this would reduce excavation costs considerably, and increase green space.
This was later approved by the whānau.

CO-DESIGN
MILESTONE 3.5: RESPONSE: DEVELOPED PLANS

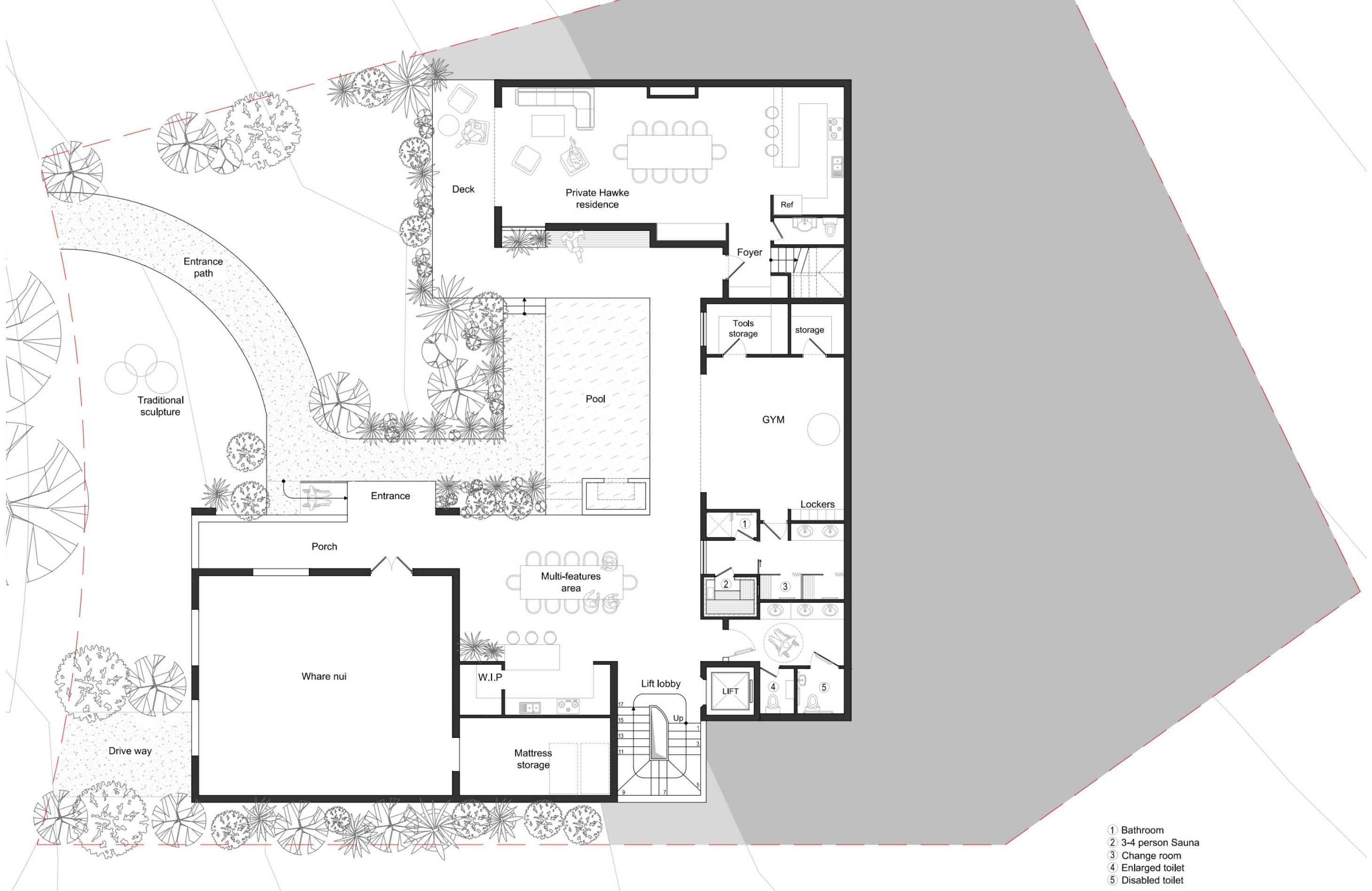


Fig.56. GROUND FLOOR - Whare Hui, guest accomodation, gym, private hawke residence, (Allan Phan ,2022)

Fig. 58. LEVEL 2 - Rentable Apartment, OraNga Tamariki Accommodation, Communal Patio, Private Hawke residence (Allan, 2022)

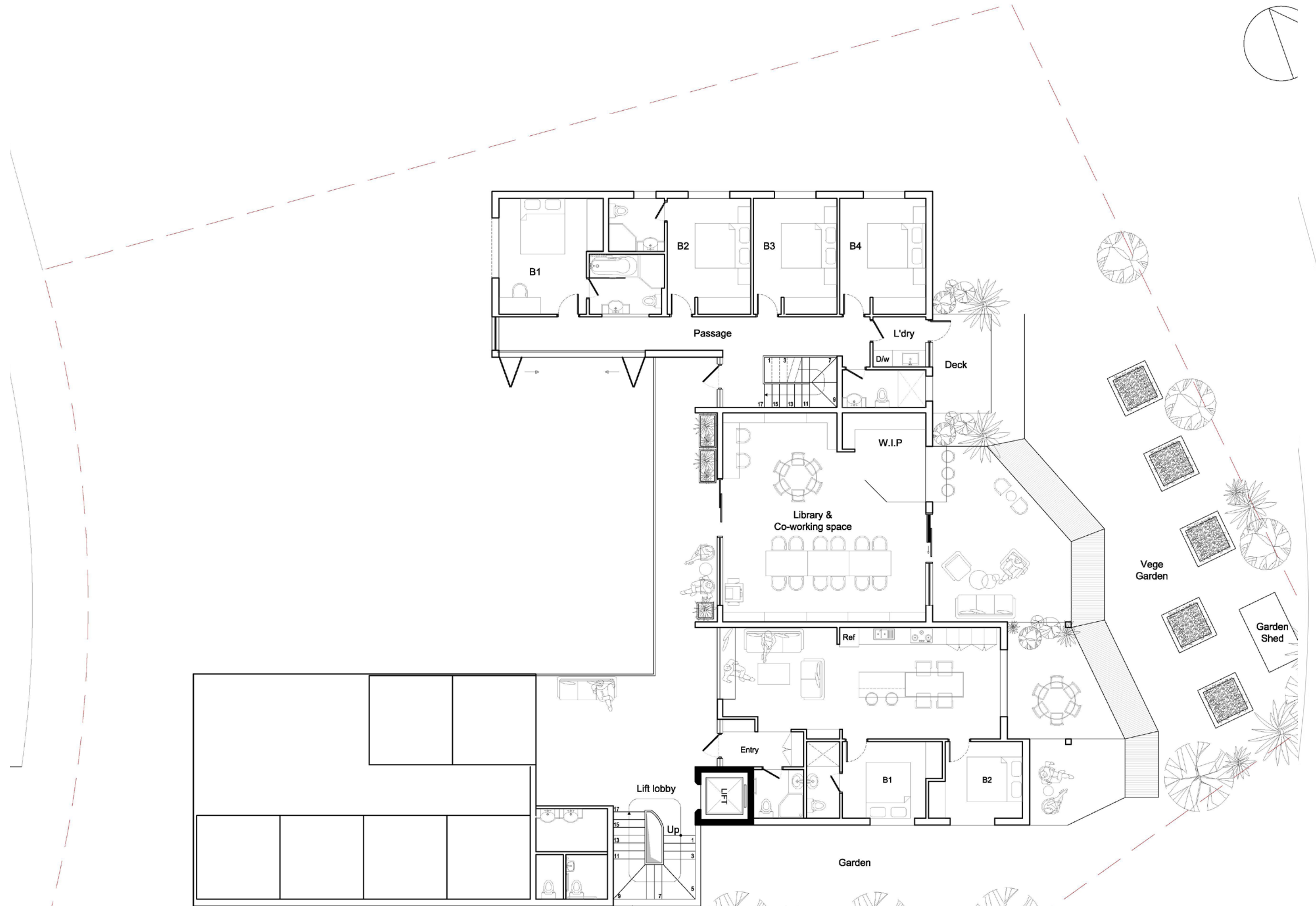


Fig. 57. LEVEL 1 - Rentable Apartment, OraNga Tamariki co-living, communal library, private Hawke residence (Allan Phan, 2022)

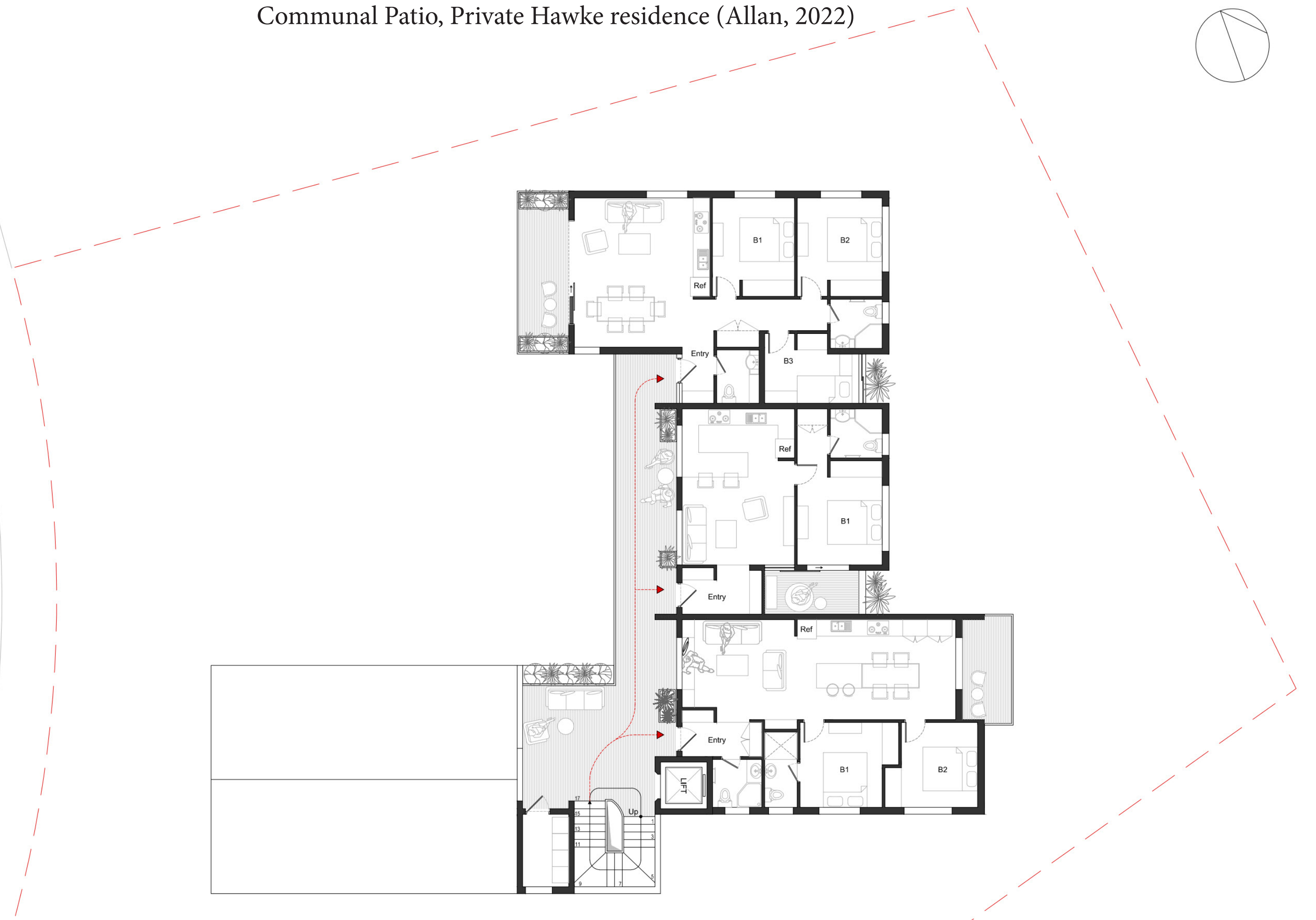


Fig.59. LEVEL 3 - Rentable Apartment, Mothers accommodation, private Hawke Residence (Allan Phan, 2022)

CO-DESIGN MILESTONE 4:
May Meetings and General Development

May 2022

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 RaNgātiratanga 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 Whānau. Prior to our meeting we had asked her questions relating to personal visual symbols and artwork that hold importance within the whānau.
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 whānau.The female side should incorporate visual elements that represent the whakapapa of Aroha Nui; (Ruapehu, Ngāti Rangi, WaNganui River). While the masculine side represents Bob Hawke's whakapapa; (Ngāti Whātua, etc...).
Tui explained that the house should be a representation of masculine and feminine energies merging harmoniously together as a singular entity. These ideas 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.

REFLECTION ON MILESTONE 4:

My original intention with visual development of the whare, was to carry out a lot of the creative work myself. However, after recieving advice I realised that it is not my place to carry out such a process myself.
If this development is to reflect the notion of mana motuhake, artists from Ngāti Whātua Ōrākei themself need to tell the story visually, not an outsider like myself.

"As researchers and practitioners, we must be vigilant of assumed and dominant frames of design, so that they do not skew or replace what design means and how it's practiced in and by 'peripheral' locations, cultures, and people." (Akama et al, 2019, p63).

CO-DESIGN MILESTONE 5:

Meeting with Laurence Makoare And Beronia Scott - VISUAL / ARTISTIC DEVELOPMENT

Fig.60. Co Design Meeting, September, 2022, Rana Fatoohi

In September we had the privilege of meeting with two renowned Ngāti Whātua Ōrākei artists. Beronia Scott, known for her skills in raranga, and Laurence Makoare, a well-recognised carver of the tribe.

This was an exciting opportunity to work face to face with Iwi to explore what the visual language of the building would look like. To uphold the principle of Mana Motuhake, It was important for us as the architect not to impose too strictly on the direction the artists would take.

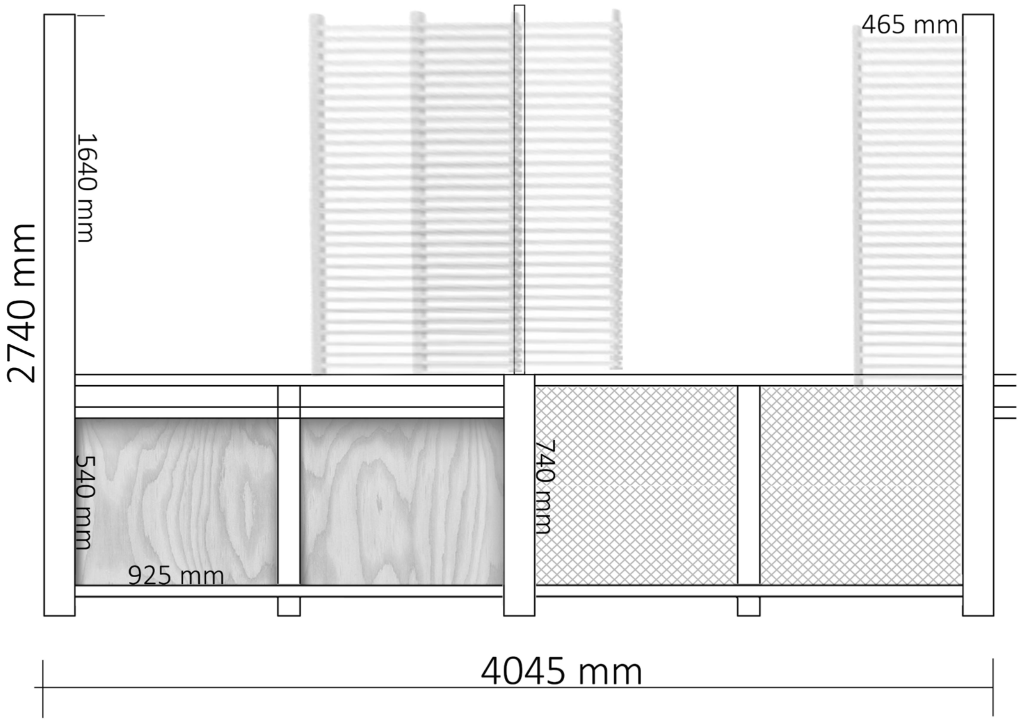

Fig.61. Co Design Meeting, September, 2022, Lana Webster

In order to help Beronia and Laurence understand the scope and opportunities of the project, I developed several spec drawings that explored the opportunities presented in various building elements.

I tried to develop these drawings in a way that was clear and easy to understand for people outside of the architectural industry. I decided to focus on a generic balustrade and a simple pergola that extended out onto the third-floor patio. I produced a 3D representation for each element that clearly conveyed several opportunities for artist involvement, with design examples serving as inspiration. On a separate page, I produced detailed specs that displayed the measurements for each element. The idea behind this was to allow a simple way for Beronia and Laurence to interact with the development without feeling overwhelmed by the scope of the whole project. We also provided them with the latest rendered elevations of the building.

Before I began presenting these drawings, I explained that these were only to be used to guide the artists, and it was ultimately up to Beronia and Laurence to decide their level of involvement.

The drawings displayed in the following pages are what we presented to Beronia and Laurence.



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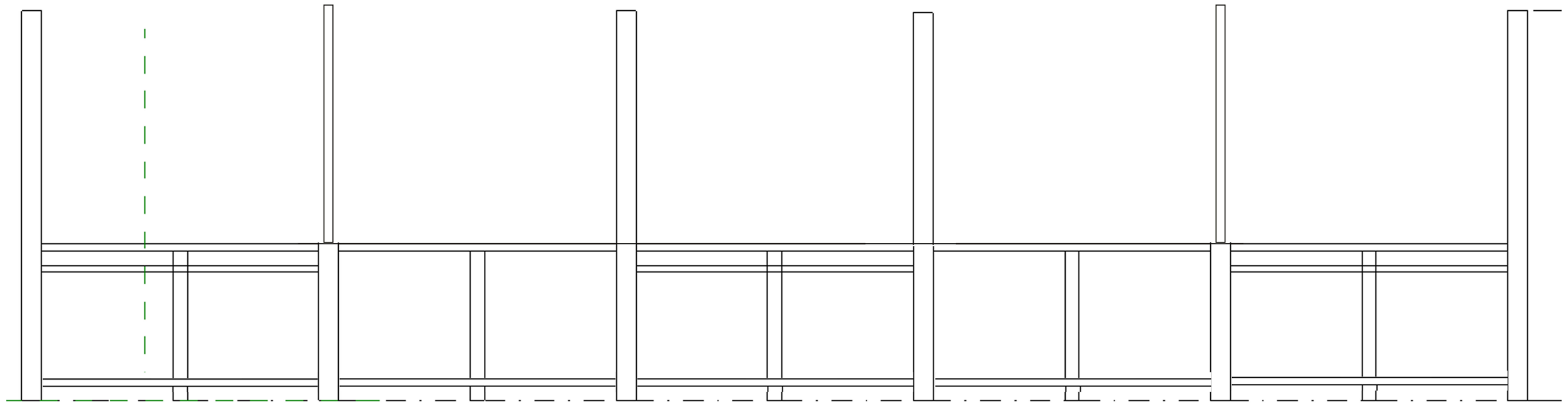
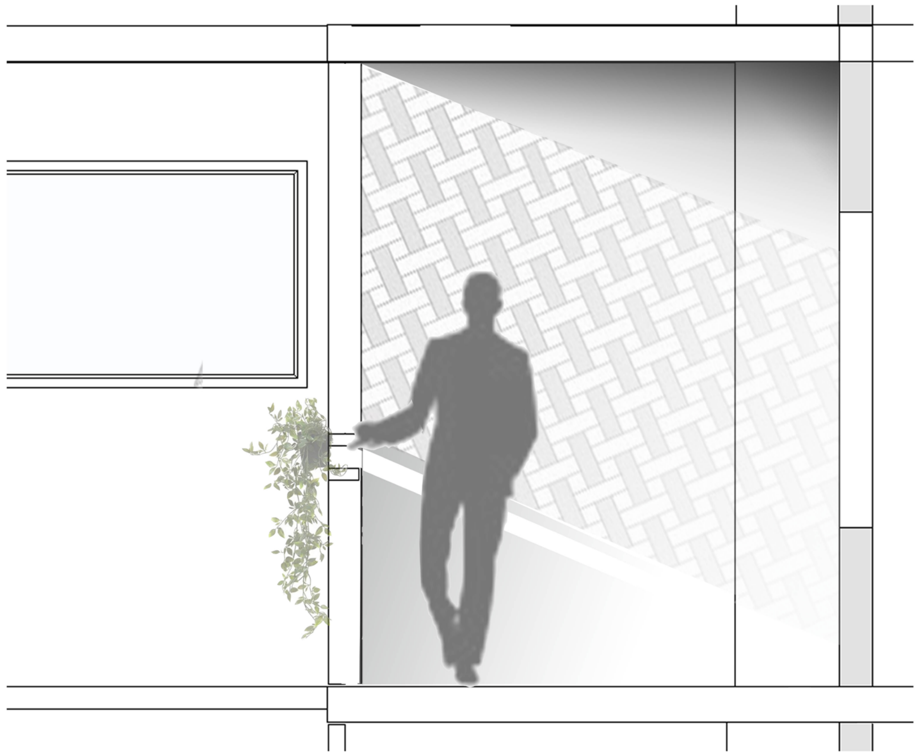


