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TE KŌPUTU O TE WHAKATŌHEA

A tikanga of gathering and sharing to guide future kai sovereignty

*Shannon Davis**
Richard Morris†
Te Kahautu Maxwell‡
Isobel Happy§

Abstract

The story of Te Whakatōhea is indistinguishable from its relationship with kai. Starting with the iwi's migration narratives from Hawaiki to Aotearoa New Zealand, through an economic flourishing that followed initial contact with European settlers, then as a matter of survival following raupatu, kai has been an integral component of Te Whakatōhea culture and tikanga. Today this relationship with kai is manifest in the industry-leading aquaculture enterprises of the iwi; however, there are also serious challenges present in terms of its people's nutritional wellbeing, with access to fresh kai in the Ōpōtiki rohe limited for a high portion of the population. The research reported in this article investigated how spaces for growing kai in Te Whakatōhea's past could give direction to future urban planning for increasing kai security and sovereignty. Through interviews with kaumātua, three urban planning models for integrating spaces to grow and access kai within future urban land use planning are developed in relation to the concept of whakakitenga-nui, which frames how kai planning can connect ancestral mātauranga to future land use planning and wellbeing strategies.

Keywords

Te Whakatōhea, kaumātua, kai security, māra kai, whakakitenga-nui, future landscape planning, kai sovereignty

* Head of the School of Landscape Architecture and Senior Lecturer in Landscape Planning, Te Whare Wānaka o Aoraki Lincoln University, Lincoln, New Zealand. Email: Shannon.Davis@lincoln.ac.nz

† Postdoctoral Fellow, Department of Agricultural Sciences, Te Whare Wānaka o Aoraki Lincoln University, Lincoln, New Zealand.

‡ Te Whakatōhea, Te Whānau-ā-Apanui, Ngāi Tai ki Tōrere, Ngāi Tai ki Tāmaki, Ngāti Awa, Tūhoe, Ngāti Maniapoto, Ngāti Porou. Professor, Te Pua Wānanga ki te Ao Māori and Indigenous Studies, Te Wānanga o Waikato | University of Waikato, Hamilton, New Zealand.

§ Te Whakatōhea, Whānau-ā-Apanui, Tūhoe, Ngāti Kahu. Researcher and Master's Student, School of Landscape Architecture, Te Whare Wānaka o Aoraki Lincoln University, Lincoln, New Zealand.

… Me aha he kai māu ki reira?
He kai nui tonu māhau, ko te rau o Hūnā.
Ka kapi ngā pūtahi kai
I a Pahi-poto, i a Te Rangi-ka-wehea,
Hoki kē mai koe ki Ō-hiwa,
Ki te tamāhine a te Whakatōhea, …

… What was to be your food there?
Your big meal, of course, would have been the leaves of Hūnā.
A bounteous feast was to come
From Pahi-poto, and from Rangi-ka-wehea,
But you returned instead to Ō-hiwa
To the daughter of Whakatōhea …
(pātere of Te Whakatōhea)

Introduction

On 27 May 2023, the then Justice Minister Andrew Little signed a Deed of Settlement and delivered a formal apology from the Crown to Te Whakatōhea for breaches of Te Tiriti o Waitangi | the Treaty of Waitangi, including the invasion of its eastern Bay of Plenty rohe in the 1860s and the confiscation of more than 140,000 acres of its land (New Zealand Government, 2023). The Waitangi Tribunal (2021) described the Crown's actions around Ōpōtiki as "among the worst Treaty breaches in this country's history". (p. xii) Raupatu, the confiscation by Crown forces of practically all of the iwi's highly productive coastal plains in the late 1860s, was at the core of the Treaty claim. In parallel with land confiscation, nearly all of Te Whakatōhea were moved onto the Ōpape Native Reserve—22,000 acres of mainly unproductive land with a thin coastal strip between Omarumutu and Ōpape (Figure 1).

Raupatu essentially destroyed the physical connection hapū had to their whenua, denied them the right to practise traditional mahinga kai, and severely limited their ability to feed themselves. In the decades following raupatu, mātauranga relating to cultivating and storing of kai and tikanga relating to its distribution, were called upon to secure the survival of hapū living on the Ōpape Native Reserve. The research reported here drew on the memories of kaumātua who grew up on the reserve to cast light on this mātauranga and tikanga, as a way to guide kai growing within the present-day and future urban environments of the rohe. This future orientation explores Maxwell's (2025) concept of whakakitenga-nui, which frames how kai planning can connect ancestral

