

KO TE PŪKĀKI 2040



Tirotiro Whānui - Regeneration Plan Overview



NGĀTI WHĀTUA ŌRĀKEI



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NGĀTI WHĀTUA ŌRĀKEI

KARAKIA

Ehara i te tira rāpatu, he papako pipiri
Kāpātau ko te tira whakahere i te paenga o te māra
Kai kōrā, kai a te waru, kai a te pūkākī!
Nāna te rere, he tau, he tau, he tau!

*This is not a ritual loosening of the soil
But it is time for making conciliatory offerings at the
garden boundary*

*The first shoots appear – a crop not ready for
harvesting, it is food at its very source!
This shall be a bountiful season indeed!*

RĀRANGI TAKE

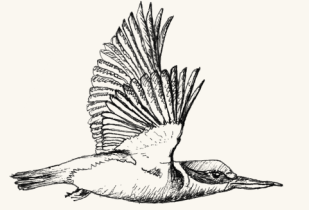
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HE MIHI

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We also acknowledge whānau, past and present, that been pivotal in shaping our kaitiakitanga taiao. To all those who share, apply, and embrace our regeneration kaupapa, our heartfelt recognition to you all - mihi!

We also warmly acknowledge our partners who have provided their expertise, guidance and support for the creation of this kaupapa:

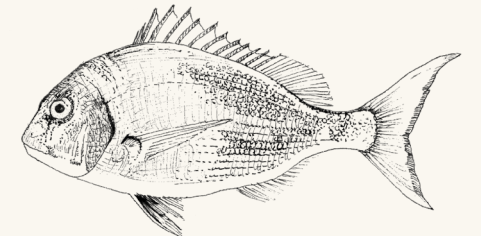
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Photos provided by Ngāti Whātua Ōrākei and the Hood & Co.

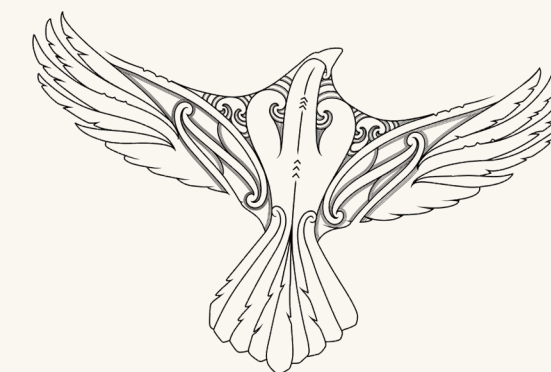
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Kaiwhakahaere kaupapa: Jessica Hiscox

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HE WHAKARĀPOPO TOTANGA



Summary

Ko Te Pūkākī: 2040 is a statement of intent, a manifesto for change, and a call to arms.

Ko Te Pūkākī: 2040 draws from, and builds upon, the traditions and knowing of place left to us from our pasts, both distant and recent. It consists of two, interconnected parts; Mahere Hōmiromiro – our detailed, time aligned management plan for years 1–5, and this document – Tirotiro Whānui. Together, as Ko Te Pūkākī: 2040, they lay the pathway for the continued regeneration of our whenua from now until 2040.

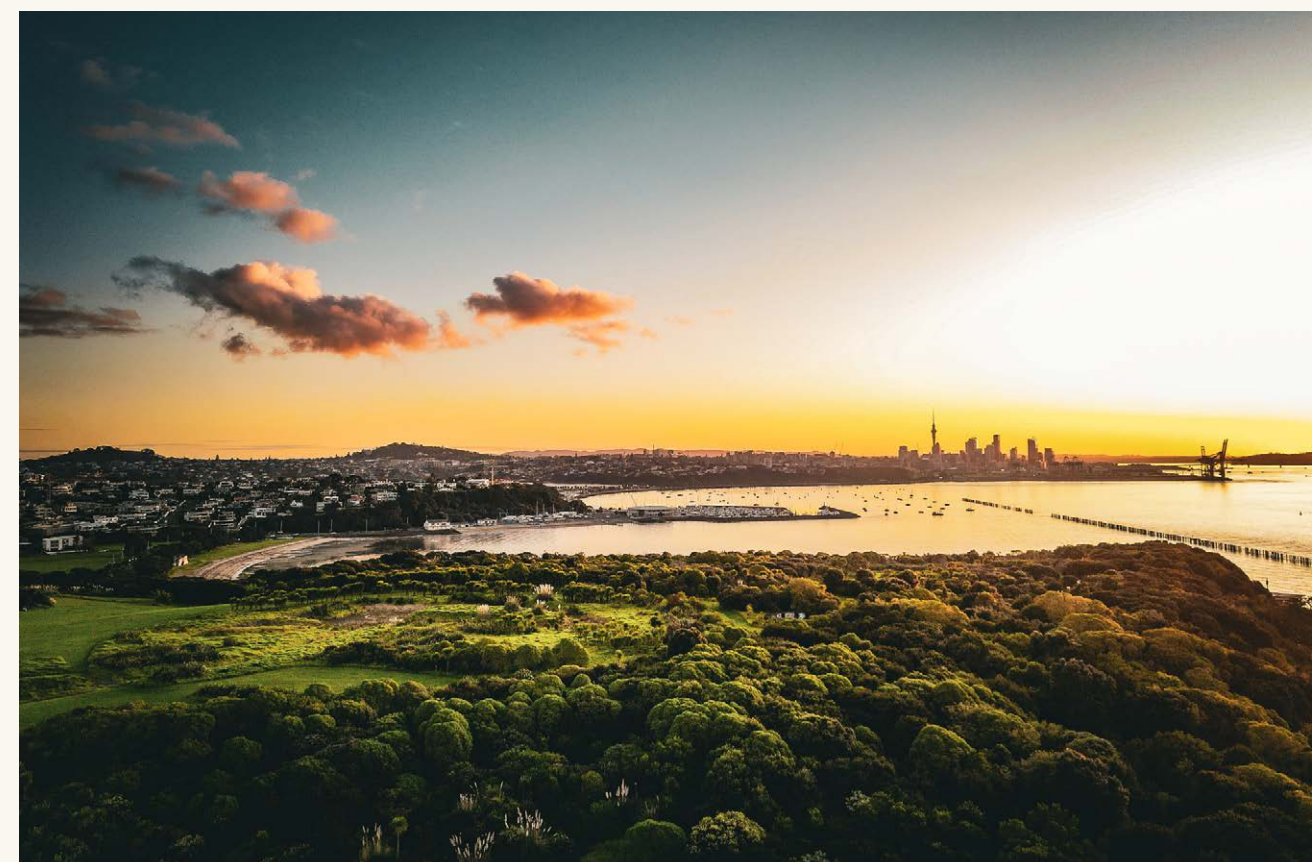
Building on the Ōrākei Visual Framework and Kākahuria te Whenua, Kākahuria te Moana (Combined Reserves Management Plan), responding to our 5- and 50-year strategies, Ko Te Pūkākī: 2040:

- establishes our vision and our regeneration mātāpono
- sets up a series of habitat types based on our unique landscape, establishes planting palettes for these areas, and builds timelines for the regeneration of our whenua
- introduces baseline indicators to track our progress, and places us at the heart of all of this mahi
- introduces the use of software as the basis of our work programming to provide quality assurance for our mahi. This will enable us to report on our progress in real time, with accuracy
- undertakes a gap analysis to identify research and kaupapa needed to support future regeneration

Conceptually, Ko Te Pūkākī: 2040 first invites us to dream and then shows us a clearly defined pathway to a future state of abundance for our people. This is a future where our whānau are an integral component of our environment. They are active participants working within and for te taiao. They do so according to our tikanga and as an exercise of our mana motuhake.

This document, Tirotiro Whānui, provides a snapshot of Ko Te Pūkākī:2040. It is an access point into our broader taiao kaupapa. Tirotiro Whānui introduces Ngā Mātāpono Whakaora, our regeneration principles, which provide the beating heart and bedrock of our regeneration mahi. Following on from these, Tirotiro Whānui articulates some of the ways our Mātāpono will be brought practically to our physical mahi and identifies some of the gaps in our knowledge that could be explored with the help of our partners.

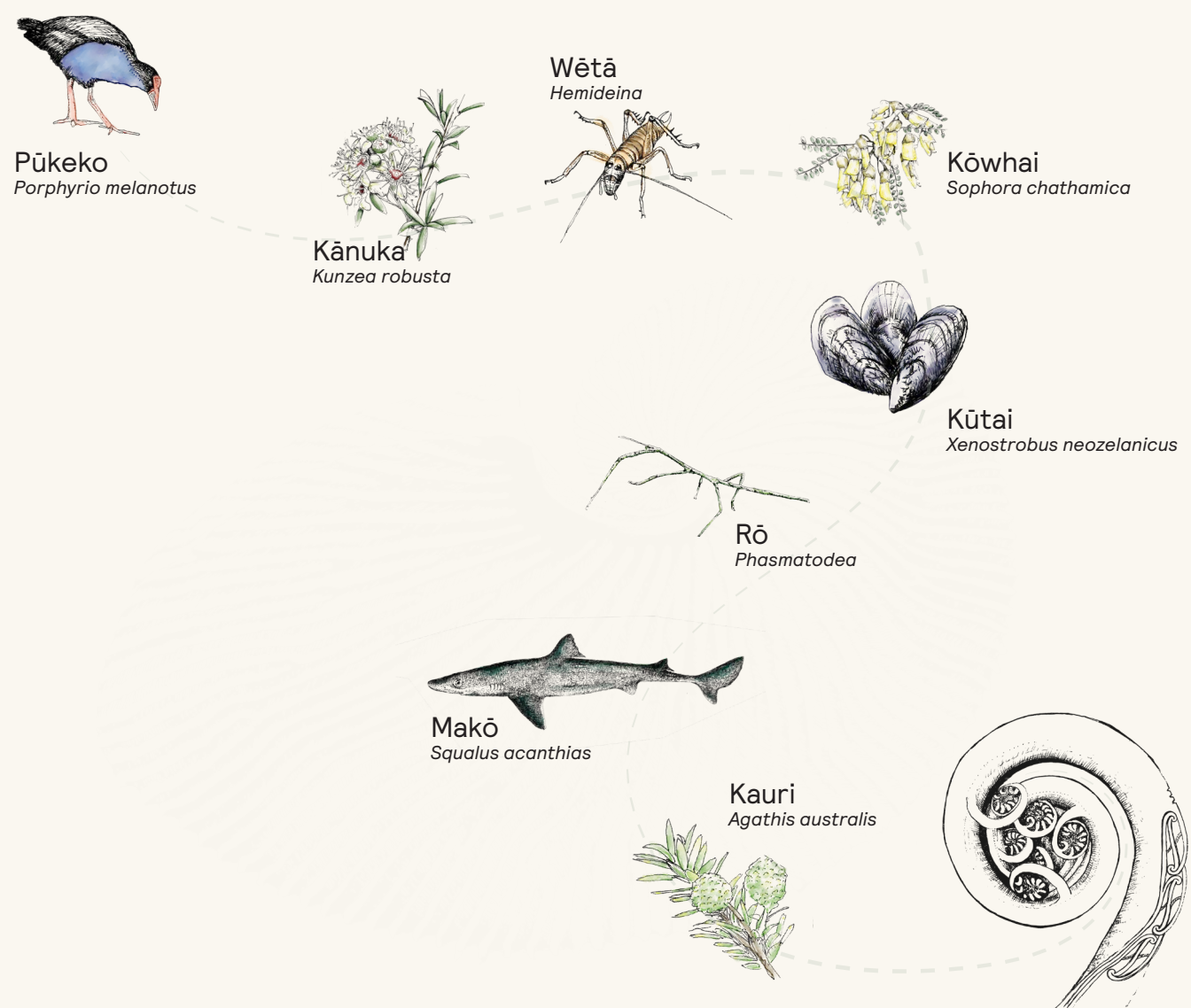
Ko Te Pūkākī: 2040 provides a blueprint for the extension of our mātauranga taiao across Te Kahu Tōpuni o Tuperiri. We openly pledge our willingness to work with individuals, groups and agencies who wish to warm themselves alongside the flame of our ahi-kā to benefit our taiao and the communities within our tribal rohe.