1:50 @ A3



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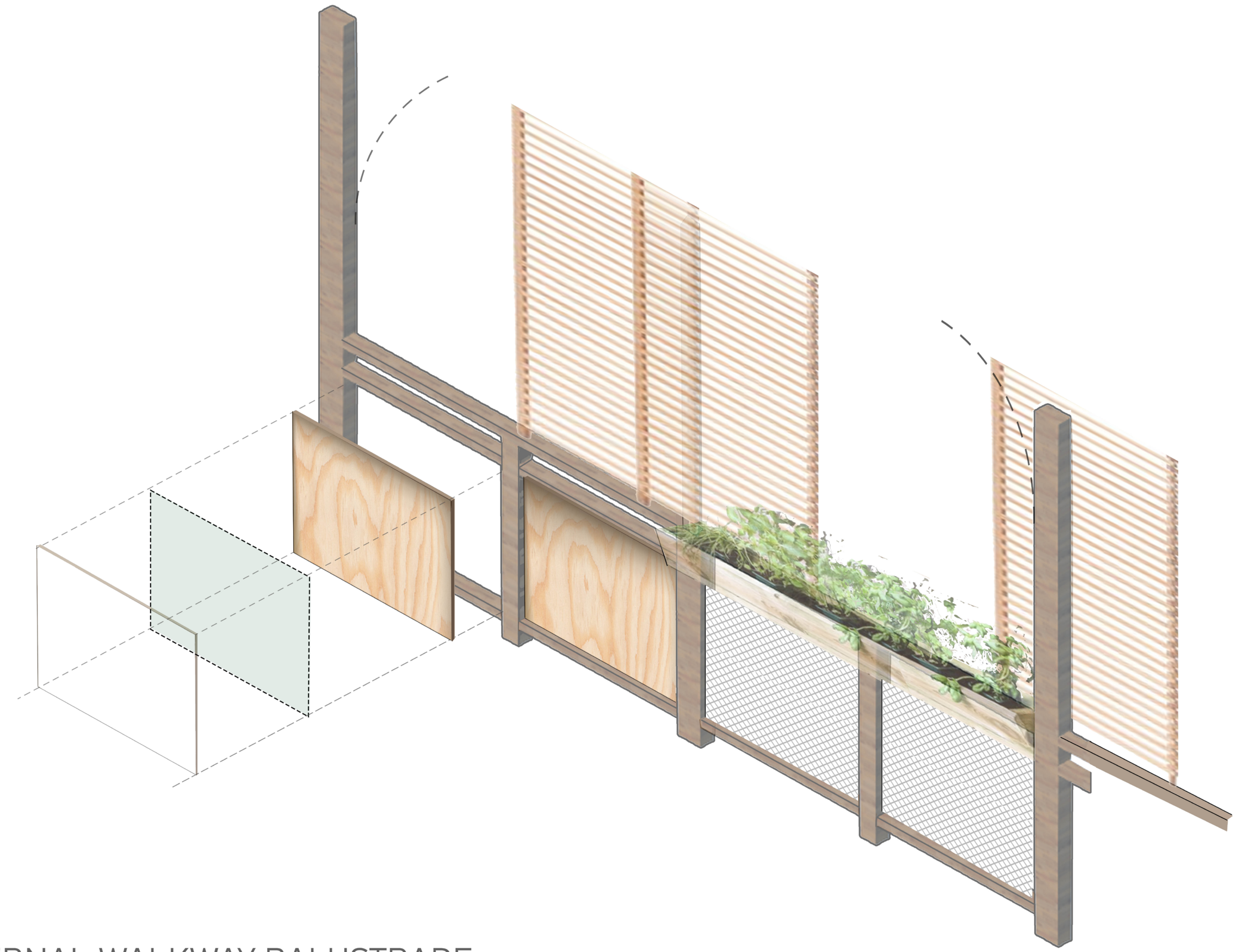
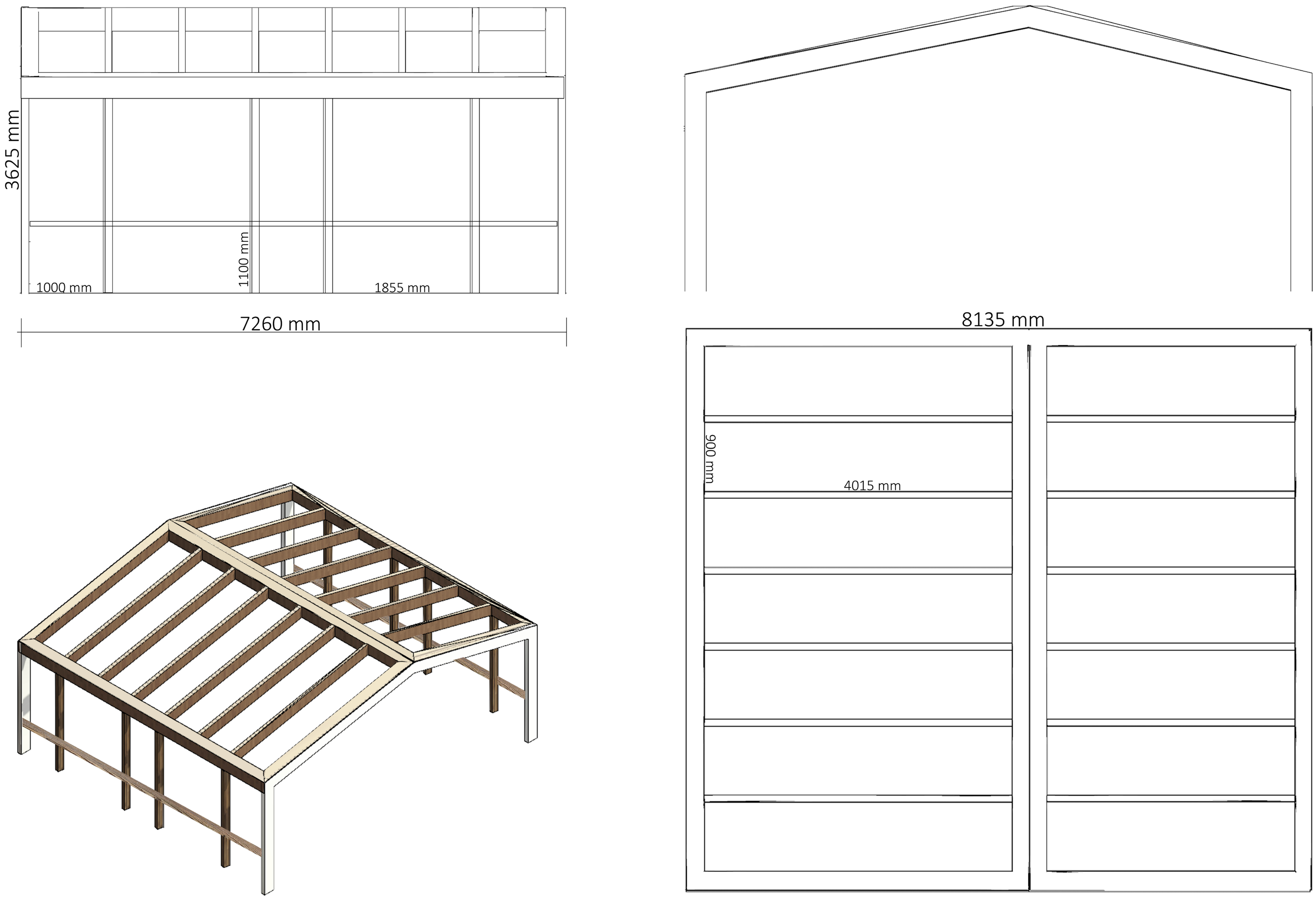


EXTERNAL WALKWAY BALUSTRADE



THIRD FLOOR PERGOLA 1:50 @ A3

Fig.62. Pergola Details, 2022

GENERAL INSPIRATION BOARD

Fig.63. Inspiration Baord, 2022

Redacted due to copyright laws.

Fig.64. Pergola Investigation, 2022

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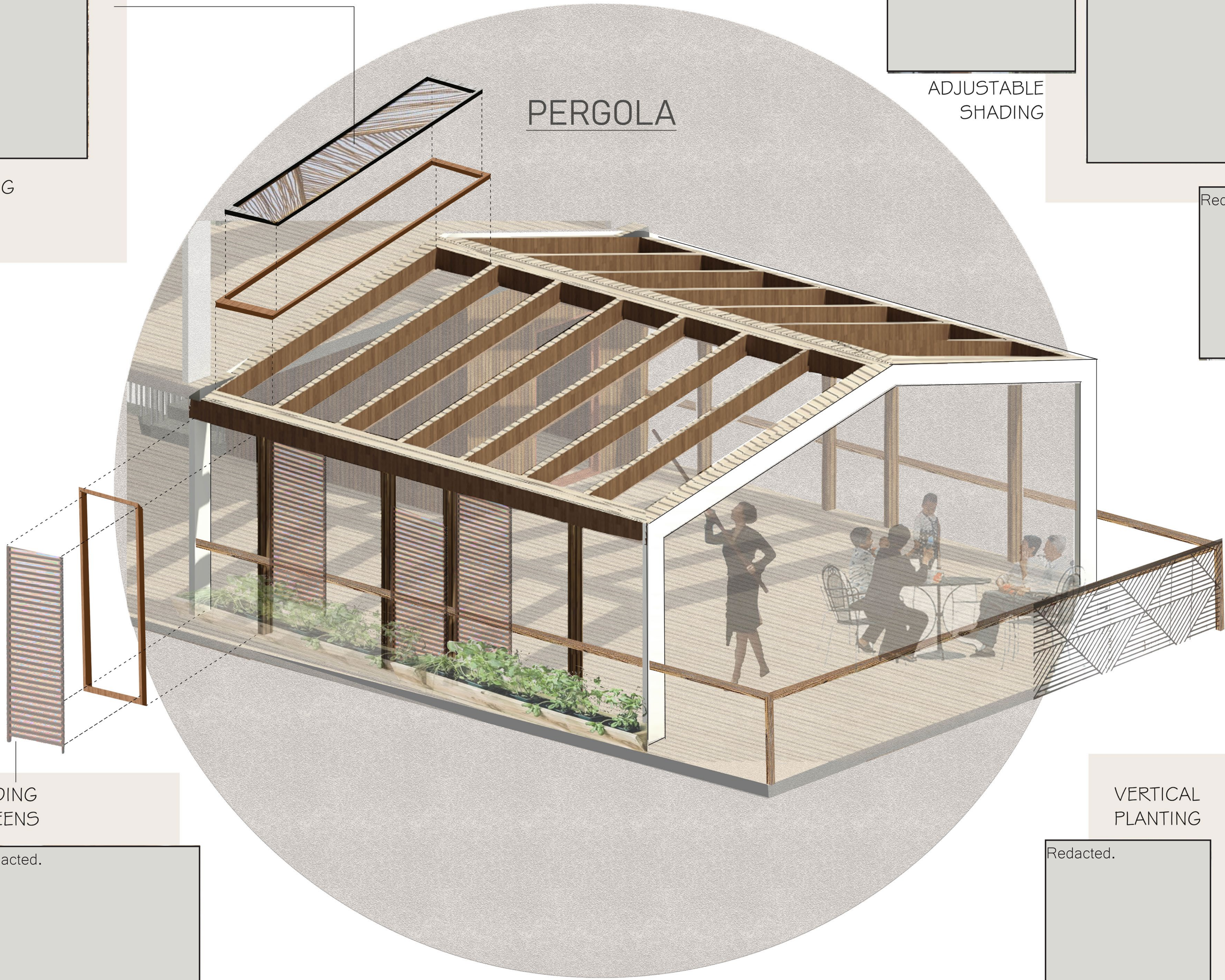

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Author's Note: These drawings were developed to show Beronia and Laurence how we felt the atomosphere of the development to look visually. We stressed to them that these were merely suggestions, and we wanted t them to be fully in control of how these features would turn out.

Fig.65. Balustrade Investigation, 2022

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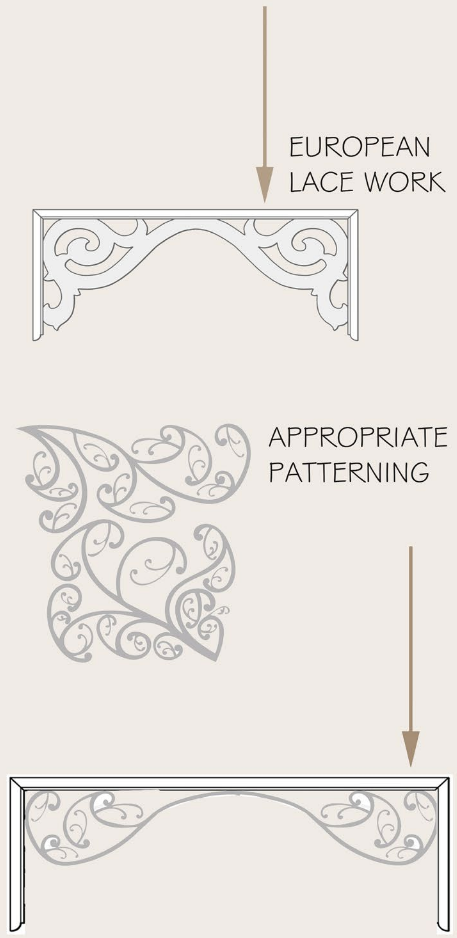

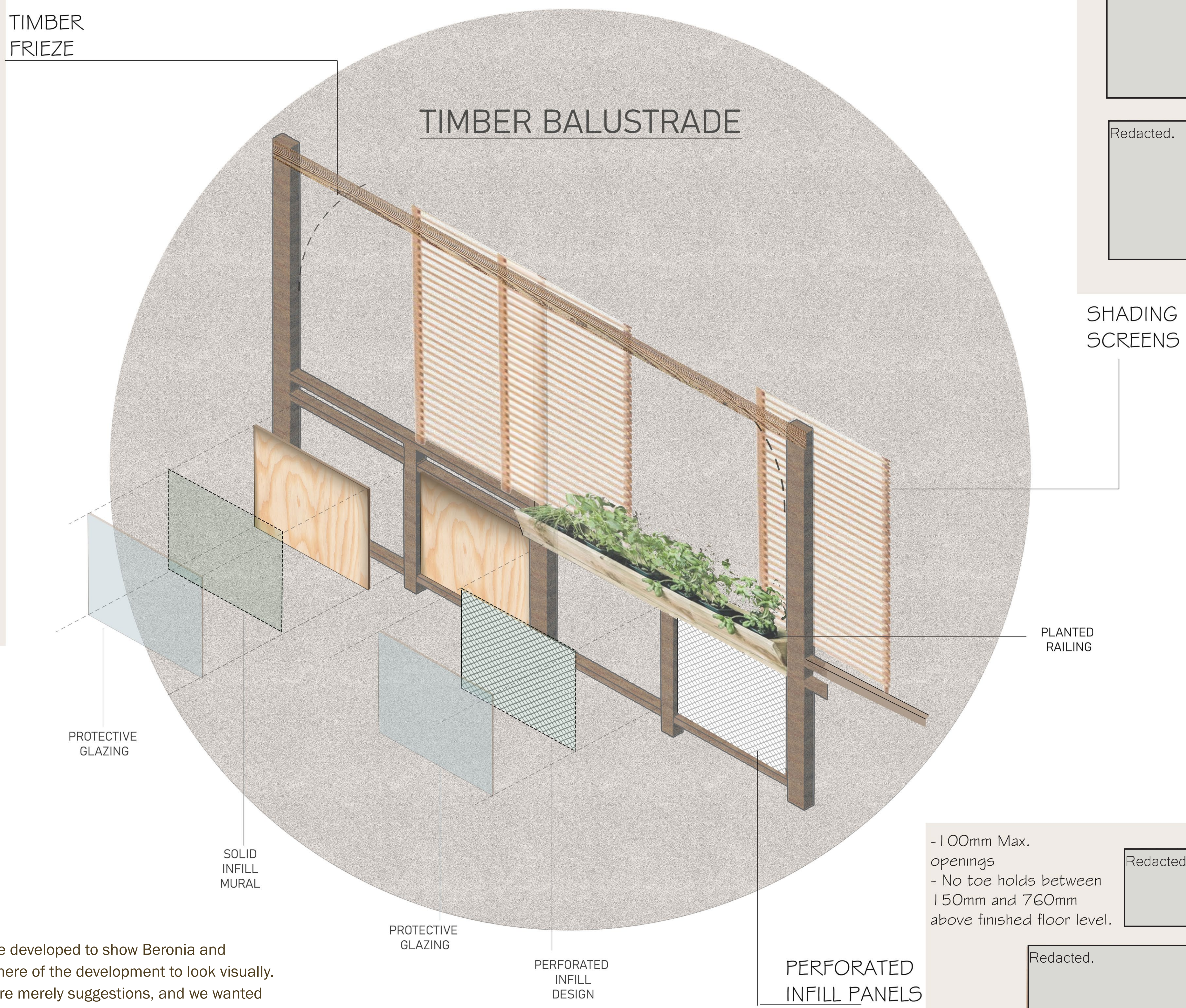

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- 100mm Max. openings
- No toe holds between 150mm and 760mm above finished floor level.

Redacted.

Redacted.

Author's Note: These drawings were developed to show Beronia and Laurence how we felt the atomosphere of the development to look visually. We stressed to them that these were merely suggestions, and we wanted them to be fully in control of how these features would turn out.

Fig.66. East and West Elevations, 2022

CONCEPTUAL FACADE EXPLORATIONS

Fig.68. North and South Elevations, 2022

Fig.67. West Elevation Concept, 2022

Fig.69. South Elevation Concept, 2022

KEY POINTS OF DISCUSSION WITH BERONIA AND LAURENCE:

-Initially, Laurence pointed out that the profile of the pergola and mentioned the surface could provide an opportunity for a carved feature.

-Beronia then mentioned how the profile of the southern facade resembled the terraced form of a Poutama design. She discussed how this could somehow be integrated within the cladding of the facade through different colours or materials.

-Beronia also discussed how the facade could emulate a Kakahu - a cloak made from feathers that could symbolically drape over the building through facade expression. A Tanako pattern could encompass the lower perimeter of the facade.

-The discussion then moved towards shading panels present throughout the exterior walkways and pergola. Laurence explained how panels could be filled with poutama designs that could join symmetrically when joined together.

REFLECTIONS ON MILESTONE 5:

While explaining each of the elements presented in the drawings to Beronia and Laurence, I realised I was imposing and trying to manipulate the discussion. At this point, I decided it was best to limit my explanation and let Laurence and Berionia interpret the drawings for themselves.

“As researchers and practitioners, we must be vigilant of assumed and dominant frames of design, so that they do not skew or replace what design means and how it’s practiced in and by ‘peripheral’ locations, cultures, and people.” (Akama et al. 2019, p63).

I found it unfamiliar how the artists interacted with the project. Although it is worth noting that they have very little experience with architecture - I was still expecting them to be full of suggestions, but they were tentative and thoughtful.

I found this session to be an interesting point of learning. As a designer, I felt the urge to take charge of the project, as I had spent a lot of energy producing these drawings and felt like I somehow had ownership over the discussion. However, I had to remember the core driver of my thesis - I needed to step back as a passive facilitator and as someone who doesn’t dominate the project. Especially within a project which is so personal to the Ngāti Whātua Ōrākei Hapū.

I now realise that the reason I felt so uncomfortable presenting these concepts, is that Ngāti Whātua Ōrākei already know how to approach artistic design. This is a group of people that have been generating artwork for generations. I now understand that I was trying to mould the narrative and solve an issue from my level of perception as a designer. In order to exercise mana motuhake, visual development is something that has to originate organically from within the Hapū. It shoud not be generated through approach of a Pakeha architecture student forcing a set of templates onto people. Especially, when that student becomes confused and frustrated when such inforcements are not utilised.

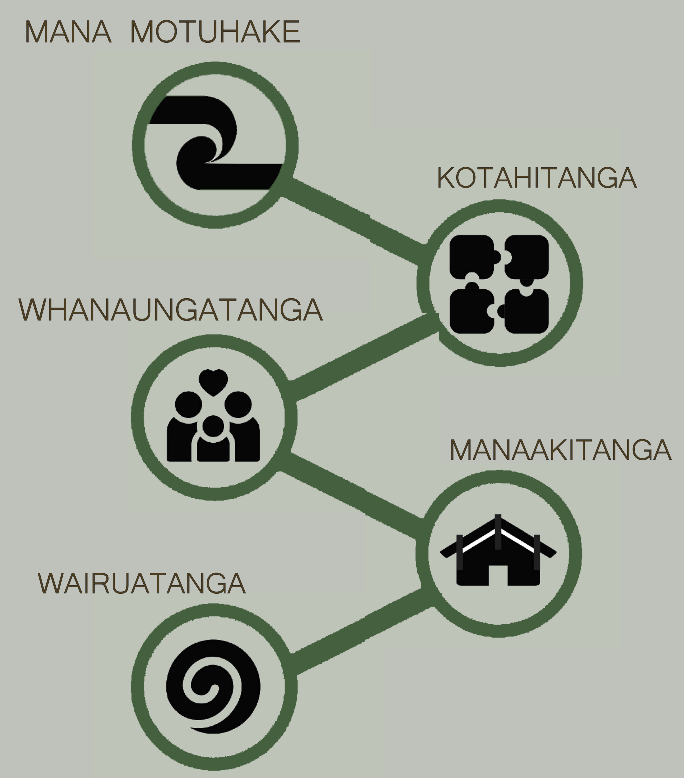
I want to thank Laurence and Beronia for their time and the knowledge that they shared with us. I can only hope that they can understand that this meeting was a pivotal experience for me as Pākehā a designer in the process of learning.