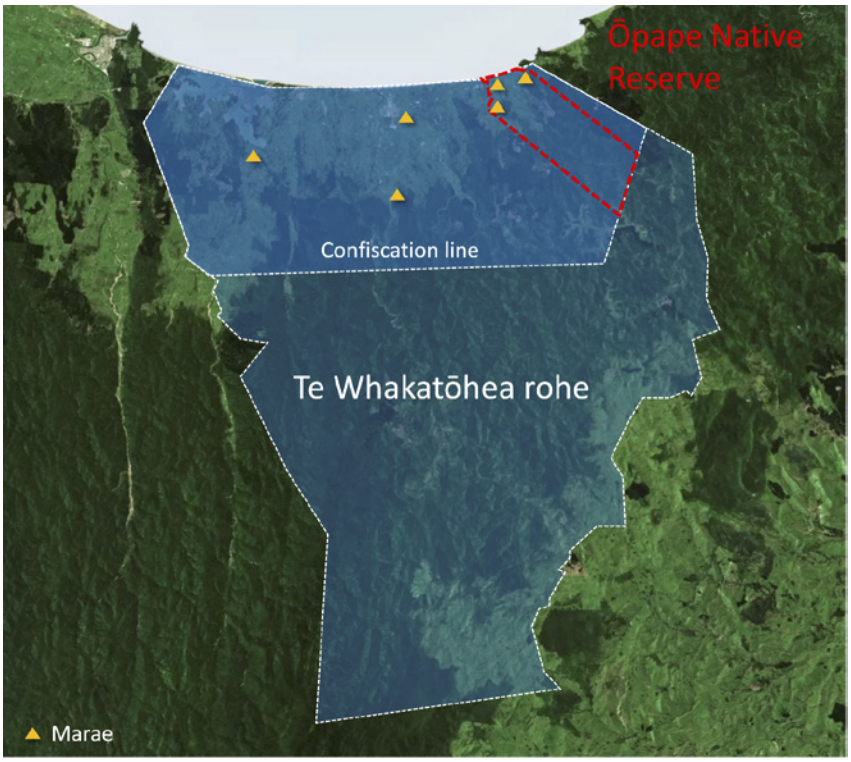

FIGURE 1 Map showing the rohe of Te Whakatōhea, the confiscation line and the Ōpape Native Reserve (Whakatōhea Pre-Settlement Claims Trust, 2022)

mātauranga to future land use and wellbeing strategies. While kaumātua experiences of growing up and surviving on the Ōpape Native Reserve featured throughout the research, ultimately it is Te Whakatōhea's kai traditions that define them, not raupatu.

Te Whakatōhea have had a strong relationship with their ancestral lands since the arrival of their tīpuna from Hawaiki. Te Whakatōhea genealogy dates back to Māui, who fished up Aotearoa New Zealand, through his grandson Tīwakawaka, who arrived on the waka *Te Aratauwhāiti*. Te Whakatōhea can also trace their lineage to Toi-te-huatahi, to whom all iwi whose ancestors arrived on the *Mātaatua* waka around 1350 have whakapapa. Continuing on, their whakapapa connects to the *Nukutere* waka, 13 generations prior to the "Great Migration". Te Whakatōhea's whakapapa includes the *Te Araumauma* waka and Tarawa, from whom the name of Ōpōtiki originates, as well as the *Horouta*, *Ōtūrereao* and *Rangimātoru* waka, which all landed at Ōhiwa Harbour, and the *Pākihikura* waka, from which the confluence of the Waioweka and Ōtara Rivers is named. Then the *Tūwhenua* waka, captained by Tamatea, the husband of Te Whakatōhea's founding ancestress, Muriwai, navigated the Waioweka River, the original name being Te Awa o Tamatea. The *Mātaatua* waka was followed finally by the *Tauira Mai Tawhiti* waka, which landed at Ōpape.

Kai is of central importance in the relationship between Te Whakatōhea and their whenua. As expressed in a whakataukī of Tapui-kākahau, "Te kai hoki i Wai-aua! [Ah, the food of Wai-aua!]" Te Whakatōhea rohe was famed as a food basket in pre-European times—and central to this prosperity was the kūmara. Tradition says that a return to Hawaiki to fetch the kūmara had been requested by Toi-te-huatahi, which resulted in the building of the waka *Te Ara Tāwhao* to procure the kūmara. Subsequently, the *Mātaatua* waka brought the kūmara to Aotearoa. The first kūmara garden was in Whakatāne (40 km west along the coast from Ōpōtiki) and named Matirerau, a māratautāne dedicated to Rongomātāne, the god of kūmara (Maxwell, 1998).

Before the first contact with Europeans in 1769, Te Whakatōhea's rohe supported an abundance of food resources. Ōhiwa Harbour, Te Ahiaua or Te Karihi-Pōtae (Waiotahe inlet), Pākihikura, and the Waiaua River and its catchment supplied many resources. Tapui-kākahu's whakataukī originates from the Waiaua area. The forests of the Raukūmara (Kahikatea, Waioweka, Urutawa, Pākihi, Ōtara, Toatoa and Whitikau) were hunted for native bird species including weka, kākā, kererū and tītī, and harvested for aruhe, pikopiko and kiekie (te ure and te tāwhara) (Walker, 2007). The rivers, harbours, estuaries, mountains and forests which fed the ancestors of Te Whakatōhea became places of strong cultural importance, carrying the names and stories of their tīpuna (Whakatōhea Pre-Settlement Claims Trust, 2021). The settlements they built consisted of māra, pā, kāinga and urupā. Kāinga were located along the coastline, utilising and protecting the resources obtained from the ocean. Inland areas were used for seasonal encampments, which allowed for hunting and gathering (Walker, 2007). There were many fortified pā in the Waiaua, Ōtara, Waioweka and Waiotahe Valleys to protect the hinterlands and to also procure and protect kai, ensuring supply in the winter months.

