

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

Te Papa noho-a-Kupe:

whakaterere nga rīpa tauārai

Samuel Dunstall

2025



***Te Papa noho-a-Kupe :
whakatere nga ripa tauārai***

A thesis presented in partial fulfilment of the requirements
for a Masters of Design at Massey University,
Wellington, New Zealand

Samuel Dunstall
2025

fig. 1



fig. 2



Karakia

Tū Mai Awa

*Tū mai awa, tū mai moana
Ko koe kei takahia noatia e au
Tupe au nuku, tupe au rangi
Whati ki runga, whati ki raro
Uru marangaranga
Pērā hoki rā taku manu nui nā Tāne
Ka tatau atu ki roto o nuku ngahere
Maia whiwhia, maia rawea, maia whakatakahia*

*Ka taka te huki rawea,
Koro i runga, koro i raro
Koro i Tāwhirimātea
ki korā hoki koe tū mai ai*

*Ka hura te Tamateanunui, ka hura te Tamatearoroa
Te kauaka nuku, te kauaka rangi
Te ai a nuku, te ai a rangi
Te kura mai hukihuki, te kawē au tetere
Kawē a nuku, kawē a tai oi
Oi! Tūmatakokiritia*

*Hoatu waka ki waho
Hoatu waka ki uta
Ngaru hinga atu, ngaru hinga mai
I runga te mata wahine, i raro te mata tane huki nawenawe
Tēnei te waka ka whakairihia
Ko Takitimu te waka e
Ko Tamatea-arikinui te tangata.*

Mōteatea (nā Ruawhāro)

mihī

First and foremost I wish to thank Ngāti Hinewaka for taking me on this journey, for your kaupapa has become deeply influential and significant to me. Since being welcomed aboard this waka, Ngā Rā-a-Kupe has broadened my perspectives and guided my understanding of what it means to be Māori. It has awoken my Kahungunutanga and deepened the connection I have with my own tīpuna. I have allowed the wairua of Kupe, whose presence emanates throughout the rohe of Ngāti Hinewaka, to guide my mahi and immerse my thought process as manuhiri in this space. Ngā Rā-a-Kupe has shown me how kaupapa Māori builds upon itself, continuing to go from strength to strength. It ignites, and feeds the hearts and minds of many. It has shaped my future, and deepens the wider pool of mātauranga Māori.

My wish is that this gift will fill the baskets of your people,
as it has filled mine.

***Mā te tika o te toki o te tangere, me te tohu o te panoho,
ka pai te tere o te waka i ngā momo moana katoa***

***Through the tika of the adze that shapes the hull of
waka, the waka will travel swiftly through every kind
of ocean***

**Ngā mihi ki a koutou,
Samuel / Hāmuera**

tuhinga whakarāpopoto

*He aha te mea nui o te ao?
Māku e kī atu,
He tangata, he tangata, he tangata*

Mātakitaki-a-Kupe, the southernmost tip of Te Ika-a-Māui is a physical convergence point of our atua Māori, the raw forces, thresholds and interface between their domains. The forest of Tāne bloom amongst the secluded valleys of Aorangi, his korowai for Papatūānuku. The oceans of Tangaroa crest high bringing life and death, and the waters of Parawhenuamea swirl and carve the land, toward the undercurrents of Hinemoana and acidify at the threshold. This wāhi tapu is a thin landing between maunga, moana, awa and ngāhere that amplifies the intensity of these collisions. Ngā Rā-a-Kupe tower over you and cascade down into the depths to join the giant wheke that led Kupe to Aotearoa. The many locations that bear the name of the great navigator Kupe represent the voyaging spirit of our ancestors, reminding us of where we come from, our connections across moana and the direction of our future - kia whakatōmuri te haere whakamua. The Ngā Rā-a-Kupe kaupapa, set out by Ngāti Hinewaka hapū of Ngāti Kahungunu ki Wairarapa provides the anchor stone for this rangahau Māori that connects ancestral knowledge, mātauranga Māori and re-emerging technologies to inform kaupapa Māori design. Centering the practices of tohunga hanga whare aims to ground this pātaka whakairinga kōrero in a shared whakapapa with the materials and narratives, understood through indigenous methods of wānanga, hīkoi, kōrero tuku iho, pūrākau, and whakatauki. The practice of the tohunga retains the sanctity of the whare and allows us to revitalise traditional knowledge through contemporary structures, ensuring that this practice retains and upholds the tikanga and kawa of the built form in te ao Māori. Painting the links between the whare and the waka draws into sight the voyage we are embarking on into the future, attuned to the knowledge of our ancestors.

Research question:

Can the recentering of tohunga hanga whare in kaupapa Māori design facilitate future wānanga and deepen our connection with the whakapapa of a structure?

rārangí take

6: karakia

7: mihi

8: tuhinga whakarāpopoto

10: ko wai au

14: wānanga (methodology)

17: te ao mārama

20: ūpoko

26: punga mauri

28: kōhatu mauri

30: tohunga naga whare

34: material life cycles

*Tuia ki te rangi
Tuia ki te whenua
Tuia ki te moana
I rongō i te pō
I rongō ki te ao*

ko wai au

Ko Tauhara te maunga,
Ko Taupō te moana,
Ko Waikato te awa,
Ko Te Arawa, Takitimu te waka,
Ko Ngāti Tūwharetoa me Ngāti Kahungunu
ōku iwi,
Ko Ngāti Rauhoto te hapū
Ko Nukuhau te marae
Ko Dunstall te whānau
Ko Samuel tōku ingoa

Nō Te Arawa me Takitimu ōku tīpuna
I tupu ake au i Taupō-nui-a-Tia
Ko Tauhara te maunga e karanga mai ana
Ko Waikato te awa e tārere mai ana
Ko Samuel/Hāmuera tōku ingoa

I whakapapa to the whenua and awa that feed Te Manawa o Te Ika-a-Māui
- the heart of the great fish of Māui, known to Ngāti Tūwharetoa as
Te Kōpua Kāpanapa o Taupō Nui-a-Tia - the deep glistening pool of Tia.

My whānau whakapapa Ngāti Kahungunu me Ngāti Tūwharetoa.

At Kāwera, Heretaunga we connect to Ōmahu marae.

Raised in Taupō I feel a closer connection to my Tūwharetoa whakapapa through lived experience; this rangahau has connected me deeply to my own māoritanga and my untouched Kahungunutanga. Since boarding this waka, this proceeding rangahau has proven deeply personal and driven me to reclaim my whakapapa as a taonga for my whānau. Our whakapapa back to Tūwharetoa, to Kahungunu, and Hoturoa was recorded by my grandmother Tiari Rangimarie Mackie (nee Dehar). These documents were not touched by me or my immediate whānau until my time of writing this thesis, at which point these transcripts of my kuia provided an aho, a weaving, a grounding, an understanding and connection to my whakapapa Māori.

*Hokia ki ngā maunga kia purea koe e ngā hau a Tāwhirimātea
Return to your mountains to be cleaned by the winds of Tāwhirimātea*

Te waka o Takitimu holds particular significance in my connection to this kaupapa, it is what ties me genealogically to Ngāti Kahungunu iwi, my whānau to the Heretaunga rohe. “Kahungunu is the eponymous ancestor of Ngāti Kahungunu who originally came from Turanga near Gisborne. Kahungunu himself was the son of Tamateamaitawhiti who commanded the Takitimu waka. Kahungunu was born in Northland and after several moves and marriages found his way to the Māhia Peninsula where he married for the fourth time to Rongomaiwahine” (Te Whaiti, 2004, p.6).

Kahukuranui was the eldest child of Kahungunu and Rongomaiwahine, born at Nukutaurua, Mahia peninsula - and was the only child reared in the whare kāinga.

Kahukuranui, with Ruatapuwhine had a son Rākei-hikuroa.

Rākai-hikuroa and Ruarauhanga had 6 children

- Tūpurupuru
- Taraia (Ancestor to Te Ūpokoiri of Ōmahu)
- Rangitawhiao
- Te Ao Mataraki
- Hineterarakau (Ancestor of Hinewaka)

The common ancestors linking my own Kahungunu whakapapa to that of Ngāti Hinewaka hapū, the union of Rākei-hikuroa and Ruarauhanga which precedes myself by 16 generations. My whānau are descendants of Taraia. The eponymous ancestor of Ngāti Hinewaka hapū, their tipuna Hinewaka, and is a descendant of Hine-te-rarakau. “Hinewaka originally came from Heretaunga to Awhena.” (Te Whaiti, 2004, p.6)

fig. 3



fig. 4





Wānanga

as methodology

First and foremost I must state my positionality relative to the Ngā Rā-a-Kupe kaupapa and the following rangahau. I detail my whakapapa in the preceding chapter ‘Ko Wai Au’, but emphasise that I approach the Ngā Rā-a-Kupe kaupapa as an outsider, as manuhiri to Ngāti Hinewaka. This rangahau then is engaged from both insider and outsiders perspectives. As an insider, methods of learning, thinking and doing come through my whakapapa Māori (Ngāti Tūwharetoa, Ngāti Kahungunu), and as an outsider it is through understanding my positionality that I am able to operate in proximity to the wider kaupapa of Ngā Rā-a-Kupe. This space has helped me grow as an indigenous researcher, extended my own mātauranga, and reserve utmost respect for Ngāti Hinewaka hapū and their ancestral knowledge that continues to be held within the lifeforce of their hapū.

“I speak to the sacredness of my own lands,
but my taringa are open
and my whakaaro flows
with respect to create alongside others,
observing manaakitanga.
I offer forward my kōrero,
whakaaro to the kaupapa of others.
It is not mine to claim,
but mine to tautoko.
Mauri ora.”

(Dunstall, 2023, p.8)

“Kaupapa Māori is neither fixed nor rigid. It is open-ended, it is ethical, systematic and accountable. It is scientific but open to existing methodologies, informed and critical.”, “it comes from tangata whenua, from whānau, hapū and iwi. It is undertaken by Māori. It is for Māori and it is with Māori” (Smith, 2015, p.47). Throughout this kaupapa, wānanga has served as a physical interface, a process and a state of mind that has connected an entire rōpū of tangata whenua. Wānanga is a term that encompasses all of these states and pre-dates the use of ‘mātauranga’ as a kupu māori. Prof. Rangi-Anehu Mātāmua (Tūhoe) reflects on his own understanding of the term in an interview on ‘Mātauranga Māori’,

“Mātauranga is not a traditional Māori word for knowledge. We generally use *kōrero*, or *wānanga*. But what happened is as a response to education, the use of the word ‘*mātau*’, ‘to know’, *mātauranga* became education.” (Tūruru NZ, 2024, 0.53). The term *wānanga* is used to describe the space, process and acquisition of knowledge including the realm of applied knowledge. Our *tīpuna* understood the retention, acquisition and application of knowledge could not exist in separate spaces. *Wānanga* then is both a methodology and a process and applied through *whakapapa* as a basis of relating inward and outward to the context. It acknowledges that knowledge is descendant to us and it is through this very *whakapapa* that carries this embodied and ontological knowledge. This multidimensional ‘*knowing*’ is held sacred through *whakapapa* and its grounding in our Te Ao Māori worldview.

Wānanga are the epitome of knowledge layering, of built-up generational teachings, epiphanies, proven techniques that put so great a focus on the perpetuation and fostering of knowledge specific to *whānau*, *hapū*, or *iwi*. *Whakapapa* again can be traced through the refinement of a skill, for the *wānanga* also incorporates entities such as *hau* (essence), *mauri* (life force), and *wairua*. This is what makes *wānanga* unique, for the link to the past is still tangible and the states of *mana*, *tapu* (sacred), *oho mauri* (awakening the life force), *wana* (zeal), and *wehi* (awe), along with other verbs still carry a sense of caution and awe with them. (Inia, 2021, p.14)

It is this multidimensional approach to knowledge that has driven my involvement with this kaupapa, and this subsequent rangahau. It is through our Māori methods of knowledge sharing and acquisition that we can decolonise and return our understanding to a true te ao Māori context, which expresses and extends our Māoritanga.

Applying western research frameworks and perspectives to kaupapa Māori can prove problematic and a disconnect felt between community and academia. This holds particular relevance to indigenous researchers who are constantly navigating between two worlds. As members of *whānau*, *hapū* and *iwi* our *whakapapa* carries through every experience, every learning, interaction and decision we make. “The word itself, ‘research’, is probably one of the dirtiest words in the indigenous world’s vocabulary.” (Smith, 2021, p.XI). Research is defined by the Oxford Dictionary as a “Systematic investigation or inquiry aimed at contributing to knowledge of a theory, topic, etc., by careful consideration, observation, or study of a subject.”. What Smith is talking about is “the perception still held by many indigenous communities that research has been a process that exploits indigenous peoples,

their culture, their knowledge and their resources.” (Smith, 2021, p.XI). Understanding the impact of ‘research’ on a community must be initially understood by the researcher in order to understand its level of appropriateness to the context of kaupapa Māori.

This is something I have grown to understand through working with Ngāti Hinewaka hapū, developing an understanding of my own positionality. Māori methods of knowledge sharing operate relative to whakapapa and thus are inseparable from Māori identity.

Wānanga draws on all of those relationships, and their own whakapapa. This gives an example of a multidimensional indigenous methodology, already refined by our ancestors through thousands of years that draws on our whakapapa, and the whakapapa of knowledge together into a space for learning, a nest for understanding and growing with a unique set of protocols.

‘Te Papa noho-a-Kupe’ leads through wānanga to create a space to facilitate wānanga, it is learning through doing, experiencing and understanding the process.

fig. 5



Fig. 6



Te Ao Marama

Ko te pū
Te more
Te weu
Te aka
Te rea

Ko te wao nui
Te kune
Te whē
Te kore
Te pō
Ki ngā tangata Māori
Nā Rangi rāua ko Papa
Ko tēnei te tīmatanga o te ao Māori

The above waiata speaks of the origins of te ao Māori, from the darkness and the coming of light into the world. Kōrero such as the one above refer to the common understandings we share as Māori, with nuances in kōrero that criss and cross to form these woven narratives, pūrākau central to whakapapa and kōrero tuku iho. These pūrākau serve both figuratively and literally to the environment from which they come. For specificity in the instance of this rangahau I am referring to kōrero of Ngāti Kahungunu iwi, from the east coast of Aotearoa. In introducing wānanga as a methodology I introduced the term whakapapa. An understanding of whakapapa is foremost to an understanding of te ao Māori. Whakapapa, defined by Sir. Āpirana Ngata (Ngāti Porou) as “the process of layering one thing upon another. If you visualise the foundation ancestors as the first generation, the next and succeeding ancestors are placed on them in ordered layers” (Ngata, 1972, as cited in Te Rito, 2007, p.1), referring to the lines of genealogical descent in which all things can be traced to an origin. Everything has a whakapapa, and as Māori we exist as living representations of our ancestors entrusted to preserve and retain our own whakapapa, and this knowledge passed unto us through birth, the particulars of which are often shared through the elements of the ancestral whare tīpuna.

In the following I will start from the beginning, by reciting a simplified whakapapa of the cosmos, and te ao mārama, the world of light.

Whakapapa of Te Ao Mārama

Te Korekore (limitless potential)
|
Te Pō (darkness / night)
|
Te Ao Mārama (the world of light)

Ranginui - Papatūānuku (sky father - earth mother)
|
Ngā Atua (gods)
|
Hineahuone (first human/woman)

Separation of Ranginui & Papatūānuku

“The union of the Sky (*Rangī*) and Earth (*Papa*) resulted in the birth of a number of children. They were confined between the bodies of their parents, the most roomy parts between the breasts and under the armpits of their mother” (Buck, 1949, p.439), the children of Rangī and Papa wished not to be confined to the cramped darkness. The slightest rays of light would sometimes pass between the two, alerting the children of the world of light beyond. After some deliberation, a number of the children agreed they should separate their parents, but not all consented to this. After several attempts, Tāne lay on his back facing his father, and pushed Rangī upwards with the strength of his legs, filling the void with light. “The falling rain and the rising mist symbolize the perpetual grief of the primary parents at their enforced separation” (Buck, 1949, p.439). These children made up the first pantheon of atua. Following the separation war broke out among the children, these battles between children continue to this day and are retold through pūrākau.

Whakapapa of Te Whanau Mārama

Ranginui - Papatuanuku

Moe-Te-Ahuru = Uru-te-Ngangana = Hine-Tu-Rama

**Te Rā Kura
(Sun)**

**Te Marama I Whanake
(Waxing moon)**

**Ngā Whetu
(The stars)**

Above is the whakapapa of te whānau marama according to a particular Ngāti Kahungunu tradition, as retold by Ātea-a-Rangi Educational Trust (2023).

Uru-te-Ngangana was the eldest child of Rangi & Papa, a sibling of Tāne. After separating his parents, Tāne sought te whānau marama, to illuminate both day and night, so his parents could find each other. When Tāne first proposed the idea to Uru-te-Ngangana, he was rejected, after all, te whānau marama were their children. After returning he explained his intent to set out te whanau marama as celestial tohu to guide their whanaunga across Te Moana-nui-a-Kiwa:

Tāne: Arā ētahi mouere kāore anō kia tūhuraia; he hekenga nui kāore anō
kia tīmataia. Māu e taea ai ēnei momo mahi!

Uru-te-Ngangana: Taihoa. Kia kōrero ahau ki aku wahine, kua whakautu ahau
ki a koe...

Tō manawarahi e Tāne; he pērā anō hoki o moemoeā mō tō tāua iwi.

Kua huri ōku whakaaro. Āe, māu e hari atu Te Whānau Marama;
e tautoko ana ahau i tēnei mahi āu... (Ātea-a-Rangi, 2023)

After consulting his wāhine, Uru-te-Ngangana gave Tāne his support to set out on his quest.

Te Rā Kura was placed in kete *Rauru-rangi*

Te Marama i Whanake was placed in kete *Te Kauhanga*

Ngā Whetū were placed in kete *Ikaroa*, all whetū but *Atutahi*, the mataatua and most tapu of all the stars, *Atutahi* was hung on the side of the waka

Tāne consults his friend Tamarēreti, a great master of waka. Te waka o Tamarēreti is ready to sail into the heavens, the name of the waka is *Uruao*. Te waka o Tamarēreti, the rope and punga can still be seen across the night sky, and a key constellation for tātai arorangi (knowledge of the celestial bodies) and whakaterere waka (navigation of waka) (Ātea-a-Rangi, 2022).