Ko Te Pūkākī: 2040 is our gift to those who have gone before us, to those yet to come and importantly to our special place in the world.

TE KAUPAPA

Purpose of Ko Te Pūkākī: 2040



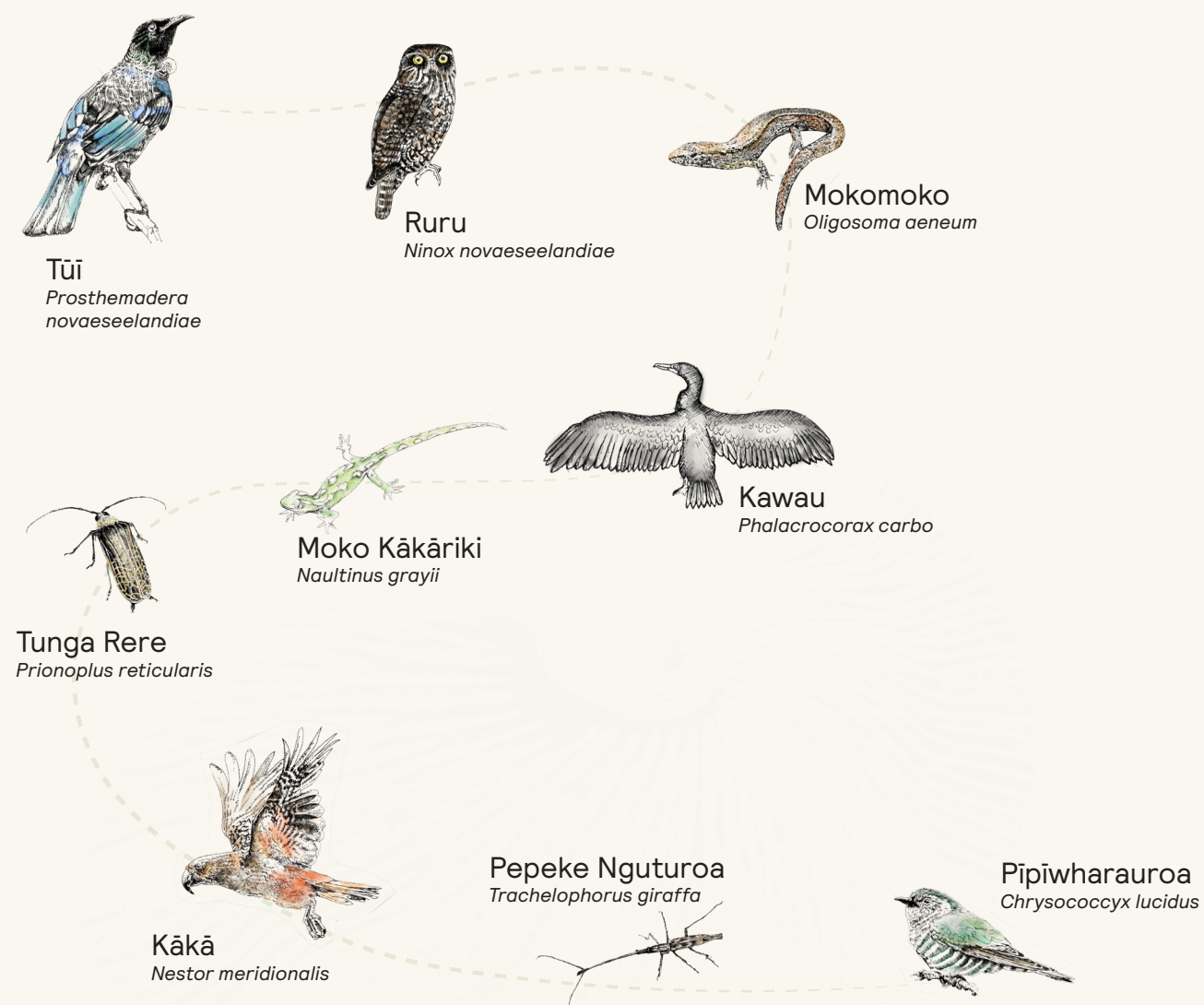
Ko Te Pūkākī: 2040 is grounded in the aspirations of our whānau. It is informed by a suite of Ngāti Whātua Ōrākei environmental and strategic documents. It builds upon the mahi of the foundational Ko Te Pūkākī and Ōkahu Rākau. Ko Te Pūkākī: 2040 sets out how our mahi will continue to bring back our manu and other native plants and critters, and ensure our people can once again harvest kai, rongoā and materials from their whenua.

Ko Te Pūkākī: 2040 consists of two, interconnected parts; Mahere Hōmiromiro - our detailed, time aligned management plan for years 1-5, and this document - Tirotiro Whānui. Together they provide us with a clear and strategic vision for our whenua. Ko Te Pūkākī: 2040 guides our regeneration mahi and articulates a range of high-level activities for the future. It is our pathway to co-ordinate and deliver on these activities through a structured approach, allowing us to achieve the vision developed with our whānau for our whenua.



TE KAUPAPA

Purpose of Tirotiro Whānui



The purpose of this document, Tirotiro Whānui, is to demonstrate aspects of our mātauranga Ōrākei as they relate to the regeneration of our whenua. Tirotiro Whānui is part of a longer-term plan we are putting in place, which allow us to work more aligned with natural systems, cycles and timeframes.

Within this document are:

- **Ngā mātāpono whakaora**
Regeneration principles
Page 18-21
- **Ngā mono nōhonga taiao me ngā momo tupu**
Habitat types and planting palettes
Page 36-43
- **Te mahere rerenga rauropi rākau**
Rākau biodiversity species plan
Page 44-47
- **He tātaritanga**
Gap analysis
Page 78-79

Tirotiro Whānui is also intended as a call to arms for like-minded individuals, groups and organisations. It is here we offer opportunities to share and deliver upon our vision. We can undertake this mahi ourselves, but we recognise that there is much benefit to be gained by involving the broader community who share our place in the world.

Tirotiro Whānui provides context and understanding of Ko Te Pūkākī: 2040. While Ko Te Pūkākī: 2040 is initially focused on the Whatutoto, it is our intention that this mātauranga will extend across Te Kahu Tōpuni o Tuperiri over time. We see opportunities for the work of others to be grounded in our mātāpono, to use and be inspired by our planting palettes, and to support the delivery of the broad range of kaupapa identified within our gap analysis. We welcome all enquiries in this regard.

For those that want to help us with this mahi:

Whakapā mai:



For plant supply contact:
Pourewa@nwo.iwi.nz

For projects and other enquiries contact:
tokitataiao@nwo.iwi.nz

HOROPAKI

Foundation

Our pepeha locates us within our place in the world as tangata whenua for Tāmaki. Our whakapapa connections tie us as ngā Uri o Tuperiri to those who have gone before and to those to follow on from us today. Our actions as ahi-kā define us as kaitiaki of our ancestral whenua and moana.

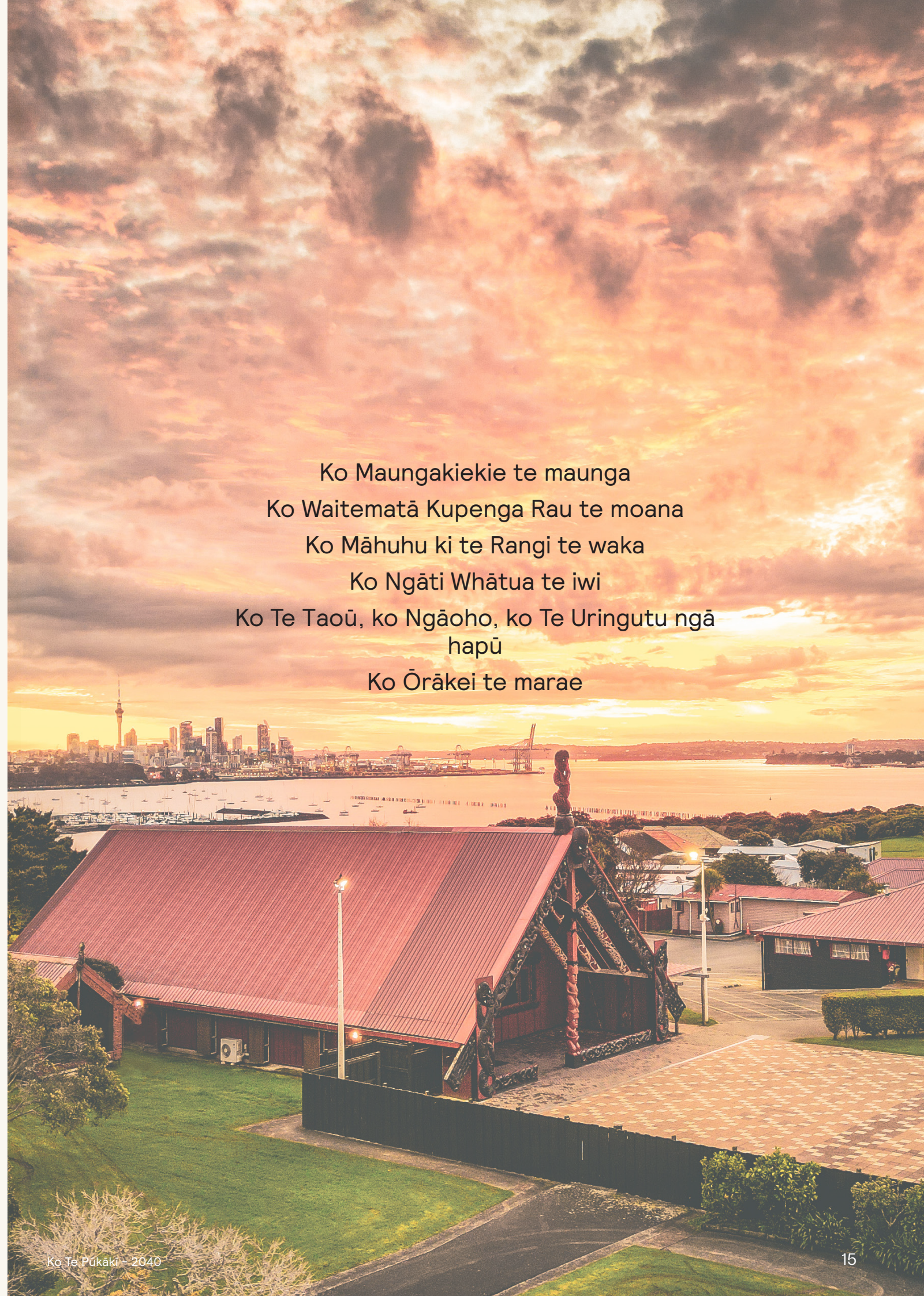
The health of te taiao is essential to a thriving Ngāti Whātua Ōrākei. There have been moments in our history where external forces have severely impacted our whenua and the cultural, environmental, and economic wellbeing of our people has suffered.

In 1910 the sewer pipe that still cuts across Ōkahumatamomoe was built. It established both a physical and metaphorical barrier between our people, our lands and our moana. This barrier had far-reaching effects on the mauri of our place, disrupting natural systems and profoundly affecting our way of life. This mamae remains with us in 2024.

Forty years later in 1951 our papakāinga was burnt, including our wharenui Te Puru o Tāmaki, and our māra kai. Our people were forcefully evicted from the bay and our connection to these significant sites was severed. It is important to note that the pain of these events is seared into the living memories of a small number of our kaumātua and kuia today.

Ngāti Whātua Ōrākei acknowledges the environmental crisis we are currently in. The taiao across our tribal lands has suffered significantly. In our transition from a seasonally mobile, mostly coastal people, to the highly urban iwi we are today, we find ourselves surrounded by development and urbanisation. We are surrounded by pollution from waste, light, noise, and chemicals. Our rohe has extensive pest species, soil disturbance, stormwater diversion, and habitat fragmentation. We did not ask for these things. They have been served on us as Auckland has developed over the last 184 years.