CO-DESIGN REFLECTION
PART 5 GENERAL CRITICAL REFLECTION

Overall, I believe our approach to co-design proved to be successful. By involving the Hawke whānau in every design development, we arrived at an outcome that we hope fully reflects their needs and values. However, the only real way we can measure our success is by asking for a detailed evaluation from the whānau. This is something that we have not yet asked for as the development of the project is still ongoing and it is up to the whānau to decide the level of feedback they want to give to us. It is also worth considering that the whānau do not have prior co-design experiences to compare our process with, meaning any feedback received may lack perspective as to how it could be approached differently.

It is also worth considering that this was our first experience with co-design as well. Considering the basic guides currently available, this was an opportunity to learn as a way of providing advice for architects working on similar developments in the future.

NGĀTI WHĀTUA ŌRĀKEI VALUES ENGAGED WITHIN THIS PROCESS:



WHAT COULD BE IMPROVED:

- The communication process would have been much more efficient if we had developed a more defined method of storytelling. Something that really assisted us last year was providing a site model with movable massing models that the family could interact with.

- We needed a clearer way of recording the progress gathered from each session. Although we made an audio recording of each session, it would have been more effective if we visualised each piece of information during the sessions as a way of gaining a more detailed perspective of what was needed. Listening back to the recordings was often a laborious process, and recording development in a visual, tactile way would have been a lot more efficient.

- It may have been more beneficial for the whānau to involve a member of the Ngāti Whātua Ōrākei Hapū in the process who had a background in building development.
At times, our Ropū would explain our concepts in a lot of detail, meaning there was a lot of information for the whānau to take in at one time. If there was a Hapū member present who was more literate in architectural concepts, they could easily relay information to the other whānau members who might not have grasped aspects of the kōrero. However, this could have been assisted through a more cohesive and interactive method of presentation on our part.

- Considering our Ropū's lack of experience, it might have been beneficial to consult more professionals earlier on in the process. Especially an architect or designer who has had extensive experience with co-design in the past.

- Considering this project is in conjunction with Oranga Tamariki, it may have been beneficial to involve an O.T representative who knew in detail what was needed in order to provide for young boys in such a facility.

Part 6
FLEXIBILE HOUSING

Putting power back into the hands of residents

Future-proofing the Hawke whare

"The potential for others to imprint an identity is paramount in any building, but most of all in housing, where there is an ethical imperative to allow the dwellers to live out their own lives and not that of the architect."
(Raban, 1974)

6.0 FLEXIBLE DESIGN; A REMEDY FOR INOPERATIVE HOUSING?

Flexibility is something that is largely lost within most modern building developments.

Current approaches to housing tend to follow the structure of responding to the needs of the moment, with very little consideration paid to the temporality of a building.

Jeremy Till and Tatjana Scheider (2007) reflect on the current state of housing in their book '*Flexible Housing*':

"It is a landscape of design stupidity. Why, just why, would one build housing that so quickly becomes redundant?" (Till et al, p.4)

Versatility of space could be the key to designing a built environment that can grow and morph sustainably. Urban density has increased dramatically over the past decades.

Considering this, a common Western solution is to build and expand cities latitudinally, through sprawling housing developments that segregate communities and waste resource.

In order to combat housing issues, we need to start approaching architecture as though it is something that can ebb and flow within our constantly shifting - living needs.

Through research and conceptual exploration, I aim to use flexibility as a tool to provide residents with the power to customise their home interiors.

In theory, offering flexible homes provides people with the authority to dictate their living environments without the need to consult professional developers or pay for extensive renovations.

"There is a simplistic association of flexibility with progress; something that can move escapes the shackles of tradition, something that can be changed is forever new." (Till et al, p.5)

The Hawke development is an ultimate example of a building that will require a considerable level of flexibility to operate effectively. Predictably, over time, the needs of the whānau will shift, meaning the interiors of the building will need to adapt. By providing versatile space, we are responding to the needs of generations of iwi members, not just those in the here and now.

6.1 'HARD' AND 'SOFT' FLEXIBILITY

Introduced in '*Flexible Housing*' (2007), the 'soft' and 'hard' methodology acts as a method of categorisation to navigate the overriding typologies within the field (Till et al, 2007). The 'Hard' typology is perhaps the more standard method displayed within flexible projects. This method results in a specifically determined interior arrangement, one where the architect still maintains a sense of control over the result. 'Hard' methodology implements basic adjustable elements such as sliding doors, moving walls and fold-down furniture. The architect works in the foreground by determining specified layouts and uses.

Alternatively, the 'Soft' methodology allows for indeterminacy, the tenant themself controls the plan and the architect works in the background. 'Soft' methodology implements, raw, open planned spaces and a lack of rigid construction elements. It also allows greater opportunity to implement modularity and footprint expansion (Till et al, 2007).

Both of these methods are equally as useful within their relevant environments, and the use of either method must be carefully considered against the central context of the space in question and the needs and desires of its occupants.

When considering this within the context of the Hawke development, I believe it is important to allow as much personal control as possible from within the family. This allows them to implement a sense of personal belonging within their home.

This concept is supported by Jonathan Raban (1974) in his book '*Soft City*', which explores the notion of allowing dwellers to hold power in their personal environments:

"The potential for others to imprint an identity is paramount in any building, but most of all in housing, where there is an ethical imperative to allow the dwellers to live out their own lives and not that of the architect." (p. 12)

I believe this is especially relevant in terms of social housing within our local contexts, as a common problem of many current social housing developments is a distinct lack of personal connection. Consequently, this seperation between dwellers and their living environments results in social housing becoming derelict and inhabitable.

Such buildings need to morph and expand to the specific needs that a vast diversity of tenants require.

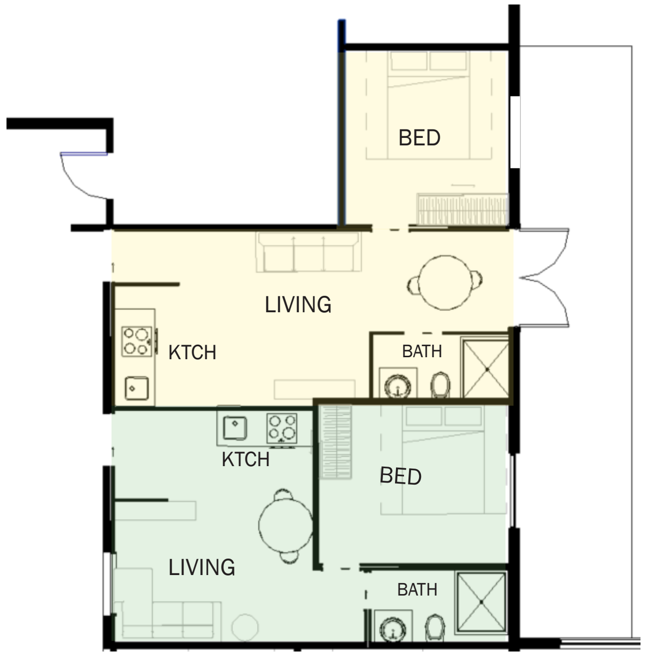
(Refer to case studies in Appendix 1)

6.4 'HARD' METHODOLOGY APPLICATION

Below I have applied 'hard' methodology to one of the private apartments on the second floor of the Hawke whare. A partition wall acts as removable tool that can be taken away to combine two studios into one large dwelling.

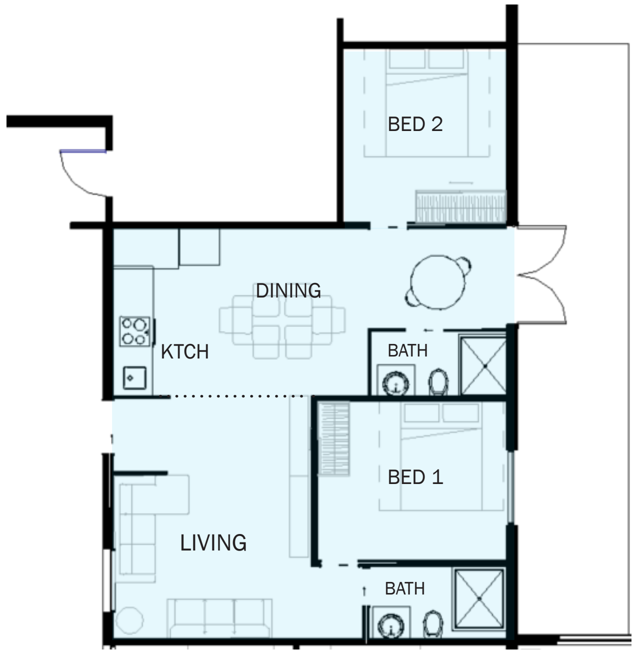
LIMITATIONS:

Although this is a suitable solution for a basic level of versatility, there are only two iterations that can be applied within this model. Additionally, kitchen associated with the green apartment would require to be stored away when out of use, and plumbing system would have to be re-installed each time the partinition wall is put in place.



TWO STUDIO APARTMENTS

Figure.74. Two Studio Apartments, 2022



TWO STUDIO APARTMENTS
COMBINED INTO ONE
TWO BEDROOM APARTMENT

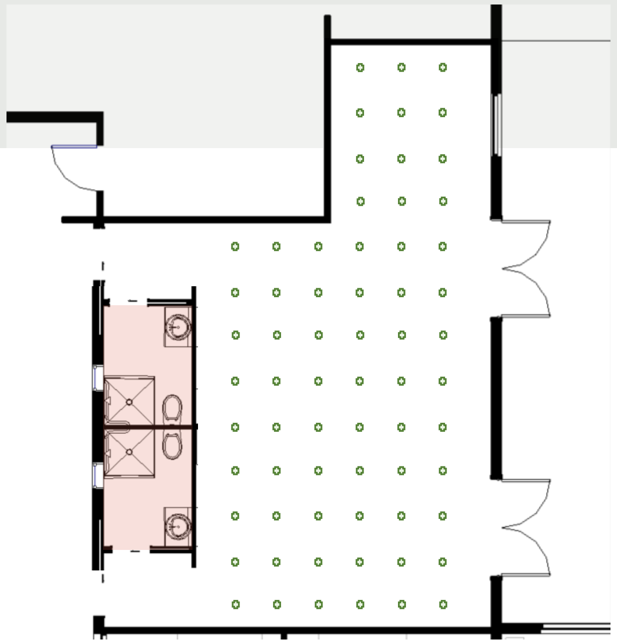
Figure.75. Two Studio Apartments combined into one, two bedroom apartment, 2022

6.5 'SOFT' METHODOLOGY APPLICATION

In this iteration, I have utilised the custom electical outlet system present in the Les Anticonformes project. The only fixed features in this scheme are the bathrooms, meaning there are endless layouts that can be produced - without having to re-wire anyhthing.

LIMITATIONS:

Although this option allows for an incredible amount of versatility, the same issue arises when considering the installation of kitchen plumbing. There is also the issue of sstoring the partition walls when they are removed to accomodate a larger apartment.

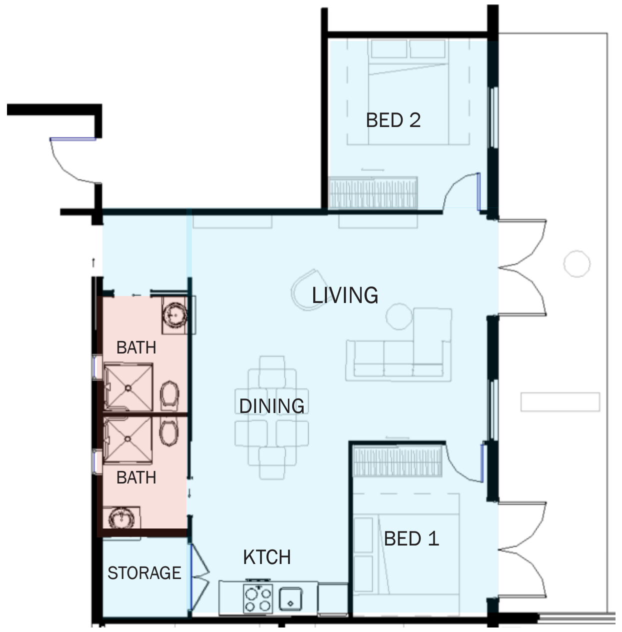


EMPTY SHELL

Figure.77. Empty Shell, 2022

TWO STUDIO APARTMENTS

Figure.76. Two Studio Apartments, 2022



TWO BEDROOM APARTMENT

Figure.78. Two Bedroom Apartment, 2022

6.6 MĀORI PERCEPTIONS OF PAST, PRESENT AND FUTURE

Kia whakatōmuri te haere whakamua:

'I walk backwards into the future with my eyes fixed on my past'

(Rameka, 2016)

In contrast to Western views, Maori consider the three traditional dimensions of time to be intrinsically interwoven with one another.

Considering this, future proofing the Hawke whare is an obvious way of respecting kaupapa Maori by acknowledging its usage within the context of an infinite spirit or wairua.

Within western architectural context, this could mean acknowledging buildings as dynamic environments. Spaces that not only provide for present needs, but pay tribute to the past, and hold prospects for the future.

(REFER TO CASE STUDIES IN APPENDIX 2)

6.6 PARTICIPATORY DESIGN: INTEGRATION WITHIN THE HAWKE DEVELOPMENT

Design elements on the scale of Aravena's developments would be hard to implement at this stage of design. Especially when the Hawke Whānau have already specified a set plan. Participatory design could instead take the shape of smaller-scale elements throughout the development. However, this contradicts the idea of producing outcomes that I have personally designed to cultivate a cohesive visual language within the development.

Through the exploration of work from designers like Alejandro Aravena, the notions of modern architecture become inverted. For generations, architects have focused on the act of controlling space - assuming we know exactly how a building is going to be utilised for decades. This methodology can serve us well in many contexts, notably allowing designers to assert a creative imprint - and solidify a safe pre-determined outcome. However, such practices within the context of an increasingly unstable and condensed civilization have already proved to be unsubstantial. Instead, we must produce buildings that respond to present context, as well as future possibilities. To achieve this, architects must be willing to leave their personal visions behind and instead grant considerable control to the people who reside within a structure, both present and future.

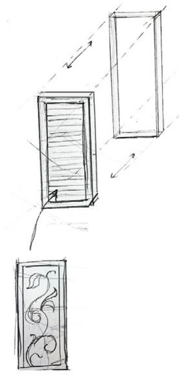
If our future living environments are to improve, we need to start implementing radical methodologies into real-life developments. If done right, I believe the Hawke development is the perfect opportunity to inspire future developments to use more holistic and 'participitory' design solutions.

I aim to produce a series of iterative design solutions that respond to this need for a fresh perspective within social housing.

PARTICIPITORY CONCEPT EXPLORATION

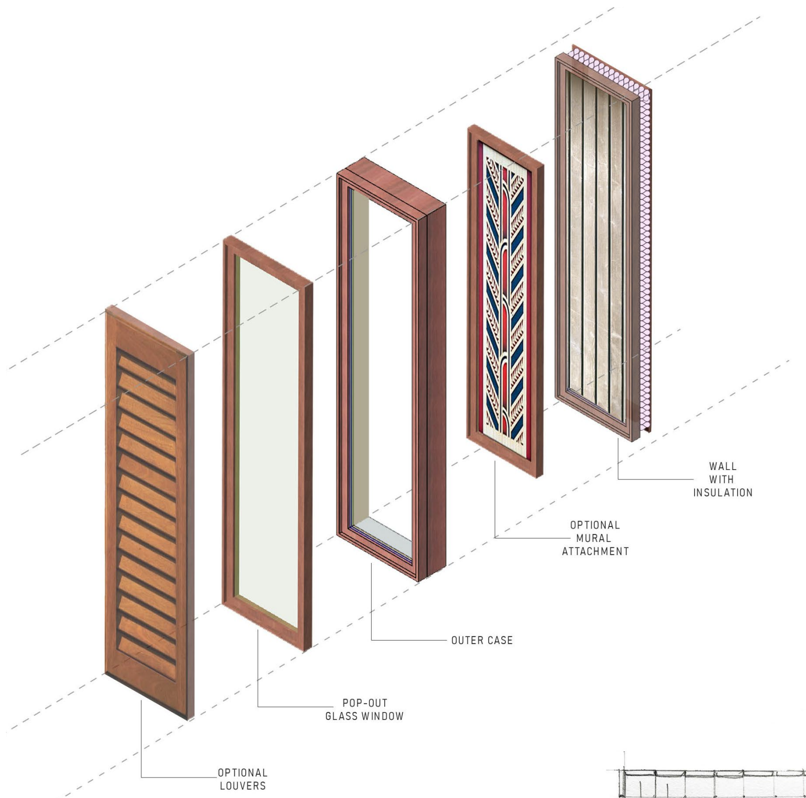
6.7 MODULAR PANELS

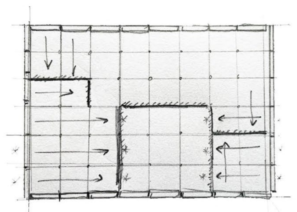
In an effort to implement flexibility throughout the development, I started to develop a series of modular panel systems. These panels would be completely interchangeable with a series of functions with the intention that the Hawke whānau can exercise a high level of control over their living environment. It is important to mention that at this stage of development, I have only produced basic concepts. I soon realised that such systems may be too complex for the scope of the development, and require engineering beyond the scope of this research.



6.8 'MODULAR CENTRAL SHAFT'

In this concept, I started to explore a completely modular shaft down the centre of the building. This would be made up of a series of moveable panels acting as a complex series of partition walls that could be shifted to make way for door openings, and windows, and to customise the layout of interiors. During development, I realised the system would have to be unnecessarily complex and require a lot of custom engineering that would add expenses and potentially be riddled with mechanical and maintenance issues. I was considering developing this concept further to explore these issues, however, the development of the Co-Design process became more of a priority as the year progressed.





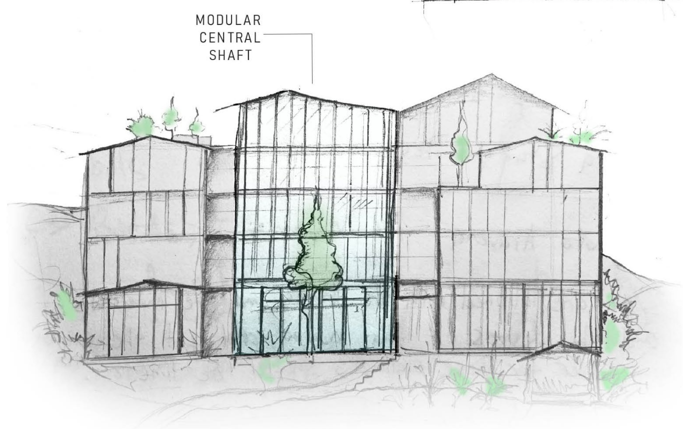


Figure. 80. Participatory design sketch concepts, (2022)

6.9 'MODULAR EXTERIOR PANELS'

This concept followed the development of a simplified version of the 'modular central shaft' design. This system involves a series of 1200mm (width of standard plyboard) x 3750mm (height of floor) plywood panels. This system would span the length of exterior corridors. In theory, each panel has the ability to host a variety of utilities including vertical garden systems and storage cabinetry. When not in use as one of these systems, each panel can display a mural, either designed by Hapū artists, or painted by OraNga Tamariki guests. This system not only offers a variety of storage options, but allows for participatory design features and visual storytelling. To develop this concept further I would have to consider the mechanics of such a system.

OPTION DISPLAYING EMPHASIS ON MURALS

OPTION DISPLAYING EMPHASIS ON STORAGE SYSTEMS

OPTION DISPLAYING EMPHASIS ON VERTICAL GARDENING

Figure. 81. Modular Panel System, (2022)

6.10 MODULAR CONCEPT: INTERIOR PANEL SYSTEM

In order to simplify the system discussed in (6.8: Modular Shaft), I decided to implement modular panels within the interior at a much more simple scale. By once again using 1200mm x 3750mm plywood panels, I explored the idea of customisation through partition walls that could be easily packed away. However, I realised that storage for these panels might be an issue. Also, the panels wouldn't always evenly span between walls - restricting versatility.