Fig. 7





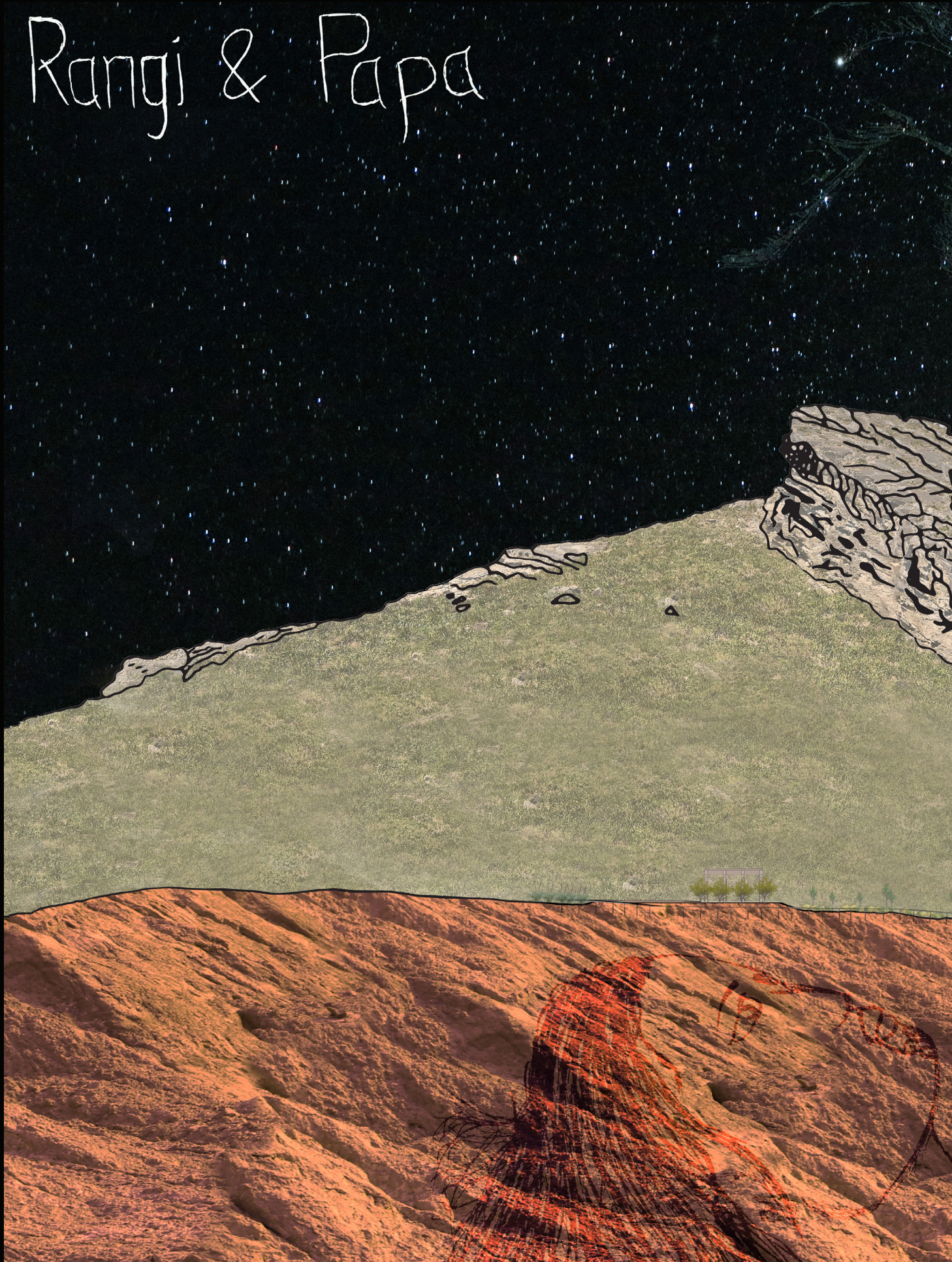
Fig. 8

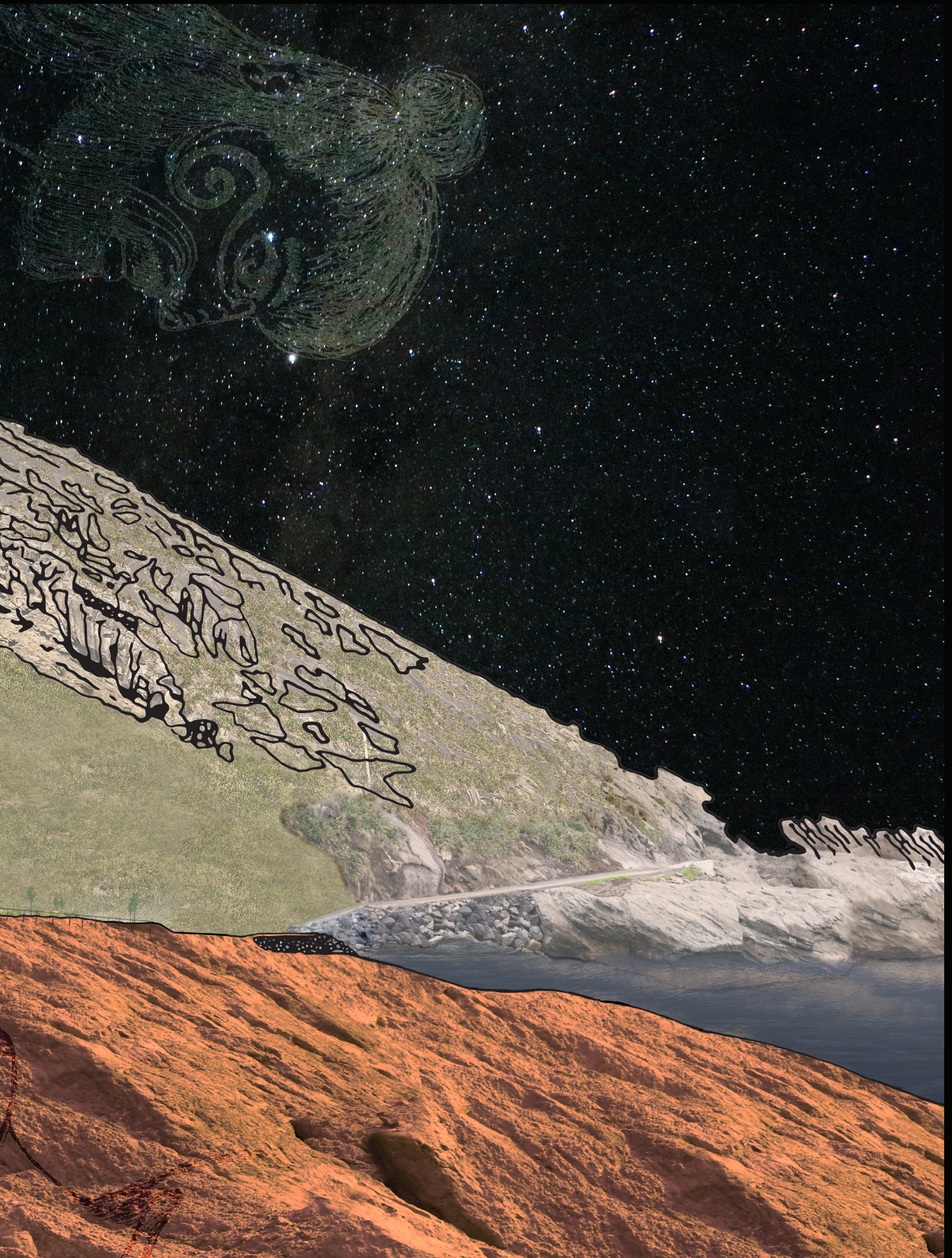




Fig. 9

Rangi & Papa





Āpoko

‘Te Papa noho-a-Kupe: Whakatere ngā ripa tauarai’ first and foremost is a kaupapa Māori rangahau, encompassed within the Ngā Rā-a-Kupe kaupapa led by Ngāti Hinewaka hapū of Ngāti Kahungunu ki Wairarapa. I exist in this space as apart of a wider wānanga rōpū, working with Ngāti Hinewaka hapū and their board of trustees. It is important to understand from the outset my work a contribution into the deeper pool that extends ngā mātauranga (knowledges), ngā auahatanga (creativity), ngā pā whakawairua o Ngā Rā-a-Kupe (expression of mauri). Through my involvement in this kaupapa, design has been used as a tool for a conceptual imagining and response to Ngāti Hinewaka hapū aspirations. These aspirations have been communicated to me through kōrerorero, hui, hīkoi and wānanga since first meeting the hapū. Of course, it is not up to me to determine, or provide a definitive answer as to what these aspirations look like. What I can do however is offer forward my knowledge and expertise in design to help facilitate these very wawata into the future.

First receiving the karanga for this kaupapa in Tatau-uru-ora (November) o te tau 2022, was to the Ngā Rā-a-Kupe wānanga held at Kohunui Marae near Wairarapa moana. This wānanga “brought together tangata whenua designers and artists, practitioners, teachers and students to experience, understand, interpret and imagine future direction in which Ngāti Hinewaka can share as mana whenua the stories and teachings of the land and draw toward their connection to Kupe as a tipuna.” (Dunstall, 2023, p.38). Throughout the wānanga we engaged in process of hīkoi, kōrerorero, mātakitaki, whakarongo, mahi toi, mahi ā-ringa and mahi ā-rehe.

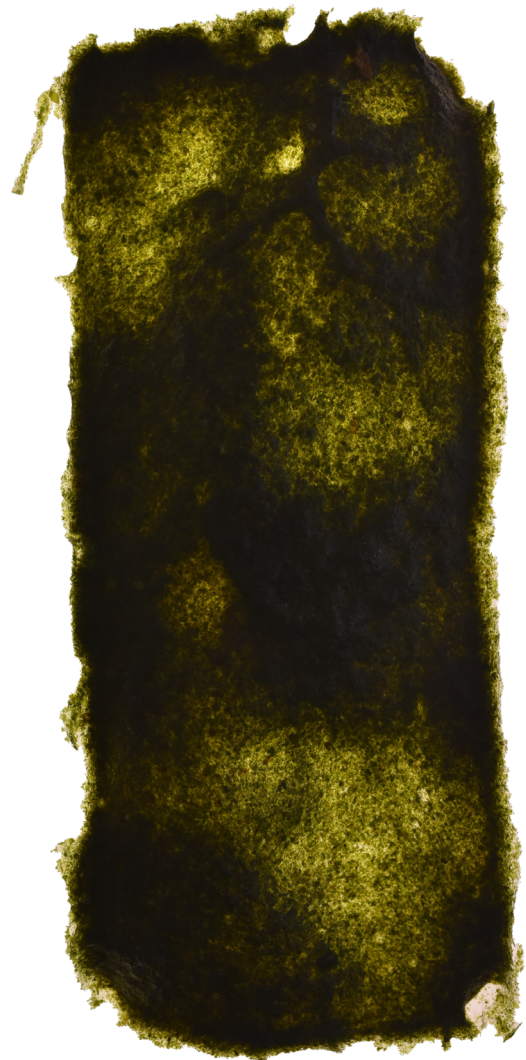


Fig. 10

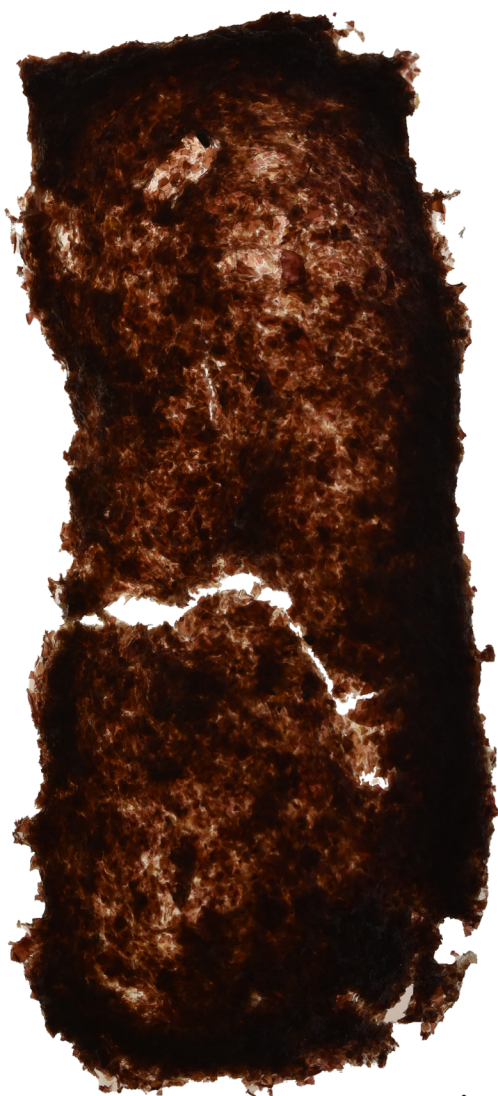


Fig. 11

I have been aboard this waka ever since, with ‘*Te Papa noho-a-Kupe: Whakatere ngā ripa tauarai*’ being the culmination of the mātauranga shared to me through my experience aboard this waka, and the relationships I have formed with Ngāti Hinewaka and our wānanga rōpū over the years.

Ngā Rā-a-Kupe is a physical place, a wāhi tapu near Mātakitaki-a-Kupe, the southernmost point, and the upper jaw of Te Ika-a-Maui. Ngā Rā-a-Kupe are pūrākau and are embed through their name with the navigational histories of Kupe, Ngake and their discovery of Aotearoa. “Pūrākau is an ancient form not just of transmitting ideas but of creating shared meaning and thus identity.” (Stansfield, 2015, p.85), “Māori celestial bodies of knowledge can be located within pūrākau. Pūrākau are not kōrero pāki (common yarns); rather, they are sources of knowing that define who we are.” (Hawkins, 2018, p.90).

The following is the pūrākau of Ngā Rā-a-Kupe retold by Ngāti Hinewaka kaumātua Haami Te Whaiti (Ngāti Kahungunu ki Wairarapa, Rangitāne, Ngāi Tahu, personal communication, November 28, 2022) during a hīkoi at Mātakitaki-a-Kupe, “Whilst camping here, Kupe and his companion Ngake contested to see which of them could make a sail in the shortest time. Both beginning in the evening, Kupe finished

his in the middle of the night, whilst Ngake did not finish his until dawn the next day. They were hung to dry and in the morning both sails, Ngā Rā-a-Kupe, could be seen towering above as they stand today. They are hōanga material, made of sandstone, and are what we call Ngā Rā-a-Kupe”.

This kaupapa provided me with an introduction to wānanga emergent from hapū aspirations. Wānanga has the ability to take many different forms, to evolve and be malleable. I like to think of this rangahau as an extended space of wānanga. This also situates this rangahau in an appropriate position relative to the kaupapa, as this study is a part of a larger pool of knowledge, this knowledge positioned to tautoko the directions chosen by Ngāti Hinewaka; rather than leading the design process from a perspective of

problem
|
ideation
|
interrogation
|
design
|
solution

instead we approach through kaupapa Māori

karanga
|
whaikōrero
|
mihimihi
|
wānanga
|
tautoko

The process of extended wānanga is sustained by positioning wānanga as both a methodology as a way of being. This has required a certain kind of positionality relative to the kaupapa, a certain tikanga specific to this kaupapa that envelops the process. This allows for full immersion into wānanga throughout, whether that be in the context of the group, or in a self-led environment. The complexity of such has required a personal shift in my way of working too, employing karakia to open and close the wānanga space each day. This assists in a healthy balance, so I can manoeuvre freely between the immersive space of learning and my own personal life.

While introducing his preceding book, *Tikanga Māori: living by Māori values*, Sir. Hirini Moko Mead (Ngāti Awa, Ngāti Tūwharetoa, Tūhourangi) describes that “an attempt is made to understand a particular tikanga in its traditional setting and then examine how it is being put into practice today.” (Mead, 2016, p.2). Though I do not wish to compare my own study to that of Sir. Hirini’s, the trajectory of my studies resonate with this; through the quest to understand a tikanga in its traditional setting (i.e. mātauranga of the whare) and apply the understandings of this practice to inform how I navigate toward the future within my field, in a kaupapa Māori sense - between past, present and future. The following rangahau sets out to achieve just that.

Understanding the tikanga and kawa that underpin the practices of our tīpuna in relation to the whare allows communication with the messaging encompassed within. This is how our pūrākau are retold. These are wealths of knowledge passed down to us from a young age by our elders, and reveal to us who we are, and how we came to be. There are pūrākau to guide our understanding of the cosmological principles spatialised within the whare. The whare is already written in these languages, as descendants we can interpret and apply this mātauranga into the conception, design and articulation of an emerging whare as to draw this tīpuna knowledge into the present. “Research in a Māori sense seeks to expand knowledge outwards (te whānuitanga), in depth (te hōhonutanga) and towards light (te māramatanga)” (Mead, 2016, p351). Te Papa noho-a-Kupe extends from the inside out, into these dimensions, realms and possibilities.

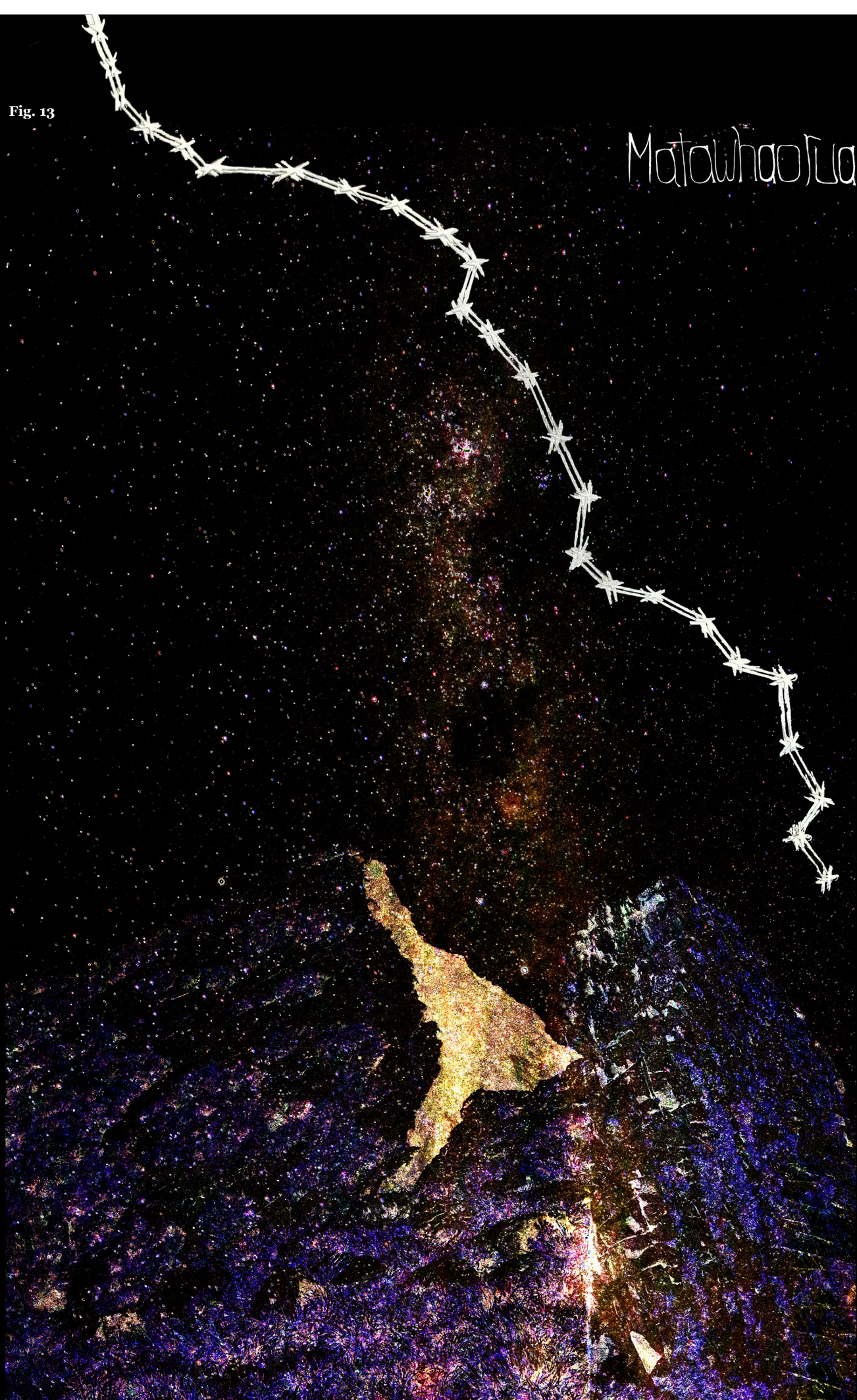
Fig. 12



tawara

Fig. 13

Matawhaoiua



punga Mauri

Throughout Aotearoa iwi have retained their unique kōrero and pūrākau of the migrational waka that brought Māori to these shores. The punga, or anchor stones used on the migrational waka are held in high regard as being integral to the mauri and sanctity of waka. This has permeated through the descendants of these migrations, long after the vessels themselves expired. Multiple punga were used for a single deep-sea waka. These were often large stones, shaped and especially chosen for their rarity or significance. In the case of migrational waka, punga were representative of the ancestral homeland, Hawaiki. Waka had multiple punga for different purposes, as explained by Elsdon Best in ‘The Māori Canoe’,

(1.)