Ko Maungakiekie te maunga
Ko Waitematā Kupenga Rau te moana
Ko Māhuhu ki te Rangī te waka
Ko Ngāti Whātua te iwi
Ko Te Taoū, ko Ngāoho, ko Te Uringutu ngā hapū
Ko Ōrākei te marae



HOROPAKI

Foundation

We have suffered the extensive loss of vital habitat across our rohe. Our ngahere, repo, and our rimurimu have been decimated. Many of our birds, insects and reptiles are at risk or no longer present. Aerial images from 1940 show that most of our land associated with our Ōrākei papakāinga was cleared for farming, defence and other purposes. This occurred without our input and ultimately against the wants of our people.

Because of our understanding of connections within te taiao, we know that all these losses are linked. With the loss of repo, our ika and tuna lose their nursery habitats. With the loss of our ika and tuna, our manu suffer. With our manu no longer nesting on our cliffs, our coastal ngahere lose vital nutrients. As well as the loss of all these taonga, we have lost rongoā, kai, and materials for our toi. Our way of life has suffered alongside the impacts on the mana and mauri of our taiao.

Ko Te Pūkākī: 2040 and this document Tirotiro Whānui, build on the pakiaka (roots) of Ngāti Whātua Ōrākei regeneration mahi Ko Te Pūkākī and Ōkahu Rākau. We have been undertaking targeted ecological regeneration works since the early to mid-2000s. Our goal, as it has always been, is to develop and sustain a regenerative relationship with our ancestral whenua and moana.

Kaitiakitanga requires a holistic response that recognises the interconnected web of relationships and reciprocity between the environment and people. So, for us as kaitiaki, regeneration is restoring balance to these systems.

Ngāti Whātua Ōrākei 2050 long term strategy clearly sets out our vision to regenerate a thriving taiao. One where our whenua is healthy, abundant and alive with native vegetation, birdlife and insects. Our wai flows clear, clean and true. Our moana teems with life and vitality. And a taiao where our whānau are actively integrated within a regenerative and enduring relationship with Papatūānuku, Tāne Mahuta and Tangaroa. This remains an on-going process as we continue to build, develop, discover and re-discover our mātauranga Ōrākei, our knowledge in place. Like our tūpuna, our vision is clearly on the future but viewed through our past. We do all these things as an exercise of our mana Motuhake, according to our tikanga, to ensure that we actively enhance the mana and mauri of our place, for all.

Ko Te Pūkākī: 2040 will help us to achieve our vision for our mokopuna, starting here on the Whatutoto.



Me taka iho kia tākaia a Rangī

*The spiral of time is constantly moving around us,
backwards and forwards*

Whenua
Rangatira

Te
Pourewa

TE WHAKAKITENGA

Our Vision – The regeneration of our whenua

Our whenua is healthy, abundant and alive with native vegetation, birdlife and insects. Our wai flows clear, clean and true. Our moana teems with life and vitality. Our whānau are actively integrated within a regenerative and enduring relationship with Papatūānuku, Tāne Mahuta and Tangaroa.

Kia tiakina ō tātou whānau, ō tātou whenua, ā tātou taonga me ā tātou rawa mō ake tonu atu

To protect our people, our lands, our resources and our taonga forever



NGĀ MĀTĀPONO WHAKAORA

Regeneration Principles

Ngā mātāpono whakaora are our guiding principles as they relate to the regeneration of our whenua. Our use of the term regeneration is intentional, we recognise we need to go beyond 'restoration' or 'environmental protection'. This approach is not about us trying to bring back what once was, nor about us accepting things as they now are. It is about bringing a collective focus to actively elevate the mauri of our taiao. Building resilience in the natural and cultural systems present, to pursue an abundance that has been lost over the last 184 years. It is about recognising, evaluating, activating and enhancing the full range of mana which are present as an integral part of our mahi. Our mātāpono whakaora are the way we do this.

These mātāpono are also intended to be a grounding for those who wish to work with us. Giving context and a depth to why we do this mahi, these mātāpono will guide collaboration and partnership. It is our hope that these mātāpono will support others in extending the vision laid out in Ko Te Pūkākī: 2040 across Tāmaki and Te Kahu Tōpuni o Tuperiri.

Each of the five mātāpono have a tohu that sits with them, a taiao symbol that aligns with their intention. All five mātāpono have guided all elements of Ko Te Pūkākī: 2040, look out for them throughout the pages of this document.



NGĀ MĀTĀPONO WHAKAORA

Regeneration Principles



Intent

Tāwhiwhi ki ngā atua

- Our whakapapa extends vertically and horizontally. Connecting us to all elements, energies and forces
- Recognise and provide for the full range of mana and mauri which are present
- Recognise that as humans, we are but one of the elements present in the environment
- Our active application of tiaki and manaaki invokes and requires consideration of all realms present, physical and metaphysical
- **Context is everything**

Hikoia te whenua, hikoia te marama

- Be guided by observations and understanding of te taiao and te ao mārama
- Remain grounded at all times, but lift your head and hearts to a greater understanding and enlightenment
- Recognise and give space for our intrinsic connection to, and understanding of, te taiao and te ao mārama
- **Context is everything**

Ko te taiao te tuakana, kia teina te tū

- Te taiao holds a mana and a mauri which we are part of, and which is greater than and more important than any we individually possess
- Recognise that te taiao held extensive knowledge and systems prior to the advent of humanity, and that these developed ways of being and knowing did not require us
- As humans we are entirely dependent upon the ability and willingness of te taiao to sustain us
- Look first to the environment for solutions for human induced issues before developing solutions – what natural systems and processes are relevant?
- Actively work to restore and support natural balance wherever possible
- **Context is everything**

Kia mau ki te aka matua

- Work within all knowledge systems available, but maintain a constant scan for innovation and improvement
- Ensure that the knowledge systems, technologies and solutions being considered are the most appropriate ones for the task(s) at hand
- Acknowledge the limitations of existing knowledge and welcome opportunities to extend and build new knowledge
- Assess all options, but be decisive and act – ‘do nothing’ is not an option
- An understanding of the past provides a rich portal to the future
- **Context is everything**

Whāia te haumarutanga a te kāhu

- Our role as tangata whenua and ahi-kā is critical
- Engage meaningfully and respectfully to uphold the mana held by tangata whenua
- Recognise that mātauranga and tikanga is always place-based, and never generic
- Recognise that the assessment of mauri lies with tangata whenua, and should not be misconstrued with concepts such as health or wellbeing
- **Context is everything**

HE TAUIRA MAHI KI TE WHENUA

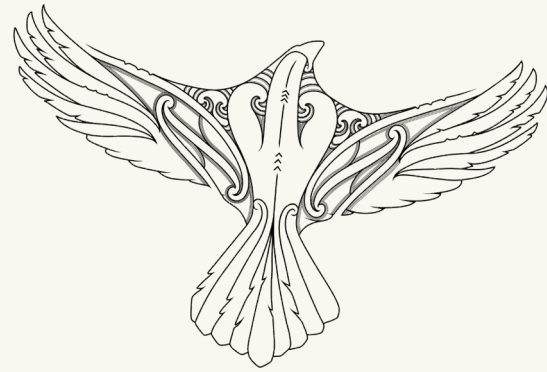
Examples in practice on our whenua

Our mātāpono are deeply embedded in all our mahi as kaitiaki taiao. In the following pages we give some examples of our mahi, and our tikanga, showing how we are embodying these mātāpono in our day-to-day mahi.

By providing examples as to how we enact these mātāpono on our whenua, we provide guidance and direction to others who have similar regeneration aspirations within the Ōrākei area and out into our ancestral Tāmaki landscape.



Eco-sourcing



Whau
Entelea arborescens

Ngāti Whātua Ōrākei recognise our current environmental reality of advancing climate change, ongoing habitat fragmentation, and urban intensification within our rohe. Humans have fundamentally and adversely impacted the ability of te taiao to function naturally, including the natural systems by which plants reproduce and prosper.

We are now forced to grow plants in our nursery to support taiao regeneration and, in doing so, help rebuild resilience into our plant communities and our taiao. To do this we collect seeds (and other propagation forms such as spores, propagules, nurse logs/trays) from exemplars of species from across our rohe. How this is done and where we source this material from is informed by our mātāpono.

Our current reality is that rākau in the Whatutoto and the Tāmaki isthmus are reduced to fragmented pockets, with little remnant intact and functioning vegetation. Rampant urbanisation, pollution and climate change continue to place ever-increasing pressure on these valuable pockets and remnant natural systems where they do exist. Therefore, Ngāti Whātua Ōrākei place less importance on collecting strictly within the defined “Tāmaki ecological district” and instead place more focus on being guided by the environment and environmental conditions.

We celebrate our whakapapa and landscape associations with Te Wao Nui o Tiriwa to the west. We recognise the importance of habitat diversity and the unique qualities of seed sourced in healthy natural systems. We acknowledge that our prevailing westerly winds influence where seed originates and is dispersed from within Tāmaki Makaurau. We also acknowledge cultural varieties that have historically been managed by our whānau for rongoā, kai and toi.

In practice this means that we observe the micro-climates the plant species are suited to, we recognise the impact climate change is having now, and we respond to the impact climate change will have in the future. We then use all this mātūranga to guide appropriate locations for seed to be collected from and planted into.

We are currently dependent on the few remnant ecosystems in our rohe to self-regenerate and to provide viable seed source for harvest and propagation according to our tikanga. It is vital we protect and respect these ecosystems and the individual rākau within them. Expanding our collecting region beyond human-drawn divisions (i.e. Tāmaki ecological district) aims to restore balance to the Whatutoto. It allows us to respond to the current pressures faced by our taiao.

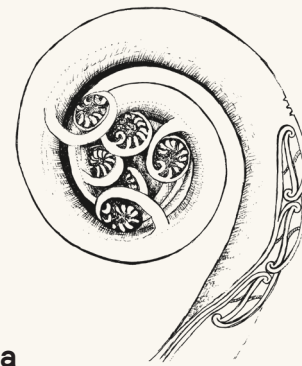
Eco-Sourcing Examples



Whau
Entelea arborescens

Tāwhiwhi ki ngā atua

- Make space for cultural plants that may not originate from Tāmaki but have significance for Ngāti Whātua Ōrākei:
 - Toetoe for the marae tukutuku panels originate as a gift from our Kaipara whanaunga
 - Pōhutukawa from Tai Tokerau invoke tribal whakapapa links
 - Multiple varieties of Harakeke are used for weaving
- It is important to respect native, natural species and varieties:
 - Regeneration should not use cultivars as this does not respect the natural whakapapa of the original plant as taonga, nor their complex roles within the systems they live in
 - While cultivars are commonly used in commercial landscaping, naturally occurring species (wild types) are preferred for all applications as maintaining genetic diversity is key to a healthy ecosystem. It is our hope that over time with guidance and increased nursery availability, planting for regeneration and landscaping for amenity will become synonymous



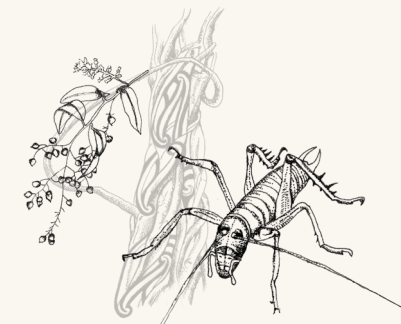
Kia mau ki te aka matua

- Ensure that methodologies for propagation and collecting are the best possible for the mana and mauri of the plant, and its uri.