In the decades following contact with Pākehā, Te Whakatōhea demonstrated considerable entrepreneurship, transforming their food basket into a significant agro-economy. The following excerpt from the 2023 Deed of Settlement demonstrates this:

> Beginning in the early 1840s, [the iwi] acquired their own fleet of small schooners and cutters. At least 22 ships were registered to Whakatōhea owners, comprising a significant proportion of the New Zealand registered vessels over that period. Given that the majority of Māori owned ships were not registered, it is likely Whakatōhea owned many more vessels than officially recorded. So many Whakatōhea men sailed on trading vessels that by 1849 most of the male population of Ōpōtiki were reported to have visited Auckland and/or the Bay of Islands. (New Zealand Government, 2023, p. 27)

Up until 1865, Te Whakatōhea maintained a thriving economic base for their people through agricultural enterprise, combining Te Whakatōhea practices of farming and trade with European ones. Large, cultivated areas of maize, wheat, corn, kūmara and potatoes extended along the plains of the Ōtara and Waioweka Rivers. The excess from these cultivations was used to farm thousands of pigs (Whakatōhea Pre-Settlement Claims Trust, 2021). Te Whakatōhea's rohe was rich in food resources by the 1860s, making them a target for the New Zealand Settlements Act 1863, which facilitated the confiscation of iwi land around the country.

When the lands of Te Whakatōhea were confiscated by the Crown in 1866, it had a profound impact on the relationship between the mana

whenua of the Ōpōtiki rohe, and on their whenua, their identity, their ability to feed their whānau and their connection to the metaphysical world. As shown in Figure 1, the confiscation boundaries did not consider hapū affiliations and included the confiscation of most of the arable land in the region (Whakatōhea Pre-Settlement Claims Trust, 2021). Some 22,000 acres of Ngāti Rua ancestral land, which was unproductive, was set aside by the Crown for a reserve at Ōpape to resettle all the hapū of Te Whakatōhea (Ngāti Patu, Ngāti Murīwai, Ngāti Rua, Ngāi Tama, Ngāti Ngahere, Ngāti Ira and Te Upokorehe). This land was chosen for its geographical features which segregated the reserve area from the high-quality confiscated land (Walker, 2007).

In 1880, the Ōpape Native Reserve was subdivided into six coastal blocks and six inland blocks to be divided between the six Te Whakatōhea hapū (Figure 2). This was intended to provide each hapū with access to resources from the coast, such as seafood, and kai and timber harvested from forests inland. Ngāti Ira chose to stay on land appointed to their rangatira, Hira Te Popo. Ngāti Ngahere stayed on reserves in Te Rere (Walker, 2007). Only the six coastal blocks were ever developed.

The alienation of hapū from ancestral lands and forced resettlement onto Ngāti Rua lands created many challenges for Te Whakatōhea. Each hapū now had a limited supply of land available to support their people, the majority of which was not suitable for cultivation. Raupatu immediately isolated Te Whakatōhea from their ancestral lands, restricting their ability to sustain their people and destroying the strong economic base Te Whakatōhea had developed over the preceding decades through agricultural enterprise.

The Whakatōhea Māori Trust Board was formed in 1952 out of a need to manage iwi-owned assets. Today, Te Tāwharau o Te Whakatōhea (the post-settlement entity) manages several land investments (alongside its aquaculture enterprises),

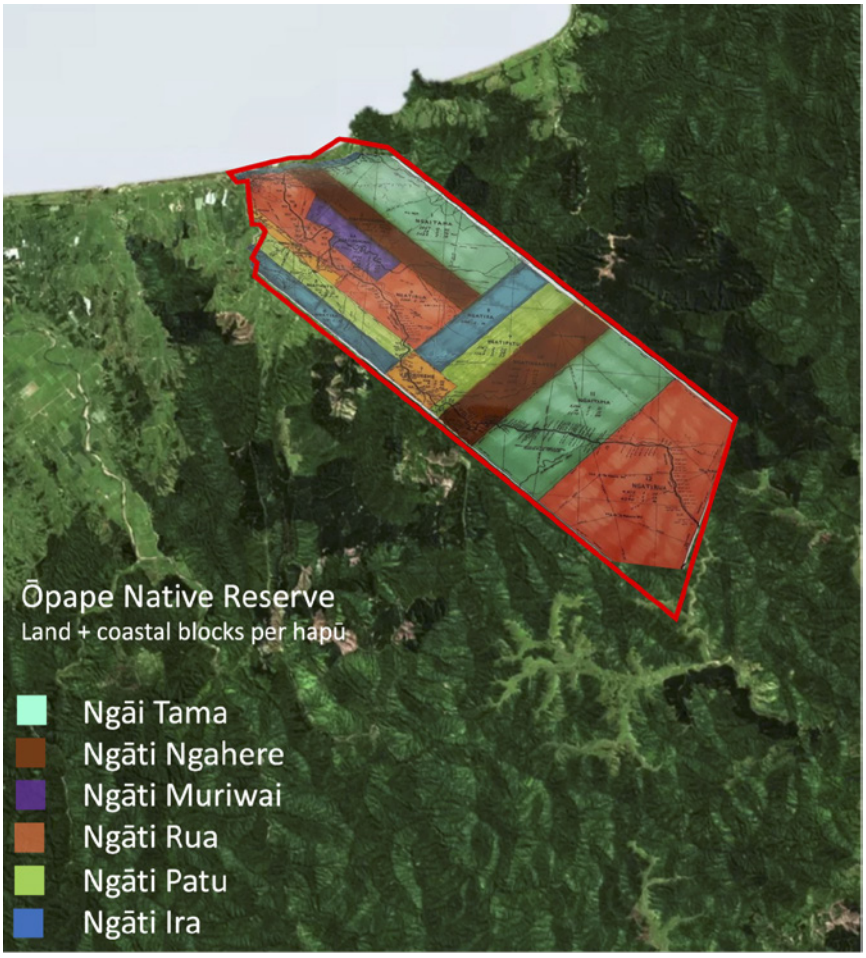

FIGURE 2 Reconstructed historical cadastral map of the Ōpape Native Reserve and subdivision of coastal and inland blocks between the six hapū (Morris, 2023; adapted from Tole, 1880)