Punga whakawhenua: Heavy ground or holding anchors, used in anchoring the vessel.

(2.)

Punga korewa (occasionally termed punga tarere): Sea-anchors. These were lowered a certain distance for the purpose of steadying a canoe in a rough sea. A lighter stone than No. 1.

(3.)

Punga terewai: A much lighter, smaller stone, used in sounding, and in ascertaining the set and strength of currents; hence described as a punga tutoro. Punga here should not be translated as “anchor” (Best, 1925, p.278)

The importance of these punga is emphasised in the unique naming and retention of names given to these stones throughout generational kōrero and iwi centric histories.

“The anchors of important canoes had special names given them, and some of the names of those of the canoes that arrived here from eastern Polynesia twenty generations ago are still preserved.” (Best, 1925b, p.276)

Here are some examples of the retained names:

Matahourua

Maungaroa - left by Kupe at Porirua

Te Arawa

Tōka-parore (bow punga)

Tūterangiharuru (stern punga)

Tainui

Puna (bow punga)

Hine (stern punga)

Takitimu

Matakana (bow punga)

Toka-ahuru (stern punga)

Te Taupunga o Takitimu

Te Puwhenua

Horumoana (stern punga) - ropes named Marohe & Mawake

Punga would be blessed with their own special karakia at point of departure, ensuring the safety of the vessels and its occupants at sea. To this day stones can be found across all of Aotearoa that have their origins from across Hawaiki-nui, said to have come as anchor stones on many of these ancestral waka.

In Te Kauwae Raro, Te Matahorohanga retells a kōrero pertaining to the importance of these stones, “Hoturoa said, ‘Drag the canoe into the clump of wood and let her lie there ; then erect pillars at the bow and the stern as a sign to us of the length of Tainui’ The stone pillars were set up and they were named ‘ Hine’ at the stern, and ‘ Puna ‘ at the bow. It is said these were the names of the anchors of ‘ Tainui,’ they were stones brought from Tahiti, and they stand there still. This matter was deposed to by Hotu-roa in the Whare-wananga” (Whatahoro, 1915, 267), in this instance it was the length of Tainui that was of emphasis, the punga to outlast the life of the vessel but also enstate their presence at this particular site. “Not only did all canoes receive special names, but in the case of important canoes the sails, cordage, masts, anchors, paddles, thwarts, bailers, were also named in a similar manner. The names given were sometimes those of tribal ancestors, sometimes those of famed natural features of the tribal lands, as mountains, ranges, and rivers.” (Best, 1925a, p.277)

The punga that accompanied our ancestors here were physically transferred to sites on the whenua as statements of arrival. Ngāti Toa rangatira Kahu Ropata speaks to the punga ‘Maungaroa’ that Kupe brought from Hawaiki to Aotearoa aboard Matawhaorua, “Now when a Polynesian lays his anchor stone onto the whenua, that was his declaration to his world that he had discovered Aotearoa. Tēnei whenuatia nei kārangā nei ko Aotearoa, ko tēnei whenua, nāku” (Manatū Taonga, 2020, 0:58). How these sites and kōhatu were treated differs from waka to waka and their subsequent iwi. Some punga transferred into the foundations of whare, then becoming physical representations of the mauri and the wānanga that was carried to Aotearoa. “Ko te whatu i te pou tuaron-go te wāhi tapu, ko te Kura a Tangaroa, he kōwhatu āhua pūwhero nei, he kōwhatu nō te kei o ‘Kurahaupō’, translated by Best as ‘the stone deposited at the rear post of the house marked the tapu spot and it was the Kura a Tangaroa. It was a reddish stone, being a stone belonging to the stern of ‘Kurahaupō’” (Best, 1925b, p.307). Te Taupunga o Tākitimu is the name of the meeting house at Waimārama marae. When Tākitimu first anchored in this area, “four tohunga disembarked at Waimārama. *Tunui* and *Taewha* were the most well known of the tohunga and established the whare wānanga *Rangiteauira* and the Whare Maire *Paewhenua* respectively” (Origins of Waimārama, n.d.). While some punga transferred to whare, others, such as in the case of *Maungaroa*, *Hine* and *Puna* lay as markers of presence but it is undisputed that this punga all held great significance to their people.

Kōhatu Mauri

Mauri stones hold a significant and important role in retaining the life force of built structures throughout te ao Māori. These kōhatu would often be placed in the corners of the house, or along the side of the whare facing toward the east (the rising sun) (Kaire-Melbourne, 2022). The way mauri stones are treated, and act as grounding agents to the structure, carries much resemblance to the use of punga aboard waka. We can begin to understand the spiritual significance of kōhatu used in traditional whare construction, that ties the sanctity of the structure to our ancestral homelands of Hawaiki.

In the construction of the whare, “the four corner pou were tapu” (Makereti, 1986, p.301). Whare represent repositories for the intergenerational knowledge and prosperity of a people. Waka represent our people, as continued today through our pepeha, our whakapapa and the connections we retain throughout our iwi. Mātauranga-a-iwi, specific knowledge became subject of whare wānanga now adapting to Aotearoa, a knowledge base, and a pou in the ground. As referred to by Whatahoro, these mauri stones play a key role in both the whare and the waka. “The use of sacred stones is characteristic of the Polynesians as we may learn from many things. So far as their use in the whare-wānanga is concerned they were considered to give authority to those who taught, and permanency in the matters taught, on the part of the pupils.” (Whatahoro, 1913, p.xii).

The following is a course adopted in the construction of the whare-wānanga: The foundation of the house must be carefully cleared and swept. This done, a commencement is made with the pou-tua-rongo, or rearmost pillar, then the pou-toko-manawa, or central pillar, and lastly the pillar by the door. These three pillars are kept to their proper height by the aho-tatai, or cord stretched from rear to front; the rear pillar is four fingers breadth lower than the centre one, and the latter the same below the top of the front pillar. It is the same with the floor of the house, the rear must be four fingers breadth below the front (and adds the Scribe, the building must be four fingers breadth wider at the greater in the front than in rear, and the opening of the doorway four fingers wider on the insides of the jambs than the outside. This is supposed to allow smoke to escape, and the dimensions have been decided on from experience. All measurements are always made inside the house. (Whatahoro, 1913, p. 86)

Fig. 14



Connecting these stones as structural elements of the whare is another extension of waka thinking, re-mem-bering the knowledge of whare and waka toward each other again. These punga are held in woven baskets, and suspended vertically from the substructure of the whare, much in the same way punga would be used aboard waka hourua. This unique opportunity for returning to the traditional practices of creation becomes exciting, and a means of reconnecting with ancestral design thinking. Through uncovering we see hints that were there the whole time, lines in mōteatea, references and connections in karakia and symbolism in pūrākau.

Tohunga Hanga Whare

Tohunga are highly revered figures throughout te ao Māori, of which their role in Māori society was central prior to colonisation and the subsequent Tohunga Suppression Act of 1907. Today we largely understand tohunga as being ‘experts’ in certain fields, this however, as described by Rev. Māori Marsden (Te Aopōuri, Ngāi Takoto, Ahipara, Ngāti Wharara) “is wrong and stems from the mistaken idea that because the Māori used this term in association with recognised experts in a particular field the word must mean expert” (Marsden, 2003, p. 14). As mentioned tohunga we referred to in relation to particular fields, but were “chosen or appointed by the gods to be their representative and the agent by which they manifested their operations in the natural world by signs of power (tohu mana)” (Marsden, 2003, p.14). Māori goes on to explain that specialist tohunga were experts in various fields of artistic activity, ‘chosen by the gods and empowered with mana to suit him for this task’. This is the realm of which the ‘tohunga hanga whare’ would extend, often in the medium of tohunga whakairo. Matene Simon (Ngāti Pīkiao-Te Tokotoru o Manawa Kotokoto, Ngāti Rongomai) describes the role of the tohunga in his ancestral rohe of Te Arawa, “Ko te mahi o te tohunga, tāku e mōhio nei, ko tāna mahi he tū pākai riri mo tōnā iwi. Koia te ariki e arataki i tōnā iwi, me tōnā hapū, me tōnā whānau. Ki te tohutohu ki a rātou he aha ngā tohu o te taiao o taua wā tonu. Nā reira ko te tohunga he hono. Koia te kauwake e hono i te iwi ki ōna atua” (Houltham, 2024, 0:10). “The word tohunga is derived from the stem ‘tohu’ which as a verb means a sign or manifestation. Tohunga is the gerundive of tohu and means the ‘chosen one’ or ‘appointed one’” (Marsden, 2003, p.14). Simon explains that through the means of suppression by the government, this didn’t stop tohunga from practicing, and studying their environment, continued through tātai whetū, tātai kōkōrangī, tātai te moana, tātai te ngahere, tātai te maunga, tātai te tangata (Houltham, 2024).

Tuta Nihoniho of Ngāti Porou retells how a community enacted the process of felling a tree, “When timber was required for house building, or canoe-making, or other purposes wherein was expended much labour, the trees were felled in the Autumn. In the previous spring a crop of food would be planted near the spot, if possible, in order to save a labour of carrying it to the scene of operations. When the crop was lifted, then the people moved to the spot, erected huts and the labour of tree-felling commenced” (Best, 1925b, p.74). The building of Te Aurere by, Hekenukumai Ngaiwi Puhipi details the process, “for the falling of the tree, there’s quite a few different karakia. You know, we have a karakia when we actually go into the forest and then, when we find the tree. We have the karakia before we start. We take the chips on that tree and we actually light two fires. I can burn the first chips on the one fire so that part of it goes up, to wāhi ngaro” (Mills, 2009,19:10).

This is the customary practice of *tumutumu whenua*.

A karakia for the tumutumu whenua as follows:

Hika ra taku ahi
E tumutumu whenua
E aneane whenua
E raro timu, e raro take, e Hawaiki
Ka hika ki te ihi o Tāne
Ka hika ki te mana o Tāne
Noho mai i tua na
E tapu ana Tāne
E maota ki te rangi o Hawaiki...e! (Best, 1925b)

Hekenukumai continues, “...then, one of the fires we actually use for cooking some of the food from Tangaroa, and from the land for whoever is involved in the acts of falling the tree. It’s actually to pacify Tāne, you know, that we want this tree for waka. And then, we need it to-- survive really, so that’s what the ritual is about” (Mills, 2009, 19:40). This fire is the ahi pūrākau, and “is for the purpose of taking the tapu off, that the proceedings may be free from tapu” (Best, 1925b, p.74).

A karakia for Ahi Pūrākau as follows:

Hika ra taku ahi, E Tane!
Hika ra taku ahi, E Tane!
He ahi purakau, E Tane!
Ka hika i te ihi o Tane
Ka hika i te mana o Tane
Ka hika i te marutuna o Tane
Ka hika i te maruwehi o Tane
Ka hika i te pukapuka o Tane
Ka hika i te mahamaha o Tane
Ka kai koe, E Tane!
Ka kai hoki au, E Tane! (Best, 1925b)

A particular karakia for the kai cooked in the ahi pūrākau is repeated and “this not only completes the lifting of the tapu from the food, the work, and workmen, but also as a pou [to support and impart energy to the workmen]; it wards off evil influences and sickness, or misfortune; it prevents workmen becoming listless or unduly wearied. It also renders them intelligent and clear-minded in regard to their work; and it pertains to Tāne” (Best, 1925b).

Here follows the karakia for the taumaha, to shift those who partake in this process from a place of tapu to a place of noa:

Tenei te pou ka eke
Te pou kai a koe
Ko te pou o tenei mahi
Taiaho i roto, wananga i roto, korero i roto
Tena te umu, te umu ka eke
Ko te umu o tenei whaihanga
Ka ma taku hau mahi
Ka ma mo tu, ka ma moe rere
Ka ma moe te whakaarahia
Whakaarahia i te ata hapara
Ka mau tatau mau wawe i te ata hapara
Ka ma nga pukenga
Ka ma nga wananga
Ka ma hoki matau, enei tauira. “
(Best, 1925b)

As Best describes, everyone apart of these processes were under strict tapu, to ensure the safety of all involved. It is impossible for us to grasp in its entirety what these methods looked like, however we can take the learnings of connecting the material to the spiritual as a means of understanding. “Quite often we are thinking of tikanga or customs as pure things but often, in today’s environment, we are trying to forensically piece together and reconstruct our cultural identity from fragments; a ramification of the colonisation process...” (Kawiti et.al., 2025, p.4).

As noted in the previous chapter, in the description made by Te Matorohanga in *The Lore of the Whare Wānanga: Te Kauae Runga* (1913) it is apparent that aho-tatai is a measuring device, however it may become apart of the mīmiro post-tensioning system employed into the structure of the whare once lashed. The relational language used by Te Matorohanga, “four fingers breadth” and “the dimensions have been decided on from experience” supports the notion that measurements were taken in relation to the human body and from within the house (Whatahoro, 1913, p.86). Connecting ourselves both physically in dimension and metaphysically through drawing our whakapapa to material and process, “It is possible to revive some aspects of the tapu of knowledge and to adapt these aspects to the practices of today. Thus, learning in accordance with tikanga Māori could mean adopting protocols that derive from the notion of the tapu of knowledge and ensuring that such protocols are fully discussed and that students are willing to follow them. The objective should always be to enhance the learning of students and to assist them to achieve to the best of their abilities” (Mead, 2016 ,p.352).

Treadwell explains an example of how we may have lost touch with these methods, through the “colonising and controlling of knowledge can be seen in the translations in Rev. L.W. Williams’ ‘1892 Dictionary of the Maori Language’. In this edition we see that the terms for the structures used to raise the ‘tāhuhu’, ‘rangitapu’ and ‘tokorangi’ (references to the te ao mārama separation of Ranginui from Papatūānuku), were translated as functional nouns, ‘scaffolding’ and ‘sheers’, thereby excising the cosmological significance embedded in the Māori words.” (Treadwell, 2017, p.94). In ‘*The Terminology of Whakapapa*’, Āpirana Ngata describes the significance of tāhuhu and its dual meaning, “we have two conceptions, according as tāhuhu is used as the first weft in the weaving of a garment, thus allied to “taki aho” or “hāpai,” or as the ridge-pole of a house or as a stiffening rod. In the cult of genealogies “tahu or tāhuhu” has a technical meaning. It is the act of setting out or arranging the main ancestors (connected with a common ancestor) from whom you may derive the tribe or tribes of a more or less extensive area. It has the idea of a horizontal arrangement with connected suspended lines that fits with both the conception of a weft and of a ridge-pole” (Ngata, 2019,p.21). Through colonial language the whare could be abstracted and viewed as an object, rather than from a Māori perspective where the whare is understood as the body of an ancestor and viewed from the inside, out. Elisapeta Heta explains of this era, “the prevalence of Christianity meant that there were certain things that were biased towards those academics’ view of what they are looking at. This is where the idea that the right side of the house was the right relative to standing outside of it and looking at it comes from” (Kawiti.et.al, 2025, p.5).

***He whare i whakaarahia i roto i te pā tūwatawata o ngā tūmanako
A house that is erected within the fortress of desires***

Material life cycles

“The understanding and respect for knowledge on a genealogical scale is embedded in mātauranga. Coupling this with emerging technologies, ways of making and thinking we hold the power to pull our modern day, urbanised and fragmented relationship between society and te taiao towards the intertwined and infinitely deep understanding our tīpuna had of being and caring for the world around them. “This understanding was achieved through a transcendence of the physical and into the spiritual realms of connectivity of Māori to past, present and future, through drivers such as whakapapa, our creation stories and our tikanga” (Dunstall, 2023, p.17).

Intertwined throughout indigenous culture are the concepts of balance and renewal. It is an understanding based on our relationship to the world around us and built upon observations of this world and the cycles in our environment. The way in which whare were designed and the materials treated reflected this, proving a living and breathing structure - the whare raupō. Whare raupō were of distinct construction, and frequently used in pre-colonial Aotearoa. These whare were moveable structures and well insulated. As a thatching material the lifecycle of raupō aligned with the timescale of the passing of the knowledge. This process of renewal was a way of passing on knowledge to the next generation through practical application. “Maori were familiar with a constant process of seasonal building and rebuilding, a process which also provided the ongoing opportunity to practise and pass on construction skills to the next generation” (McKay, 2004, p.64). This was a means of both cultural and physical preservation of skill and ‘know how’. “Māori thatched wall linings had their origins in the thin vertical timbers, from the purau tree, used by Rarotongans that make walls and known as “kaka’o”, a likely cognate for the Māori word “kākaho” denoting a reed lining.” “As the art of interior lining, or tukutuku, developed, “kākaho” was a term applied to the vertical and horizontal toetoe stalks or timber battens decoratively lashed together to form wall and ceiling linings, while raupo bundles and nikau palm leaves became an exterior covering element on the walls and roof” (Brown, 2005, p. 59), as explained by Brown although the whare raupō are largely an architecture of the past these weaving traditions continue in practice to this day and show an example of the strength of this method of knowledge preservation through a cultural framework and teaching method.

This process was in part an inspiration for the creation of local bio-based material exploration incorporating the plentiful rimurimu of the coast of Te Matakītaki-a-Kupe. This would bring the domain of other atua into question, and were negotiations to consider when operating in rapport with the whakapapa of materials. The call for the development of rimurapa into a usable, building material comes from the call for the application of place based materiality, an evident whakapapa between site and material. The great depths of Te Moana-nui-a-Kiwa ki te Tonga are home to abundant Rimurapa, a fascinating ecosystem and material in its own right, described by high born rangatira and great navigator Hui-te-Rangiora as a ‘woman with hair that waved about in the water, upon the surface of the sea’. Rimurapa does not do well when extracted from his hydrated environment, for its unique biology and semipermeable cell structure uniquely adept to the conditions within the moana. Taking advantage of this materials semipermeability I was able to preserve rimurapa as a usual material for interior environments, by replacing its 80-90% water content with vegetable glycerine. This preserved the rimurapa in a ‘leather-like’ state, preventing the material from expiring, however still with the problem of drying out when exposed to sun.