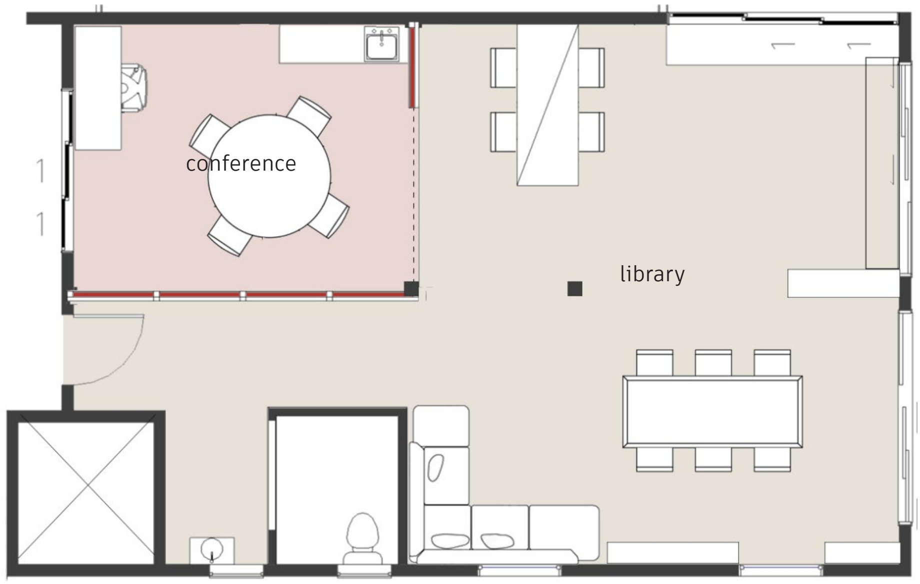


Figure.82. Plan of Level One, set up as a communal library. Zone in red displaying private conference room segregated with the use of panel system. (2022)

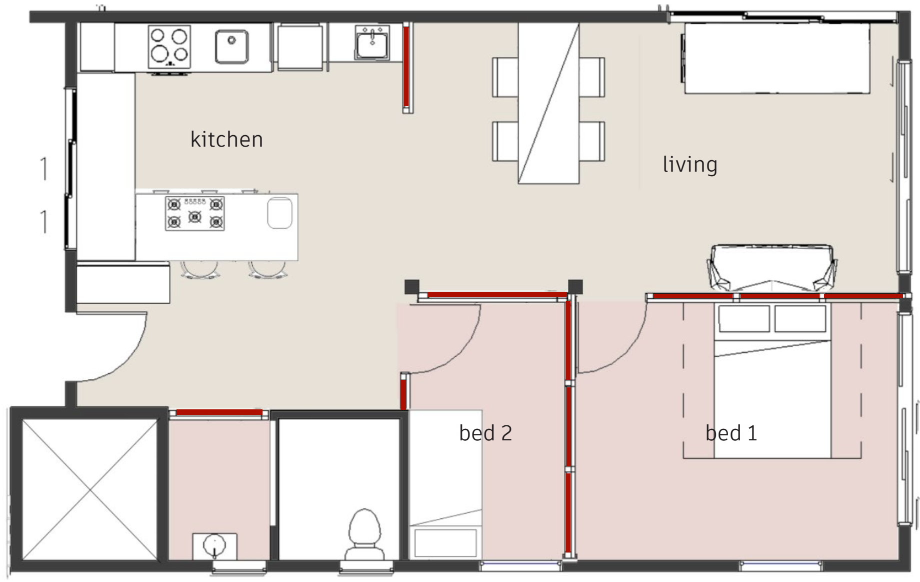


Figure.83. Plan of Level One, set up as a private apartment. Zones in red displaying spaces that have been seperated using modular panel system. (2022)

6.11 MODULAR CONCEPT: SHOJI DOORS

Shoji doors are a traditional Japanese architectural feature known for their simplicity and versatility. Shoji originated within the Kamakura Period (1123-1333 AD) as a way of creating more compact and affordable swellings for people in lower economic areas. This system is a cost effective way of establishing the option of privacy while still allowing light to penetrate a space.

Shoji also offer a source of cultural connection. Within traditional Japanese communities, Shoji are a adorned with intricate and colourful murals that often speak a narrative (Larsen, 2019).

Placed in the context of the Hawke whānau development, I have developed a system based off Shoji that allow for a greater level of modularity and durability considering young children who might damage weak design features. (This system is developed further in the next page)

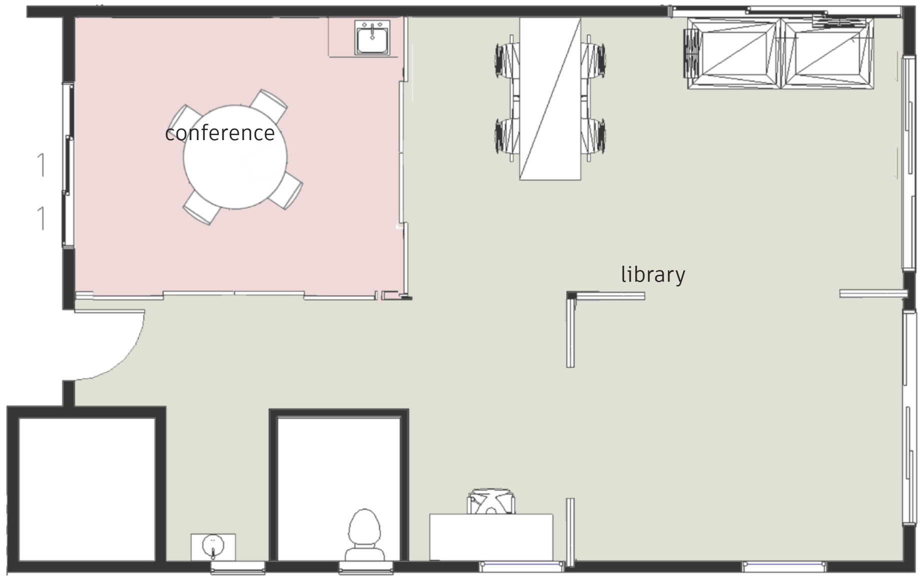


Figure.84. Plan of Level One, set up as a communal library. Zone in red displaying private conference room segregated by sliding shoji screens. (2022)

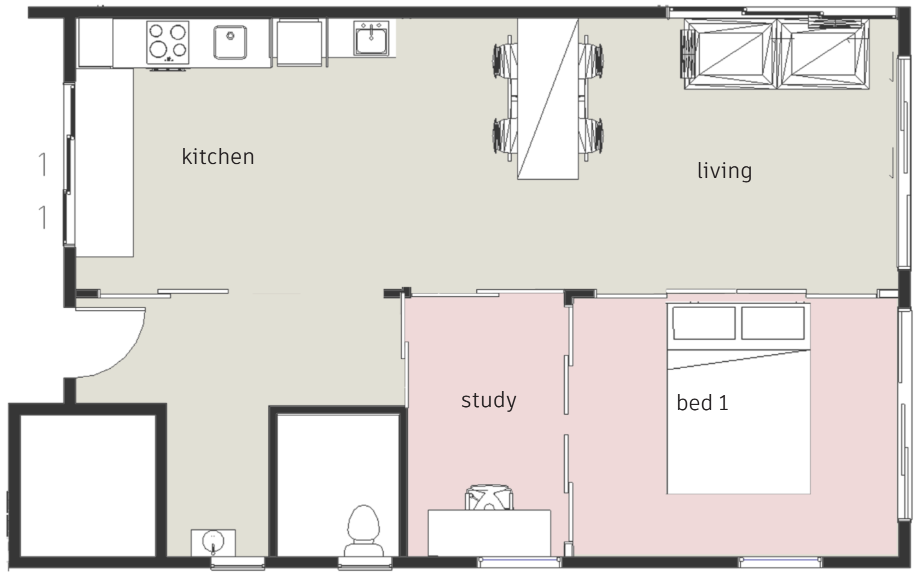


Figure.85. Plan of Level One, set up as a private apartment. Zone in red displaying private spaces segregated by sliding shoji screens. (author)

Kay Satherley @ Kay Designs NZ (Murals)

6.12 SLIDING 'SHOJI' SCREENS

Traditional Shoji screens extend from floor to ceiling, however, considering these doors will be postinioned in areas throughout the Hawke development where children are present, an 800mm timber base will protect the screens from damage and also add extra accoustic resistance.

PRIVACY

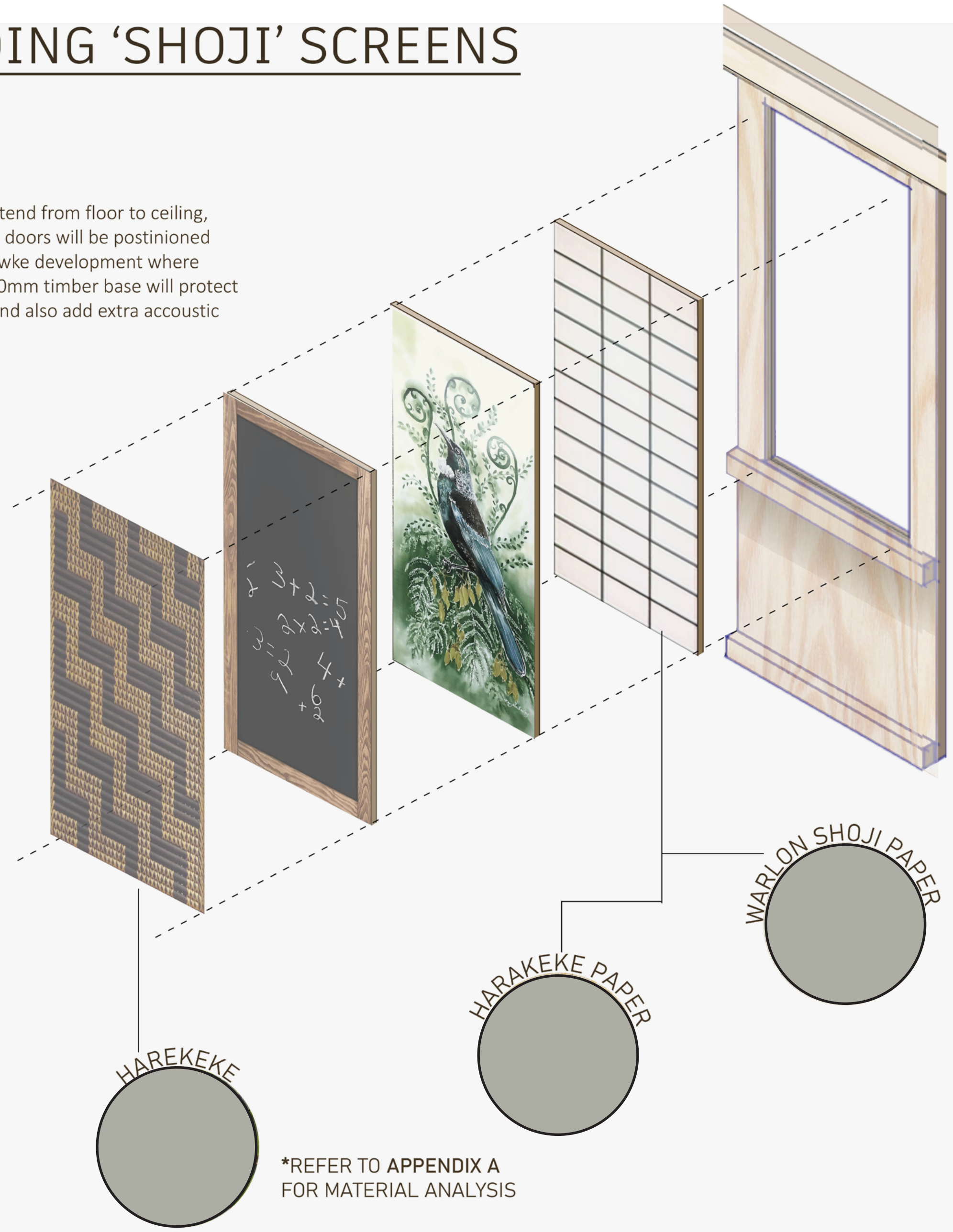
To maximise the versatility of an interior dwelling, inhabitants will have the option to board up the screen system with modular mural panels that not only act as an light and sound barrier, but also add an opportunity for visual story telling.

MODULARITY

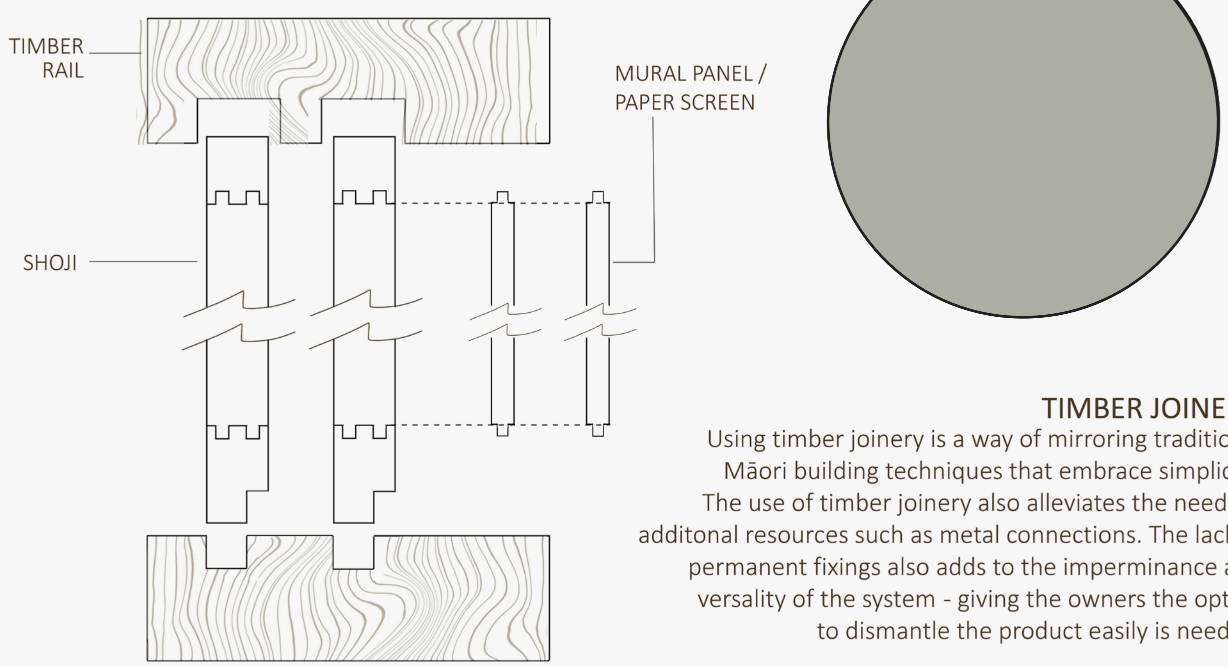
As a way of optimising functionality, each system will allow the user to remove privacy panels and stow them away within the door itself. This wil be achieved by timber slots that attach the panels to the lower portion of the door.

FUNCTIONALITY

Considering the fact that these doors will be situated within spaces that require multiple functions, the panel screens could be filled with devices that increase gneral usability. One option could include a calkboard panel in the case of the space being used for educational purposes.



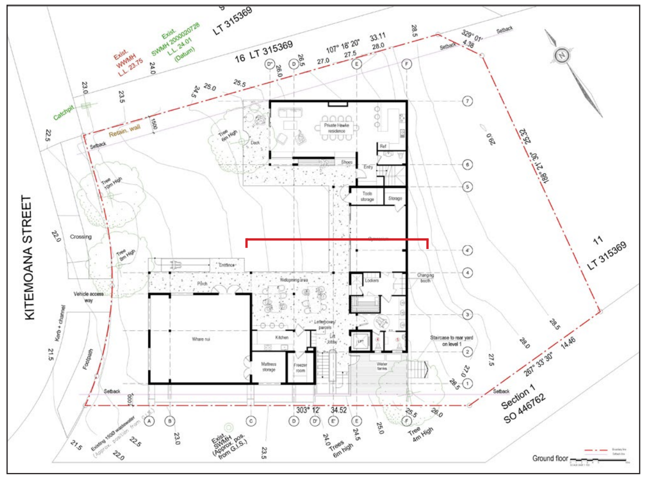
*REFER TO **APPENDIX A** FOR MATERIAL ANALYSIS



TIMBER JOINERY

Using timber joinery is a way of mirroring traditional Māori building techniques that embrace simplicity. The use of timber joinery also alleviates the need for additonal resources such as metal connections. The lack of permanent fixings also adds to the imperminance and versality of the system - giving the owners the option to dismantle the product easily is needed.

Figure. 86. Shoji System Development, (2022)



6.13 LONGEVITY STUDIES

Now that I had explored a number of systems that enabled flexible space usage, I needed a way of visualising how the spaces could be transformed over time.

If these concepts were to be understood by the Hawke whanau, I needed to visualise these concepts in a way that was accessible. By visualising the same space within two differing contexts, the Hawkes may understand that they hold the power to redefine the purpose of their whare on multigenerational scale.

Figure. 87. Longevity Study 1, (2022)

GROUND FLOOR -
CURRENT PROPOSED USE:
communal gym,
whare hui dining area

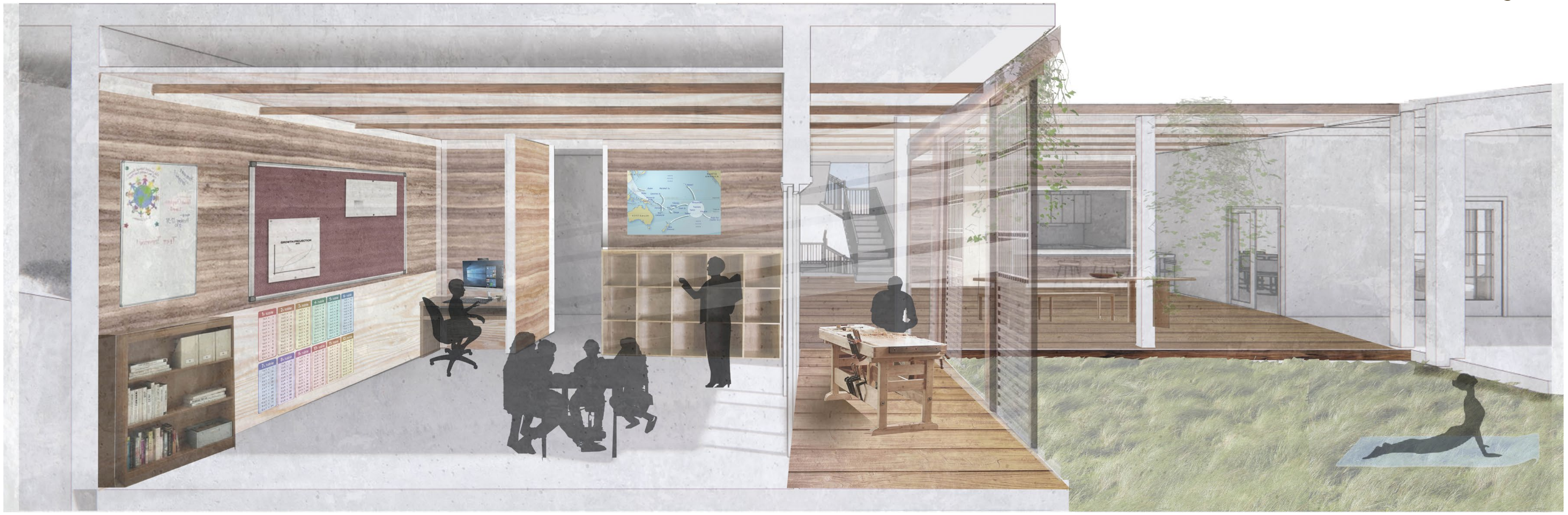
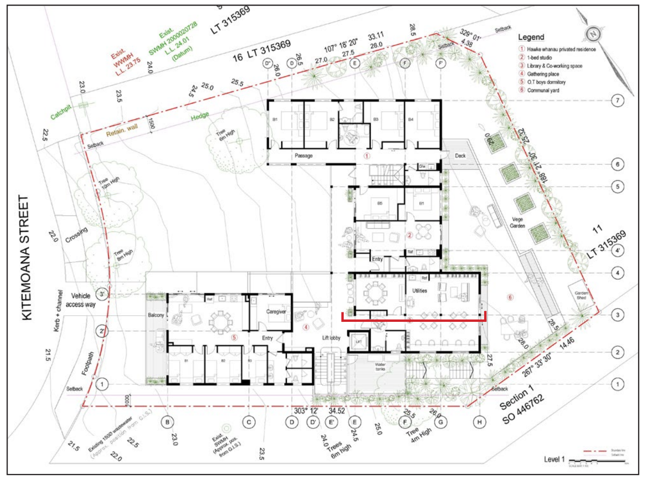


Figure. 88. Longevity Study 2, (2022)

GROUND FLOOR -
POSSIBLE FUTURE USE:
Educational space in the event of pandemic lockdowns,
Woodworking workshop
(utilising shoji screen system)



LEVEL ONE -
CURRENT PROPOSED USE:
Communal Library
(Utilising modular panel system)

Figure. 89. Longevity Study 3, (2022)

LEVEL ONE -
POSSIBLE FUTURE USE:
Private Apartment
(Utilising modular panel system)

Figure. 90. Longevity Study 4, (2022)

PARTICIPATORY DESIGN: FLEXIBILE FURNITURE

Now that I had explored flexibility on a macro scale, I realised it was important to attempt to incorporate it at a more specific, customised scale.

I did this by exporaing how flexible furniture could provide opportunities for space to evolve according to a variety of needs. Considering the whanau's connection with craftsmanship, I thought it would be fitting for the young tamariki staying at the whare to be able to assemble these items themself as a way of providing woodworking experience and encourage kotahitanga.