including dairy and beef farms, kiwifruit orchards, and a forestry block. Yet while development of aquaculture and dairying are positive macroeconomic signs for Te Whakatōhea, today the iwi faces significant nutritional challenges at grassroots level. There are significant challenges in the health and wellbeing of iwi members living in Ōpōtiki and in smaller settlements within the rohe. Te Whakatōhea are gradually rebuilding their food sovereignty after their disconnection from their traditional food practices and the predominance of Western food systems (McLellan, 2020).

This article seeks to record the memories and mātauranga related to growing and distributing kai held by Te Whakatōhea kaumātua, and considers how this knowledge and experience could be applied to modern urban planning that integrates kai production to reassert the relationship between Te Whakatōhea and kai for the 21st century. It explores how spaces and practices for growing kai in the past might inform future decisions and planning for kai security for Te Whakatōhea. This research, initiated and guided by kaumātua and the Whakatōhea Māori Trust Board, was founded with the intention to support Te Whakatōhea's kai vision: "Ko te kai hoki i Waiaua: To be the food bowl that feeds the world". The research was undertaken through a longstanding partnership between Te Whakatōhea and Lincoln University anchored in personal relationships extending more than three decades and including a team composed of both Indigenous and non-Indigenous researchers. This article documents an iwi-led process for urban land use planning that is grounded in tikanga Te Whakatōhea, supporting aspirations for kai security and sovereignty, wellbeing, and the connection of mātauranga with contemporary urban planning practice.

The article contributes to the growing body of kai sovereignty and Indigenous planning literature (McLellan, 2020; Oldham et al., 2024; Smith & Hutchings, 2024; Thompson-Fawcett, 2025), extending this scholarship through a Te Whakatōhea lens. Central to this framing is whakakitenga-nui—an iwi-specific articulation of future visioning that integrates mātauranga, whakapapa and ecological design to guide collective urban land use planning to support increased kai security and sovereignty through the spatial inclusion of māra kai.

Method

The researchers conducted semi-structured interviews with six kaumātua from Te Whakatōhea. Interviews were recorded and then transcribed, before a thematic analysis was carried out to identify key themes and sub-themes from the kōrero. The identified key themes were then translated into three urban māra planning models focused on reintegrating places for growing and accessing local kai within urban spaces, which are developed and presented in the Discussion section.

Semi-structured interviews are commonly used as a data collection technique in qualitative research studies. In this study, interviews were used to record the mātauranga and memories of Te Whakatōhea kaumātua, illustrating their experiences and knowledge of growing kai within the Ōpōtiki rohe in the past. Kaumātua kōrero were then translated into spatial models for creating places to grow and access kai within urban areas, informing current and future urban land use planning approaches.

Semi-structured interviews also allowed the researchers the opportunity to further explore important ideas that might come up in the course of an interview, which could enhance the understanding and enrich the contribution of the interviewee's mātauranga and memories to the research. As noted by Adeoye-Olatunde and Olenik (2021), "Semi-structured interviews are the preferred data collection method when the researcher's goal is to better understand the participant's unique perspective rather than a generalized understanding of a phenomenon" (p. 1360).

While the researchers developed a general question framework and structure, interview direction ultimately evolved as the discussion unfolded. Interviews were overseen by Te Whakatōhea leadership to guide the interview process in iwi tikanga. Relational research approaches were integrated within the semi-structured interviews, with focus placed on the collaborative nature of the research intent in support of the iwi's kai vision of "Ko te kai hoki i Waiaua"; on the longstanding relationship between university-based researchers and iwi-based researchers and kaumātua; and on flexible data collection and analysis. Kaumātua were free to talk about aspects of kai production, storage and tikanga important to them and were given flexibility in how they wanted to express their mātauranga and memories. Various approaches were undertaken and led by kaumātua, including the use of maps, drawing, waiata, mōteatea and stories. The semi-structured approach allowed the researchers to follow participants' lead, listen to their narratives and ask further questions, while applying their kōrero to ideation for the development of spatial models focused on māra kai.

The interview transcripts and subsequently

developed spatial models were given to kaumātua for their review, response and discussion. Researchers attended a Taumata Kaumātua (a council of Te Whakatōhea elders) hui to discuss the work, receive feedback and ensure kaumātua mātauranga had been included correctly. A hui with the Whakatōhea Māori Trust Board leadership was also conducted to ensure the alignment of the research outcomes with iwi kaupapa and its kai vision.

Human ethics approval was granted by the Te Whare Wānaka o Aoraki Lincoln University Human Ethics Committee (No. HEC2023-41). Iwi approval for this project was also provided by the Te Whakatōhea Māori Trust Board. Participants were all over the age of 18 and provided written consent after reviewing the Research Information Sheet.