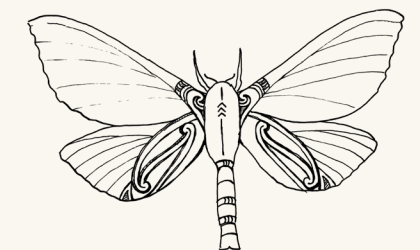
Ko te taiao te tuakana, kia teina te tū

- Seed sources should occur from larger, remnant populations and not take more than the source can handle (<10% of the source).
- Ensure that large trees identified as seed sources are actively managed and protected to promote health and mitigate risks, as appropriate and wherever possible.



Hikoia te whenua, hikoia te marama

- Be guided by what the environment and the plant itself is telling the seed collector. Is the environment dry, wet, rocky? What are the plants characteristics and form? This should be used to inform where the plants grown from these seeds should go:
 - For example, if the plant is thriving in a wet area and has suitable characteristics, it's offspring should be planted back into a riparian area.
- It is important for the seed collector to be present when undertaking this mahi to observe the natural associations that the source is part of and to replicate when planting wherever possible and appropriate



Chemical Free



Karo seedling
Pittosporum crassifolium seedling

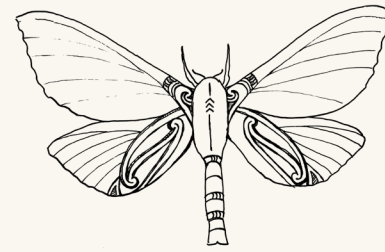
Ngāti Whātua Ōrākei are proudly chemical free and follow organic principles in our regeneration. In line with hua parakore, we are 100% committed to a 'no spray or poison' philosophy.

We aim to actively enhance the mauri of our taiao through all our actions. We want to see our whenua alive with birdlife and insects. We want our whānau to again have a regenerative and enduring relationship with Papatūānuku, Tāne Mahuta and Tangaroa. The use of chemical poisons for regeneration goes against these aspirations and impacts on our whakapapa present in these relationships.

Our natural world is a complex and beautiful network of interconnected, living things. By changing the conditions of the environment using chemicals we can unintentionally have long-term negative impacts on many parts of this interconnected system.

Instead of short-term approaches reliant upon the use of poisons, our non-toxin approach supports healthy, functioning ecosystems. These healthy ecosystems are the basis for a long-term resilience in our taiao. We recognise that this approach is much more labour and resource intensive. However, as we align our timescales and methodologies with that of our taiao and act as good ancestors for our future tamariki, the value of our mahi far outweighs any additional 'cost'.

Chemical Free Examples



Hikoia te whenua, hikoia te marama

- Because chemicals are not used, manual weed removal and non-chemical based pest removal, suppression and exclusion methodologies are required. To do this effectively we use our mātauranga to observe and respond to indicators from our environment. For example:
 - Knowing the best time and method to target a weed species. Some weeds will need to be removed every year, as new plants continually establish (such as moth plant); other species take 3 to 5 years before flowering, providing time to remove. New invasive species will appear and need to be identified and removed.
 - Observing native species for signs of stress and responding appropriately. New native species can be nurtured and encouraged by releasing from competing vegetation or by mulching to help through summer drought.
 - Focusing on preventative biosecurity, being aware of introducing new pests and diseases, is also critical to our approach. Careful observation of changes in our taiao can be early warning signs of an unwanted species.

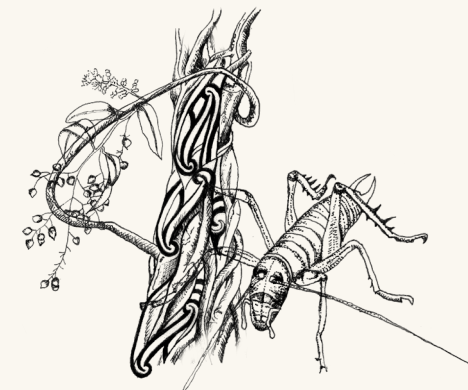


Karo seedling
Pittosporum crassifolium seedling



Tāwhiwhi ki ngā atua

- The natural system is complex and interconnected. Chemicals change the conditions of the environment, and this can have a long-lasting, unintended negative effect on multiple parts of te taiao.
- By not using chemicals, it allows the ecosystem to remain intact – from microbial life to insects, plants, birds and us.

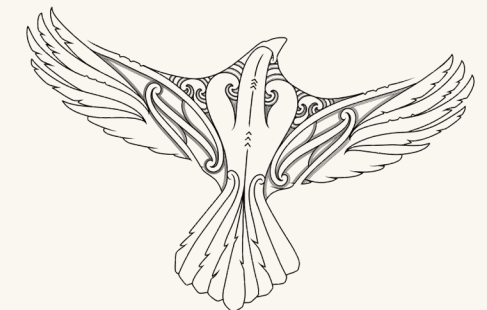


Ko te taiao te tuakana, kia teina te tū / Kia mau ki te aka matua

- Ngāti Whātua Ōrākei looks for innovations from within the organisation and mātauranga Ōrākei as well as from community groups, government and external research. We fully expect that the methodologies we use now will be different in the future.
- Ngāti Whātua Ōrākei looks to build ecosystem resilience using organic and permaculture-based methodologies: compost, vermicast, weed extracts, and informed and strategic decisions around scheduling.

Whāia te haumarutanga a te kāhu

- Approaches to regeneration and methodologies will be different in other areas because the knowledge and/or challenges will be different based upon level of regeneration, habitat and weed species.



Maramataka



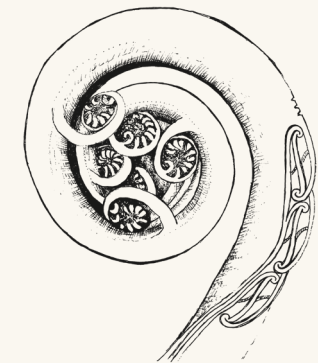
Pūpūtarakihi
Argonauta sp.

We are currently in the early phases of (re)developing our own maramataka. The maramataka is built off the natural rhythms, energies and conditions of our unique place in the world. It acknowledges, most importantly, the place and role of our whānau in our taiao. This is an exciting and natural next step for us and will bring a native and natural dimension to our mātāpono and our way of life.

Our whānau have a history of loss and disconnection from te taiao and te ao Mārama. This means that our mātauranga Ōrākei and maramataka Tāmaki is not elevated to the level we aspire it to be. Ko Te Pūkākī: 2040 is a logical place for us to give space for, and activate, our own maramataka. Ensuring that now, and in the future, our whānau are actively integrated within a regenerative and enduring relationship with Papatūānuku, Tāne Mahuta and Tangaroa.

The Pūpūtarakihi, the Paper Nautilus, depicted here is an indicator species from the time of our tupuna matakite Titahi. It is one of the most potent symbols of our tribal culture, knowledge and identity. The Pūpūtarakihi is a lightweight egg casing created by the female Argonaut Octopus. This casing floats and the māmā wheke uses the Pūpūtarakihi to care for her tamariki until they are ready to enter Tangaroa on their own. Thus, the Pūpūtarakihi is also a strong statement of mana wāhine and māmātanga.

Our developing maramataka allows us to assess and understand what is going on in te taiao by looking for tohu taiao such as this. By observing presence, timing, duration, orientation, and vigour of tohu, we can gain clues as to the mauri of te taiao. These observations also inform where and when we should be assisting te taiao or applying tikanga such as rāhui.



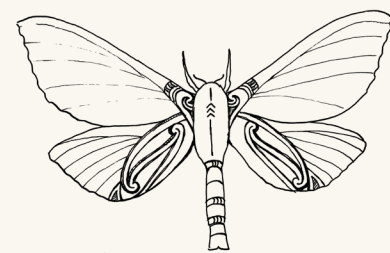
Maramataka Examples



Pūpūtarakihi
Argonauta sp.

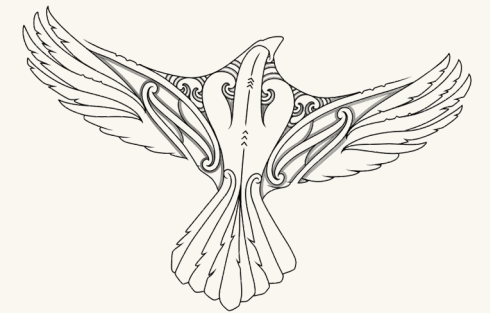
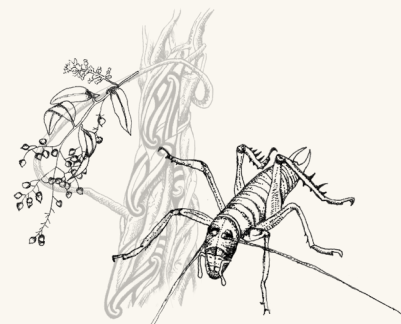
Hikoia te whenua, hikoia te marama

Throughout Ko Te Pūkākī: 2040 we have given space for the development of mātauranga and maramataka Ōrākei. Part of the delivery of our regeneration, alongside the weeding and planting, is to walk the whenua. We take time to connect and observe our natural world. This has not been bound by expectations on what we will deliver in this time, instead it is prioritising our whānau and our kaimahi to get out into nature and be a part of the system.



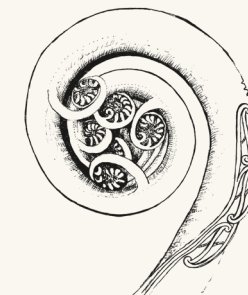
Ko te taiao te tuakana, kia teina te tū

Through the naming of the habitat types on our whenua (see page 38-39) we recognise and elevate the role that these systems play in the interconnected space that is te taiao and te ao Mārama.



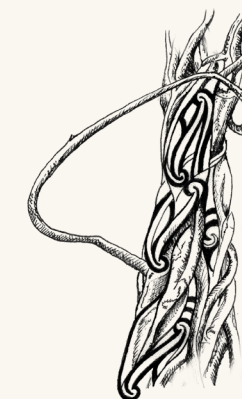
Tāwhiwhi ki ngā atua

Identification and elevation of our taonga species (see page 52-57) within Ko Te Pūkākī: 2040 recognises our intrinsic relationship with them. Placing their names and likeness in Tiro tiro whānui, using them as our tohu for our mātauranga, having them as indicators of the abundance are all our ways that we are acknowledging them, their mana and their mauri.



Kia mau ki te aka matua

As we continue to re-discover and further develop our own maramataka, we will uncover tohu unique to Ngāti Whātua Ōrākei. As we do so, we acknowledge how our taonga species can be environmental indicators. Providing opportunities to learn how their presence, absence and behaviour aligns with te taiao and what they can tell us about past, present and future.



Whāia te haumarutanga a te kāhu

Ko Te Pūkākī: 2040 showcases our place-based mātauranga and tikanga. By establishing our mātauranga for the regeneration of the whenua under our direct influence within the Whatutoto, this mahi offers a blueprint for public and private regeneration initiatives within our broader rohe.

NGĀ MOMO NŌHONGA TAIAO ME NGĀ MOMO TUPU

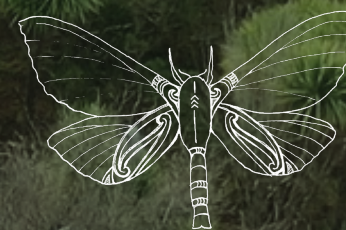
Habitat types and planting palettes

When walking across the whenua, one can observe the natural changes in our taiao. Changes in habitat and species occur with the influence and presence of natural elements such as wai, shade, aspect and temperature. These natural delineations, along with our knowledge of our whenua, form the basis of our habitat types.

The intention behind mapping and applying these habitat types is to acknowledge the uniqueness of these spaces. It allows for the appropriate regeneration approach to be undertaken for the conditions present in that space. By focusing upon the specific needs of each space, our management approach differs across the whenua to reflect this natural nuance and physical variation.

Their names acknowledge the significance of these habitat types to us and to the functioning of the natural world - Tāwhiwhi ki ngā atua.