CONCEPT 1: FOLDING DINING TABLE AND WINDOW SEAT

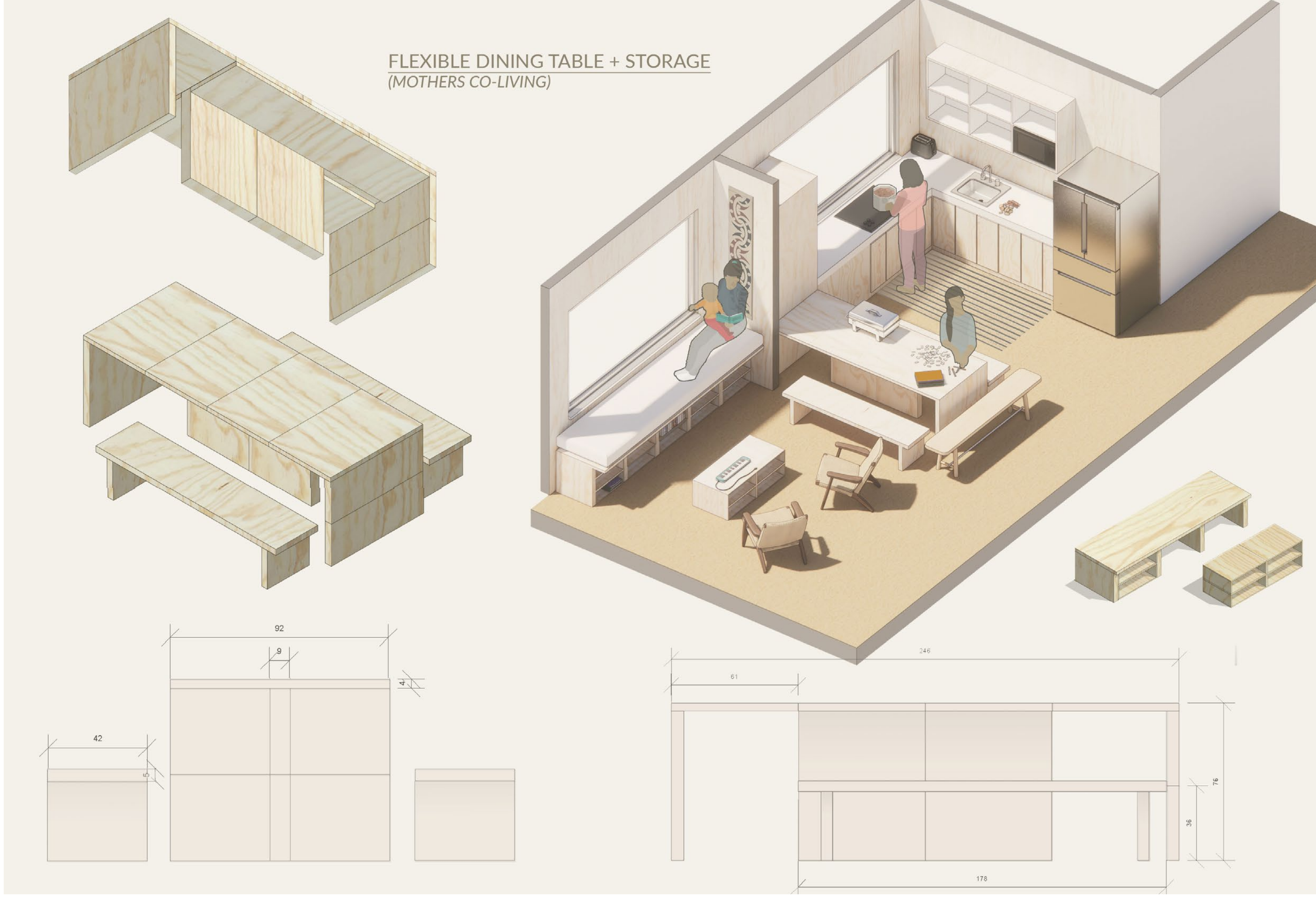
As a way of creating flexibility in the mothers living area, I developed a basic furniture system that could be easily disassembled. Each system is designed in a way that does not require complex screw systems or additional tools. Furniture segments are instead put together through dowel inserts and basic timber joinery.

Shown in figures 90-91:

1. Timber dining table that folds away into the parallel wall.

2. Window seat with pull-out storage underneath that can be used as a coffee table.

Figure. 91. Flexible Dining Table + Storage 1, (2022)



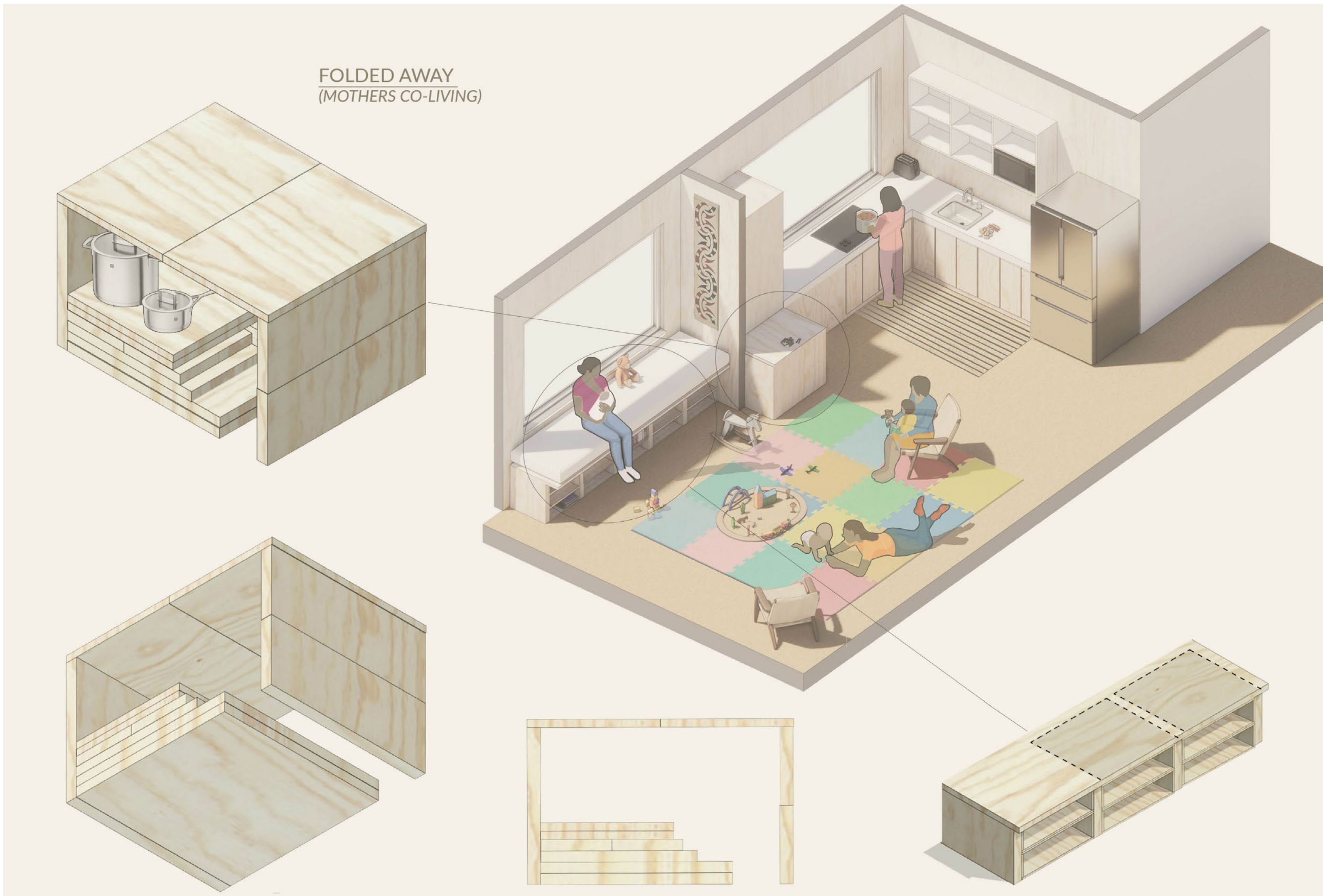
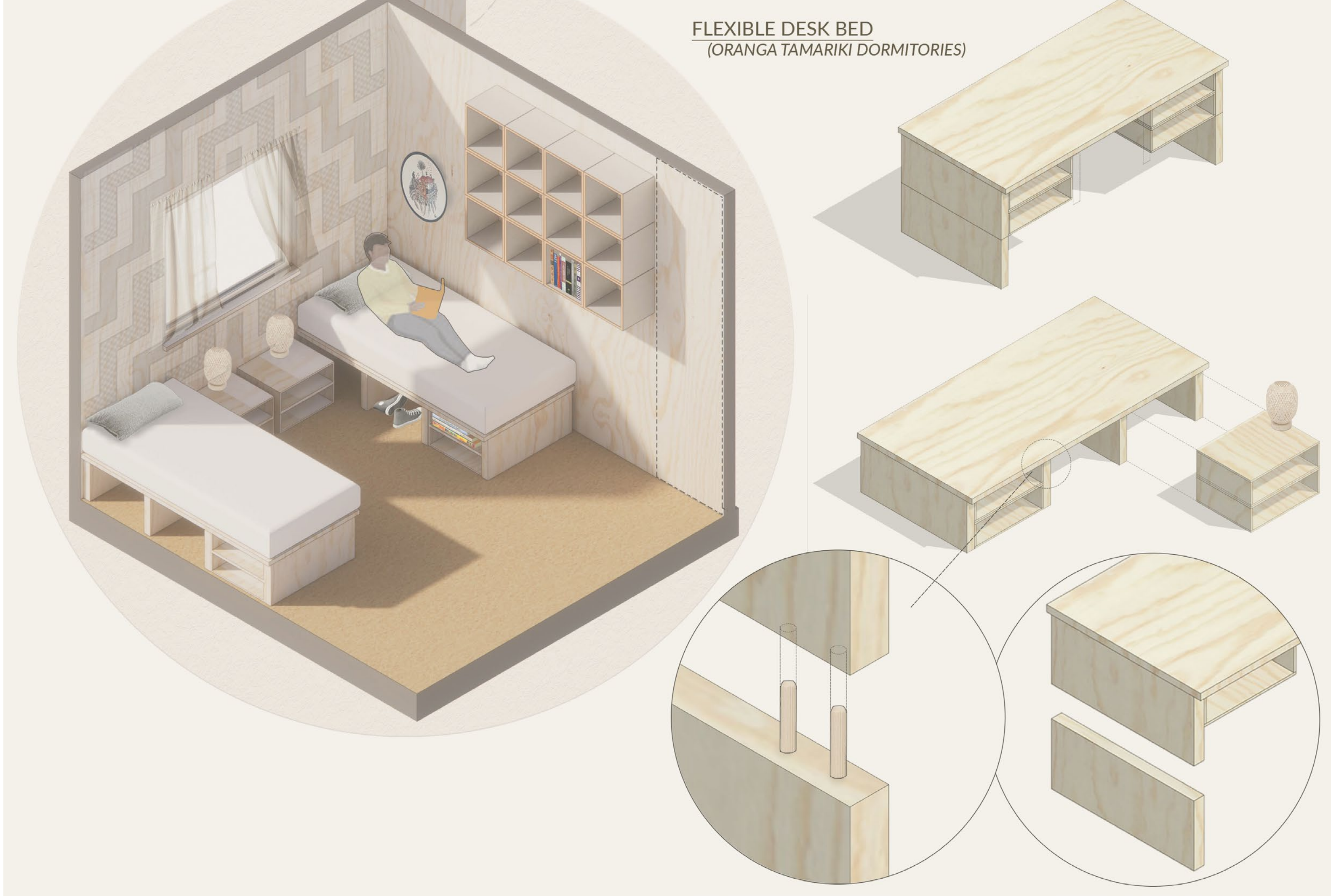


Figure. 92. Flexible Dining Table + Storage 2, (2022)

Figure. 93. Flexible Desk + Bed System 1, (2022)



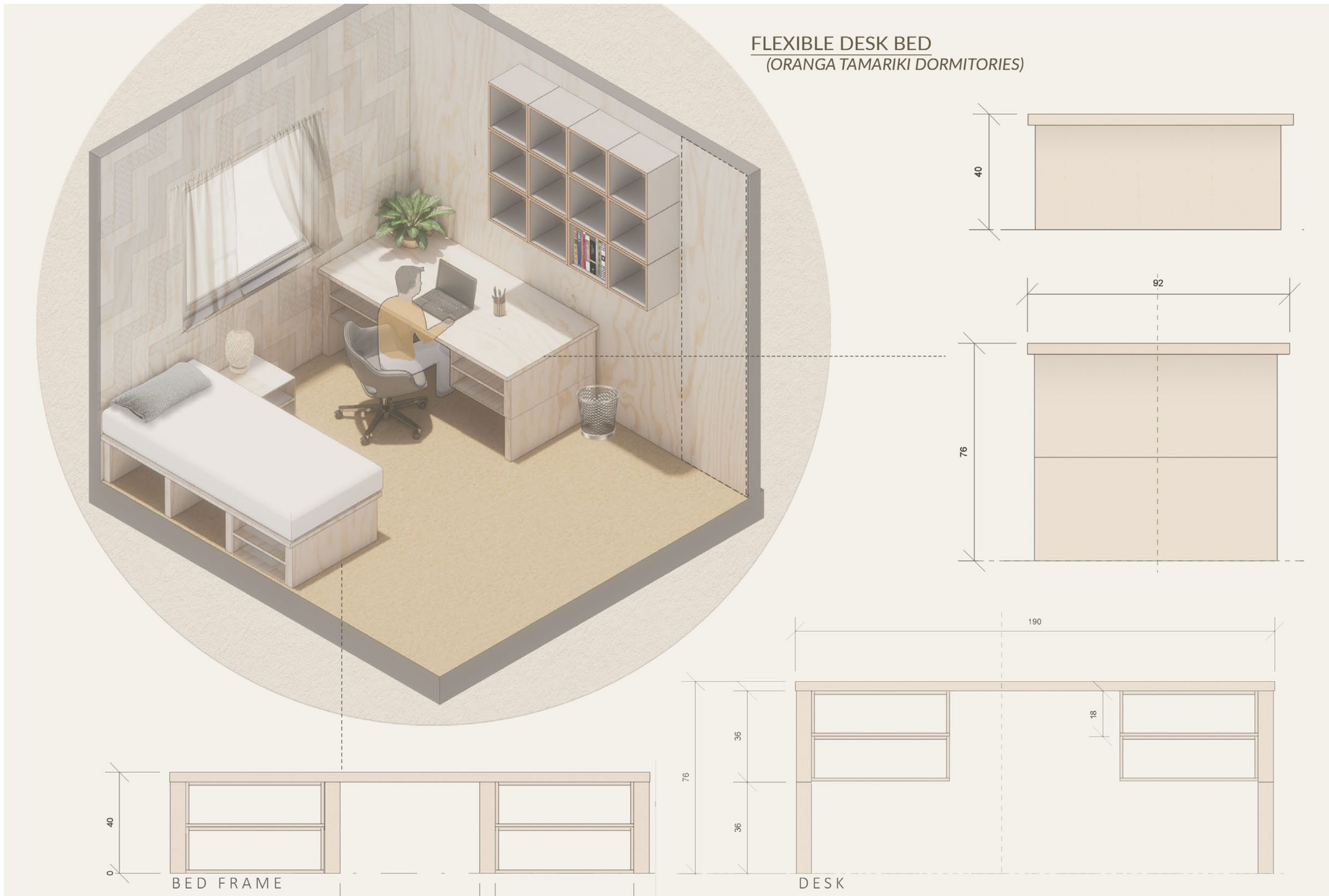


Figure. 94. Flexible Dining Table + Storage 2, (2022)

CONCEPT 2: DESK/BED SYSTEM

Considering the fluxuating numbers of whanau staying at the Hawke residence, this system allows bedrooms to be transformed without having to store excess furniture.

REFLECTION
Part 6: FLEXIBLE HOUSING

Within Aotearoa's current state of housing restrictions and consent barriers, some of the more complex concepts explored in this chapter may not be entirely practical. Additionally, the mechanics and logistics of such systems may just over-complicate the development. I have come to the conclusion that utilising simple systems is the most efficient way to incorporate versatility and longevity into the design.

This chapter was an attempt at responding to the need for higher density alternatives within housing. Although these systems I have developed were customised to fit the needs of the Hawke whānau, I have developed them in a way that allows for application throughout similar housing developments. This was done in an effort to promote participatory design and encourage mana motuhake within mana whenua developments.

RESPONSE TO RESEARCH QUESTION:

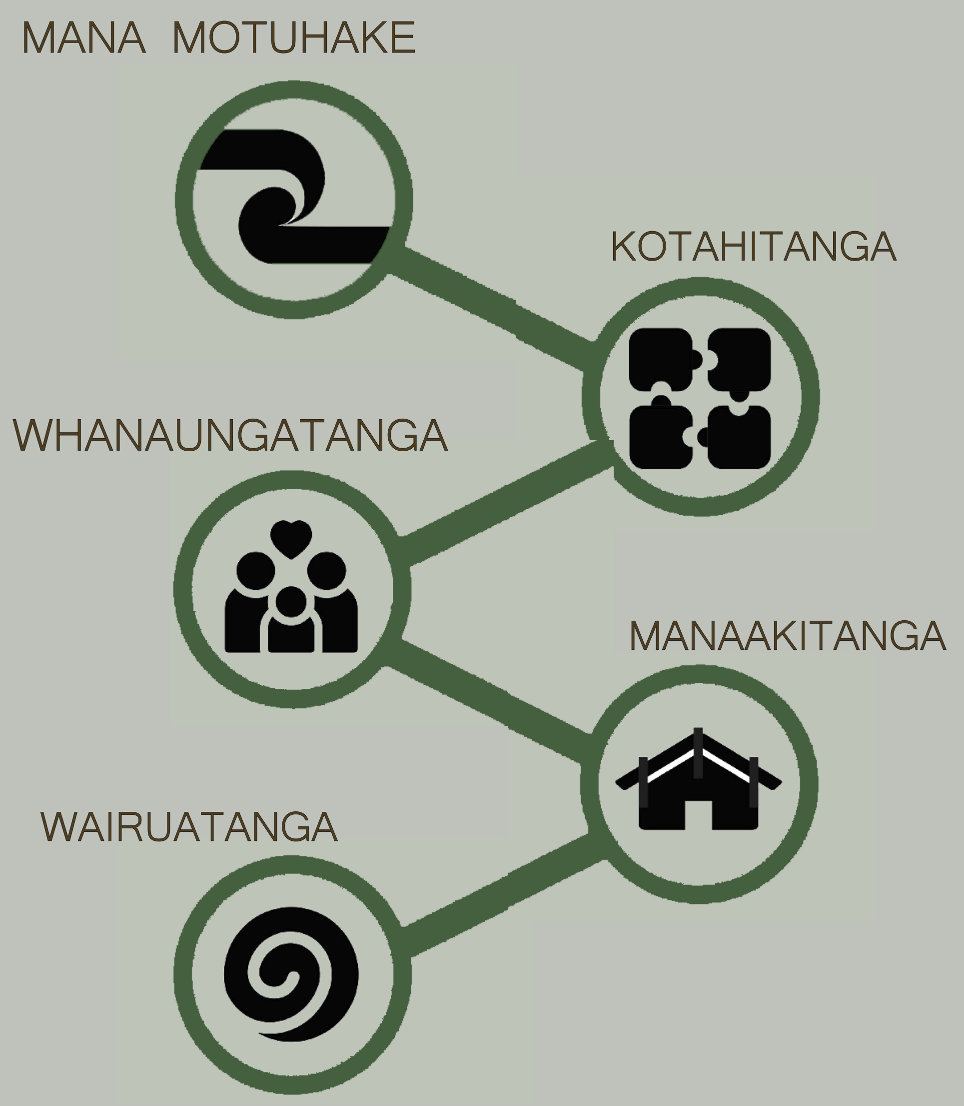
How are flexible architectural systems an example of mana motuhake?

Flexibility within housing allows occupants to have direct and accessible authority over thier living environments on a long-term scale. Architects are not able to effectivley predict the future needs of their client, so it makes intuative sense that a building should be designed in a way that puts the power into the hands of the user.

How can flexible systems be used to combat our housing crisis?

Providing flexibility within the envelope of a building is a way of future-proofing it's functionality, decades into the future. Historical responses to housing emergencies teach us that unthoughtful designs result in buildings that become futile and derelict over time. By offering systems like participatory design, social housing can become personalised homes for an endless number of future occupance.

NGĀTI WHĀTUA ŌRĀKEI VALUES ENGAGED WITHIN THIS PROCESS:



Part 7

MĀTAURANGA MĀORI APPLIED WITHIN WESTERN PRACTICE

Designing with Ngā hauropi
Living Ecologies

In order to respect the integrity of mana motuhake, it is important that we approach design within the scope of a holistic Māori worldview. If Māori are to assert self-determination over their living environments, the application of central tikaNga principles throughout the entirety of the project is essential. TikaNga defines Māori cultural values and practices and by upholding and expressing these principles, designers enable iwi, Hapū and whānau to live in an environment that is true to their cultural identity.