Findings

Raupatu and the importance of whenua to Te Whakatōhea

As described above, in the late 1860s, the six hapū of Te Whakatōhea were physically moved from their homes, their marae and their land, and put on the Ōpape Native Reserve. The loss of land and the subsequent loss of physical connection to their whenua had a profound impact on the identity of hapū by removing their physical connection to their ancestral lands. Kaumātua Te Riaki Amoamo explained:

> By seeing it [the whenua] like ancient Māori saw it, it's by looking at the landmarks. So, each generation must do the same, by looking at the landmarks. To have the technology to have this on paper is great. But also, it's great to see it, walk on it, tramp on it. Ko wai koe? No hea koe? Who are you? Where do you come from? We were born on [the] reservation, classified as the Ōpape Native Reserve.

Te Whakatōhea whānau were deprived of physical connection to their whenua, with tamariki born disconnected from their ancestral land. The six coastal blocks that made up the Ōpape Native Reserve were cleared of vegetation to allow for more intensive kai growing to feed the now significantly higher population of whānau living there. Te Riaki recalled:

> Well, there's six coastal blocks to work to develop, for farming and to keep us alive. So, before my time being on the reservation, the land was developed, whatever trees that were growing there were cut for development. And the contour of the land is not so bad. They weren't big trees. They were mānuka, when you get to the coast, the vegetation is not as big as the hinterland … You'll have some big ones, but the majority is mānuka, kānuka that hugs the coastline.

Raupatu had a profound impact on the relationship between mana whenua and growing kai. Kaumātua Robert Edwards recalled:

> My father was on Omarumutu right at the start. They were there before the raupatu, and when the raupatu happened, everybody was forced on to Omarumutu around there, and my tīpuna applied for some land. And then we got 650 hectares to grow kai on.

Kaumātua Graeme Riesterer recollected:

> Kai to Te Whakatōhea has always been part of us. After raupatu we lost everything, and our people starved when they were pushed out onto the reservation. There was no waste, everything was used … That is something that has always been true, that we have been starving.

Kaumātua Julie Lux commented: "It was all about survival. And you know, if you didn't work, if you were lazy, you starved." Kaumātua Danie Poihipi further explained how whānau worked the land to sustain their families: "[We had] families with huge numbers of children."

Julie recalled that "there were some whānau who didn't have enough land, didn't even put [in] a vege garden. So, you know, those days you did a lot of sharing." Robert explained further: "We didn't only grow for ourselves. We grew for the other part of the family as well. There was no such thing as 'town' to us out there—we had to live off what we grew."

Robert explained what happened when someone was in need:

> We … and the kuia communicate between themselves, and then we'll fill up a couple of kits [bags] or something. So the community looked after each other. There was no one really falling through the cracks. No, no, you looked after everybody. Yeah, no matter who it was … You could call it bartering, but we never call it bartering. You just say, "Kei te hiakai tēnā?"

For Kaumātua Te Kahautu Maxwell, "Being the entrepreneurs that we are, the entrepreneurial skills that we, I think we were blessed and born

with, [we have a] tenacity to exist." These are traits that have ensured the survival of Te Whakatōhea.

The confiscation of Te Whakatōhea land had far-reaching impacts for generations of whānau. Connection to the whenua is a critical lifeforce for mana whenua. Graeme explained the iwi's commitment to the return of their ancestral land:

> They held no resentment against the Pākehā people that had come … That was where it was … We [Te Whakatōhea] would buy back every acre that we lost one acre at a time. If it took us a thousand years, it took us a thousand years … But we will buy back everything that we lost.

Māra and growing kai

Ensuring that there was enough kai was always a top priority. As Te Riaki recalled, whānau had large māra and orchards associated with their homes:

> We were brought up on a dairy farm, had 50–60 cows. The main product would be just cream, and skim the milk off for the pigs … [The] cream [was] collected by the Ōpōtiki Dairy Factory, and so the truck could come all the way up and collect the cream from beyond Rāhui; the truck went right up to Toatoa. [This was] the main income, the source of income coming. The cream, it changed to milk. Not in our time, later … We grew all our kai on the farm [in] a quarter acre or something like that … That's enough to sustain your four kids. We had a smaller garden at the house … for everyday food and the store, the rest stored away … Everything is made use of for the animals and for us. We had fowls, we had pigs, and we had dogs, you know, the muster, and for hunting, because we were next to the forest. In the bush block that's what you're going to do, your hunting, yes, and timber right as well.
>
> [We had] a big māra kai—potatoes—to keep us going for the year, and kūmara to keep us going for the year… we also had kamokamo and pumpkin, the watermelon … We had a big orchard, part of the farm … plum trees and apple trees, pear trees. The orchard was closer to the house.

Robert shared:

> We grew everything from rīwai, kūmara, maize, popcorn, all those sorts of things. Watermelon, kākāriki, sugar cane … The merikaurau was the main maize crop, we used to use that for kānga pirau and for kānga pungarehu. We would plant pumpkin in the maize. We're combining the two together, pumpkin and then kamokamo for the pigs, and all those things all combined in one … We were milking about 100 cows then … Right next to the house [we] had our smaller [māra] for lettuce and all these sorts of things, carrots and what have you. And we all had orchards … three or four different types of plums … and we had about three or four different types of apples as well, and pears and cherries. Cherries, figs … right up near around the house ... That's where the citrus fruits were grown. The marmalade, the lemons … A couple of the orchards were around about four or five acres, and that was fenced off. The only animals in there were sheep.