Traditional uses for rimurapa exist and were practiced by Ngāi Tahu iwi of Te Wai Pounamu. Rimurapa was put to use as bags for preserving tītī, or muttonbird. These preserves were bags known as ‘pōhā’ - a bladder of rimurapa split down the centre, creating a cavity between the ‘skins’ of the blade. Tītī would be stuffed into this cavity, and the bark of the tōtara tree attached to the outside of the bag. The rimurapa could then dry out, that is evaporate its moisture content while preserving the tītī inside. These preserves were then placed in pātaka, or other forms of storage and could preserve tītī for over a year at a time. Pōhā also doubled as a unique cooking technique in which the tītī would remain in the bag, while it was tossed over a fire. This would have the effect of steaming the contents inside.

Another traditional use for seaweeds were as mourning wreaths worn in tangi, the lifecycle of the material being connected with the time for mourning during tangi.

Mākōtutukutuku wharepuni

Mākotutukutuku is a 16th century sleeping house constructed by members of Ngāti Hinewaka hapū. After kōrero with a number of those involved with the construction in the mid 1990s, it became apparent that the wharepuni was a means by which Ngāti Hinewaka were able to reconnect with their whakapapa and mātauranga. The hapū were engaged in wānanga over a long period of time where they learnt not only the customary practices associated with constructing a wharepuni, but also the practices and tikanga of living everyday life as a hapū. Wānanga, adzing, harvesting, lashing were some of the practices and techniques of Mākotutukutuku I explored and applied in this rangahau. These were unique opportunities to connect back into customary methods and engage my Māoritanga.

Mākotutukutuku wharepuni takes on the context of an accurate recreation / model of traditional wharepuni design, method and structure for its place in Te Papa Tongarewa. This has meant the development of Mākōtutukutuku has been bound to a certain trajectory, and seen through a particular lens.

Fig. 15



Fig. 16

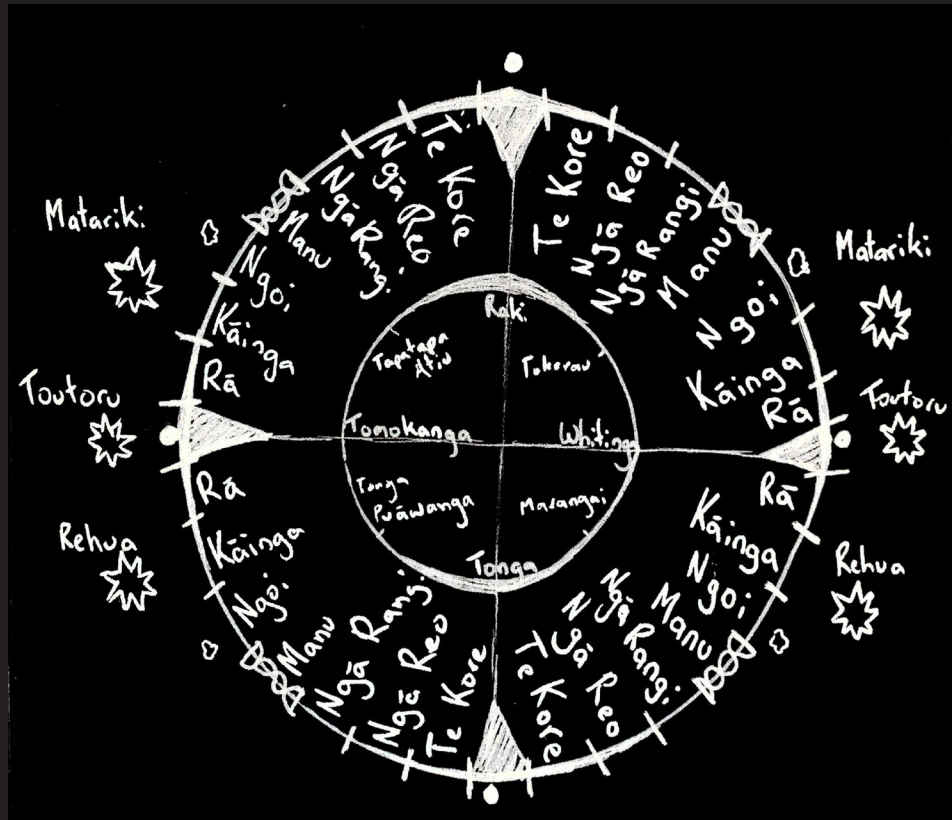


Fig. 17



Ātea-a-Rangi

Fig. 18



Ātea-a-Rangi is a celestial star compass set out on the whenua, at the mouth of Ngaruroro awa. Carved by Piripi Smith, whakairo, whakatere waka practitioner and chair of the Ātea-a-Rangi educational trust, Ātea-a-Rangi is one of the key tools within the wayfinders toolkit.

It is an astronomical device utilised across Te Moana Nui-a-Kiwa, this particular ātea, a holder of significant kōrero to the Kahungunu iwi. Emphasis is on the carvings to communicate and spatialise mātauranga ā-waka of Aotearoa. It acknowledges ancestral and contemporary vitalisation of knowledge, featuring figures such as Maui and Kupe but also Mau Pilailug, carved atop 'Whitinga' pou and represents the reconnection and revitalisation of wayfinding knowledge in Aotearoa. The whakairo details retell pūrākau of Te Moana Nui-a-Kiwa, such as Maui snaring Te Rā, Kupe and the wheke and Te Māngōroa. Ātea-a-Rangi identifies the numerous tohu a wayfinde might look for at sea. Particular birds, key constellations, the rising and setting points of the sun and knowledge of how the navigator might position relative to these elements. The pou are arranged spatially, positioning the taura in the centre, as if aboard waka. This example continues to be used as a classroom.

Fig. 19



*Raki
(Rata)*



*Whitinga
(Mau Piailug)*



*Tonga
(Kupe)*



*Tomokanga
(Maui)*

*Hine-Takurua
(Rising)*



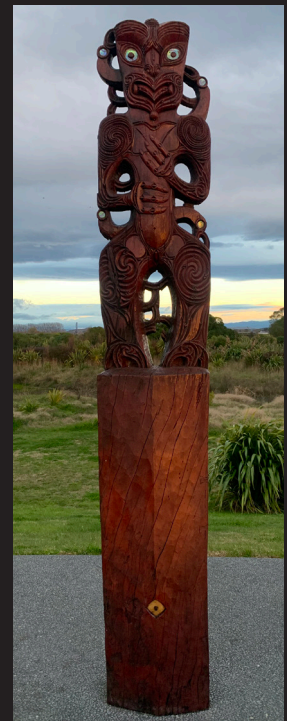
*Hine-Raumati
(Rising)*



*Hine-Raumati
(Setting)*



*Hine-Takurua
(Setting)*



Whakaahua

In te ao Māori, whakapapa is not exclusive to human genealogies but is present to everything in our world as every living thing descends from a primordial atua. The rākau and fibres for instance, descend from Tānemāhuta, Rimurimu descended from Tangaroa. In the opening sequence of Kupe the narrator lays out the connection between tangata and the god of the forest, “In Aotearoa Kupe saw huge kauri trees -’the forest is abound with Tāne Mahuta, holding earth and sky apart, Tāne must be appease when one of his children is taken” (Turei, 1993, 4:50). “Tangata whenua exist in an interconnected mesh of energies, ecologies and genealogies that entangle to the point of inseparability. This is holistic and it becomes important that the relationships between energies, ecologies, genealogies and self-identity are not severed. This has existed for time” (Dunstall, 2023, p.17). Harvesting, and working hands-on with material is a means of connecting directly to its source, a means of understanding where things come from and how they behave. “If we think of spirituality as the intangible, and touch as the interface between the body and the material world we can begin to understand how whakapapa, as a thread, combines to connects our being with the material world around us and in-turn toward te ao wairua, and the idea that we exist in the ‘eternal present’” (Dunstall, 2023, p.15).

Given kaupapa Māori research methodologies have guided this rangahau, it should come as no surprise that ‘wānanga’ has been a primary and critical method of engagement with the materials. The following chapter has been adapted from kōrero with the tōtara rākau upon shaping it to a 1:10 scale model of Te Papa Noho-a-Kupe. I see this as a part of engaging the wānanga between myself and the material.

In writing about the process of creation, in particular of the physical work shaped by the tools at the end of my hands, I found it tricky to communicate what I had felt throughout this process through a document or in a space where the rākau itself was excluded. Thus it made sense, in order to speak of this process and relationship, it made sense to engage in kōrero with the rākau directly. The following chapter, in fact almost all writing pertaining to the designing process, is adapted from transcriptions of kōrero I shared with the rākau, rimurimu, and the whare itself. I believe this is an extension of these indigenous processes, and in fact wānanga is embedded and embodied by these physical objects, and so serve as interfaces to engage in this teaching/learning.

Fig. 19



Fig. 20



Emerging from research surrounding the mīmiro mātauranga, post tensioning system of the 19th century whareniui came the need to create a scale replica, or at least section of one of these whare. The following model I designed referencing a variety of mātauranga, but with a particular reference to, *The Old Time Māori* (Mākereti, 1986); writings within Kohika (Irwin, 2004) an archaeological study in Whakatāne rohe Ngāti Awa 18th century whare and pātaka; anthropological publications of Te Rangi Hiroa (Buck, 1949) and Rev. L.W Williams (1896); and Mākotukutuku wharepuni of Ngāti Hinewaka hapū housed in Te Papa Tongarewa Museum of New Zealand.

The decision was made by myself to hand carve the whare by means of chisel, based on kōrero with kaumātua of Ngāti Hinewaka. This kaumātua emphasized the importance of understanding the language of rākau, the practice and purpose of making and that being directly engaged with the tool is a form of communication to the carver - the importance was in carefully selecting and understanding both the timber and the tool being used. A visit to Scaife timber recyclers in Mangaroa followed. The tōtara I sourced was used in a woolshed on Kahurangi road - on the shores of Wairarapa moana. This was the only Tōtara rākau they had at the time, but when I entered that warehouse something in particular must have drawn me to that rākau, a wairua presented itself to draw me and this kaupapa toward that Tōtara - I think that is to not be underestimated. Upon being told of the board's previous use I was quite moved, it was as though the rākau had found a way back towards the rohe in which it came from. This tōtara would have once stood in the ngāhere, a breathing part of the Wairarapa.

The portal consists of a tāhuhu, poutokomanawa, four heke, four poupou, two pou-matua, six kaho, two kaho matapaho and two kaho tapu. The two kaho matapaho are lashed to the poupou, the kaho and kaho tapu which are lashed/wrapped by the tua-whenua then sit atop the heke as the tua-whenua passes across the tāhuhu and down to the otherside. The outside pou-matua lean against the poupou and support the weight of the roof by applying inward force. The mīmiro post tensioning on this whare requires there is a poutokomanawa to support the tāhuhu as per the traditional design of the whareniui. The tāhuhu has notches in its underside that correspond with the three central pou that support the ridgepole in the air. The tua-whenua is tied off (once tension is pulled into the cord) to the pou matua. The tua-whenua runs from this pou matua, up the poupou, across the kaho matapou, across the heke (wrapped around the kaho & kaho tapu), above the tāhuhu, and down the opposite side and tied again at the opposite pou matua. This tension is then pulled to the ground like a tent, with the rope grounded beyond the poupou. "When the rope reached the outside wall it was secured tightly by a process called mīmiro" (Papakura, 1986, p.302). These specific connection details are designed to 'lock' under compression. "The use of this lever placed great strain on the rope, and this strain locked the timbers of the house. The two poupou outside each other took the strain, and the rafters were held together on wall and ridgepole. The creaking of timbers was heard under the strain" (Papakura,, 1986, p.302).

Fig. 21



Fig. 22



The chisel is what drew the shape into these members, the hand chiselled connection details were made as accurately as I could to the original drawings I had seen. Using a hand drill for the lashing holes on the poupou and heke (small scale of the whare, holes only measuring around 3mm diameter.)

Using the hand chisel was a really valuable experience as it allowed me to communicate with the rākau in a way that I hadn't experienced before. I don't know the process of how the tōtara was felled in the forest, or the tikanga employed when it was milled for the woolshed originally. I do know at least the approximate whakapapa of that tree. This was an important observation for me to bring into the creation of Te Papa noho-a-Kupe - the rākau had to be connected to this kaupapa in one way or another. I didn't have control of that prior use or tikanga employed in this case, but personally I employed karakia whakairo - facilitating a connection and reciprocity with the rākau - to keep me safe within the process of working with the rākau and so that karakia was given before the first toki from myself.

The top of the tāhuhu is convex and there are corresponding upper ends to the heke that are shaped to be able to shift slightly against the surface of the tāhuhu. The tension of the tua whenua overtop also counters the upward force of wind on the roof. The tua whenua pulls tension downward and creates a friction connection between these two elements. The central pou that support the tāhuhu represent the extended legs of Tāne when he separated Rangi and Papa (Kahungunu understanding of separation). This applies to the architecture of the wharenuī but I will further discuss these forces and principals in their relation to the contemporary design of Te Papa noho-a-Kupe and its implementation of other technologies.

It was important to build a connection with the tōtara before making the first cut. In particular, as a kawa wasn't established from the point of the rākau in the ngāhere. Much like the process of picking out this rākau, there are many instinctive feelings I have felt with some of the decisions made surrounding the whare in the past, that they have drawn my attention or given a tohu that just aligns with the surround kaupapa, existing kōrero, pūrākau and Ngā Rā-a-Kupe wāhi tapu.

Understanding the language and essence within the rākau was only possible when using hand tools that facilitate a direct interaction. It helped me understand that there is an ever present mauri within the rākau, and as the carver that it is my job to whakarongo, feel out and connect myself to the frequency in which the rākau will speak through that channel. Each physical motion or cut is a part of this conversation or exchange. Working by hand attuned my feeling toward the rākau much more so than using a saw or a router as you run the chisel along the rākau you can feel if there is a curve, a knot, or the growth rings of the tree. This is the story of a living being, well before your time.

Fig. 23



Fig. 24

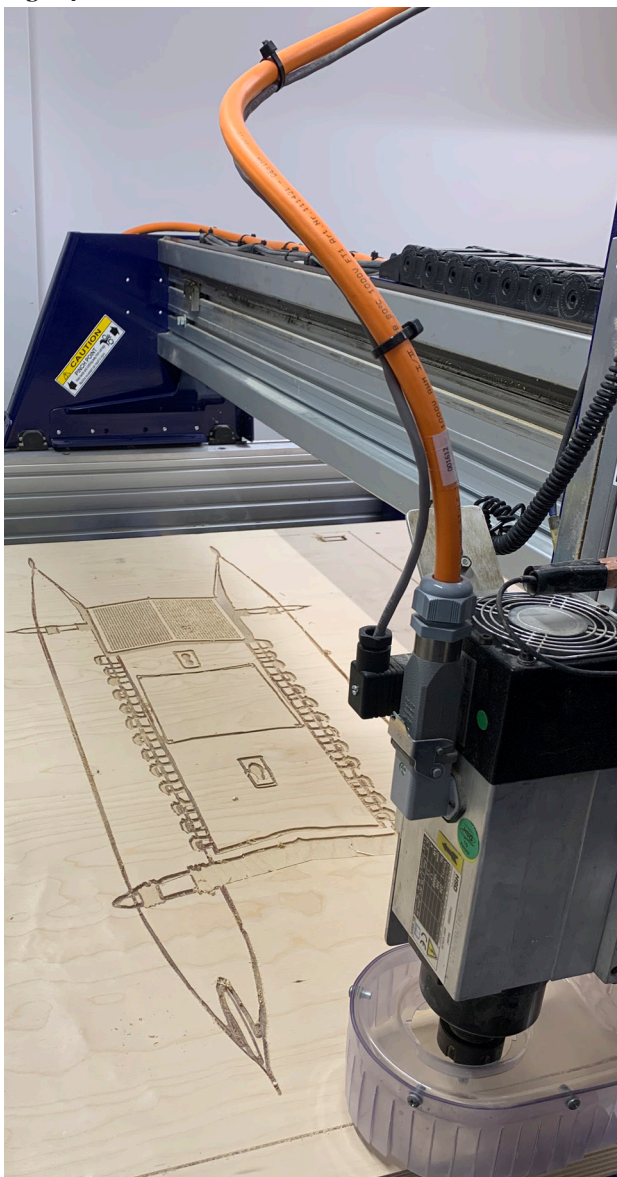
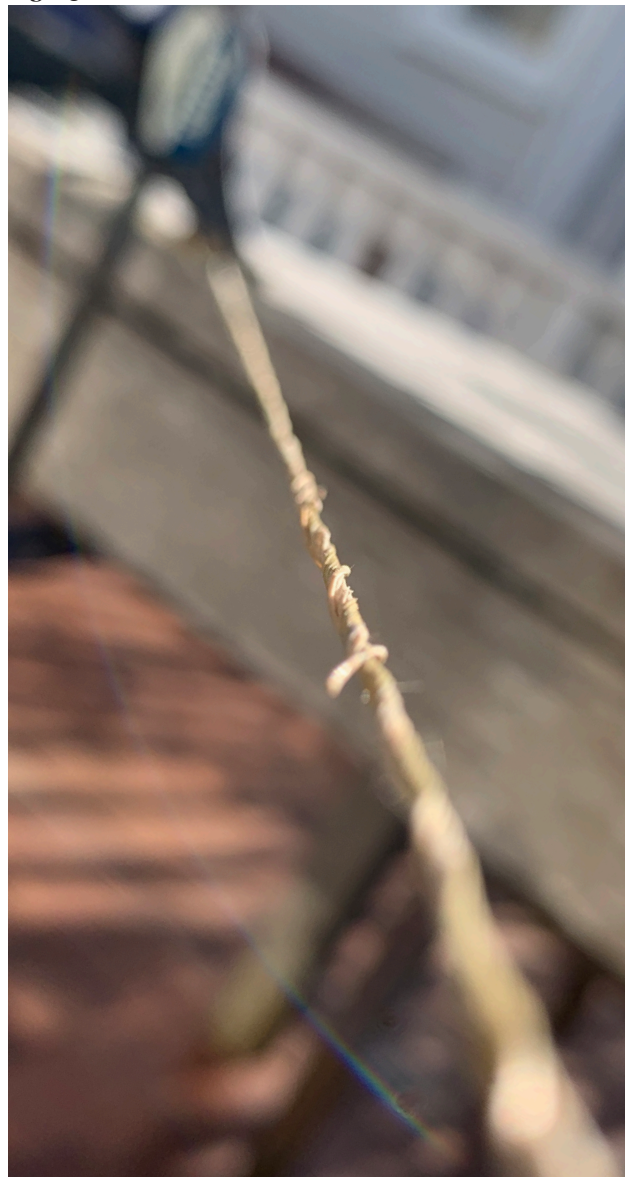
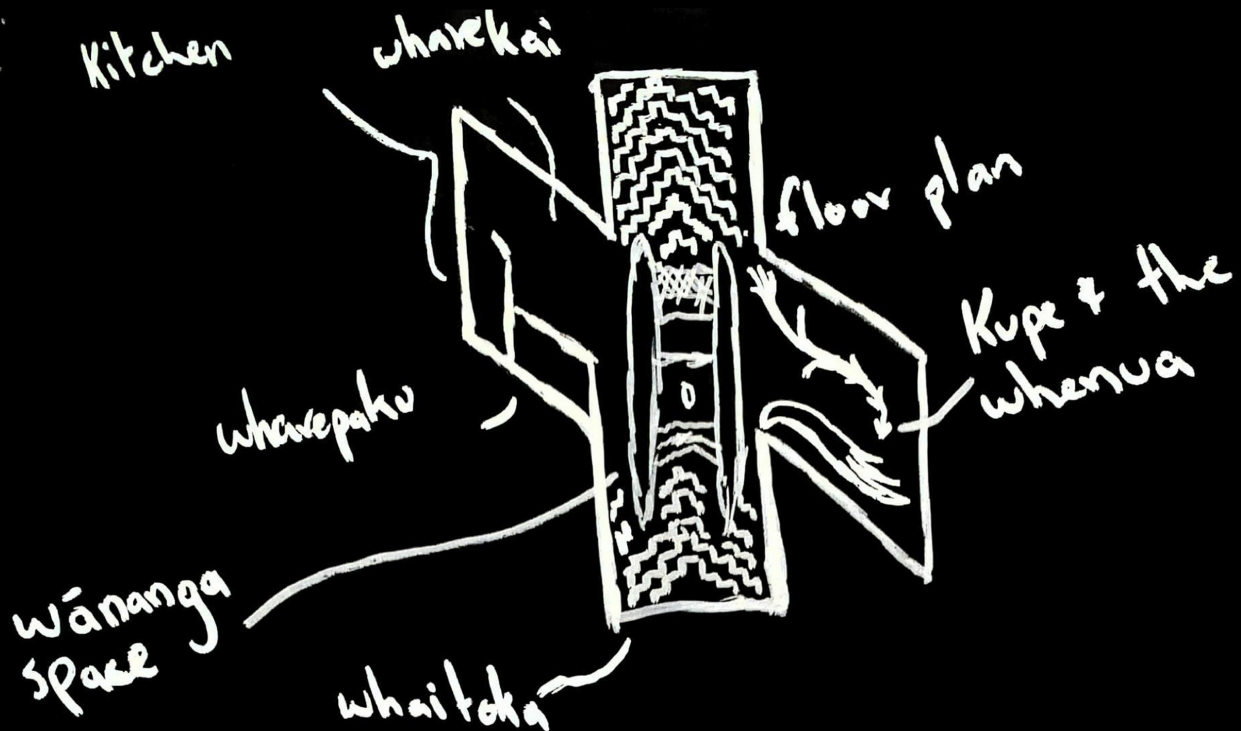
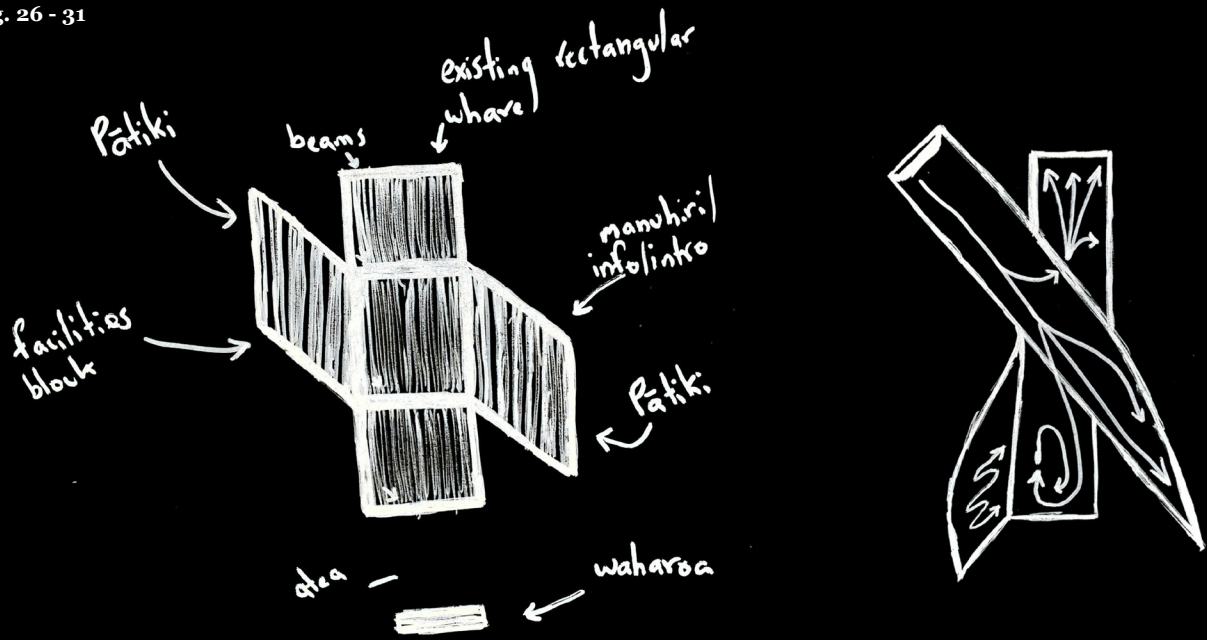