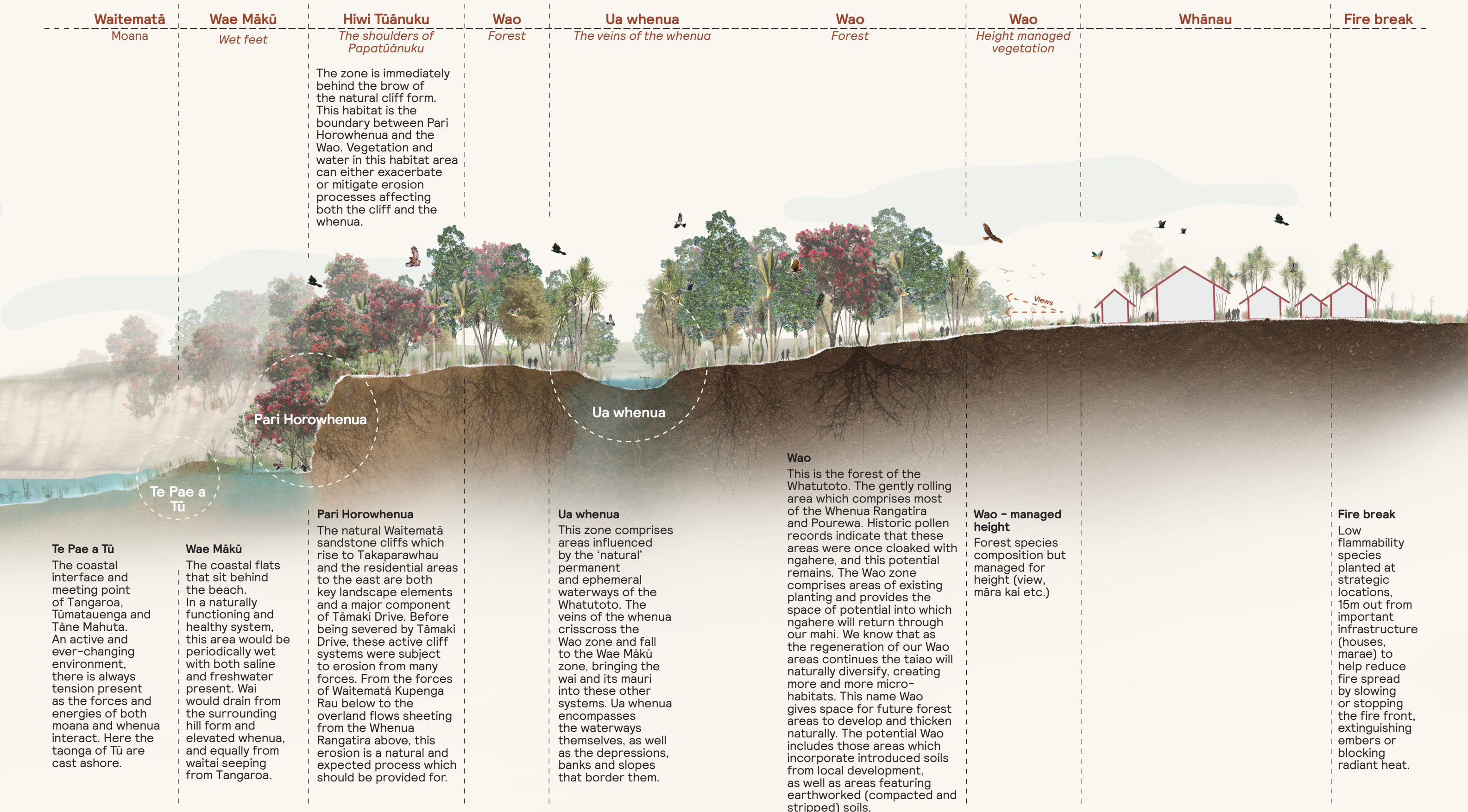
For each of these habitat types we have designed a unique planting palette. Within each of these palettes, we have identified species that will elevate the mauri of these habitats and will support their landscape location and function. These palettes are available on request and through engagement with us.



Hikoia te whenua, hikoia te marama
Move with the whenua, seek out enlightenment



Habitat Types



Waitematā
Moana

Wae Mākū
Wet feet

Hiwi Tūānuku
The shoulders of Papatūānuku

Wao
Forest

Ua whenua
The veins of the whenua

Wao
Forest

Wao
Height managed vegetation

Whānau

Fire break

The zone is immediately behind the brow of the natural cliff form. This habitat is the boundary between Pari Horowhenua and the Wao. Vegetation and water in this habitat area can either exacerbate or mitigate erosion processes affecting both the cliff and the whenua.

Te Pae a Tū

Pari Horowhenua

Ua whenua

Views

Te Pae a Tū
The coastal interface and meeting point of Tangaroa, Tūmatauenga and Tāne Mahuta. An active and ever-changing environment, there is always tension present as the forces and energies of both moana and whenua interact. Here the taonga of Tū are cast ashore.

Wae Mākū
The coastal flats that sit behind the beach. In a naturally functioning and healthy system, this area would be periodically wet with both saline and freshwater present. Wai would drain from the surrounding hill form and elevated whenua, and equally from waitai seeping from Tangaroa.

Pari Horowhenua
The natural Waitematā sandstone cliffs which rise to Takaparawhau and the residential areas to the east are both key landscape elements and a major component of Tāmaki Drive. Before being severed by Tāmaki Drive, these active cliff systems were subject to erosion from many forces. From the forces of Waitematā Kupenga Rau below to the overland flows sheeting from the Whenua Rangatira above, this erosion is a natural and expected process which should be provided for.

Ua whenua
This zone comprises areas influenced by the 'natural' permanent and ephemeral waterways of the Whatutoto. The veins of the whenua crisscross the Wao zone and fall to the Wae Mākū zone, bringing the wai and its mauri into these other systems. Ua whenua encompasses the waterways themselves, as well as the depressions, banks and slopes that border them.

Wao
This is the forest of the Whatutoto. The gently rolling area which comprises most of the Whenua Rangatira and Pourewa. Historic pollen records indicate that these areas were once cloaked with ngahere, and this potential remains. The Wao zone comprises areas of existing planting and provides the space of potential into which ngahere will return through our mahi. We know that as the regeneration of our Wao areas continues the taiao will naturally diversify, creating more and more micro-habitats. This name Wao gives space for future forest areas to develop and thicken naturally. The potential Wao includes those areas which incorporate introduced soils from local development, as well as areas featuring earthworked (compacted and stripped) soils.

Wao - managed height
Forest species composition but managed for height (view, māra kai etc.)

Fire break
Low flammability species planted at strategic locations, 15m out from important infrastructure (houses, marae) to help reduce fire spread by slowing or stopping the fire front, extinguishing embers or blocking radiant heat.

Whenua Rangatira Habitat Example

The six habitat types become obvious when looking across the Whenua Rangatira landscape. One can see the Pari Horowhenua, and the artificial separation Tāmaki Drive creates, denying the natural association with Te Pae A Tū. The importance of Hiwi Tūānuku becomes clear as the shoulders of Papatūānuku on top of these cliffs. Hiwi Tūānuku acknowledges the connection between Pari Horowhenua and the Wao, and it provides a critical function by actively tying these habitats together. It is a naturally dynamic space, and species here can either exacerbate or mitigate erosion processes affecting the cliff.

Ua Whenua, the literal veins of the Whatutoto, can also be seen where wai flows across and through our whenua. Wao and Ua Whenua blend together seamlessly, with species transitioning from one into the other.

One can also see our whānau on their whenua, being active in the Wao. Being able to manaaki events such as Ōrākei Manu Aute kite day and the Umu Kohukohu Whetū ki Takaparawhau on our whenua is vital for the mauri of Ngāti Whātua Ōrākei and the taiao.

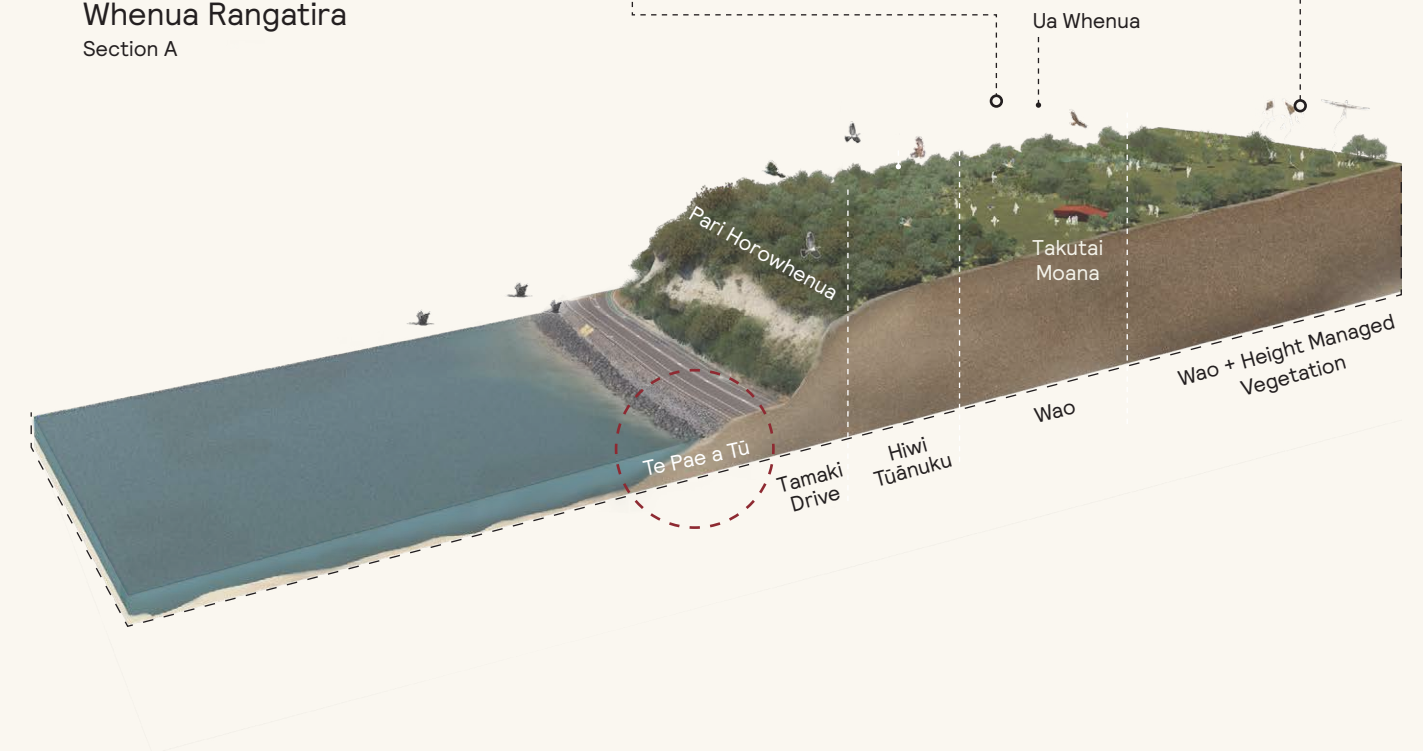


Whenua
Planting & Eco-sourcing



Kite Day
A Space for Activity / Events

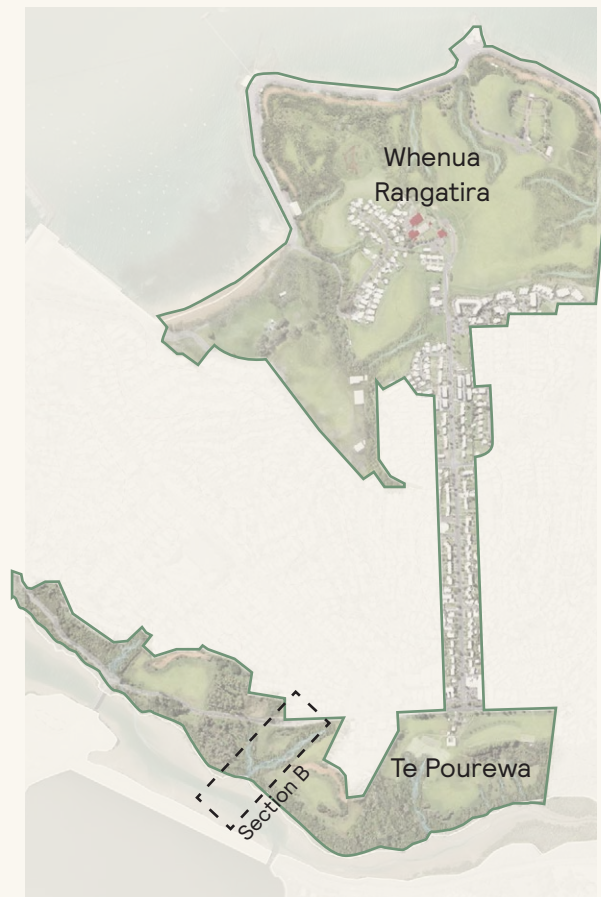
Whenua Rangatira
Section A



Te Pourewa Habitat Example

Pourewa Creek allows Wae Mākū more space in the Pourewa landscape. Here in places, mangroves grow uninterrupted into the Wao. There is room here for Wao and Wae Mākū to spread, and for more biodiversity to grab hold and flourish. Tribal aspirations for Te Pourewa are for this whenua to again be blanketed in ngahere; for the Wao to cover the whenua and the Wae Mākū to cover the wetlands. In acknowledging the ki uta ki tai connection of this whenua with Pourewa Creek, the proposed waka landing is shown. This area on Te Pourewa is easily accessible both from Kepa Road and from Pourewa creek.