7.0 LIVING BUILDING CHALLENGE

The Living Building Challenge was first launched in 2006 following the publishing of 'The Living Building' by Jason F. McLennan and Bob Berkebile in 1999. Based in the Pacific North-West of America, McLennan is considered one of the most influential environmentalists in the field of architecture.

The Living Building Standard, published in 2005, influences how designers approach modern building development. This is done through a set of seven core imperatives that dictate the design of a building towards reaching a high standard of sustainability. This methodology shares many parallels with Te Ao Māori and tikaNga. For example, both exhibit a deeply holistic outlook toward our relationship with the earth.

7.1 TE KURA WHARE - TŪHOE CASE STUDY

Ngai Tūhoe are a Māori Iwi based in Te Urewera in the Central North Island. The Iwi share similar values with Ngāti Whātua but hold a powerful affinity for kaitiakitanga, which had been demonstrated over the past decade.

Tāmati Kruger, Chairman of Tūhoe Te Uru Taumatua explains; "Nature can continue to exist without humans, but humans cannot exist without nature." (Mensies, 2022). In the early 2010s, Tūhoe needed a way of unifying and uplifting their community. For decades the Iwi had been striving towards the revival of autonomy and self-governance - mana motuhake - with a focus on preserving their heartland, Te Urewera. Like the majority of Iwi living throughout Aotearoa, Tūhoe had been misled and exploited by the Crown throughout all of British occupational history. This mistreatment is another example of the Crown's immense disregard for Te Tiriti o Waitangi. The breaches of the Treaty were some of the worst in the history of Aotearoa, including mass land confiscation, executions, and the burning of tribal villages. Despite years of promises from the Crown to amend these wrongdoings, Tūhoe became increasingly separated from their whenua (Mensies, 2022).

Finally, in March of 2013 the Crown introduced the Ngai Tūhoe Deed of Settlement. The deed introduced a series of acknowledgements and reparations directed at compensation for the numerous breaches of the Treaty on behalf of the Crown. Through years of fighting for their land, it was Tūhoe's firm tribal principles and persistence that secured their redemption.

In 2014, after countless feasibility reports and draft plans, Tūhoe secured the rights to develop a building that would reflect the values that were the catalysts towards their self-governance and freedom. Tūhoe needed a space to reinforce a cultural identity that had been gradually eroding over decades. One of Tūhoe's core principles, kaitiakitanga, was a key driver in dictating the direction of what would become Te Kura Whare. In collaboration with Jasmax, it was decided that Te Kura would be built to comply with the Living Building Challenge (LBC); one of the world's most demanding green building standards available. Through the strict measurement of materials and energy use, Tūhoe saw this as the perfect opportunity to express their deep care for Papatūānuku and reaffirm their cultural identity through mana tangata and kaitiaki (Mensies, 2022).

The development of Te Kura Whare displayed an interconnection between Western environmental science and indigenous wisdom that had never been seen before. The distinct similarities between the LBC standard and Tūhoe's imperative values were arguably what led to the momentous success of Te Kura. The LBC is known for its stringent guidelines that intimidate even the most accomplished architects. Through Tūhoe's deep underlying value of kotahitanga (unity), the Iwi generated a natural synthesis between Western scientific complexity and the basic human capacity for goodness. Tūhoe whānau from all over the tribal land joined forces to source materials, fed workers and contribute to the construction of the building itself. All of this was done while using materials that reflected the natural environment of Tūhoe's heartland, securing mana motuhake while aligning with the LBC's strict 'Living Economy Sourcing' guidelines (Ngāi Tūhoe, n.d)

The successful development of Te Kura Whare is a living example of how Pākeha and Māori can live and work together in such a way that all peoples can thrive in Aotearoa. Central to this collaboration is the equal exchange of knowledge. An interesting way of acknowledging this exchange is illustrated within the Māori proverb or whakataukī referring to 'the three baskets of knowledge'.

Nāu te rourou, nāku te rourou, ka ora ai te iwi
With your food basket, and my food basket, the people will thrive. (Inspiring Communities, n.d)

The whakitauki refers to a Māori creation myth in which humans are gifted three baskets by the gods, each containing an essential set of knowledge needed to thrive on Earth. One basket holds knowledge of the natural world, one; the spirit world, and another; the rational world. Each of these baskets of knowledge needs to be in balance with each other for humans to live harmoniously. It is often within Western developments that a considerable emphasis is placed within the basket of the rational world - prioritising affordability and common logic. The Living Building Challenge is a rare example of Western acknowledgement of the natural world. However, in accordance with the Māori proverb, it can be argued that it is spiritual fulfilment and connection to the natural world that has fallen out of balance within Western ideals.

Acknowledgement of the spirit world within the Tūhoe development is seen in the expansion of a number of imperatives within the LBC standard. These standards were reformulated through a mātauraNga Māori lens, giving them meaning that is not always conceivable within common Eurocentric perspective.

This is demonstrated perhaps most clearly in relation to the L.B.C 'Beauty + Biophilia' imperative. Accordingly, this was renamed 'Beauty + Spirit' to suit the Tūhoe worldview (Ngāi Tūhoe, 2017). Although the exploration of biophilia offers a valuable way of establishing a connection to the natural environment, this imperative attempts to define beauty as though it is something that can be measured in a tangible sense. The imperative requires this to be achieved through development of “natural shapes and forms” (LBC 4.0, P. 66) that imitate features within nature. It could be argued that in this sense, the LBC standard is operating through the lens of Western perceptions, and disregarding what ‘beauty’ may mean to other cultures.

Although they admit that physical atmosphere is important, the Te Kura Whare project team stress that beauty is so much more than just the visual or physical. The team explain how the building process of the whare is a display of beauty in itself; “There is a source of beauty associated with this kaupapa that is able to transcend time and generations, therefore connecting past, present and future Tūhoe.” (Ngāi Tūhoe, 2017). This illustrates that mātauraNga Māori can offer a valuable distinction when defining the notion of beauty - something that Western developments could benefit from.

7.2 THE METHODOLOGY

In order to authentically embed these concepts into future collaborative building projects mātauraNga Māori must be accorded equal status with Western building standards.

As a way of applying this to my research project, I have explored the cultural and workflow ecologies of materials that are used within the construction of the Hawke development. The two materials I chose are harakeke (flax leaf) and uku (clay) as they already hold powerful mana within everyday Māori life.

After exploring the limitations of the Living Building Challenge standard, I concluded that I needed to use a tool that was not based within Eurocentricity. I also needed a way of visualising my methodology that followed a sense of fluidity and kotahitanga. During an in-class discussion, I was introduced to the concept of a ‘braided river model’ (Macfarlane, 2015) developed by psychologist Dr Angus Macfarlane of Ngāti Whakaue descent. This methodology is characterised by two separate streams of knowledge converging into one main river of shared intent.

Macfarlane puts forward that it is inefficient to look for answers to Indigenous problems only within Western knowledge streams. He argues that fusing Indigenous and Western bodies of knowledge results in a strategy that may be more effective than what any knowledge stream could produce independently (Macfarlane et al, 2019). Through the utilisation of this model, I plan to fuse knowledge presented in the LBC framework with mātauraNga Māori. By doing so, I aim to create a set of guidelines that expands on and empowers both Western and Indigenous streams of knowledge simultaneously.

In order to place this model within the context of my research topic, I created a diagram that expanded on Macfarlane’s ‘braided river’ **(fig.1)**. I used this as an opportunity to incorporate ‘the 3 baskets’ whakataukī as a way of representing the three streams of knowledge present within the model. The left of the diagram represents ‘rational’ knowledge offered through the LBC framework. This intersects with the right of the diagram which represents the ‘spiritual’ knowledge stream offered by kaupapa Māori. The centre of the diagram represents the ‘natural world’ knowledge stream that is equally shared by both the western and indigenous groups in this case.

7.3 APPLICATION

This process involved following the existing framework displayed through the LBC ‘Materials’ imperative. Within this standard I aim to expand each guideline by approaching it from a mātuaranga Māori perspective, grounding it in a more holistic sense.

Firstly, I created a diagram mapping the hypothetical production process of each material as it would be developed into a fully realised building element **(fig.2)**. After following the development of these two materials, it became clear why Māori view resources as more than superficial tools. It became evident that materials can be used as a method to strengthen kotahitanga and tell stories that go beyond Western rationality. A strong example of this is seen through the concept of Te Ao Māori; this follows the belief that all things, even those such as soil, are alive and intimately connected. Considering this, Māori approach the collection of resources with respectful consideration; only taking what is needed and acknowledging the reciprocity of the exchange (University of Otago, n.d)

The next step was to test this methodology within the context of my project. I created a table that explored each imperative in relation to harakeke and uku. **(fig.3)**. This gave me the opportunity to align each guideline against the most relevant mātaurangi values. By following this process, I was able to identify the intersections between the two knowledge streams; developing a method of categorisation that would fuse the LBC imperatives with mātauranga Māori practice.

Equipped with this information, I developed a separate table that expanded each of the official LBC 'Materials' imperatives through the knowledge stream of mātauranga Māori (fig.4). The content of this table being intended to be used within the context of a Pākehā / Iwi development. To Pākehā, adding these requirements to an already stringent set of standards might seem unnecessary; however eNgaging with such ideas is crucial to developing a successful outcome for both parties. By fusing these two streams of knowledge together, we are establishing a common ground that would otherwise not result if we were to stay within the building standards.

7.4 LIMITATIONS AND CONCLUSIONS

The output produced in this report only offers a rudimentary level of realisation. Further exploration of such intersections is necessary towards the development of a framework that could eventually be applied to projects across the industry. This would involve delving deeper into the history and ecologies within mātauranga Māori which is beyond the scope of this report. This process would need to be repeated for all relevant imperatives within the LBC standard.

It is also important to consider that the guidelines presented within this framework are only based upon my own research of mātauranga Māori practices. As Pākehā, it is not my place to set such standards and the information gathered only suggests at the potential scope of such an engagement. To achieve such a framework, it is integral that iwi are fully involved in the configuration process. It is also worth considering that values may differ between each project and iwi group, meaning that the framework would need to be adaptable.

Through developing this chapter, I have learnt of the distinct divide between Indigenous and Western world views. By analysing the cultural ecologies attached to just two materials, I have developed a deeper understanding of the concept of mauri, and the reciprocity that should be applied to all aspects of life. I recognise that the implementation of such a framework would require a considerable level of sacrifice within our currenteconomic system. However, if standards like the LBC aim to restore our natural and cultural environments, they must invest in knowledge that is sourced beyond purely rational thought.

FIGURE. 1

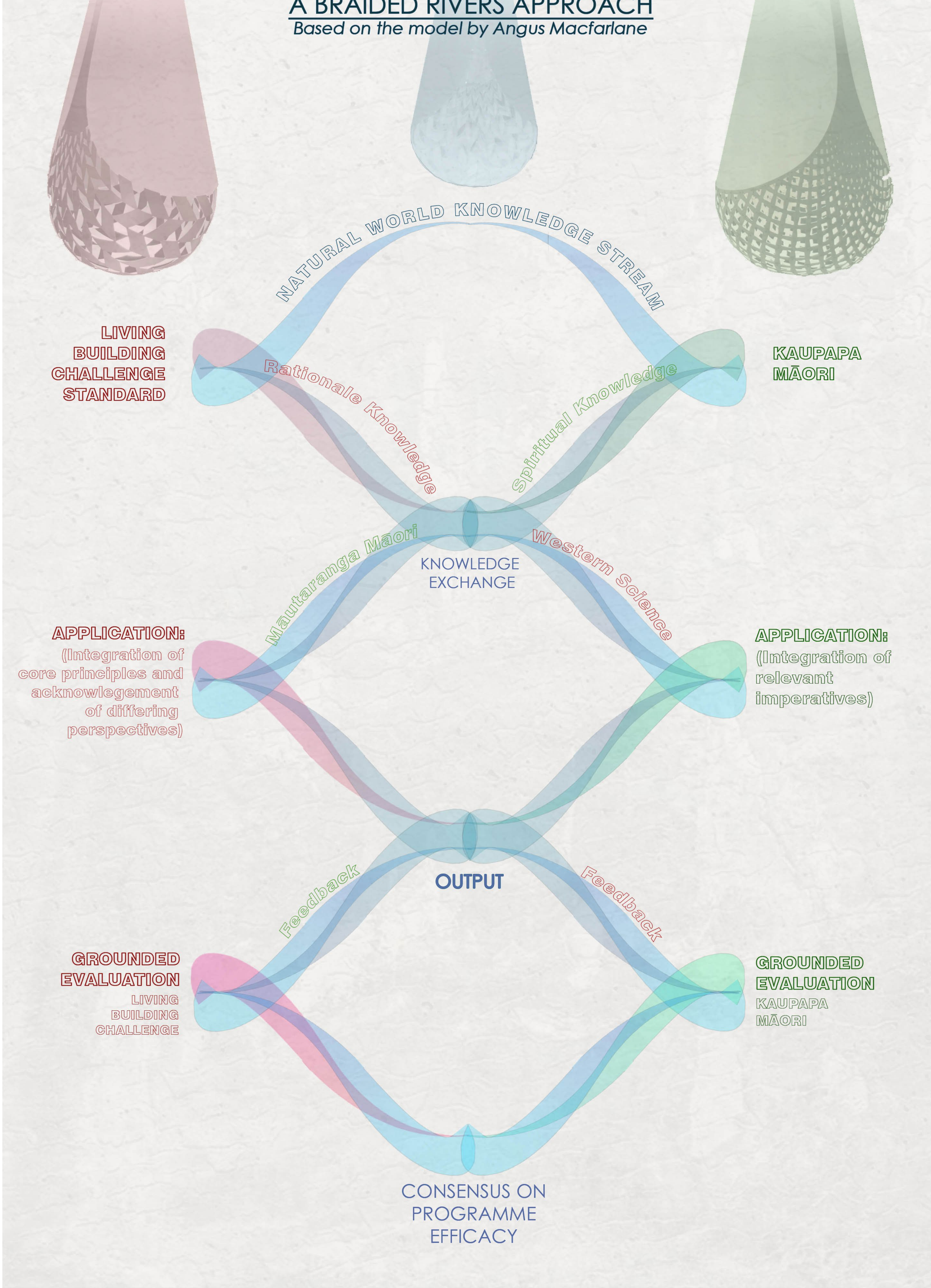


FIGURE. 2

L.B.C IMPERATIVE: RESPONSIBLE MATERIALS

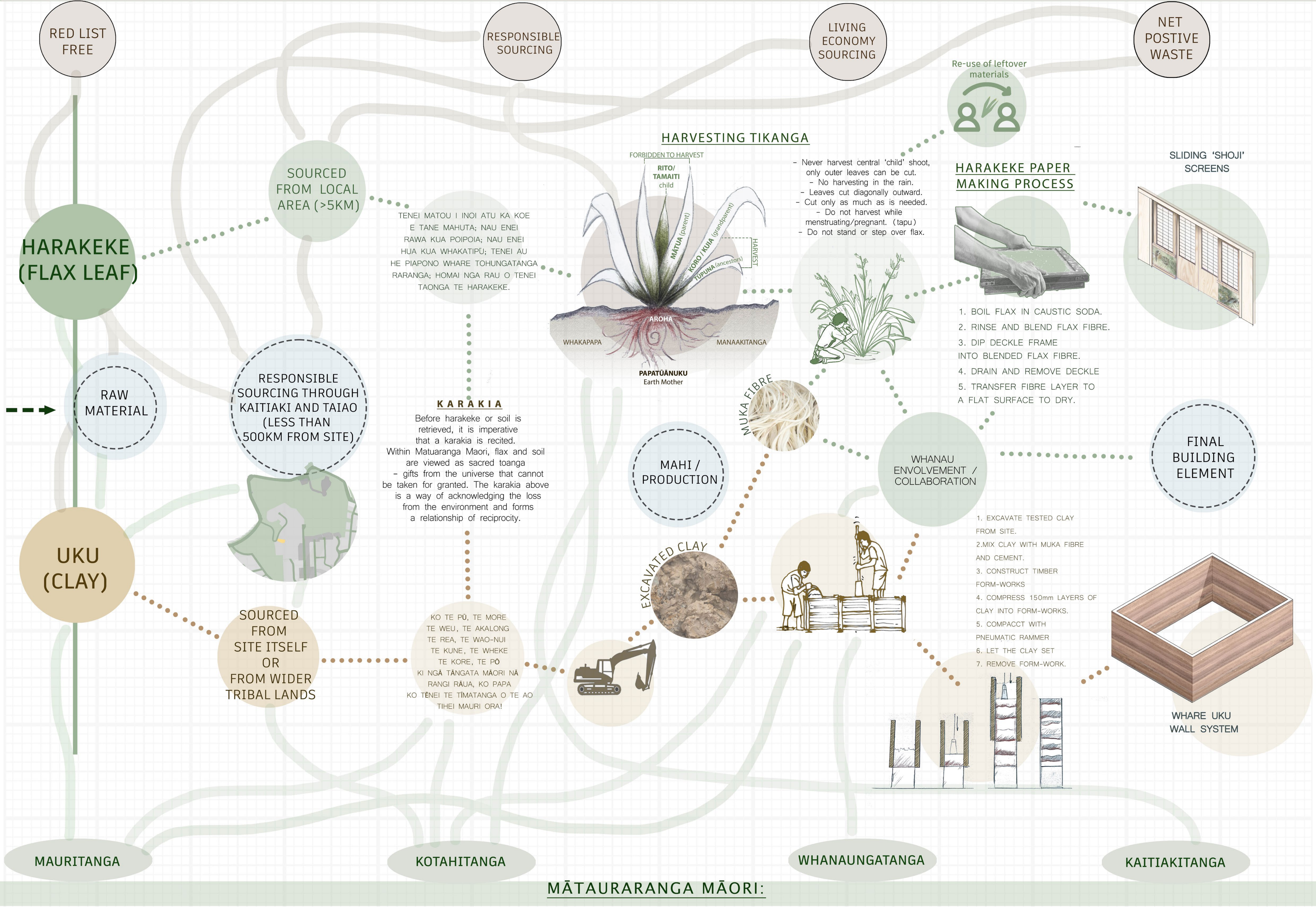


FIGURE. 3

REFRAMED TRHOUGH MĀTAURANGA MĀORI

LBC IMPERATIVE	MAURI-ORA / WAIRUATANGA *Health and Spirituality*	WHANAUNGATANGA *Kinship*	KOTAHITANGA / TE **AO** MĀORI *Unity & Reciprocity*	KAITIAKITANGA *Guardianship*
RED LIST FREE	-Wash Harakeke and source away biohazardous environments -Testing Clay -Washing hands after harvesting to prevent ingesting laxative sap. - Forbidding those who are pregnant or menstruating to harvest Harakeke *(Tapu)* *This insures the wellbeing of the mother.*			- Refraining from contaminating clay with unnecessary additives. I.e. keeping soil in its natural state. *-Ridding the development from toxic materials*
RESPONSIBLE SOURCING	-Refraining from harvesting harakeke at night or in bad weather. *(Tapu)* *-By practicing kaitiaki in this context, the inherent mauri of all things is acknowledged and protected.*	-Harakeke will be harvested by the immediate Hawke whanau or wider tribe members - Experience can be offered to whanau members through the mahi involved in developing material outputs.	*-By practicing kaitiaki in this context, the mātauranga Māori principle of reciprocity is acknowledged. (By preserving our natural environments we are preserving the universe as a whole.)*	-Harakeke harvested from healthy plants. -Only harvesting Rito and Awhi Rito as a way of preserving the ecosystem. -Only sourcing clay from areas that won't effect surrounding ecosystems. -Taking only what is needed.
LIVING ECONOMY SOURCING	*-Connections formed through this engagement provides a great source of aroha that supports wellbeing and self-respect.*	- Connections can be made through interactions involved in the mahi of harvesting as a community. - Experience can be offered to whanau members through the mahi involved in developing material outputs.	-Sourcing materials from within tribal land, acknowledging, the deep interconnection Iwi have to their whenua.	-Harakeke and clay will be sourced either from the site itself, or within Ngāti Whātua Orākei tribal boundaries. (This reduces emissions used to transport material long distances, increasing general sustainability, preserving the natural environment).
NET POSTIVE WASTE	*-By reducing waste we are acknowledging our connectivity to the universe that goes beyond selfish ignorance.*	-Utilising leftover harakeke within future raranga and construction projects. *(Connections can be maid through the exchanging of these materials.)*	*- Reciprocity is acknowledged through the preserving of materials.*	-Using clay retrieved from the excavation of the site itself as a way of utilising earth that would need to be displaced otherwise. -Only taking as much Harakeke as is needed.