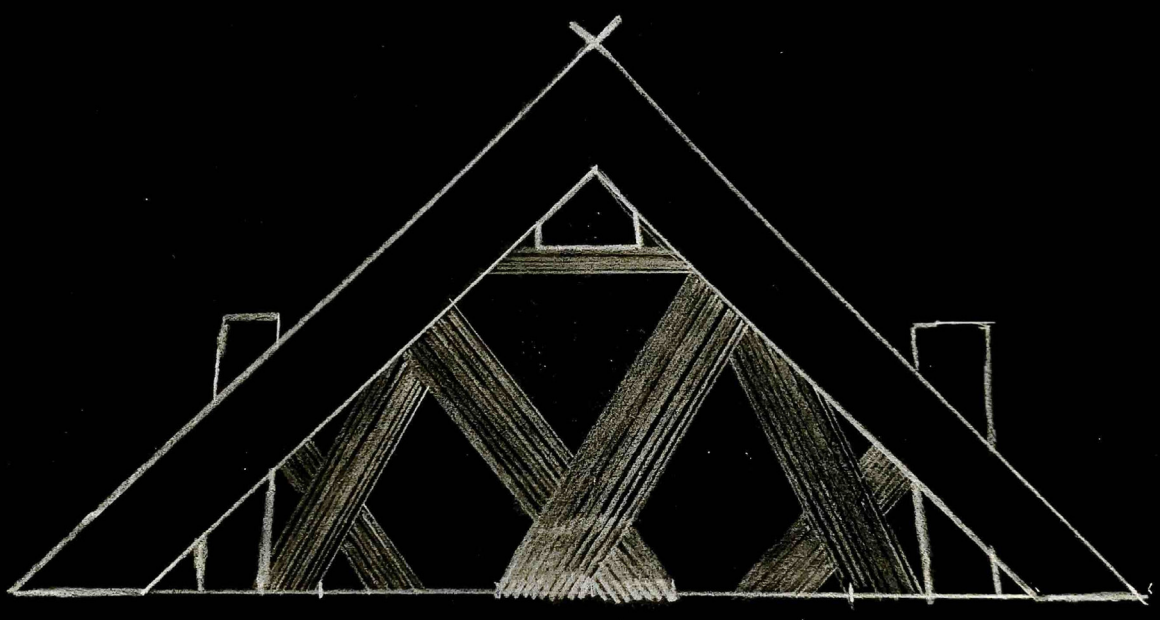
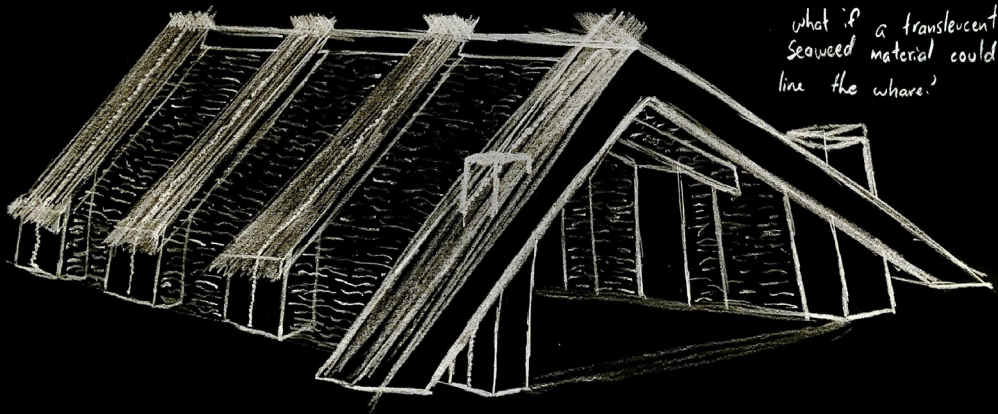
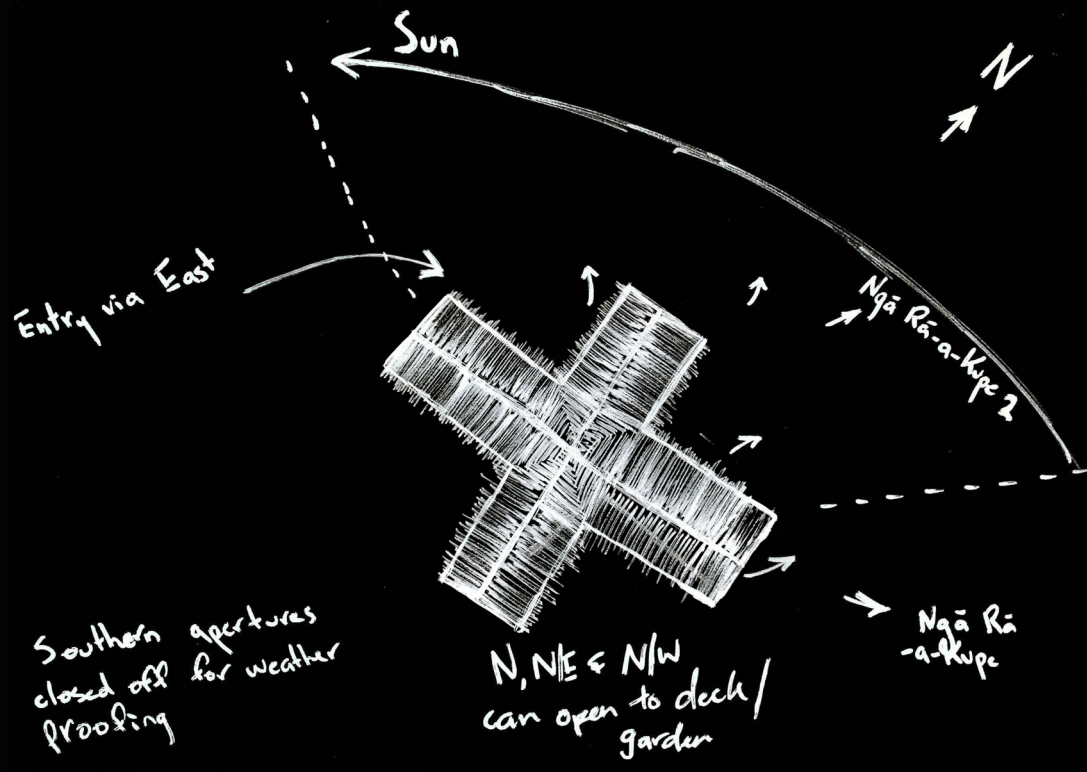
Fig. 25



Form Exploration

Fig. 26 - 31





In that regard I am working with rākau today, but the mauri of that rākau has been around for hundreds of years, thousands of years. The rākau is a portal in that regard, which I resonate with and can feel within the tōtara. This marked my first time working with native rākau this intimately, a very different experience to working with other types of wood. Tōtara rākau are imbued with the mauri of this place, and provide woven imagery throughout te ao Māori, often associated with rangatira as exemplified in the whakatauki,

***Ka hinga te tōtara o Te Waonui-a-Tāne.
A tōtara has fallen in the great forest of Tāne.***

The tool is the interface for which we can communicate with the rākau, and the chisel as an interface is much more direct meaning I can directly communicate with the rākau. Tools such as saws, routers, CNC machines are all interfaces used to communicate with the rākau, but those other tools separate man from material through the machine. There is more background noise in the conversation between you and the rākau.

Rangitapu

The poumataaho, poutokomanawa and poutuarongo of the 19th century whareniui support the tāhuhu, the ridgepole located by way of a slots carved into the underside. In 19th century whareniui these elements are not lashed to one another, the tāhuhu just sits atop them as evident in Mataatua whareniui (Treadwell, 2017). The tāhuhu is raised in the rangitapu method, a tapu part of the process of whare construction. Physically it was the most dangerous part of the construction process, but cosmologically significant in the conception of space and light. The interior of a whare is representative of Te Ao Marama (the world of light, as detailed in the previous chapter) and so the raising engages deeply within the sacred processes of coming to being. “The ritual incantation by a tohunga ‘specialist’ (priest in this case) of a karakia ‘prayer’ to raise the tahuhu was, in this context a mediation between te ao tangata ‘the world of humans’ and the realm of atua ‘gods’. The necessity for a tohunga to invoke the sanction of atua to raise the tahuhu was measure of the physical magnitude and cosmological peril implicit in the task” (Treadwell, 2017, p.99).

“The leaves of Cordyline Australis (Tī Kouka) were plucked, dried, then steeped in water for a time, then plaited into a rope by the rauru method of five strands” (Best, 1925b, p.275). As written about in this context, this method was used in making the cordage for the punga aboard the waka. This method was also applied to the construction of the whare, therein the tuawhenua, and potentially other lashing cordage. This is due to its high durability, described as tightening in the presence of salt water. Alternative fibre cordage such as the muka (fibre of Phormium tenax) and kiekie (of Freycinetia banksii) were finer fibres used in garments and textiles.

Fig. 32

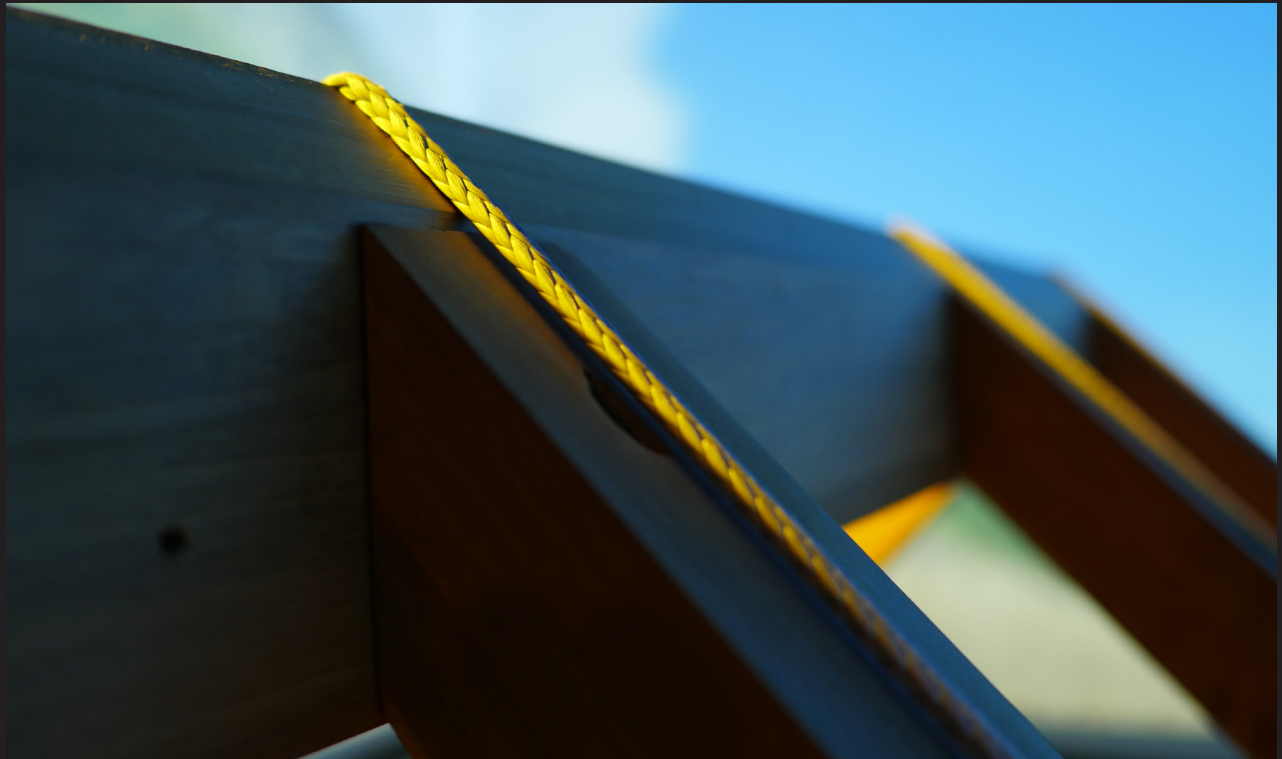


Fig. 33



Fig. 34



As a contemporary response I have used a woven cordage that utilises this same five strand, flat braid approach. This cordage is called 'bio-based Dyneema' and is an incredibly strong modern material. It is spun from waste of the wood and pulp industries, from the cellulose product. It is then spun into polyethylene fibre and woven. This material was chose for its UV ans salt resistance, strength and light weight, for its dimensions resembling that of the original tuawhenua of the whare and it continues in the fibre-work of the whare. Ideally cordage would form subject of an entire wānanga.

To recentre the practice of the tohunga would mean to recentre processes of connecting to the world around us, in particular to the tohunga hanga whare, to connect toward the world of our rākau and all of the materials in which contribute and culminate in Tāne Whakapiripiri, the built form, that protects and shelters us. It would be to understand that a structure is not simply a sum of its parts but a living being that relates to people, and relates people to one another.