Our heartland, the Whatutoto, is surrounded by urban housing and developments. These developments are intensifying rapidly around us however, we accept that these urban developments are a part of our environment. People and nature cannot be thought of in isolation. It can be seen on Te Pourewa that regeneration does not stop at boundary lines to properties. There are areas of the Wao near developments where planting will be actively managed to maintain views to significant cultural sites. Fire breaks can also be seen, where less flammable species are planted to reduce the risk of fires spreading.

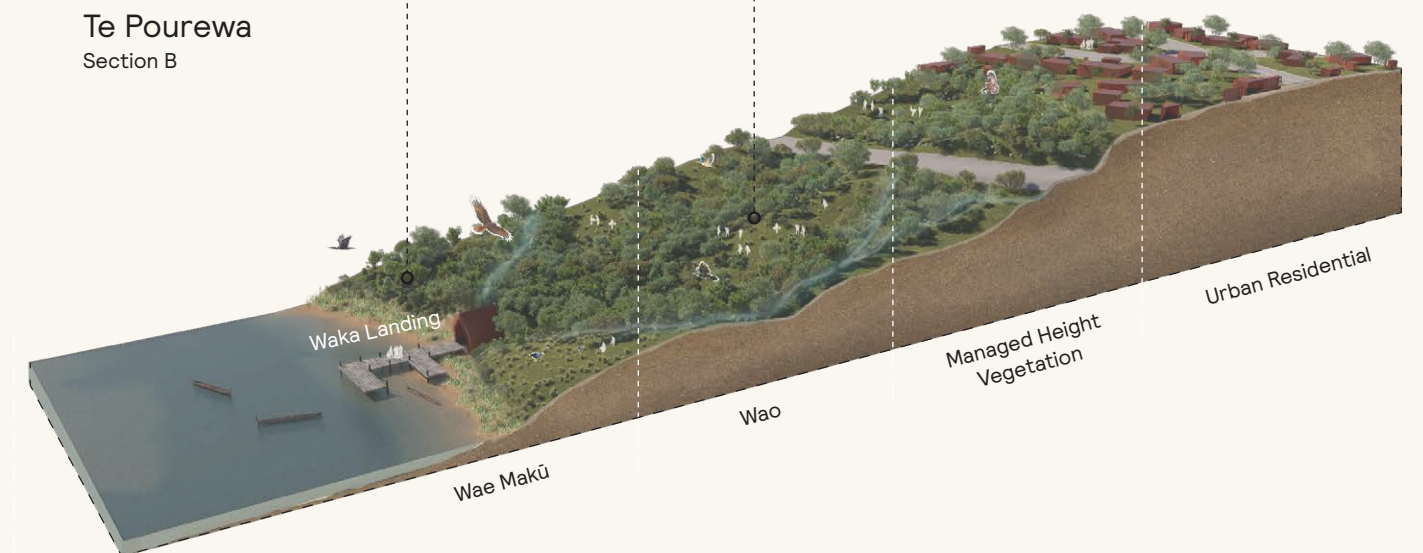


Moana
Waka Landing



Whenua
Planting & Eco-sourcing

Te Pourewa
Section B



TE MAHERE RERENGA RAUROPI RĀKAU

Rākau biodiversity species plan

As part of our regeneration mahi we have our modern Te Pourewa native plant nursery. Here we grow wild seed gathered from appropriate sources (see eco-sourcing page 24-27), grow these plants organically (see chemical free page 28-31), and plant them across our whenua and our rohe. Originally through Ōkahu Rākau and now through our Te Pourewa nursery, growing our taonga species is a tangible demonstration of our kaitiakitanga.

One of the main goals of our Te Pourewa nursery is to increase the native biodiversity across our rohe. Increased biodiversity supports ecosystem function, resilience and helps elevate the mauri of these environments and spaces. Additionally, the thickening of native biodiversity is important culturally for rongoā, for kai and materials for our toi practices.

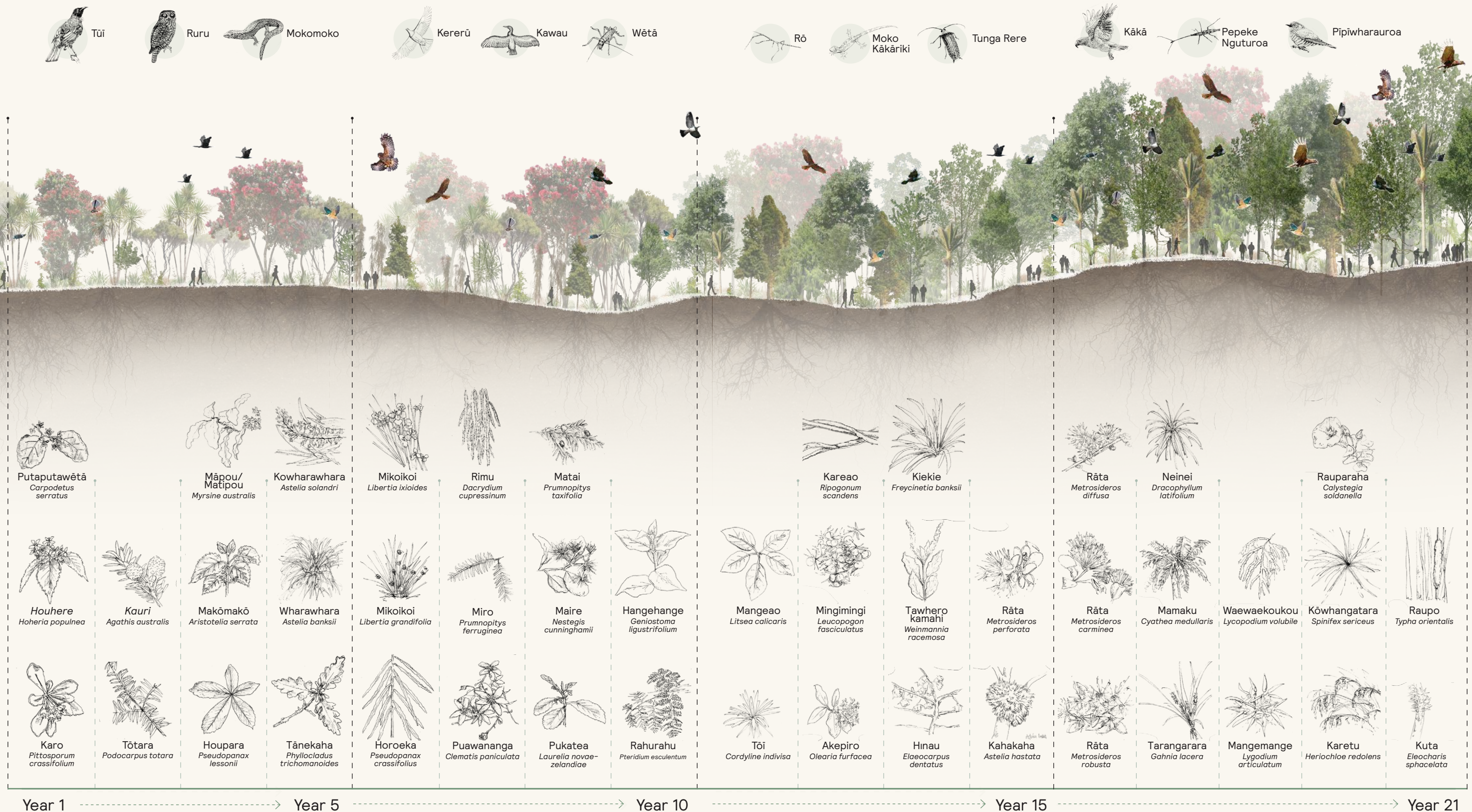
We have been increasing the number of species we grow and supply from our Te Pourewa nursery. These species are strategically aligned to the stage our regeneration kaupapa is currently at, recognising that we want to focus on growing and planting species that are suited to the current conditions. However, as our regeneration progresses, there is habitat on the whenua (both existing and potential) that could support additional species and further biodiversity.

The purpose of the biodiversity species plan is to identify which species to prioritise and when to add to nursery growing programmes. Some of our taonga species are currently threatened or even locally extinct. Others are challenging to propagate and grow in nursery conditions. Some are culturally significant plants for Ngāti Whātua Ōrākei. These are not necessarily native to Tāmaki, but there are aspirations to see them on the whenua. We also know that many species have the potential to self-introduce if they have the right conditions, such as lichens, mosses, ferns and fungi. Certain species will be beneficial to encouraging this diversity to establish themselves. All this information has informed the rākau biodiversity species plan.

There are challenges to this we must address; from knowledge creation of those species that are hard to propagate, to limited space and capacity to do this mahi, to areas where these plants can be planted and thrive. However, these challenges are also rich opportunities for partnership and creative thinking to advance the aspirations of Ngāti Whātua Ōrākei and our regeneration kaupapa.



Biodiversity Timeline

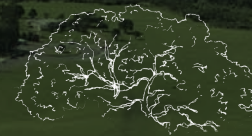


RĀKAU WHAKAARA

Trees of Significance



↑ Kaikōkiriata



↑ Kaikauruku



↑ Whakamaru

The current state of our whenua is inextricably linked with our historic loss of association with our whenua. This loss culminated in 1979 with our eviction. However, our tribal resilience and renaissance has allowed us to be here today, resourced and ready to undertake this mahi. Historic aerial images from 1940 show that almost all our whenua was cleared by others for farming, defense and other purposes, all without our input.

We note that this dire low point for our taiao is within living memory for some of our more elderly tribal members. For this reason, we recognise and celebrate the big trees present on our whenua as key elements within our taiao, our rākau whakaara. These, now highly visible and mature trees, would have existed as young trees within those few small pockets that are evident in those 1940 aerial images.

These trees have survived as witness to all our major tribal events, both negative and positive. They continue to stand with us today, as sentinels from our past and as markers for our future. We have the utmost reverence and respect for these chiefly trees, these survivors who continue to observe and share our place with us.

We have selected three rākau whakaara that we have named to recognise their mana and the mauri they hold and imbue our place with. These trees are respectively Whakamaru, Kaikauruku and Kaikōkiriata. These trees hold a special significance for us, and it is our whakapapa obligation to tiaki and manaaki them into the future, as befitting their status as full tribal members.