Danie recollected:

> Vegetables, carrots, climbing beans, broad beans … We ate what the cows ate … swedes, turnips … [Some] fruit was supplied by the health system that sent each family apples every now and again … Everybody had fowls… we had Muscovy ducks. Our main chooks were the grey ones—Orpington. The *tuna*, another delicacy for us, is the blind eel (*tuna* kāpō) … that was our food during the winter … Kūmara on any hill country … maize on coastal flats … dairy everywhere else—dairy cows were free range … So, we have been living on seafood, wild pork, bacon, mutton, and no order from the shop.

Graeme recalled, "As kids, we didn't have to go to McDonald's … There was no McDonald's anyway. But we didn't have to go to any of those places because we always had fruit."

Māra cultivation and harvesting

Te Kahautu remembered that "we didn't have to [improve the soil] because it's just being developed, it was fertile … first time to be used. Everything was there because of the fertility of the ground … the landscape was still in its fertile habitat." Robert explained further:

> We didn't just plant in the same place all the time, or the same crop. It might be maize here, and then you know, the rīwai over here. Next time it might be two years and then change … We left it fallow. There was a lot of maize crop … You're cropping for pigs, and even in my time, when I was a young fulla, I [worked] behind the plough, ploughing for about five to six days nearly a week. When it was time to harvest, they would come and do the rīwai … We would heap the rīwai up … they would be as long as this room … Leave them there for a couple of days just to let them sweat, and then the kuia

> would come out and they start sorting the little ones out—the purapura me pakupaku. They were sorting the seeds, sowing the seeds. That and the little ones and the bigger ones … then from there, put them on the cart and go back, and we had to store them.

Graeme recollected:

> The nannies would just go through, they'd have their bag and you would store them in those heaps for up to a week. The big heaps they would heat up and any that had been poked with a fork … would be eaten first. They were sorting the seeds out there and then… you normally kept the smaller rīwai for your seed … not the bigger ones, because the bigger ones, it was a waste … and you know, that was a meal for somebody … So, they've been piled just to sweat, to cure … So, once they'd cured, in later years, when we had sugar sacks… we would put them into an area that was dark and rodent-proof, dark and so mice and rats couldn't get into them, always covered … covered with fern … put the bracken down and then you layer them with fern.

Māra storage and preserving

Along with kai production, the storing and preserving of kai was also critical. Te Riaki explained:

> We had a shed for the kūmara… [It is important to] keep it away from the walls … and so you put the fern in there to keep the kai dry and warm … just the kūmara … you put the rīwai in an ordinary shed, and they had their own compartments. Yep, there's the big ones, and you get the purapura, the seed ones, and you get the paku, the small ones … the small ones you eat first.

Julie remembered having separate storage pits:

> You put the kūmara separate, you put the potatoes separate, you put the corn separate. You know you never mix them up because they started to integrate with each other, so you have some hybrids … Whenever Dad killed a pig, [or] we had a couple of sheep, we'd get the fat off the meat. You'd light a fire outside, and you put the fat inside and let it, what we call, render … turn into oil … and then what we do is part-cook the meat. So, every time you wanted a "boil up" or something, you just dig it up [out of the set render] and put in the pot … the meat. We always kept it in the kitchen in the cold part, you know, just in the fat and scoop it out when you need … It would last us through the winter.

Danie recalled "cooking apples, pears … We did quite a lot of bottling. We had heaps of fermented food—kina, kōura, nihoniho, pikopiko, kōuka, kūmara … cooked in the hāngī, then dried. Heaps of preparation." Graeme explained further:

> The stuff that was bottled, they didn't have to be frozen … My grandparents had a rua, and it was big, but it was full of jars and depending on the year, so we put up a vintage. [The rua] that I'm talking about was on the stand, so it had four legs and was about the width of this table and the same depth and made out of timber and slats on the side with a screen inside. Rua is a general name for a store above ground; the ones in the ground are kōpiha. So, there was a kōpiha that my grandparents had dug into pumice … They realised where the pumice was and dug down and then out … They had a tin lid on, and a ladder seven- or eight-feet deep. Well, you could fit three or four people in there working. You'd stack right around and there would be two or three kūmara deep and then a layer of fern … and another layer of aruhe. And then it moved to hay. And then I think it moved to cardboard. Preserving time was a family time. So, we as a family would do the preserving.