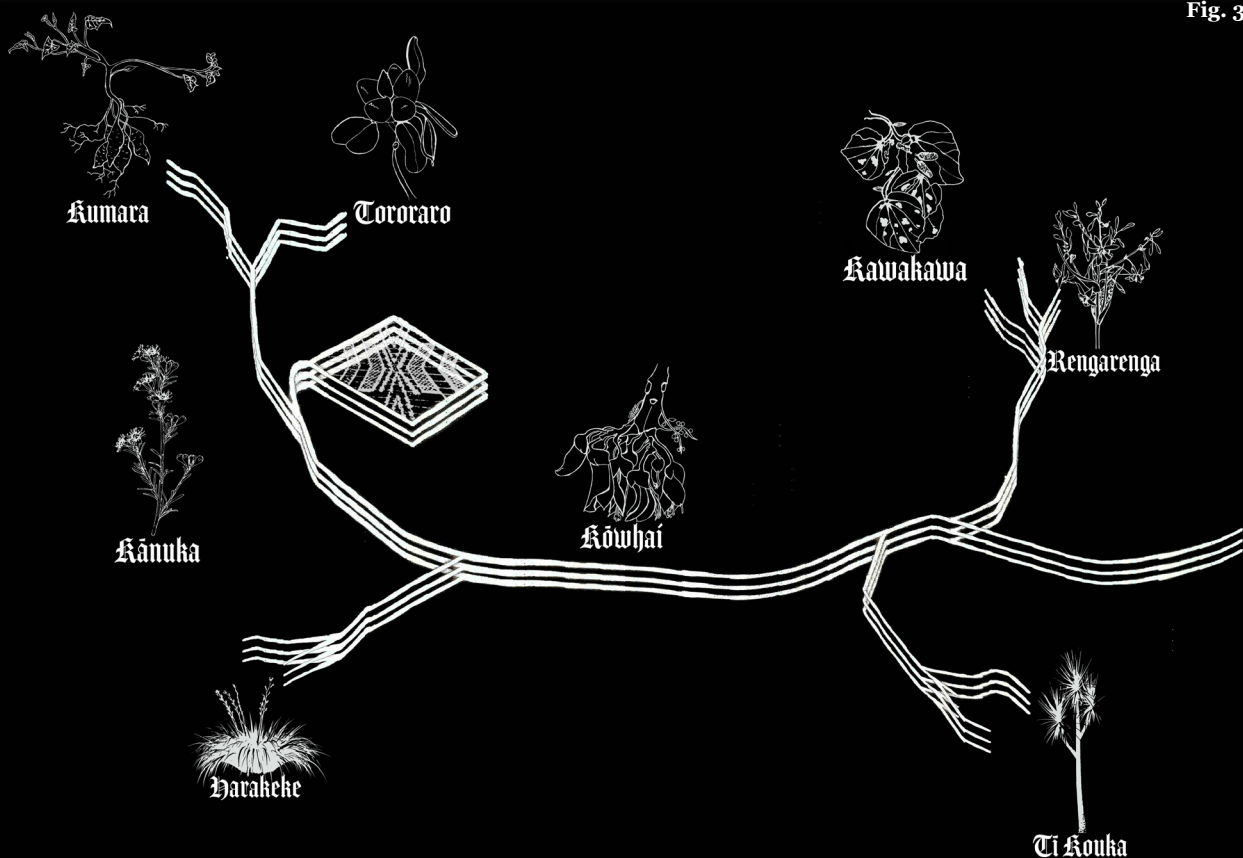
Through both karakia and mihi, I state my intention, my position and whakapapa to the material. This instigates a process of whanaungatanga, through this - and unpacking my personal relation to the material can better understand its properties, abilities and understandings of the environment. I have found this relationship building imperative to working with both the rākau and the rimurimu. Our tūpuna were masters at this, and packed these understandings of whakapapa in the world around us within pūrākau. Understandings of the māramataka often hold these pūrākau in relevance to our day to day lives. As descendants our task is to unpack the mātauranga embedded in these pūrākau to better understand ourselves, our whakapapa and our taiao.

Fig. 35



Ngā Rākau Taketake

Fig. 36



The act of kaitiakitanga informs the design of the immediate landscape surrounding the whare. This consists of an area of replanting and a walkway to guide manuhiri in their interaction with the structure. Grounding Te Papa noho-a-Kupe are ngā rakau taketake, native plantings that provide a spiritual and physical weaving toward Papatūānuku. The elevated walkway between these groves is supported by ground screws that allow the built elements to be removed with no trace on the whenua. The finishing edges on the boardwalk mimic the sewn edges of Te Rā.

These plants have been used for kai, medicinal purposes and making practices by Ngāti Hinewaka for generations. Particular species are unique to this remote and coastal environment, such as the Rengarenga lily and Tororaro shrub. This specific kōrero is then unique to Ngāti Hinewaka, and when planted reinforces as a statement of their presence. Grounding the whare with surrounding replanting would also assist in the understanding of whakapapa between the whare, its materials and the surrounding environment.

Fig. 37





Fig. 38





Fig. 39





Fig. 40





Matawhaorua

*He huhanui, he huaroa ki te ao,
Omāio, ki tua e,
Ka rongo ki te Waitai e
Haramai e te taipara, haramai e te taitimu
Nāu e Hinemoana, Nāu e Tangaroa ē*

“The name for the whare, Te Papa Noho-a-Kupe is derived from this vessel, Matawhaorua. Matawhaorua is waka hourua that brought Kupe, the great Polynesian voyager, to Aotearoa. Its form stands as a metaphor for the sharing and propelling of mātauranga into the future. All elements of the waka support the papa noho. From this position the navigator would carefully observe tohu within the environment, the sun, the moon, the star, winds, swells and the movements of *kaitiaki*. The navigator would command a number of instruments to guide their voyage, *Ātea a Rangi* (the celestial star compass), *hoe tere* and *ngā rā*. Just as there are thresholds between moana, there are thresholds between the levels of our knowledge, teachings and practices. Matawhaorua remains as a reference point across the space navigated, hence this taonga being etched into the rākau of the whare, a level place for knowledge to be shared with and within the structure, ‘Te Papa Noho-a-Kupe.’” (Dunstall, 2023)

*“The lateral sides of the waka,
Taha Matua and Taha Maui,
together with the leading and trailing ends,
Ihu and Kei,
are significant as they act as reference points
and allow the navigators to position themselves
to the heavens above.
Learn to lash,
compress the physical,
holding tight toward the future,
expand the kōrero.
The sanctity is embedded,
so bring the technology,
the specialisation,
and allow mātauranga
to propel us forward.’ (Dunstall, 2023)*

Fig. 41

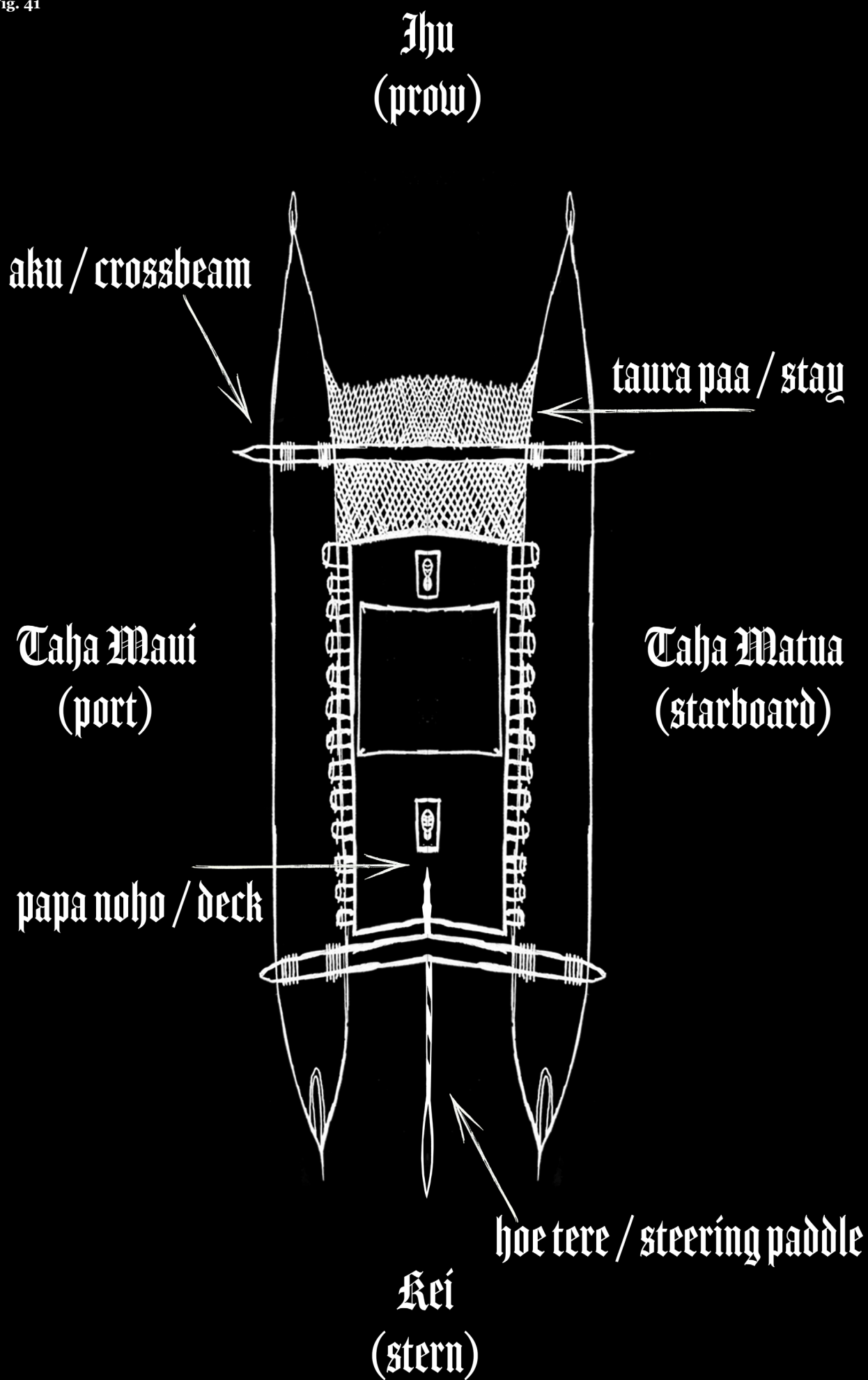


Fig. 42





Ahunga

Space & Alignment

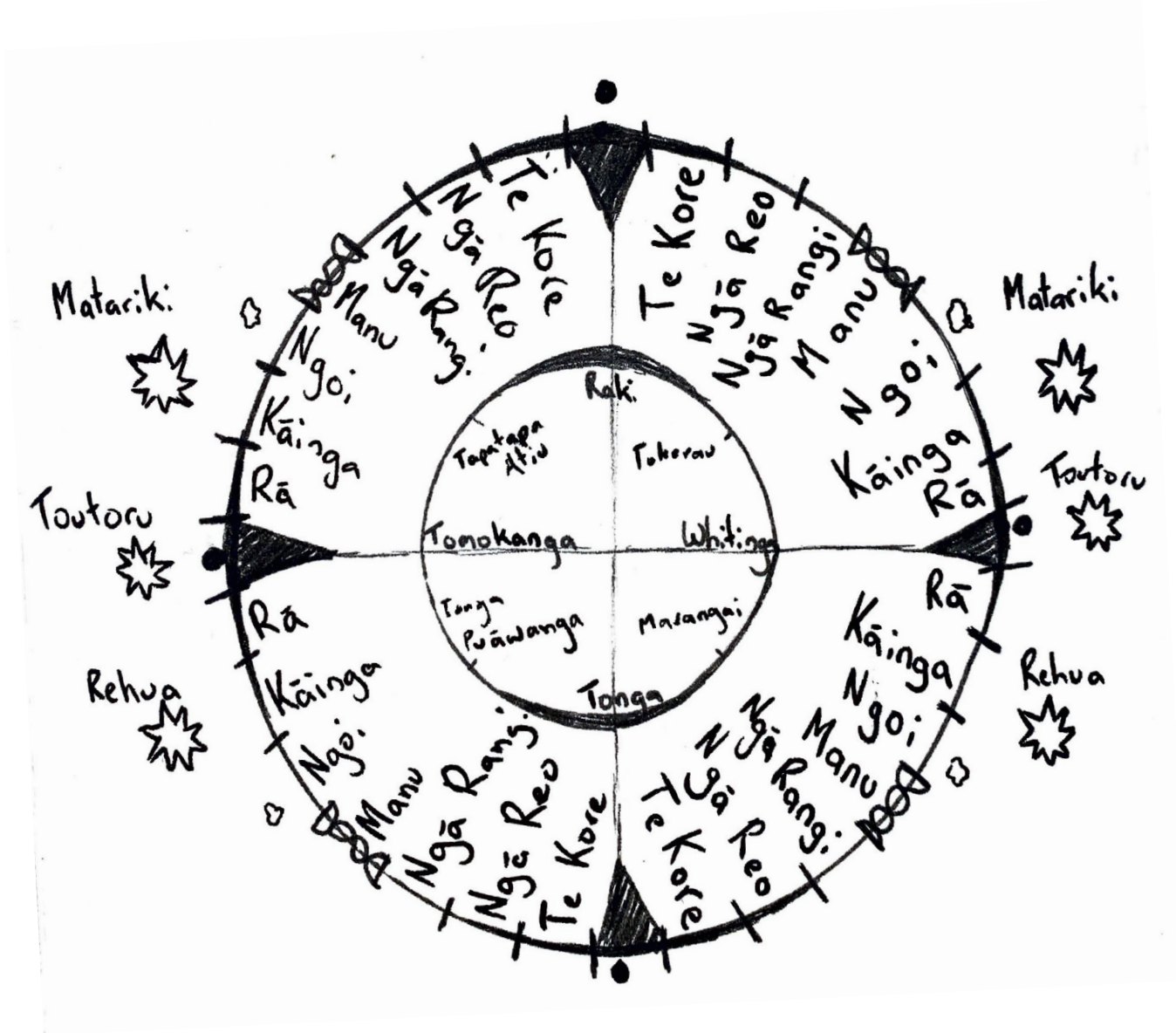
As we trace our whakapapa across Te Moana-nui-a-Kiwa, we become familiar with the spirit of our voyaging tīpuna, inseparable from te taiao. Upon reaching the shores of Aotearoa, the vessels that carried them here, the waka hourua, transitioned into whare. This whakapapa of technology continues to this day. The reconnection to the origins, or knowledge of the extent of the mātauranga of our ancestors at the arrival of our waka in Aotearoa has much owing to the many Māori reclamations of customary practices and reconnection with practices across Te Moana-nui-a-Kiwa. The form of the waka hourua remained a misty silhouette to many Māori before the revitalisation led by Hekenukumai Busby in the 1990s.

The whare tīpuna holds great power in Te Ao Māori, they are our repositories, for our language, our tikanga, our traditions and our stories. Interwoven with our cosmological narrative of being, the whare, generation after generation, ensures the continuation and proliferation of our mātauranga. This inherent tie is known by our people, but is reflected outward, through things such as in the orientation of the whare whakairo. “The back of the building is generally regarded as representing the ancestral past and the front the present and future. This arrangement is reinforced through situating the front of the house to face the east, the location of Hawaiki (the Polynesian homeland) and the sunrise, an event associated with renewal. Between them is the porch, bounded by the paepae (threshold carving) and pare (door lintel). - (Brown, 2009)

As touched on in the previous chapters the orientation of meeting houses and marae across Te Moana Nui are often aligned with celestial bodies. Most alignments are used for timekeeping, to measure distance to summer & winter solstices, equinox, etc. A number of whare throughout Aotearoa align with tātai whetū, that is knowledge of constellations and star clusters. There are constellations that hold particular significance for certain iwi, hapū and whānau. Considering its grounding in traditional waka narrative, Te Papa noho-a-Kupe whare is aligned to the constellation of *Te Waka o Tamarēreti* and its *punga*, known as Te Punga o te Waka o Tamarēreti or *Mahutonga*.

Wayfinding in voyaging is possible through the use of a ‘star compass’. A star compass works by positioning the waka relative to the horizon. This mātauranga has informed the orientation of Te Papa noho-a-Kupe and the whakatere waka kōrero of Kupe and his journey to Aotearoa.

Fig. 43



Mātakitaki-a-Kupe

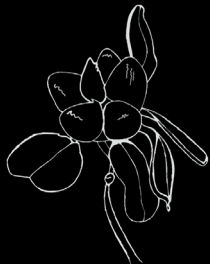
Fig. 44





Harakeke

In Te Ao Māori the Harakeke represents whānau, symbolically reflecting its importance to Māori life. Many varieties of Harakeke are grown for both medicinal and material specific purposes. The internal fibres of the leaves, called Muka, are used to make rope and other taonga. This rope is immensely strong and makes up the cordage for the tauwhenua of Te Papa Noho-a-Kupe. Pā Harakeke lines Te Waipipikaha stream and delineates the māra to the west.



Tororaro

Flowering in the summer months, Tororaro or Mingimingi is used for its hauora benefits. When used in tea Tororaro relaxes muscles and when mixed with kawakawa becomes a healing balm when applied to the skin.

Tororaro is planted to the east of the whare and low lying areas around the walkway.



Rengarenga

Rengarenga was cultivated by Ngāti Hinewaka as a source of food, cooked in an umu (earth oven), used for medicinal purposes with spiritual significance. The plant is found in rocky coastal areas, reflecting the environment of Mātakitaki. Rengarenga were grown in gardens and the location of remnant groves at Mātakitaki-a-Kupe plot out the sites of pā, including here at Ngā Rā-a-Kupe, Te Tawhiti, Takanga-o-mauri and Orangikōrero. A grove of Rengarenga is planted to the south of the whare, at the base of Ngā Rā-a-Kupe on a rocky outcrop.



Tī Kouka

Tī Kouka hold particular cultural significance for its symbolism and wide range of uses.

Tī Kouka are a tangible representation of our whakapapa across Te Moana Nui-a-Kiwa.

Tī Kouka fibres and materials are durable and valuable on waka, often used together with those derived from Harakeke.

Tī Kouka are also used for kai and medicinal purposes for their rich source of starch and sugars. Tī Kouka are planted upon the entrance and protect the māra from the Te Hau Tonga, the brisk southerly winds.



Kawakawa

A healing and restorative treasure, used extensively in rongoā Māori. Kawakawa provides a natural tonic, anti-inflammatory, antiseptic and analgesic. Kawakawa is processed into balms, oils or drunk as a natural tea.

Kawakawa is planted on the east side, in the shade of Te Papa Noho-a-Kupe, between the whare and Ngā Rā-a-Kupe.



Karaka

Karaka would often accompany Rengarenga in these plotted groves. Berries were used for kai, being collected, washed in the awa and baked in the sun.

Karaka berries would be stored in Pātaka (food stores) and would last for years.

Karaka were cultivated close to the coast and proved suitable in close proximity to pā. Karaka are planted on the south east perimeter of the māra accompanying the Rengarenga.



Kānuka

Growing rapidly, Kānuka is used for materials as it provides hardy and strong timber, particularly for making tools in agriculture. Kānuka is used medicinally for its antimicrobial and antibacterial quality. The bark of Kānuka trees was also used as insulation in the lining of sleeping houses.

Kānuka borders the māra to the north, giving shade to the other plantings in the summer months.



Kumara

Ngāti Hinewaka tipuna were known for their Kumara cultivation on the coast of Mātakitaki. Scattered along this coast, a variety of stone walled gardens can still be seen today. Kumara was a staple of those who occupied Mātakitaki-a-Kupe, contributing as a tradable resource.