RĀKAU WHAKAARA

Trees of Significance



Kaikōkiriata: the one that greets the morning

The location of this tree is high on the cliff face directly opposite Ōrākei Wharf. Its location provides it with views of the dawn piercing the sky above Whanganui, Te Pane o Horoiwi and beyond to Te Moananui-a-Toi. Its gaze follows Tamanuiterā beyond Te Rangī-i-totongia te ihu o Tamatekapua, before tracking to Maungauika, Takarunga and the memory of Takararo. He reflects briefly upon our ancestral citadel of Te Ōnewa before sweeping the length of Waitematā Kupenga Rau to lift to Te Waonui a Tiriwa and Waitākere to then farewell the day and welcome the night. In welcoming the dawn every day, Kaikōkiriata stands as a marker of the bright and prosperous future that is beckoning our people forwards.



Whakamaru: the provider of shelter and nurture

This name conveys the memories of dark neglect from our local government. It recalls a period when waste from the hospital and mortuary was simply disposed of within the wastewater system. This waste terminated off Bastion Point and was flushed into Waitematā Kupenga Rau with the outgoing tide. This system did not function as hoped. Those authorities responsible turned a blind eye, as our whanau retrieved foetuses, severed limbs and bodily waste that washed back onto Ōkahumatamomoe. Our people interred these below Whakamaru, secure in our whenua and under our manaaki.



Kaikauruku: the eater of dark smoke

The location of this tree is overlooking Ōkahumatamomoe and Kaikauruku would have watched the burning of Te Puru o Tāmaki and clearance of our kāinga in 1952.

It is the black smoke that rose from these fires of cultural destruction that provides the name for this tree. In providing this name, it is meant to invoke the dark memories from this time. It acknowledges our loss and eviction from our ancestral kāinga, but importantly Kaikauruku helps us celebrate where we are now and where we are heading into the future.



Potential abundance of biodiversity in 2040

Rākau Whakaara to be protected into the future with supporting biodiversity surrounding.

2024 aerial image showing current Rākau Whakaara locations

Reference: Auckland GeoMaps

1940's aerial image showing Rākau Whakaara locations

Reference: Auckland GeoMaps

TAONGA SPECIES



Our whakapapa extends vertically and horizontally to connect us to all aspects of the environment. Our whakapapa links us inextricably to the divinity established through our tūpuna. It establishes our unique intrinsic relationship with all of life, from the minute and microscopic, to the animals and plants we are familiar with, to the features and characteristics of the islands, seascapes and landscapes that we have been part of across millennia.

Here we identify species of significance to Ngāti Whātua Ōrākei, taonga to be celebrated, elevated and cared for. Through our observations and understanding, we can read the signs in our taiao which give us tangible indication of the health of our environment. It is our aspiration that our tamariki, now and in the future, will know these taonga and their understanding of the tohu will deepen.

Those species listed are by no means an exhaustive list. For us, all native species are taonga. Their wellbeing and the mana and mauri they bring to our place reflects on our own.



Tāwhiwhi ki ngā atua

Be actively intertwined with all of the physical and metaphysical domains of life



TAONGA SPECIES

Ngahere



Pōhutukawa
Metrosideros excelsa



Whau
Entelea arborescens



Ti kōuka
Cordyline australis



Kōwhai
Sophora chathamica



Kawakawa
Piper excelsum



Kawariki
Coprosma autumnalis



Rengarenga
Arthropodium cirratum



Harakeke
Phormium tenax



Raupo
Typha orientalis



Putaputawētā
Carpodetus serratus



Puawananga
Clematis paniculata



Kiekie
Freycinetia banksii

Ngā manu



Kōtare
Todiramphus sanctus



Tūi
Prothemadera novaeseelandiae



Kawau
Phalacrocorax carbo



Matuku Moana
Egretta novaehollandiae



Pūtangitangi
Tadorna variegata



Pūkeko
Porphyrio melanotus



Ruru
Ninox novaeseelandiae



Pīpīwharau
Chrysococcyx lucidus



Kāhu
Circus approximans



Tōrea Pango
Haematopus unicolor



Pohowera
Charadrius bicinctus



Kākā
Nestor meridionalis

TAONGA SPECIES

Ika / Kaimoana



Pātiki
Rhombosolea plebeia



Haku
Seriola lalandi lalandi



Tāmure
Pagrus auratus



Whai
Myliobatoidei



Makō
Isurus oxyrinchus



Tuangi
Austrovenus stutchburyi



Pipi
Plebidonax deltoides



Kūtai
Xenostrobus neozelanicus



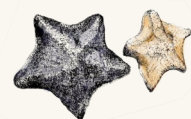
Ōrea
Anguilla dieffenbachii



Pūpūtarakihi
Argonauta sp.



Kākahī
Orcinus orca



Kapu Parahu
Patiriella regularis

Ngā tuaiwi-kore



Tuatara
Sphenodon punctatus



Moko Kākāriki
Naultinus grayii



Mokomoko
Oligosoma aeneum



Moko Pirirākau
Mokopirirakau granulatus

Ngā tuaiwi-kore



Wētā
Hemideina



Pepe Tuna
Aenetus virescens



Rō
Clitarchus hookeri



Pepeke Nguturoa
Trachelophorus giraffa



Pūpū Rangi
Paryphanta sp



Ngaokeoke
Onychophora



Pepe Kawakawa
Cleora scriptaria



Hura
Cormocephalis rubiceps



Tunga Rere
Prionoplus reticularis



Ngaro Huru
Apis mellifera ligustica
Spinola



Rauparaha's Copper
Lycaena rauparaha



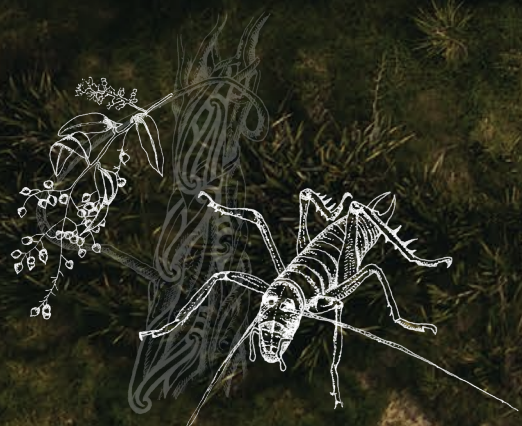
Pepe Ao Uri
Zizina otis labradus

HE MAPI – NGĀ HUA TAUMATA TĒTEI

Mapping - High level results

Ko Te Pūkākī: 2040 is grounded in our māturanga Ngāti Whātua Ōrākei. It responds to the aspirations of whānau, reflects our environmental and strategic documents, and is built off the foundational Ko Te Pūkākī and Ōkahu Rākau programmes. It draws on all of these together in Mahere Hōmiromiro – our detailed, time aligned management plan for years 1-5, and this document – Tiro tiro Whānui.

The following pages show the information collected through the creation of Ko Te Pūkākī:2040. Collected through hīkoi, wānanga, research and observations, this information has informed our decision making and outcomes of Ko Te Pūkākī:2040. These maps are intended to provide a high-level overview, give context and show what information is available to us at this moment in time. Further information is available in the appendices and through engagement with Ngāti Whātua Ōrākei.



HE TIROTIRO WHĀNUI KI TE WHENUA

Overview of our whenua

Ngāti Whātua Ōrākei are in an active phase of reinscribing our cultural landscape. The names displayed on this map are central to our identity and help to define our unique culture and place in the world. We are the inheritors of a rich and evocative korowai of names tūpuna have left for us. These warm footprints of our past are actively helping us in our advancing to a bright and abundant future for our mokopuna, secure in their histories and culture. These names recall great exploits and mark sites of conflict and peace-making. Equally, names provide clues as to what species would have existed and flourished. They highlight natural taiao events that have occurred, thickening our understanding of place.

Our heart beats most strongly on the area we know as the Whatutoto, the historic Ōrākei block. This was intended to be inalienable but proved far from that to a series of determined and nefarious colonial administrations. Despite this and after a long, painful and well-documented history, the Whatutoto is today the home of our marae, our papakāinga, our culture and our people. Ko Te Pūkākī: 2040 recognises these sites and these names and acknowledges the significance of them for the regeneration of our whenua. While the Whatutoto is the focus of Ko Te Pūkākī: 2040, the intention is for the mātūranga Ōrākei presented here to extend, over time, across the entirety of Te Kahu Tōpuni o Tuperiri .



Cultural Considerations

Informing Ko Te Pūkākī: 2040

Key cultural considerations that have influenced Ko Te Pūkākī: 2040 include archaeological sites, sites of cultural significance, and historic vegetation extents. We have mapped and included a unique mana layer which identifies areas of high cultural significance for us such as the marae, its surrounds and approaches, and particularly those areas where we welcome manuhiri. These are areas where our mana is tangible and open to all who come to us to experience. Together these cultural considerations have been used to inform areas of priority and appropriate planting palettes.

Within the Ōrākei Visual Framework whānau highlighted aspirations for establishing tauranga waka, a summer campsite for tamariki, and harvestable ngahere. The potential locations of these sites, informed by the mahi of Ko Te Pūkākī:2040, have been included on this map.

Legend

- Marae
- Mana layer (Ko Te Pūkākī:2040)
- Urupa
- Historic vegetation
- Potential harvestable ngahere
- Potential waka area landing
- Potential waka area parking
- Potential campsite for tamariki
- Archaeological sites (New Zealand Archaeological Association)
- Historic heritage place 105-111 Keka Road (Auckland Unitary plan)
- Pourewa creek reserve archaeological survey (Russell Foster and Associates, 2014)
- AUP scheduled places
- Sites of value to mana whenua (Auckland Unitary plan)



Habitat Types

Of the Whatutoto

Informed by the whenua, these are the main habitat types present on the Whatutoto. The names we have created acknowledge the uniqueness of these spaces in terms of habitat space and landscape function, highlighting the significance of them for our taiao.

The names our cultural experts have provided for each of these habitat types reflect the role they play in the system. It is expected that over time as our whenua regenerates more micro-climates will form. This will create more spaces for certain species to thrive, and in turn create areas where whānau are able once again to harvest kai and rongoā, or to simply observe our whenua.

As our taiao regenerates and as whānau deepen their relationship with Papatūānuku, Tāne Mahuta and Tangaroa, more sites will emerge, and we expect that our following generations will continue this naming process.

Legend

-  Pari Horowhenua - 40m Cliff Buffer
-  Hiwi Tūanuku - Cliff
-  Te Pae a Tū- Beach
-  Wae Mākū - Wetland
-  Ua Whenua - Riparian
-  Wao - Hill
-  Wao - Height Managed Vegetation
-  Green Firebreak
-  Harvestable Ngahere




Years

Each management units will be worked on

The purpose of Ko Te Pūkākī: 2040 is to strategically and logically help us achieve our stated vision for our whenua. To do this, we need to be able to prioritise our regeneration mahi. In developing a system which establishes metrics based on management scores, regeneration scores, and mana layers alongside our current ways of working, we have created a timeline of the mahi and the areas which we need to focus on from now until 2040. The areas and tasks for Years 1-5 have been scheduled in detail in Mahere Hōmiromiro as part of Ko Te Pūkākī: 2040. The intention is for an iterative, adaptive approach to the delivery of future years.

Legend

- | | | | |
|---|-----------|---|--------------------|
|  | Year 1 |  | Potential Campsite |
|  | Year 2 |  | Potential Orchard |
|  | Year 3 |  | Other |
|  | Year 4 | | |
|  | Year 5 | | |
|  | Year 6-11 | | |
|  | Year 11+ | | |









Management Scores

Of the Whatutoto

Created through observation and hīkoi, these management scores reflect how challenging the site will be to physically work on and in. Scores are informed by the slope present, access to the site, and the diversity and abundance of invasive plant species in each area. Alongside regeneration scores and the mana layers, the management scores allow us to gain a high-level understanding of the different sites across the whenua. These scores also act as a baseline for monitoring, allowing us to see and register changes over time.

Legend

-  A - Easy to manage
-  B
-  C
-  D
-  E - Difficult to manage
-  Other



Regeneration Scores

Of the Whatutoto

Created through observation and hīkoi, these regeneration scores provide a high-level measure of the native, ecological significance of the site. Scores for each area are informed by height of the tree canopy, as well as the diversity and abundance of native species present. Alongside the management scores and the mana layers, the regeneration scores allow us to gain a high-level understanding of the different sites across the whenua. These scores also act as a baseline for our monitoring, allowing us to see and register changes over time.