Danie described the art of storing kūmara, a taonga for Te Whakatōhea:

> [We] selected kūmara, scrape[d] the skin off, dried [them] in the sun. We used bracken fern to cure the kahawai, turns it red. When cooked, you break it up, then you put them out in the sun, let the dew get on it. The art of storing the kūmara … get all the different size kūmara. You pick the ones that you're gonna build your wall with, you build your wall like laying bricks. That front wall got to be firm and steady, so it won't tip over, [so] it won't fall out when the kūmara get rotten. You can take it out without that wall collapsing. And each kūmara you look and size up, and you place each one like that you build in your wall, and if you ever stack bales of hay, you will know how to tie that wall in, so you'll have one like this cooler in it. When you do that, you just tip the rest behind. All your big kūmaras like this, they're the last to go in the pit with your rock, they're the first ones to rot, the big ones. So, you set those at the side. Karamū—that's the name of a tree—the branches, the leaves … you add a bit … just gives it a pungent … mix it with pūriri to cure the kūmara. They give it the cure

> and the pungent when you smell it … It gives you the beautiful taste [of] pūriri leaves. You can't eat the kererū when it's eating that. Other than that, we had a lot of fermented food, with the main ones being kānga pirau, kahawai, pikopiko [and] kōtero.

Community and sharing kai

The marae and marae activities relied on kai from the community. Te Riaki explained: "Most farmers had big plantations of potatoes and kūmara to last them 12 months … It's just really for their own whānau to store it and see them through the winter. For the whānau use, and the marae and tangihanga." Julie recalled that "as soon as you hear there's a tangi, my father, if he could afford it, he'd give a pig". Graeme recollected:

> I remember uncles going out to get the kererū and bringing them home and they would be heaped up, heaped up … and for each family, depending on how many in your family, there might be five, it might be six, and you would all come, and you would get your share … You took what you needed and nothing more… to feed your family and your extended family.

The concept of ohu—the act of sharing as need required—was explained further by Danie:

> People used to come to partake in the ohu … This one has four, that's his catch. This one might have 12. Another one might have 40 … You've got to put it into the ohu for all of us … [With kererū] you eat everything. You cook it with the stomach, and you know you don't waste anything, and the feathers go to the weaving.

Te Kahautu recalled that sharing with women and children was also important when it came to hunting:

> The fat parts (the bum) were set aside for women, being bearers of children (as well as keepers of the home and the teachers and disseminators of mātauranga) … Puamanu is the term for the collection of birds. The hunters have a feed of kererū in the bush, but when they come out, they don't. It's for the ladies and the kids and old people … Ladies have the bums because it's fat, the kids had the claws and the beaks and the necks. Yeah, but the ladies always had the best part.

Danie recalled that kererū "was our supplement for winter food". Land was also shared, as Julie recalled: "They weren't using their land, so, they said to Dad, you know, use that as a runoff, you know, to give your paddocks a break."

Having petitioned the government five times for compensation for the raupatu, in 1954 the Whakatōhea Māori Trust Board was able to buy the dairy farm. Graeme explained:

> [The Trust Board] bought our initial farm. They bought it because it was cheap. The Trust Board people had looked at other farms, but they were withdrawn because we were Māori. But this farm was considered suitable for us to buy because it flooded all the time. However, in 1964 there was a big flood in Ōpōtiki and after that they built the stock banks and, all of a sudden, their farm became a very valuable farm, and with the success of the farm, we were able to buy one and then another, and then a third and then a fourth piece of land. So, we've been able to extend our farming platform as we have moved along.

Discussion and conclusion

In 2022, the Te Whakatōhea's kai vision of "Ko te kai hoki i Waiaua" was developed to "exercise tino Rangatiratanga in our pursuit to define our local food systems through the traditional knowledge and practice of growing kai that will inspire and transform the health and well-being of all Whakatōhea, Whānau, Hapū, Iwi" (Hata, 2022). Urban planning has the ability to support the health of whānau through providing space to grow kai at a range of scales. Coupled with support for learning, healthy kai can once again be a part of the places where New Zealanders live—which for most, is in urban and peri-urban settlements. This notion was supported by kaumātua Graeme Riesterer:

> When I was a kid, I was a little fulla. It was my Nan who showed me. She didn't teach me. She showed me. So, I followed. I followed what she did, and so I think that's the answer … that we've got to get people who can lead by example like this role model.

The interviews with kaumātua elucidated important themes for consideration for growing kai within the rohe today. Themes relating to the importance of whānau and whenua connection, māra location in relation to kāinga, kai type, techniques for cultivation and harvesting, storage and preservation, and kai sharing were all strong narratives communicated by kaumātua. Coupled with these narratives are the existing māra of the

Ringatū, a Māori Christian faith founded by the prophet Te Kooti in the 1860s with adherents mainly from the Bay of Plenty and East Coast tribes. The concept of a māra takiwā originates from the Ringatū rituals of planting (Te Huamata, on 1 June) and harvesting (Te Pure, on 1 November) (Maxwell, 1998).

The Ringatū have three sets of māra: māra takiwā refers to the forest, land, rivers and sea, which are classified as gardens; māra tapu is the sacred garden set aside for Ihowa o Ngā Mano (Jehovah of the Multitudes); and māra kāinga is the vegetable garden at home (Maxwell, 1998).

Integrating spaces for kai growing and access for whānau has always been integral to Te Whakatōhea. The reintegration of māra back into the urban environment of Ōpōtiki and its surrounding towns for whānau is one way to support the kai security and sovereignty vision of Te Whakatōhea. To maintain the sanctity of the three māra of the Ringatū Church, especially the māra tapu and māra takiwā, we propose two additional māra to serve the purpose of communal gardens, alongside the māra kāinga:

- māra-ā-papakāinga—a communal garden shared between several whānau or in a papakāinga
- māra-ā-iwi—a large community-scale garden that serves a key educational role, as well as producing food at larger scale.