FIGURE. 4

LBC IMPERATIVE	EXPANDED THROUGH MĀTAURANGA MĀORI
RED LIST FREE This Imperative aims to promote a transparent materials economy devoid of poisons and dangerous substances. Red List chemical classes must not be used in 90% of the new materials for any project, ranked by cost. "In situ" materials don't need to be taken out or checked for chemical classifications on the Red List.	- Are the materials used sourced straight from the land when possible? - Has tikanga regarding the handling of materials that may have potentially toxic properties been acknowledged and carried out? - Have you refrained from eating around materials where toxic substances could be transferred? - Have you refraining from contaminating natural materials with unnecessary additives?
RESPONSIBLE SOURCING The purpose of this imperative is to promote transparent product labelling and sustainable material extraction. For all projects, at least 80% of the wood must be obtained from sources that are Forest Stewardship Council (FSC) certified, salvaged, or came from on-site timber that was intentionally cut down for construction purposes or to restore or maintain the on-site bionetwork's continued ecological function. The remaining 20% of the wood must come from low-risk sources. The project could also become an FSC Project Certified project.	- Has there been a prioritisation of material extraction from areas that won't be ecologically disrupted? - Have relevant karakia been recited before materials are extracted, acknowledging reciprocity? - Has tikanga been followed in the extraction of materials? - Have there been measures put in place to insure you only harvest what is needed?
LIVING ECONOMY SOURCING This imperative aims to minimise the effects of transportation while assisting local businesses and communities. The project must include locally place-based solutions and support the development of a local economy built on environmentally friendly processes, goods, and services. (Example) 20% or more of the materials construction budget must come from within 500 kilometers of construction site.	- Have you prioritised materials that can be sourced from within tribal boundaries? (*This not only reduces emissions, but is a way of affirming kaitiaki and mana motuhake through self reliance and spiritual connection to the whenua.*) - Have you engaged with the wider community and whanau as a way of sourcing local materials and establishing connections? - Have you provided the opportunity for educational workshops that provide valuable experience for young Iwi who plan to work within the wider construction sector?
NET POSTIVE WASTE The purpose of this Imperative is to stimulate creative reuse of salvaged "waste" resources and to integrate waste reduction into all project phases. To conserve natural resources and discover ways to incorporate waste back into either an industrial loop or a natural nutrient loop, all projects must work to limit or eliminate the production of waste during design, building, operation, and end-of-life.	- Materials: Have you extracted only what is needed within the project scope? - How will left-over materials be utilised within future projects? Will left over materials be offered to groups that might need them? - How will biodegradable materials be returned to the earth?

Part 8
FINAL* OUTPUT

* The following chapter details the current stage of development of 31 Kitemoana Street. Due to the fact that this is a live project - this design is only an initial concept and will be further developed into the new year.

BASEMENT

The carpark of the building is accessed by a ramp dropping 900mm below ground level at entry, with a 3 meter depth at the rare of the level. This floor has parking space for five vehicles - including one accessible parking space. The Hawke's mentioned that their guests often bring a lot of belongings to the whare - to provide space for this a storage unit is placed at the rare of the floor. A plant room to the South can double as storage overflow if needed.

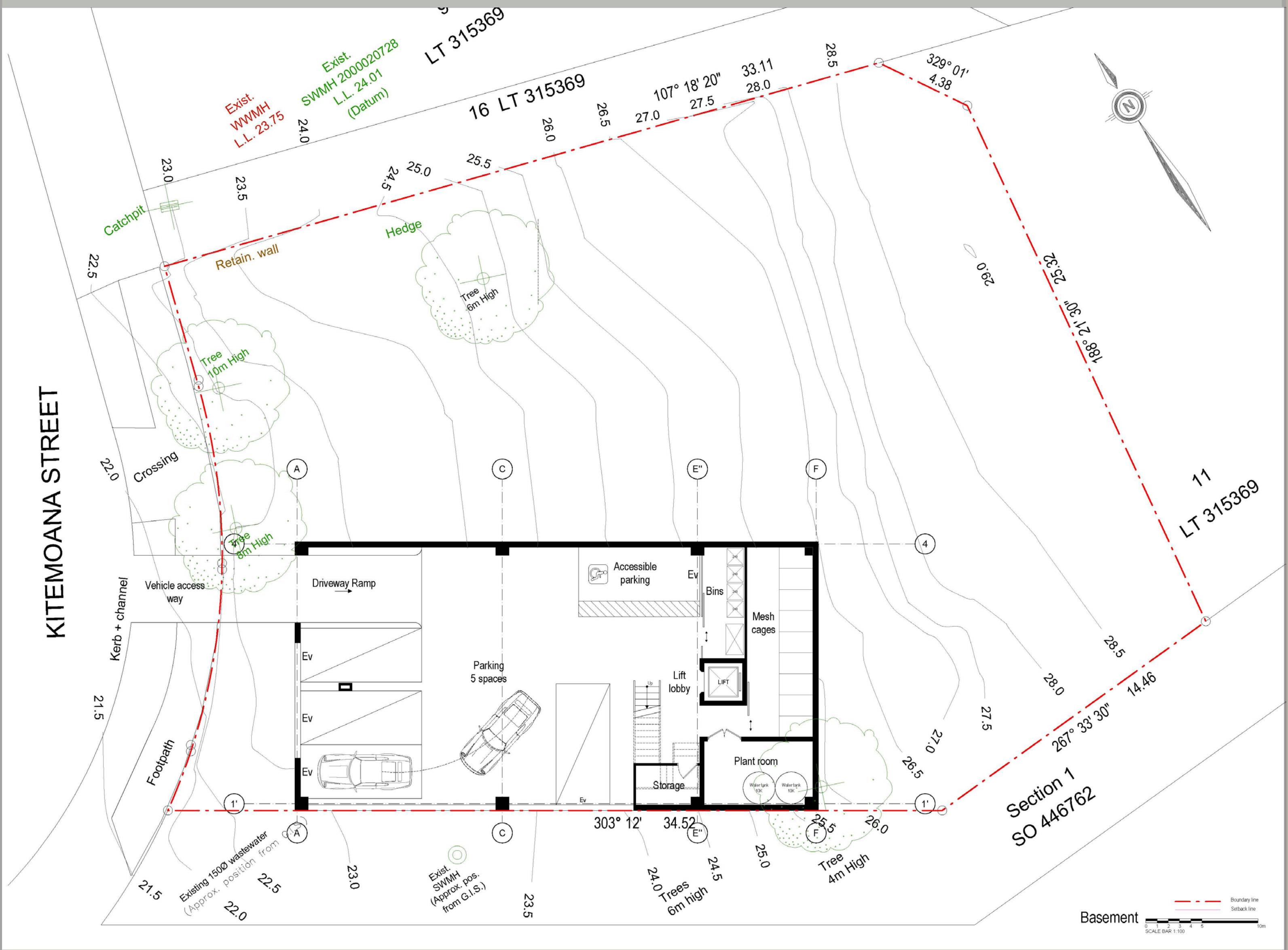


Figure. 95. 'Hawke Whare, Basement Level', in collaboration with Allan Phan, (2022)

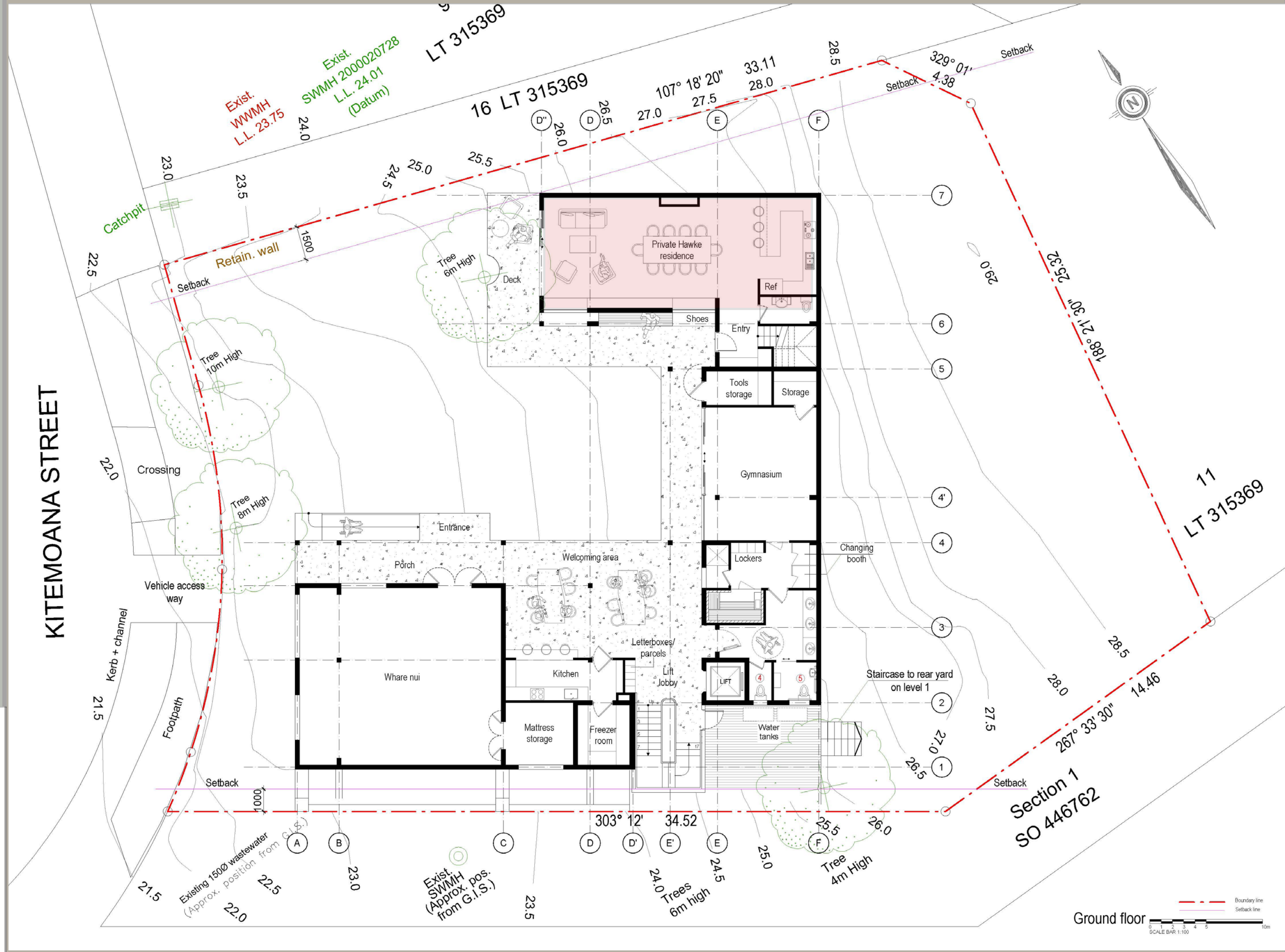


Figure. 96. 'Hawke Whare, Ground Level', in collaboration with Allan Phan, (2022)

GROUND LEVEL

The ground floor of the whare was designed to embody a sense of welcome. The majority of the floor is communally accessed. To the West of the site lies the centre-piece and receptive anchor of the building - the Whare Hui. This is a space that can be used to host large events, and ceremonies. The Whare Hui is also a space that can accommodate large groups wishing to stay the night at the whare.

An adjoining room to the East of the Whare Hui serves as matress storage - or seat storage, depending. To the East of the Whare Hui is a basic kitchen and eating area, used to serve guests during ceremonies that involve the Whare Hui. To the East is a communal gym that opens out onto lawn. To the North is the private Hawke 'Kaumatua flat', which acts as the 'watch point' for people entering the site.

LEVEL ONE

The whanau can access the upper levels through a shared stairwell and elevator.

The Southern wing of level 1 provides co-living accommodation for children in need. A private bedroom is provided for a care giver.

A communal library (where tamariki can do their homework) and apartments to the north, providing general accommodation for the Hawke whanau.

As shown in this view, the library utlises adjustable screen doors, allowing the whanau to customise the layout of the space - giving them the power to adapt as their needs change over time.

During our co-design meetings our team was told of the importance of parallel living for this development. The whanau stressed that they wanted everyone living within the whare to be fully part of the wairua (or spirit) of the community.

So our team needed to design floor layouts that optimised a shared flow and common ground while retaining the option of privacy.

Therefore, an exterior corridor acts as a communal bridge between each space. These external corridors are an integral part of the whare's whanaungatanga or essence of family unity - and encourage chance encounters.

Figure. 97. 'Hawke Whare, Level One', in collaboration with Allan Phan, (2022)

Figure. 98. 'Hawke Whare, Level Two', in collaboration with Allan Phan, (2022)

LEVEL TWO

Level Two follows a similar layout, repeating the communal walkway seen on Level One. To the West of the stairwell lies co-living accommodation for solo mothers and their newborns needing shelter. Three bedrooms, each with their own kitchenette, provide mothers with the privacy to care for their baby, while having the option of socialising with other whanau in a shared living and patio space that looks out towards the Waitemata Harbour.

Giving the woman this option of solitude was stressed as an important factor within our co-design discussion with the whanau.

LEVEL THREE

Level Three also provides the whanau with general accomodation, allowing them to provide shelter to their extensive wider Hapu.

Along with the communal laundry room, this floor acts as an important representation of whanaungatanga. To the west lies a large open patio deck, shaded by a leafy pergola. This space provides the community with a place to socialise and unwind with each other as they look out across the Waitemata - thus establishing a clear visual connection to geographical markers of sacred and historical importance to the Ngati whatua Orakei hapu. This was a feature that was greatly emphasised within our co-design discussions.

Figure. 99. 'Hawke Whare, Level Three', in collaboration with Allan Phan, (2022)

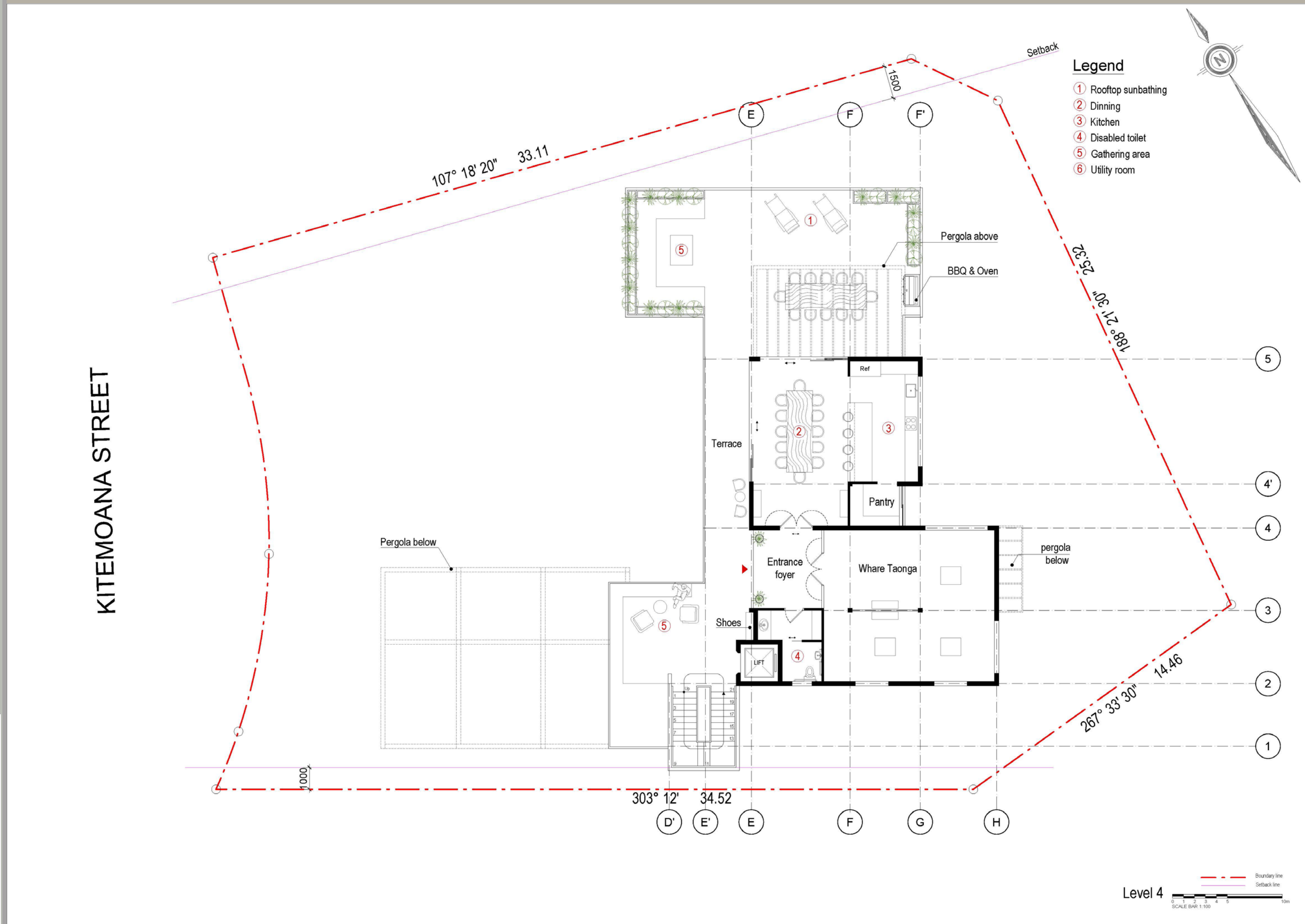


Figure. 100. 'Hawke Whare, Level Four', in collaboration with Allan Phan, (2022)

LEVEL FOUR

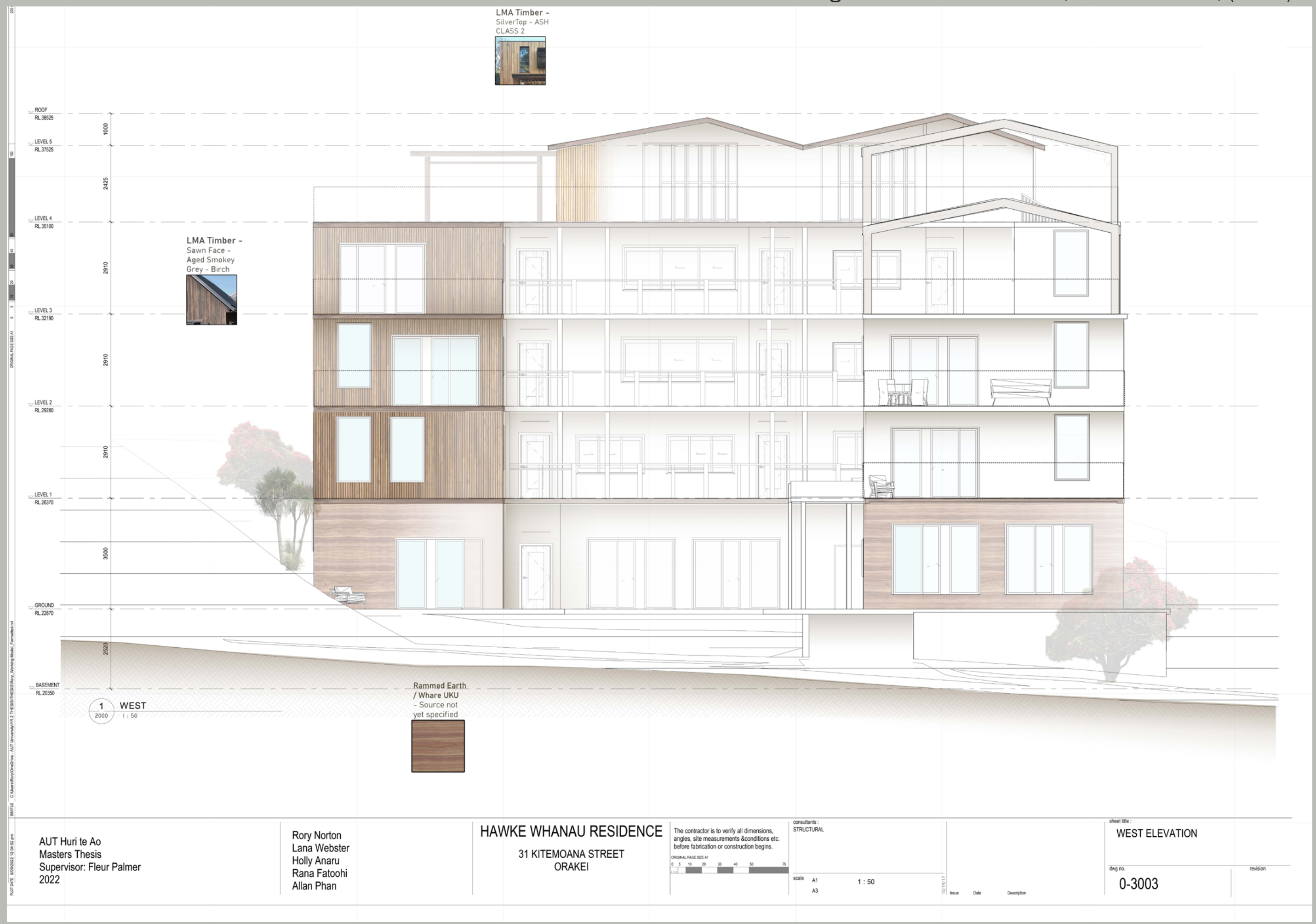
Level four displays one of the real innovations of this design - the whare toanga - which we would never have developed without the input of the Hawke whanau.

This is a family that whakapapa back over many generations, so providing a space where they could pay tribute to their rich history through the exhibition of sacred possessions was integral.

To the north of the whare toanga provides a space for the whanau to host guests in a more formal environment, away from the hussle and bustle of the lower floors.