Legend

-  ++
-  +
-  0
-  -
-  --
-  Other



Native Trees

Of the Whatutoto

This map shows the location and species of large, mature native trees on our whenua. By 1940 most of the rākau on our whenua had been cleared. We do not have many large, mature rākau left. It is important for us to locate and elevate the rākau still standing to recognise their mana and the mauri they hold and imbue our place with. It also acknowledges their potential as seed source and environmental anchors.

Legend

- Titoki - *Alectryon excelsus*
- Kohekohe - *Dysoxylum spectabile*
- Porokaiwhiri - *Hedycarya arborea*
- Kōwhai - *Sophora sp.*
- Pūriri - *Vitex Lucens*
- Pōhutukawa - *Metrosideros excelsa*



Significant Exotic Species

Of the Whatutoto

This map shows the large, notable exotic species on the whenua. Significant exotic plants have been mapped and photographed to build a baseline of these species across the Whatutoto. Most of these species are weeds; and as these are large, mature plants they are likely major sources of seed across our whenua. Others are potential risks to people or our regeneration, and we are prioritising their removal or management. It should be noted that the extensive Privet and Wattle across Pourewa isn't shown, as these are the dominant plant species and in most management units.

Through hīkoi, our mātauranga, and expert arboricultural support, we have created a removal plan and timeline for these plants that ensures strong cultural and environmental outcomes.

Legend

- Acmaena - *Syzygium smithii*
- Sydney red gum - *Angophora costata*
- Dead tree
- Eucalyptus - *Eucalyptus globulus*
- Flame Tree - *Brachychiton acerifolius*
- Monterey pine - *Pinus Radiata*
- Pheonix palm - *Phoenix canariensis*
- Privet - *Ligustrum vulgare*
- Wattle - *Acacia sp.*
- Willow - *Salix sp.*



Baseline Weed Analysis

Of the Whatutoto

Key invasive weed species have been mapped, photographed, and quantified to begin building a baseline of weediness across the Whatutoto. This allows us to prioritize areas and weed species to target, but also allows us to measure change over time. The species identified are the most prevalent invasive species observed across the Whenua Rangatira and Te Pourewa. This is not an exhaustive list. Instead, the weed species chosen reflect those that are most prevalent or pose the biggest risk to our whenua. This information will form the basis of a weed management plan for the whenua.

Legend

- | | |
|--|--|
|  Blue morning glory - <i>Ipomoea tricolor</i> |  Periwinkle - <i>Catharanthus roseus</i> |
|  English ivy - <i>Hedera helix</i> |  Tobacco weed - <i>Solanum mauritianum</i> |
|  German ivy - <i>Delairea odorata</i> |  Tradescantia - <i>Tradescantia fluminensis</i> |
|  Gorse - <i>Ulex europaeus</i> |  Tree wattle - <i>Acacia dealbata</i> |
|  Honeysuckle - <i>Lonicera japonica</i> |  Wild ginger - <i>Asarum canadense</i> |
|  Kikuyu grass - <i>Cenchrus clandestinus</i> | |
|  Moth plant - <i>Araujia sericifera</i> | |



HE TĀTARITANGA

Gap analysis



In undertaking this mahi we recognised early that we would not be able to achieve everything in this stage of our regeneration planning. Instead, we chose to focus on getting strong foundations in place including our mātāpono, management units, habitat types and planting palettes. Defining these has allowed us to establish the strategic tasks necessary to achieve our aspirations over the next five years.

Through our research and the development of Ko Te Pūkākī: 2040 we now recognise that there are key areas, pātai and next steps we need to consider as part of the ongoing regeneration of our whenua. This analysis has identified key gaps in our current knowledge, matters for resolution as this programme beds in and continues to build momentum and results.

Accordingly, we have grouped these under twelve key kaupapa. For each of these kaupapa we have expanded on the purpose, provided some of the thinking done in these spaces, and have identified what our next steps should be.

The intention behind this analysis is to inform future work programming. It will allow informed decision making and planning built off knowledge developed through action. We also want to use this gap analysis to guide partnership opportunities in the future. To inform those who want to work with us and want to know how they can bring their skills, experience, enthusiasm and resources to assist us in our mahi. These twelve kaupapa are intended to be guides into the areas where we need help. There is space for many people here, in many ways. We welcome all enquiries in this regard.

HE WHAKĀKĀ PĪ

Conclusion

The information and mātauranga Ōrākei within Ko Te Pūkākī: 2040 provides insight into our essential Ōrākeitanga. It is the foundations of our being who we are, in and of our place in the world. It is upon these foundations that we will work to elevate the mana and mauri of our taiao, actively support development of a new and tangible abundance, and revive resilience in the natural systems we are part of.

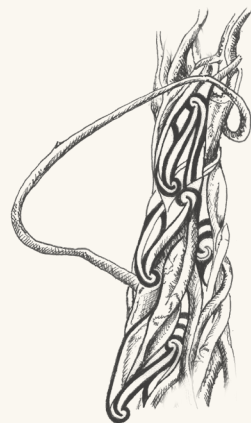
We will be again able to share a whenua which is healthy, abundant and alive with native vegetation, birdlife and insects. Our lives will again be intertwined with our wai, which flows clear, clean and true. Our moana will teem with life and vitality. And critically, our whānau will be integrated once again as teina within a regenerative and enduring relationship with Papatūānuku, Tāne Mahuta and Tangaroa.

In working to achieve the aspirations of our people as described in Ko Te Pūkākī: 2040, all will benefit.



Kāhu
Circus approximans

Whakapā mai:



For plant supply contact:
Pourewa@nwo.iwi.nz

For projects and other enquiries contact:
tokitaiao@nwo.iwi.nz



Nāna te rere, he tau, he tau, he tau!

It shall be a bountiful season indeed!

HE TĀPIRITANGA

Appendices



Technical material

That has informed this document

The information provided here is a high level of summary of the output from Ko Te Pūkākī:2040– for more detail on any aspect of this document please contact us directly.

The following data was collected to inform Ko Te Pūkākī: 2040:

- All notable invasive trees on whenua recorded and GPS tagged
- Quantity and location of key native plants recorded
- Large, old native trees on whenua recorded and GPS tagged
- Baseline regeneration and management scores for all the Whatutoto
- Plan and timeline created for diversifying plant species we grow in the nursery
- Whatutoto habitat types with planting palettes
- Regeneration Mātāpono
- For years 1-5:
 - All of the mahi that can be done safely by volunteers, the location of that mahi and the type of mahi required
 - How long when each piece of mahi will take in work hours
 - When this mahi needs to be done in the year, what season

The technical information that has informed this document that is available with consultation is:

1. Management unit information
 - a. Table with summary information on scores and classification
 - b. Summary of
 - i. % native to non-native
 - ii. Full plant list (native, non-native)
 - iii. Average height of plantings etc.
 - c. Full Management Unit descriptions with photos
 - d. Full hikoi/ground truthing data sheets
2. Notable plant information
 - a. Weed analysis of eighteen key weed species
 - b. Notable tree GPS locations
 - c. Notable exotic plant GPS locations
3. Planting palettes
 - a. Full detail of species for each habitat type
4. Biodiversity species plan
 - a. Full detail of all species to be added to the nursery 2025-2040
5. Observations from the whenua through the development of ko Te Pūkākī:2040

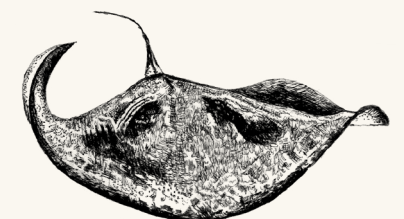
6. Detailed methodology and justifications for development of ko Te Pūkākī:2040
 - a. Summary methodology for next steps
7. 5-years tasked based delivery data
8. Full gap analysis including details of purpose and thinking to data
9. Summary of key future events
 - a. Reporting requirements (monthly, yearly, future)
 - b. Actions that need to happen in subsequent years and when (i.e. reviews, and additional detailed plans past year 5)
 - i. Appendix for methodology
 - c. If actions/tasks are missed – what to do

In the future this information could be used to further our regeneration mahi. As we now know:

- The locations of native plants across whole whenua, we can create a Cultural Materials Map.
- The amount of work that could be done safely by volunteers, we can build out our volunteer intake process. This allows us to have large part of work done by volunteers and engage partners and the wider community in the project. As well we can create standardised, sharable processes for methodology and health & safety.



- The planting palettes associated with key habitats, we can use this to support our production in the nursery. These planting palettes can be shared with external regeneration and landscaping projects – creating easier plant supply contracts with “product” palettes by habitat type. Additionally, we can have clear requirement of local government kaupapa within our rohe regarding plant species.
- Our Regeneration Mātāpono, these can be used to create position statements to increase and focus our advocacy. They are designed to be easily inserted into other kaupapa across Ngāti Whātua Ōrākei mahi.
- The location of exotic trees and key weed species on the whenua, we can create and seek funding for a long-term weed management plan. This can be used to guide other agencies that want to trial appropriate methodology.



Rākau biodiversity

Glossary of species year 1-11



Karo
Pittosporum crassifolium



Houhere
Hoheria populnea



Putaputawētā
Carpodetus serratus



Tōtara
Podocarpus totara



Mikoikoi
Libertia grandifolia



Mikoikoi
Libertia ixioides



Puawananga
Clematis paniculata



Miro
Prumnopitys ferruginea



Kauri
Agathis australis



Māpou/matipou
Myrsine australis



Houpara
Pseudopanax lessonii



Makōmakō
Aristotelia serrata



Matai
Prumnopitys taxifolia



Rimu
Dacrydium cupressinum



Pukatea
Laurelia novae-zelandiae



Maire
Nestegis cunninghamii



Tānekaha
Phyllocladus trichomanoides



Wharawhara
Astelia banksii



Kowharawhara
Astelia solandri



Horoeke
Pseudopanax crassifolius



Rahurahu
Pteridium esculentum



Hangehange
Geniostoma ligustrifolium



Tōi
Cordyline indivisa



Mangeao
Litsea calicaris

Rākau biodiversity

Glossary of species year 12-21



Akepiro
Olearia furfacea



Mingimingi
Leucopogon fasciculatus



Kiekie
Freycinetia banksii



Supplejack
Ripogonum scandens



Tarangarara
Gahnia lacera



Mamaku
Cyathea medullaris



Mangemange
Lygodium articulatum



Waewaekoukou
Lycopodium volubile



Hinau
Elaeocarpus dentatus



Tawhero kamahi
Weinmannia racemosa



Kahakaha
Astelia hastata



Rāta
Metrosideros perforata



Karetu
Heriochloa redolens



Kōwhangatara
Spinifex sericeus



Rauparaha
Calystegia soldanella



Kuta
Eleocharis sphacelata



Rāta
Metrosideros robusta



Rāta
Metrosideros carminea



Rāta
Metrosideros diffusa



Neinei
Dracophyllum latifolium



Raupo
Typha orientalis

Rārangi pukapuka

Bibliography

The information within Ko Te Pūkākī: 2040 has been collected and collated through hīkoi, wānanga, research and observations. The mātūranga within Ko Te Pūkākī: 2040 does not exist in isolation. It builds upon existing mātūranga Ōrākei, adding to the knowledge of past to lead towards a better future.

Ngāti Whātua Ōrākei gratefully acknowledge whānau past and present who have been pivotal in shaping our kaitiakitanga taiao and this document, as well as our partners who have provided their expertise, guidance and support for the creation of this kaupapa.

Below are some of the key resources and research that have been informed Ko Te Pūkākī:2040. This is not an exhaustive list and more information is available through engagement with Ngāti Whātua Ōrākei.

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Nāna te rere, he tau, he tau, he tau!

It shall be a bountiful season indeed!



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