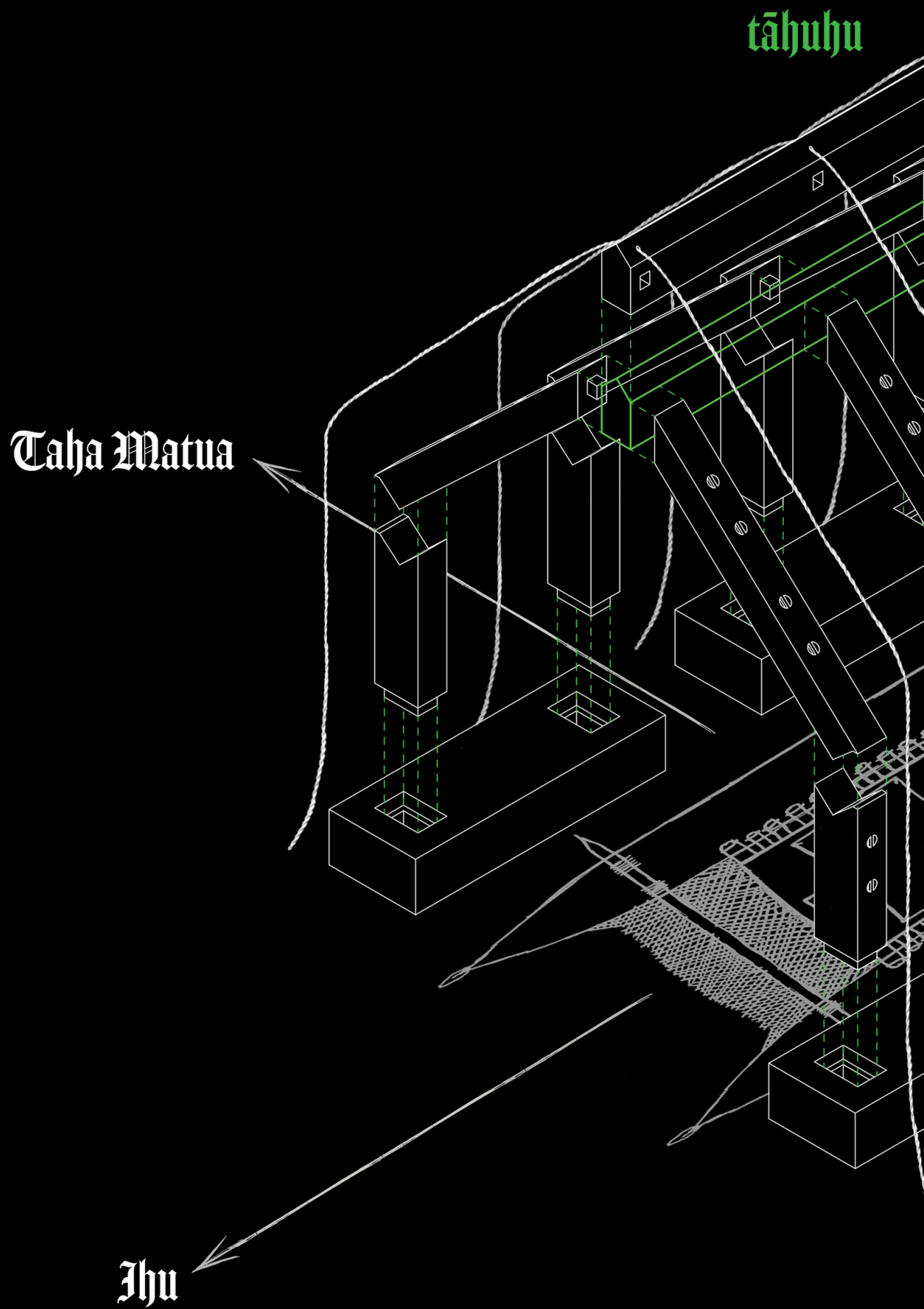
A stone walled Kumara grove utilising this mātauranga makes up a plot of the māra rākau tipuna to the north of the whare, catching the sun.

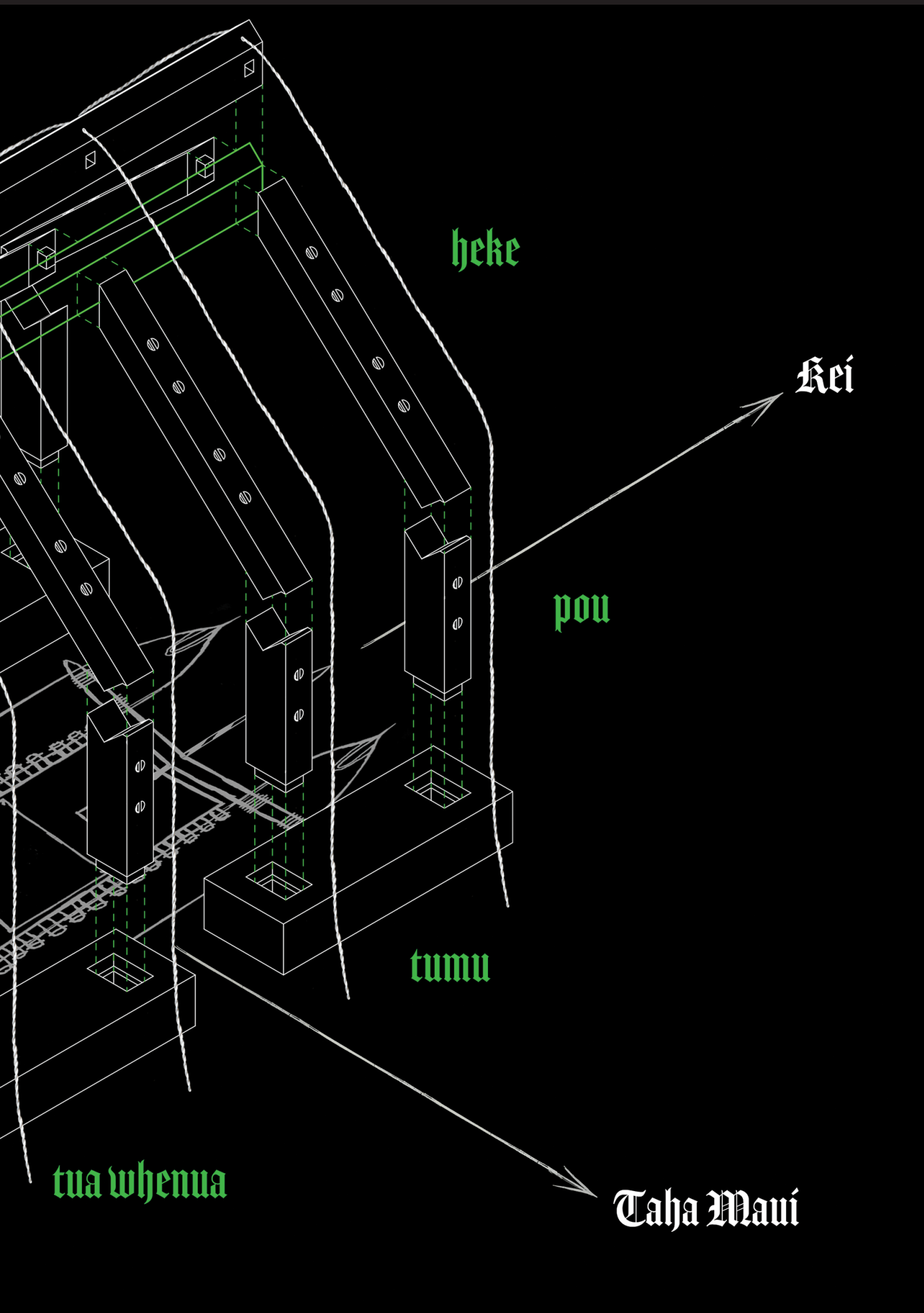


Kōwhai

Four Kōwhai are planted along the west side of the whare. These refer to spring in blossom, and harp back to the migration patterns of Ngāti Hinewaka tipuna. When the Kōwhai are in blossom this was a sign that kaimoana was abundant at Mātakitaki and the seasonal migration was made to the coast. Kōwhai are planted to the west of the whare to provide the papa noho with shade in the hot summer months and illuminating the whare with a warm Kōwhai glow.

Fig. 45





heke

Kei

pou

tumu

tua whenua

Taha Maui

Moana Nui

The names given to places across Aotearoa provide us with clues. To look deeper into the meaning of these names is to understand how these places relate to us as people. This wāhi tapu, 'Ngā Rā-a-Kupe' provides its own tohu. As one of the many locations in Aotearoa that link our people and our kōrero across Te Moana Nui-a-Kiwa our understanding of who we are as people crosses oceans, continuing the endearing spirit of our voyaging tīpuna, providing a clear link through descent and tradition. Speaking from an architectural standpoint on traditions across Te Moana Nui-a-Kiwa, Mike Austin draws out their commonality, "derived from marine technology and several implications follow from this, such as the use of tension as a construction principle – for example, the roof is built from the ridge down and often the walls are suspended" (2021). What Austin is referring to is a structural philosophy carried through the majority of indigenous structures that provide shelter across Te Moana Nui-a-Kiwa - whether that philosophy is visible or not.

The hidden structural elements of the whare rūnanga led to the misunderstanding and underappreciation of the 19th and 20th century wharenui by Pākehā anthropologists of the time.

The construction technologies have continuously been undermined when researched and investigated through a western lens, "the emergent industrialising colonial culture was therefore rendered less able and less willing to understand or imagine the sophistication and effectiveness of a coordinated socially-driven indigenous engineering" (Treadwell, 2017, p.97). These attitudes and inherent biases permeate across Te Moana Nui-a-Kiwa, seen throughout understandings of marine technology too, "indigenous boats have often been regarded as inadequate for these lengthy sea journeys, as is indicated by the use of the derogatory term 'canoes' for what were sophisticated sailing vessels. There is an Oceanic way of building boats, which involves duplicating hulls, that is coupled with a continuing European prejudice against such multihulled crafts." (Austin, 2021)

This leads us to the context of Ngā Rā-a-Kupe, if all our understandings of whakapapa, of site, of pūrākau tell of the voyages our tīpuna made across Te Moana-Nui-a-Kiwa on tensioned waka hourua, these vessels favoured balance and tension in their construction. I've carried this design thinking through to the technology of the whare.

Instead Te Papa Noho-a-Kupe suggests viewing and understanding structural principle and material through a whakapapa. Through this whakapapa we can attune to the methods, reasons and design of traditional structures. The centering of whakapapa was key in the Mākotukutuku wharepuni kaupapa.

Wayfinding and the whare.

Maneaba of Kiribati.

Explained in *The Voyaging Stars : Secrets of the Pacific Island Navigators*, by David Lewis (1980), an Aotearoa born Pākehā navigator and writer, who grew up in Rarotonga, that in Kiribati, this traditional knowledge was shared in the central house, the Maneaba.

“Teeta was the last of the Gilbertese tani borau to go through the full traditional course of training whose basis was instruction beneath the high roof beams of the maneaba (meeting house). His grandfather was his teacher. In Micronesia and Polynesia alike the heavens were conceived of as a dome or a series of domes often one after the other. There was no special word for astronomer in Gilbertese apart from tia borou.” (Lewis, 121).

One of the many aspirations of the Ngā Rā-a-Kupe kaupapa is to feed and strengthen our connection, and collective understanding of mātauranga across Te Moana-nui-a-Kiwa. It is important we paint clear where this mātauranga links to our own whakapapa. Our ancestors were masters of knowledge sharing through design, achieved both embedded in the making of, and shared within the whare with further generations.

“The use of the rafters of a building to represent stars and divisions in the sky was particularly Gilbertese.... He was seated at the base of the central pillar supporting the ridge pole of the maneaba, facing the eastern slope of the roof, that represented the eastern sky. The ridge pole was the meridian and the central pillar, by which he sat, the star Rigel. Stars and constellations were allotted places on the thatch north and south of the pillar.” (Lewis, 1980 ,p.123).

“Knowledge of Polynesian roof thatching most likely informed Māori wall thatching techniques, although bundling may be a uniquely Māori development.” (Brown, 2005 ,p.60) These techniques are seen within tukutuku of a whare.

Teeta learned the stars of the middle part of the sky around Rigel, the northern group ‘led by’ the Pleiades, and the southern by Antares. Biria had been able to name 178 stars and constellations, indicate their relative position with precision on the rafters and know at what height above the eaves (the horizon) any one might be observed at sunrise and sunset during any season of the year” (Lewis, 1980 ,p.123)

“A variety of memory aids makes the students’ task possible. He may be asked, for example, to reach out with an imaginary ey-ass (hooked breadfruit pole) towards a particular star point and ‘draw back’ all the islands that lie in that direction. Then, just as in the Gilberts, stories are woven around the stars, wherein they figure as people. Piailug has a host of such tales and I have seen him have his pupils re-enact them by arranging them in a circle with each one representing a star point.” (Lewis, 1980 ,p.134). This is Mau Piailug, who is credited with the returning to Maori of our wayfinding matauranga, sharing his knowledge through forms of teaching our waka masters, in a very similar manner to wananga.

Heiau of Hawai’i

Traditional star lore was taught in a physical house, or Hale built atop Heiau platforms that still stand in their original positions across the motu of Hawai’i. Very similar to Kiribati, the features of the house (rafters, gables and thatch) would correspond to places in the night sky. In traditional Hawaiian ‘Kilolani’ or star knowledge the basis for all understanding of the movements is centred around the concept of ‘Kaupoko o ka Hale’, or the (underside) of the Hale in the sky. Pupils are inducted into the hale, and take a seat on a small square mat. This mat is representative of a waka, points on the floor the horizon and points on the roof denoting particular influential stars. This is how whakatere waka and Kilolani was taught in the Heiau structure of Hawai’i. Once a level of proficiency had been satisfied, pupils would then move out onto the Heiau ‘platform’ and observe the stars above them, retaining their teaching mat. This was taught to me by Kalei Nu’uhiwa, (Maui, Hawaii, personal communications, November 27, 2024), of which we exchanged kōrero from across Te Moana Nui regarding tātai whetū and the whare.

Fig. 46



Fig. 47





Pātaka whakairi kōrero

Te Papa noho-a-Kupe whare affords the opportunity as a future *pātaka whakairi kōrero*, a repository for *kōrero* of a certain kind. Intergenerational teaching and storytelling are central to the methods and practices of education in te ao Māori. Traditional methods of knowledge sharing include *mōteatea*, *pātere*, *waiata*, *pūrākau*, *kōrero tuku iho*, inform *toi Māori* and are a *taonga* in the process of *wānanga*. Together these practices create a base for learning through *kaupapa*. These are practices in which knowledge is shared and connected to people and the natural world. The whare is designed to facilitate *wānanga*, embedding teaching and learning into the details and connections, its open structure allows *pūrākau* to fill the space between these *pou*.

‘Te Papa noho-a-Kupe: whakatere ngā ripa tauarai’ draws together *mātauranga ā-waka* and *mātauranga ā-whare*, embedding *waka* technology as seen through each joint and design detail, through the tension of the structure and even how the whare is treated below the *whenua* extends from the *pūrākau* of *Ngā Rā-a-Kupe*, and surrounding *kōrero* from the voyaging ancestors of *Ngāti Hinewaka*. Beneath the *whenua* *Te Papa noho-a-Kupe* sits on a substructure similar to the structure of a *waka hourua* - *tumu herenga waka*, forming the *kaupapa* (foundations) using *punga*, key stones that both physically and spiritually anchor the whare.

E kore e ngaro, he takere waka nui

We will never be lost; we are the hull of a great canoe

Through embodied experience at *Mātakitaki-a-Kupe*, the intention of the whare as a space to facilitate *wānanga*, driven by *mātauranga Māori*, explores the pools of knowledge that are embedded in *pūrākau*. Each element of the whare has the ability to be centric to its own *wānanga*, motivated by the skill, perseverance and aptitude of *Kupe*. “These are goals that are demanding and focus upon different directions, for example, laterally in the realm of *Tāne* and *Tūmataunga*, downwards into the depths of *Tangaroa* and upwards into the world of *Ranginui*” (Mead, 2016, p.351). The context and depth of the *Ngā Rā-a-Kupe* *kaupapa* then lays the foundation for this process of *rangahau*.

An understanding of Māori methods of learning, knowledge sharing and experience - process and methodology such as *wānanga*, *kōrerorero* and *hīkoi* are already folded into the ways the whare operates.

Te manu e kai ana i te miro, nōna te ngahere; te manu e kai ana i te mātauranga nōna te ao.

The forest belongs to the bird who feasts on the miro berry, the world belongs to the bird who feasts on education.

The recentering of *tohunga hanga whare* is a means of guiding and acknowledging these decisions. It was through seeking out and understanding these practices that allowed me to connect within my own whakapapa, and then to the whakapapa around me. I learnt *karakia*, immersed myself within kaupapa Māori, learnt how to hold space for the whare and let it speak on its own. I found a landing place for the intent of the whare, as a *pātaka whakairi kōrero*, that came about through being present on the whenua, with existing knowledge of the *pūrākau* that paint the physical and cultural landscape of Mātakitaki-a-Kupe & Ngā Rā-a-Kupe. The intent of the question at the instigation of this rangahau was to do exactly that. ‘Te Papa noho-a-Kupe: Whakatere ngā ripa tauarai’ now sits at the threshold of becoming a taonga for others.

‘Te Papa noho-a-Kupe’ is situated and grounded within hapū aspirations, this rangahau, ‘Te Papa noho-a-Kupe: whakatere ngā ripa tauarai’, is situated to support a reframing of design to align with a te ao Māori worldview and support tino rangatiratanga. Kaupapa Māori continuously urges us to look to the knowledge of our past to inform our future. The re-emergence of ancestral technologies, mātauranga and kōrero inform how we adapt and uphold our tikanga and kawa in the context of today, and tomorrow.

*Kia whakatōmuri
te haere whakamua*

*I walk backwards into the future
with my eyes firmly set on the past*

Imagery

Fig. 1:

Dunstall, Samuel. '*Ngā Rā-a-Kupe*'. Personal Collection. 2022

Fig 2:

Dunstall, Samuel. '*Ngā Rā-a-Kupe*'. Personal Collection. 2022

Fig 3:

Dunstall, Samuel. '*Kahurānaki maunga*'. Personal Collection. 2021

Fig 4:

Dunstall, Samuel. '*Tauhara tipuna*'. Personal Collection. 2021

Fig 5:

Ngā Rā-a-Kupe wānanga rōpū. '*Wānanga*'. Personal Collection. 2022

Fig 6:

Dunstall, Samuel. '*Ascending Ngā Rā*'. Personal Collection. 2024

Fig 7:

Dunstall, Samuel. '*Little Mangatoetoe*'. Personal Collection. 2020

Fig 8:

Dunstall, Samuel. '*Compositions at Mātakitaki*'. Te Papa Noho-a-Kupe. 2023

Fig 9:

Dunstall, Samuel. '*Rangi & Papa, Realms of Atua*' 1:1000 Scale Section @A1.
Te Papa Noho-a-Kupe. 2023

Fig 10:

Dunstall, Samuel. '*Karengo seaweed material sample*'. Personal Collection. 2022

Fig 11:

Dunstall, Samuel. '*Rimu seaweed material sample*'. Personal Collection. 2022

Fig 12:

Dunstall, Samuel. '*Tāwara: the murmurings between land, sea and sky*'. Te Papa Noho-a-Kupe. 2023

Fig 13:

Dunstall, Samuel. '*Matawhaorua: presence of tīpuna*'. Te Papa Noho-a-Kupe. 2023.