ELEVATIONS

Figure. 101. 'Hawke Whare, West Elevation', (2022)



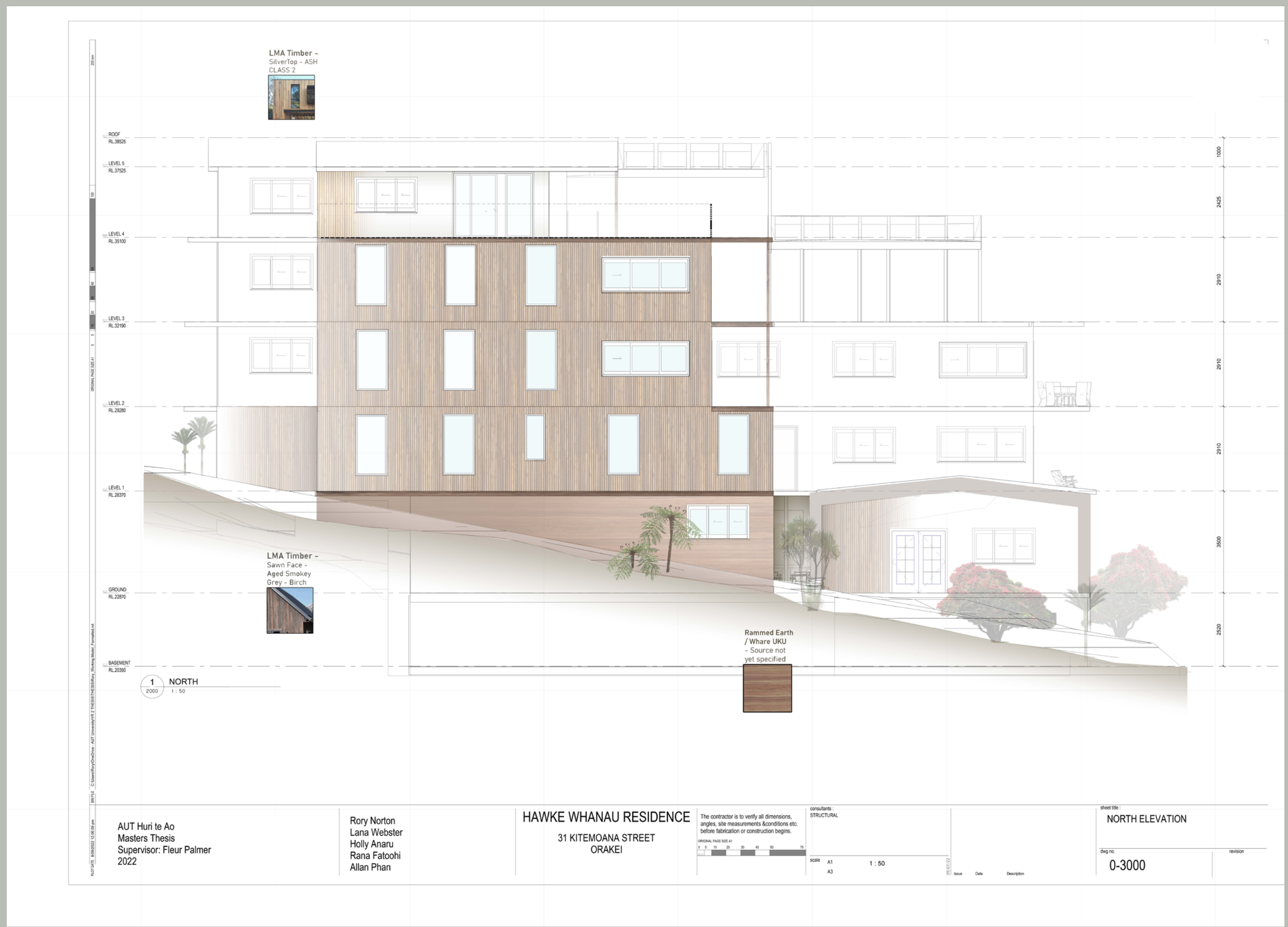


Figure. 102. 'Hawke Whare, North Elevation', (2022)

Figure. 103. 'Hawke Whare, East Elevation', (2022)

Figure. 104. 'Hawke Whare, South Elevation', (2022)

SECTION A

Figure. 105. 'Hawke Whare, Section A', (2022)

SECTION B

Figure. 106. 'Hawke Whare, Section B', (2022) Figure. 107. 'Hawke Whare, Long Perspective 1', (2022)

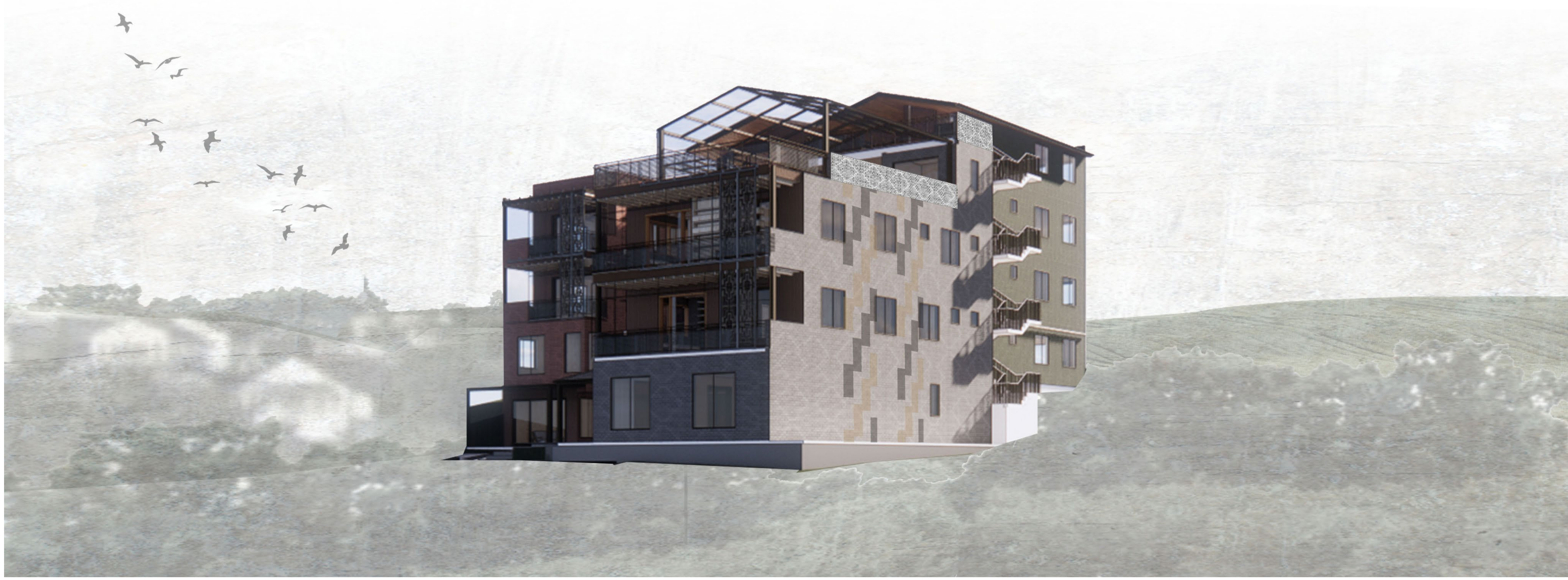


Figure. 108. 'Hawke Whare, Long Perspective 2', (2022)

LOOKING SOUTH-WEST
Towards Kitemoana Street entrance

Figure. 109. ‘Hawke Whare, Towards Entrace’, in collaboration with Holly Anaru, (2022)

Figure. 110. ‘Hawke Whare, Towards Whare Hui’, in collaboration with Allan Phan, (2022)

LOOKING NORTH-WEST
Towards Ground Floor and Whare Hui

Figure. 111. ‘Hawke Whare, Interior: Oranga Tamariki Co-living’, (2022)

INTERIOR
Oranga Tamariki Co-living

Figure. 112. ‘Hawke Whare, Interior: Communal Library’, (2022)

INTERIOR
Communal Library

LOOKING NORTH-EAST
Towards Level 3 external walkway

Figure. 113. 'Hawke Whare, External Walkway 1', (2022)

Figure. 114. 'Hawke Whare, Mothers Co-living', (2022)

LOOKING SOUTH
Towards mothers co-living

LOOKING SOUTH-WEST
Towards Level 3 ecterior
walkway and communal patio

Figure. 115. ‘Hawke Whare, External Walkway 2’, in collaboration with Holly Anaru, (2022)

Figure. 116. ‘Hawke Whare, Communal Patio 1’, in collaboration with Holly Anaru, (2022)

LOOKING NORTH
Towards Level 3 communal
patio

Figure. 117. ‘Hawke Whare, Communal Patio’, in collaboration with Holly Anaru, (2022)

INTERIOR
Level 4 Whare Taonga

Figure. 117. ‘Hawke Whare, Communal Patio 2’, in collaboration with Holly Anaru, (2022)

LOOKING NORTH
Towards Level 4 Patio and Waitemata Harbour

Figure. 118. ‘Hawke Whare, Final Model’, in collaboration with Holly Anaru, Lana Webster, and Rana Fatoohi (2022)

Figure. 118. ‘Hawke Whare, Final Model’, in collaboration with Holly Anaru, Lana Webster, and Rana Fatoohi (2022)

Figure. 119. ‘Finalist pin-up submission for the NZIA Student Design Awards at Victoria University of Wellington’, in collaboration with Holly Anaru, Lana Webster, and Rana Fatoohi (2022)

CONCLUSIONS AND FINAL REFLECTIONS

FINAL REFLECTIONS AND PERSONAL JOURNEY

In this thesis, I have explored the future potential of Aotearoa's built environment. Working with the Hawke whānau meant that I was lucky enough to have a base point to launch my research. However, I was initially unsure as to what direction I would develop my topic. My original direction leaned towards the visual and atmospheric development of the Hawke whare, as this is something I hold a lot of passion for. However, by being a part of a co-design process, my priorities and interests began to shift.

MY ORIGINAL THESIS QUESTION:

In the context of a national housing crisis, how can a multi-generational housing development maximise utility, while establish a deep sense of Tino Rangātiratanga through a distinctive visual language?

Unlike the majority of architectural theses, I have had the immense privilege of working on a real-world project with people who have experienced the impacts of colonisation first-hand.
As the co-design process progressed, I realised that my original research question was based on an approach that lacked acknowledgement of the people at the centre of this project. I started to understand that in order to combat housing issues, architectural development needs to be approached using a 'bottom-up' method. At the beginning of the year, I was focused on developing outcomes centred around knowledge that I had been using throughout my previous years of study - the majority of which were based in euro-centricity. As explored in 'Part 1: Introduction', Western practice has the tendency to approach problems in a 'head-on' manner, focusing on delivering finite solutions by utilising information that has worked in the past. However, architecture is a volatile and ever-changing industry - one that requires a unique and personal approach to every project independently. Although literature and commonly adhered systems are important, they can never fully respond to problems rooted deeply within complex sociology and cultural contexts.
This is particularly relevant within the context of indigenous communities as illustrated throughout this thesis. By engaging with tangata whenua at a personal level, I was able to understand that these communities do not need ostentatious designers to solve their problems for them.

A pivotal point of learning for me that illustrates this notion was explored in 'Part 5: Co-Design Process' (p. 97). In this section, I reflected on a co-design meeting between our ropū and two renowned Ngāti Whātua Ōrākei artists. This was the point that helped me understand that 'visual

development' is something that I as a Pākehā designer should have little to no part in. Art and visual expression is something that is so personal and unique to Māori cultural identity. I realised that even by suggesting broad features, I was trying to mould the development through my own personal judgement. By doing so, I was going against the fundamental essence of what makes co-design so valuable.

Considering this, it could be argued that my development of 'flexible' design features also falls into this category of imposition. However, this is where Western architectural knowledge can be implemented productively. Western systems can benefit communities in a practical sense - while simultaneously upholding Māori values.

This research has taught me that in order for our built environments to prosper, architects must be prepared to give up control over their designs. We need to become mere tools for our communities to utilise by way of co-design in order to provide outcomes that actually cater to people's needs and not solely the judgement of the architect.

I hope this work can help inspire people and help them to understand that the world will always offer solutions and knowledge well beyond independant judgement. Only if we are willing to approach our differences with curiosity and aroha.

In the context of a national housing crisis, how can the mana motuhake -self determination- of tangata whenua combat issues rooted in colonisation?

In this thesis I have explored numerous ways in which tangata whenua can practice self governance over their living environments.
I have illustrated how co-design allows architects to act as vessals and advocators for Maori needs and desires - voices that have been silenced for generations. Done so, through shared knowledge streams that when united, can converge into a tool more powerful than independant effort.

I have explored how Western architectural systems can be applied to mana whenua housing, in the hope of creating homes that come alive, ebbing and flowing throughout generations of future needs and lifestyles.

Finally, with initial ignorance, I have delved deep into the holistic dimensions mātauranga Māori. Exploring how the centering of wairua acts as the integral spiritual engineering of a design, holding just as much importance as physical or theorectical structure. By implementing such knowledge into an architectural context, tangata whenua are practicing mana motuhake in it's truest form - extending wairoa and kaitiaki throughout all aspects of our natural and spiritual world.

In the essence of mana motuhake, the only way of truely measuring the success of the concepts developed in this thesis is through the lived experience and evaluation of those who will utilise them.

The deeper my knowledge has developed this year, the more I realise that the potential of mātauranga Māori and mana motuhake extends well beyond anything explored in this thesis.

This work has been as much of a personal journey as it has been an academic one. However, this thesis is not just about my personal education. All of this knowledge is already embeded deeply within tangata whenua tradition.
Therefore, my only hope is that this work can be used to educate and inspire others to incorperate kaupapa Māori and indigenous perspectives into our built environement and beyond. Through this we can build a better, more equitable future.
Ngā mihi nui.

Kia tau ngā manaakitanga a te mea ngaro,
Ki runga ki tēnā, ki tēnā o tātaou,
Kia mahea te hua mākihikihi,
Kia toi te kupa, toi te mana,
Toi te Aroha toi te reo Māori,
Kia tūturu, kia whakamaua kia tīna! Tīna!

Hui e, tāiki e!

Let the strength and life force of our ancestors,
Be with each and every one of us,
Freeing our path from obstruction,
So that our words, spiritual power,
Love and language are upheld;
Permanently fixed, established and understood!

Forward together!

APPENDIX 1

Co-living Case Studies - (PART 2 p.33)

CASE STUDY: CHOBHAM MANOR, LONDON, UK

Redacted.

Figure. 2. Chobham Manor, scale model, PRP Architects

Chobham Manor (fig.2, 3, 4) is an example of how housing can effectively provide accommodation for a diverse set of people, living under one roof. One of the strongest features of the design is its ability to cater to a lifetime of changing needs. The design holds a three-bedroom main building with a one-bedroom self-contained annexe separated by a communal courtyard. The annexe provides a sense of privacy and independence for elders or - a separate family who may not want to constantly associate with the occupants of the main dwelling. As a way of establishing this independence, a separate entrance is provided for both the annexe and main house. The courtyard between the two blocks acts as a passive bridging point, providing the option for social exchange if desired. The main three-story block is made up of a main communal ground floor, with two private floors above. The upper floors are designed to be versatile to provide the option to divide the house into two separate apartments if needed. The annexe allows the for the occupancy to adapt comfortably, as the number of family members needing accommodation changes over time (PRP, 2017).

Redacted.

Figure. 3. Chobham Manor, plans displaying communal courtyard - providing passive privacy, PRP Architects

Redacted.

Figure. 4. Chobham Manor, Exterior, PRP Architects

CASE STUDY REFLECTION:

1. Exploring case studies such as this has helped me to understand the importance of versatility in a co-housing scheme. This is especially relevant within the context of the Hawke development as planning for the wellbeing of future generations is just as important as providing for current whānau.

2. Using interior schemes that can be easily adapted is crucial to providing versatility.

3. The concept of providing a communal intersection between two demographics is a perfect way of establishing privacy, while retaining social eNgagement.

Redacted.

Figure. 4. Chobham Manor, sketch displaying annexe opening into courtyard beyond, PRP Architects

Redacted.

Figure. 4. 26 Aroha Avenue, Street view, 26 Aroha

CO-HOUSING IN AOTEAROA - CASE STUDY: 26 AROHA AVENUE, MT ALBERT, AUCKLAND

26 Aroha Avenue is an example of how re-zoning Auckland's central suburbs to allow for medium density developments can be the key to saving our cities.

Because of such restrictions, quality medium-density living is hard to come by in Aotearoa. Developments such as 26 Aroha are paving the way for a more economical, social and sustainable future. The complex holds 13 separate apartments - all with different capacities. An additional guest room is offered to all residents allowing for extended family over-flow.

The complex offers a number of shared amenities - such as access to shared electric cars and bikes, a communal laundry, office space, and an extensive vegetable garden at the rear of the property.

Unlike most modern apartments, 26 Aroha offers spaces that encourage neighbour interaction.

A large, open deck on the roof of the building is completely communal and offers the chance for residents to unwind or bond through gardening.

The form of the building is long and slender, spanning almost entirely from the front to the back of the section. The building's thin structure, allows for effective cross-ventilation and light to penetrate all interior spaces.

An extensive solar-panel system is based on the roof, providing electricity and 60-80% of the building's hot water needs. (26 Aroha, n.d)

Redacted.

Redacted.

Redacted.

CASE STUDY REFLECTION:

1. 26 Aroha Avenue, is of a similar scale to what the Hawke whānau require for Kitemoana Street. This acts as a good precedent, giving us a feel of what size various elements should be.

2. The use of communal roof-top patios allows for green-space without sacrificing any of the site. Creating a communal on the roof gives residents the option of privacy.

3. Providing an shared office space is a good way of responding to periods of quanrantine, helping residents feel like they aren't so trapped in their apartments.

4. Providing shared gardens is a great way of encouraging community connections.

APPENDIX 2

Flexible Housing Case Studies (PART 6, p.110)

6.2 'HARD' METHODOLOGY CASE STUDY: BRANDHOFCHEN (1995)

Brandhofchen is a four story apartment block in Frankfurt, Germany, built in 1995. On the north side of each unit is a zone with a kitchen, bathroom, and foyer. On the South side are a series of larger living spaces. The plan is based on a regular structural grid system. The only load-bearing components of the structure are the beams and columns; none of the internal walls are load-bearing, so even party walls can be removed to join two smaller units into a single larger unit. On each grid line (at the north façade), there are small service cores that provide a variety of connection options. (Till et al, 2007)

Redacted.

Figure.70. Brandhofchen Street View, (Jagdfeld, n.d)

Redacted.

Figure.71. 'Two flats combined into one large unit', (Till et al, 2007)

6.3 'SOFT' METHODOLOGY CASE STUDY: LES ANTICONFORMES (1975)

256 Apartments, is an interesting example of 'Soft' methodology being utilised.

The advertisment for the apartment complex in Rue des Pyrénées in Paris read, "256 apartments - where you place the walls where you want."

Customers were given the option to purchase open-concept units that may later be split using a system of partition walls on a 90-cm grid. Regardless of the number of walls, doors, or cupboards the buyer chose, the sale price was set on an area basis. Most units had a balcony at each end and a double aspect design, increasing space versatility.

A typical apartment, measuring roughly thirteen by five metres, can be divided into different areas as desired, such as an open floor plan, a private space to one side and a more public area to the other, or a series of rooms accessible by a hallway. Only the kitchen and bathroom have been fixed in the plan.

The positioning of electircal outlets is also completely customisable. This means that the entire apartment doe not need to be re-wired in the event of alterations (Till et al, 2007).

Redacted.

Figure.72. Top: 'Typical Apartment', Bottom: 'Empty Shell', (Till et al, 2007)

Redacted.

Figure.73. 'Les Anticonformes', (Artstreetecture, n.d)

Redacted.

Figure. 78. 'The apartments as built in 2003 (left), with additions suggested by Elemental (middle)' and with typical additions in 2017 (right) (O'Brien et al, 2021)

6.6 PARTICIPATORY DESIGN: CASE STUDY ALEJANDRO ARAVENA

Alejandro Aravena is a Chilean architect that is known globally for his innovative social housing developments, that aim at combatting inequality within low-income communities. Many of his designs follow a 'Soft' design methodology - allowing tenants the opportunity to hold control over the general layout of their homes. Aravena displays this within his 2004 project Quinta Monroy Housing, Iquique. Each unit begins as a basic empty shell placed next to a voided area. It is then up to the tenant to expand their house as needed into the void, depending on their financial abilities and space requirements. In a 2016 interview for Dezeen, Aravena discusses the benefits of such a system;

"When you create an open system, it customises itself, it corrects itself, it's more adapted to the reality – not just to the family but also for cultural diversity. So it is not only a response to a scarcity of means." This way of thinking pushes design boundaries by reshaping how design is usually approached. Aravena mentions current architectural ideology is too inward-looking. By shifting the control onto the people who actually live in social housing, they can respond to their needs in real-time, on their own terms. This not only saves time and money for developers but allows residents the opportunity to expand their families organically and in a financially stable environment. Giving low-income communities a property that they can expand and grow as an investment is a clear path toward ending inequality. Aravena explains; "We have to operate with systems that can complete themselves, so families can arrive at their middle-class potential." (Aravena, 2016)

Redacted.

Figure.79. 'Quinta Monroy Housing', (Elemental Architecture, n.d)

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