Fig 14:

Dunstall, Samuel. '*Kōhatu at Ngā Rā*'. Personal Collection. 2025

Fig 15, 16, 17:

Dunstall, Samuel. '*Mākotukutuku wharepuni (constructed by Ngāti Hinewaka hapū), at Te Papa Tongarewa*'. Personal photography. 2023

Fig 18:

Dunstall, Samuel. '*Ātea-a-Rangi: drawing of the navigators compass*'. Excerpt from personal notebook. 2024

Fig 19:

Dunstall, Samuel. '*Tōtara carving in Island Bay*'. Personal Collection. 2024

Fig 20:

Dunstall, Samuel. '*Heke in a row*'. Personal Collection. 2025

Fig 21:

Dunstall, Samuel. '*Muka & Fibrework*'. Personal Collection. 2024

Fig 22:

Dunstall, Samuel. '*1:20 Scale 19th century wharenuī*'. Personal Collection. 2024

Fig 23:

Dunstall, Samuel. '*Chiselling out face eyelet*'. Personal Collection. 2024

Fig 24:

Dunstall, Samuel. '*CNC Waka Hourua*'. Personal Collection. 2025

Fig 25:

Dunstall, Samuel. '*Torokaha*'. Personal Collection. 2025

Fig 26 - 31:

Dunstall, Samuel. '*Conceptual design drawings*'. Te Papa Noho-a-Kupe. 2023

Fig 32:

Dunstall, Samuel. '*Lashing crossing tāhuhu*'. Te Papa Noho-a-Kupe. 2025

Fig 33:

Dunstall, Samuel. '*Lashing down poupou*'. Te Papa Noho-a-Kupe. 2025

Fig 34:

Dunstall, Samuel. '*Te Papa noho-a-Kupe 1:10 scale model*'. Te Papa Noho-a-Kupe. 2025

Fig 35:

Dunstall, Samuel. '*Te Papa noho-a-Kupe 1:10 scale model II*'. Te Papa Noho-a-Kupe. 2025

Fig 36:

Dunstall, Samuel. '*Ngā Rākau taketake*'. Te Papa Noho-a-Kupe. 2023

Fig 37:

Dunstall, Samuel. '*Te Papa noho-a-Kupe 1:10 scale model III*'. Te Papa Noho-a-Kupe. 2025

Fig 37:

Dunstall, Samuel. '*Te Papa noho-a-Kupe 1:10 scale model IV*'. Te Papa Noho-a-Kupe. 2025

Fig 38:

Dunstall, Samuel. '*Te Papa noho-a-Kupe - Hero image*'. Best Awards - Toitanga. 2024

Fig 39:

Dunstall, Samuel. '*Kōrerorero*'. Best Awards - Toitanga. 2024

Fig 40:

Dunstall, Samuel. '*Hinewaka adze wānanga*', Best Awards - Toitanga. 2024

Fig 41:

Dunstall, Samuel. '*Waka hourua distinctions*'. Te Papa Noho-a-Kupe. 2023

Fig 42:

Dunstall, Samuel. '*Tātai whetū from Te Papa noho-a-Kupe*'. TBest Awards - Toitanga. 2024

Fig 43:

Dunstall, Samuel. '*Ātea-a-Rangi: drawing of the navigators compass*'. Excerpt from personal notebook. 2024

Fig 44:

Dunstall, Samuel. '*Mātakitaki-a-Kupe, Site Plan showing Te Papa Noho-a-Kupe*'. 1:1000 Scale Plan @ A2. Te Papa Noho-a-Kupe. 2023

Fig 45:

Dunstall, Samuel. '*Isometric mīmiro detailing of Te Papa noho-a-Kupe*'. Te Papa Noho-a-Kupe. 2023

Fig 46:

Dunstall, Samuel. '*Moana-nui, Moana roa*'. Personal Collection. 2025

Fig 47:

Dunstall, Samuel. '*Ngāti Hinewaka kaumatua Haami Te Whaiti sharing kōrero at Ngā Rā-a-Kupe, with Te Papa noho-a-Kupe imagined in background*'. Te Papa Noho-a-Kupe. 2023

References

Ātea-a-Rangi Trust. (2023) *Te Waka o Tamarēreti*. <https://www.atea.nz/graphic-novel>

Austin, M. (2020, November). *Architecture of an ocean*. Architecture NZ, (6). <https://architecturenow.co.nz/articles/architecture-of-an-ocean/>

Best, E. (1925a). The Burning of Tee Arawa. *The Journal of the Polynesian Society*, 34(4(136)), 292–320.

Best, E. & New Zealand. (1925b). *The Maori canoe: An account of various types of vessels used by the Maori of New Zealand in former times, with some description of those of the isles of the Pacific, and a brief account of the people of New Zealand /* by Elsdon Best. Board of Māori Ethnological Research.

Brown, D. (2005). *Clothed not Clad*. The University of Auckland. pp. 59–64.

Brown, D. (2009). *Māori architecture: From fale to wharenuī and beyond*. Raupo.

Buck, P. H. (1949). *The coming of the Maori /* by Te Rangi Hiroa (Sir Peter Buck). Maori Purposes Fund Board.

Dunstall, S.J. (2023). *Te Papa Noho-a-Kupe* [Undergraduate honours thesis]. Massey University.

Hawkins, H. (2018). The Indwelling Spirit of Rangahau. *Departures in Critical Qualitative Research*, 7(4), 87–96. <https://doi.org/10.1525/dcqr.2018.7.4.87>

Houltham, K. (Director). (2024, November 17). *Tohunga*: Vol. Episode 16 [TV Series Episode]. Te Māngai Pāho. <https://www.tvnz.co.nz/shows/waka-huia/episodes/s2024-e16>

Inia, R. (2021). *Transmission of mātauranga māori: Customary forms of taongatuku iho from a Ngāti Tarawhai and Ngāti Pikiao uri perspective*. Te Atawhai o Te Ao.

Irwin, G. (2004). *Kohika : the archaeology of a late Māori lake village in the Ngāti Awa rohe, Bay of Plenty, New Zealand /* edited by Geoffrey Irwin. Auckland University Press.

Kaire-Melbourne, K. (Director). (2022). *Homesteads: Mākeha whānau homestead*. (Season 1, Episode 2). [Documentary]. Te Māngai Paho. <https://www.maoriplus.co.nz/show/homesteads/play/6313389731112>

Kawiti, D., Refiti, A., Yates, A., Heta, E., Bloomfield, S., Chanse, V., & Zari, M. P. (2025). *Indigenous knowledge, architecture, and nature in the context of Oceania. Nature-Based Solutions*, 7, 100213. <https://doi.org/10.1016/j.nbsj.2025.100213>

Manatū Taonga. (2020, January 9). *Tuia 250 ki Te Whānganui a Tara: Kupe's anchor* [Video]. Youtube. Tuia 250 ki Te Whānganui a Tara: Kupe's anchor

Marsden, M., & Royal, T. A. C. (2003). *The woven universe : selected writings of Rev. Māori Marsden* / edited by Te Ahukaramū Charles Royal. Estate of Rev. Māori Marsden.

Mead, S. M. (2016). *Tikanga Māori: Living by Māori values* (Revised edition). Huia Publishers.

Mills, T. (Director). (2009). *The Bridgebuilder* [Video recording]. Tawera Productions. <https://video.alexanderstreet.com/watch/the-bridgebuilder>

Waimārama Marae (n.d.). *Origins of Waimārama*. <https://sites.google.com/site/waimaramamarae/about-us/origins-of-waimarama>

Oxford University Press. (n.d.). *Research*, n.¹. In Oxford English dictionary. Retrieved April 10, 2025, from <https://doi.org/10.1093/OED/1888781292>

Papakura, M. (1986). *Makereti: The old-time Maori*. (Manawatū Nga Kupu Ora (Level 2) 305.899442 Mak). New Women's Press.

Smith, L. T. (2021). *Decolonizing methodologies : research and indigenous peoples* / Linda Tuhiwai Smith (Third edition). Zed Books.

Smith, L. T. (2015). *Kaupapa Māori research-some kaupapa Māori principles*.

Stansfield, J. (2020). Pūrākau: Our world is made of stories, Whanake: *The Pacific Journal of Community Development*, 6(1), 84-93.

Treadwell, J. (2017). Cosmology and Structure: The “Tāhuhu” in the 19th -Century Whare Māori. *The Journal of the Polynesian Society*, 126(1), 93–122.

Tūturu NZ. (2023, July 23). *Mātauranga Māori* (No. 5) [Youtube Video]. Mahitahi Agency. <https://www.youtube.com/watch?v=t7QFvIciXiI>

Turei, P. (Director). (1993). *Kupe: Voyaging by the Stars* [Documentary; Television]. Ngā Taonga Sound and Vision; NZ On Screen. <https://www.nzonscreen.com/title/kupe-voyaging-by-the-stars-1993/overview>

Te Rito, J. S. (2007). Whakapapa: A framework for understanding identity. *MAI Review* LW, 1(3), 10.

Te Whaiti, H. (2004). The Waitangi Tribunal: Wai 959 - *Overview of Traditional History by Haami Te Whaiti* [Opening Submissions of Counsel for Ngāti Hinewaka me ona Karangaranga].

Whatahoro, H. T., & Smith, S. P. (1913). (Te Kauwai-Runga) *The Lore of the Whare-wānanga: Or Teachings of the Maori College on Religion, Cosmogony, and History*. Cambridge University Press.

Whatahoro, H. T., & Smith, S. P. (1915). (Te Kauwai-Raro) *The Lore of the Whare-wānanga: Or Teachings of the Maori College on Religion, Cosmogony, and History*. Cambridge University Press.

Bibliography

Abbott, M. (2021). *The woven narratives: Weaving climate change science, ecologies and mātauranga Māori through spatial constructs: An exegesis presented in partial fulfilment of the requirements for the degree of Masters of Design at Massey University, Wellington, New Zealand.*

Austin, M. (2020, November). *Architecture of an ocean*. Architecture NZ, (6). <https://www.nzia.co.nz/explore/articles-and-essays/oceanic-architecture>

Best, E. (1925a). The Burning of Te Arawa. *The Journal of the Polynesian Society*, 34(4(136)), 292–320.

Best, E. et.al. (1925b). *The Maori canoe: An account of various types of vessels used by the Maori of New Zealand in former times, with some description of those of the isles of the Pacific, and a brief account of the peopling of New Zealand*. Board of Māori Ethnological Research

Brown, D. (2005). *Clothed not Clad*. Clothed Not Clad. The University of Auckland pp.59–64.

Brown, D. (2009). *Māori architecture: From fale to wharenui and beyond*. Raupo.

Buck, P. H. (1949). *The coming of the Maori*. Maori Purposes Fund Board.

Buck, P. H. (1954). *Vikings of the sunrise*. (New Zealand ed). Whitcombe and Tombs;

Campbell, D. (2019, May 13). *Identifying the plant materials in Te Rā* [Wordpress]. Identifying the Plant Materials in Te Rā. <https://wordpress.com/read/blogs/156674217/posts/115>

Dunstall, S.J. (2023). *Te Papa Noho-a-Kupe* [Undergraduate honours thesis]. Massey University.

Gardiner-Hoskins, P. (2023). *Tane Whakapiripiri*. Building Better, Homes, Towns and Cities. <https://www.buildingbetter.nz/tane-whakapiripiri-story/>

Grimble, A., & Grimble, R. (2004). *Migrations, myth and magic from the Gilbert I slands: Early writings of Sir Arthur Grimble*. Routledge;

Hawkins, H. (2018). *The Indwelling Spirit of Rangahau*. Departures in Critical Qualitative Research, 7(4), 87–96. <https://doi.org/10.1525/dcqr.2018.7.4.87>

Hemara, W. (2000). *Māori pedagogies: A view from the literature..* New Zealand Council for Educational Research;

Houltham, K. (Director). (2024, November 17). *Tohunga*: Vol. Episode 16 [TV Series Episode]. Te Māngai Pāho. <https://www.tvnz.co.nz/shows/waka-huia/episodes/s2024-e16>

Inia, R. (2021). *Transmission of mātauranga māori: Customary forms of taongatuku iho from a Ngāti Tarawhai and Ngāti Pīkiao uri perspective.* Te Atawhai o Te Ao.

Jahnke, R. (2006a). *He tataitanga ahua toi: The house that Riwai built, a continuum of Māori art: A thesis presented in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Māori Studies at Massey University, Palmerston North, Aotearoa New Zealand.* Massey University Library Catalogue.

Jahnke, R. (2006b). *Māori Visual Culture on the Run. Critical Perspectives on Communication, Cultural & Policy Studies*, 25, 57–65.

Jury, R. T. W., & Seng, K. (2009). *I roto i tōku whareniui.* Te Pou Raki Kōrero Whāiti.

Kaamira, H. (1957). Kupe. Na Himiona Kaamira, o Te Rarawa. *The Journal of the Polynesian Society*, 66(3), 216–231.

Kawiti, D., Refiti, A., Yates, A., Heta, E., Bloomfield, S., Chanse, V., & Zari, M. P. (2025). *Indigenous knowledge, architecture, and nature in the context of Oceania.* Nature-Based Solutions, 7, 100213. <https://doi.org/10.1016/j.nbsj.2025.100213>

Lewis, D. (1980). *The voyaging stars : secrets of the Pacific Island navigators /* David Lewis. Fontana/Collins.

Mahuta, R. T. (1974). *Whaikoorero: A study of formal Maori speech:* Thesis presented in fulfilment of the requirements for the degree of Master of Arts in anthropology, University of Auckland / by Robert Te Kotahi Kahuta. Massey University Library Catalogue.

Papakura, M. (1986). *Makereti: The old-time Maori.* New Women's Press; Massey University Library Catalogue.

Maude, H. E. (1980). *The Gilbertese maneaba.* Institute of Pacific Studies; Massey University Library Catalogue.

McGarvey, H. (2019). Ngā karakia tawhito ki te pūtake o te riri. *MAI Journal*, 8(3), 285–293. Scopus®. <https://doi.org/10.20507/MAIJournal.2019.8.3.5>

McKay, B. (2005). *Pacific Architecture Conference Review.* ArchitectureNZ, March/April 2005, 108. Index New Zealand.

McKay, B. (2005). *Pacific Architecture Conference Review.* ArchitectureNZ, March/April 2005, 108. Index New Zealand.

- McKay, B., 1947-. (2004). *Maori architecture: Transforming western notions of architecture*. Fabrications. Index New Zealand.
- Mckay, B., & Walmsley, A. (2003). Maori Time: Notions of Space, Time and Building Form in the South Pacific. *Idea Journal*, 4(1), 85–95. <https://doi.org/10.37113/ideaj.vio.236>
- Mckay, B., & Walmsley, A. (2005). Pacific Space: The Pacific Conception of Building. *Idea Journal*, 6(1), 61–71. <https://doi.org/10.37113/ideaj.vio.196>
- Mead, S. M. (2016). *Tikanga Māori: Living by Māori values* (Revised edition). Huia Publishers.
- Mills, T. (Director). (2009). *The Bridgebuilder* [Video recording]. Tawera Productions. <https://video.alexanderstreet.com/watch/the-bridgebuilder>
- Moriarty, T. R. (2019). *Ko te taki waerea: Hei oranga noho mō te iwi: He tuhinga roa hei whakatutuki i te tohu paerua*[Masters of Arts (MA), Massey University]. <https://mro.massey.ac.nz/items/bf5151c7-05fd-48b1-b208-9fbca41eaf4b>
- Murray, J. (2021, May 16). *Mahinga Kai with Maanu Paul* [MP3]. Retrieved April 23, 2024, from <https://www.rnz.co.nz/national/programmes/teahikaa/audio/2018795467/mahinga-kai-with-maanu-paul>
- Ngata, A. T. (1897). Notes on the Rev. H. W. Williams' Paper on "The Māori Whare." *The Journal of the Polynesian Society*, 6(2(22)), 85–88. JSTOR.
- Ngata, A., & Ngata, W. (2019). The Terminology of Whakapapa. *The Journal of the Polynesian Society*, 128(1), 19–42. <https://www.jstor.org/stable/26857330>
- Ngatai, A. M. (2024). *Toi ki roto, toi ki waho = Art in, art out: Breathing through contemporary art practices as rongoā (healing) embedded in kaupapa Māori methodologies* [Masters of Creative Practice]. Unitec, Te Pūkenga – New Zealand Institute of Skills and Technology.
- Nūhaka hapū. (n.d.). *Kahungunu Marae—Kahukuranui*. Kahungunu. Retrieved March 28, 2025, from <https://www.kahungunumarae.com/kahukuranui>
- Ratana, Maia. (2021). *Māori Architecture: A response to colonisation*. <https://www.researchbank.ac.nz/handle/10652/5516>
- Manatū Taonga. (2020, January 9). *Tuia 250 ki Te Whānganui a Tara: Kupe's anchor* [Video]. Youtube. <https://www.youtube.com/watch?v=TjcZRFjiCFs>
- Smith, L. T. (2021). *Decolonizing methodologies : research and indigenous peoples / Linda Tuhiwai Smith* (Third edition). Zed Books.
- Smith, L. T. (2015). *Kaupapa Māori research-some kaupapa Māori principles*.

Smith, T. (2008). Tohu and Māori knowing. J. S. Te Rito & S. M. Healy (Ed.), *Proceedings of the Traditional Knowledge Conference 2008 Te Tatau Pounamu: The Greenstone Door* (pp. 266-270). Ngā Pae o te Maramatanga.

Stansfield, J. (2020). Pūrākau: Our world is made of stories, Whanake: *The Pacific Journal of Community Development*, 6(1), 84-93.

Stokes, G. (2022). Whakapapa Plotting: An Aotearoa-specific method of spatial communication. *Idea Journal*, 19(01), 200–217. <https://doi.org/10.37113/ij.v19i01.468>

Treadwell, J. (2017). Cosmology and Structure: The “Tāhuhu” in the 19th -Century Whare Māori. *The Journal of the Polynesian Society*, 126(1), 93–122.

Tūturu NZ. (2023, July 23). *Mātauranga Māori* (No. 5) [Youtube Video]. Mahitahi Agency. <https://www.youtube.com/watch?v=t7QFvIciXiI>

Turei, P. (Director). (1993). *Kupe: Voyaging by the Stars* [Documentary; Television]. Ngā Taonga Sound and Vision; NZ On Screen. <https://www.nzonscreen.com/title/kupe-voyaging-by-the-stars-1993/overview>

Te Rito, J. S. (2007). Whakapapa: A framework for understanding identity. *MAI Review* LW, 1(3), 10.

Te Whaiti, H. (2004). The Waitangi Tribunal: Wai 959 - Overview of Traditional History by Haami Te Whaiti [Opening Submissions of Counsel for Ngāti Hinewaka me ona Karangaranga].

Waitangi Tribunal. (2010). *The Wairarapa ki Tararua Report* (No. Wai 863).

Walker, R. (2008). *Tohunga whakairo: Paki Harrison: The story of a master carver / Ranginui Walker*. Massey University Library Catalogue.

Whatahoro, H. T., & Smith, S. P. (1913). (Te Kauwai-Runga) *The Lore of the Whare-wānanga: Or Teachings of the Maori College on Religion, Cosmogony, and History*. Cambridge University Press; Massey University Library Catalogue.

Whatahoro, H. T., & Smith, S. P. (1915). (Te Kauwai-Raro) *The Lore of the Whare-wānanga: Or Teachings of the Maori College on Religion, Cosmogony, and History*. Cambridge University Press; Massey University Library Catalogue.

Williams, H. W. (1896). The Māori Whare: Notes on the Construction of a Māori House. *The Journal of the Polynesian Society*, 5(3(19)), 145–154. JSTOR.