Based on the strategy expressed through the iwi's kai vision, and taking direction from the kōrero with kaumātua, we illustrate below the three scales at which space for kai production and kai education can be integrated into urban environments, and thus support kai whakakitenga-nui—an extensive future vision for urban planning to increase kai security and sovereignty, connecting ancestral mātauranga with future urban planning and wellbeing strategies.

Māra kāinga—place to connect

Māra kāinga is a small-scale māra kai located alongside whānau homes to support kai self-determination, connection to Papatūānuku, a place to practise Te Whakatōhea and Ringatū tikanga, and learning together as whānau (see Figure 3).

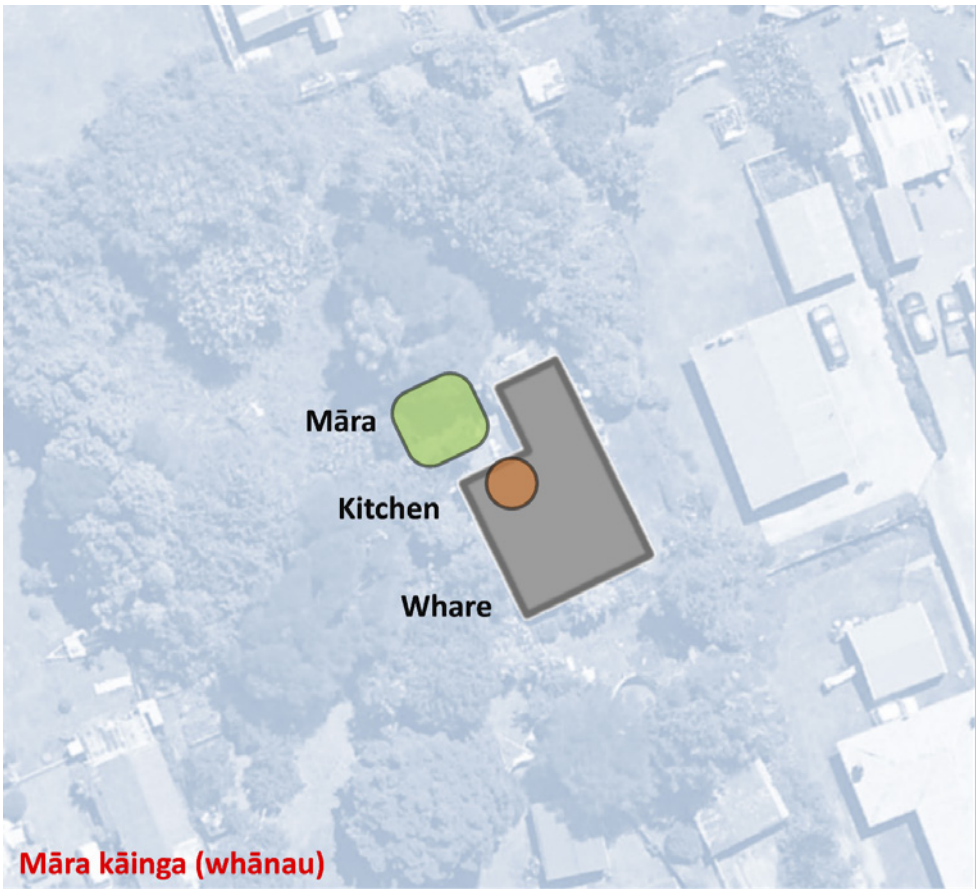

FIGURE 3 Māra kāinga

Māra-ā-papakāinga—place to share

Māra-ā-papakāinga is a medium-scale māra kai located within papakāinga/marae/neighbourhood with strong hapū governance to support kai security and community hauora—social collectiveness and sense of belonging, mātauranga sharing and transfer across generations (see Figure 4). This is also a place to practise Te Whakatōhea and Ringatū tikanga.

Māra-ā-iwi—place to learn

Māra-ā-iwi is a large-scale māra kai located along the edges of Ōpōtiki to support iwi kai sovereignty (see Figure 5). Providing choice to whānau over what they eat, where they access it and how it is grown, this māra has iwi governance.

This research has attempted to gather the memories and mātauranga held by Te Whakatōhea kaumātua and translate this knowledge and experience into a modern urban planning strategy. By integrating kai production with the physical fabric of contemporary Te Whakatōhea communities, it has aimed to practically address issues of nutritional security affecting whānau through the spatial integration of māra at various scales and locations. This research may contribute to decision-making as Te Whakatōhea embark on the post-settlement era, resonating with the iwi's kai vision of "Ko te kai hoki i Waiaua"—under the leadership of Te Tāwharau o Te Whakatōhea.

There is significant potential for urban design and planning to provide for and enhance spaces within cities and settlements to better support kai security. Having been left off the urban agenda in Aotearoa for decades, urban food planning is now resurfacing as an essential component of urban planning (Smith & Hutchings, 2024; Thompson-Fawcett, 2025; Viriaere & Miller, 2018). As the world grapples with increased environmental vulnerabilities brought to the fore by a changing climate; international conflict; and the far-reaching environmental, social and economic impacts of long food supply chains, local kai production for local consumption is once again being deemed essential for the holistic resilience of communities in Aotearoa.

This Te Whakatōhea case study has illustrated the powerful nature of kaumātua mātauranga as

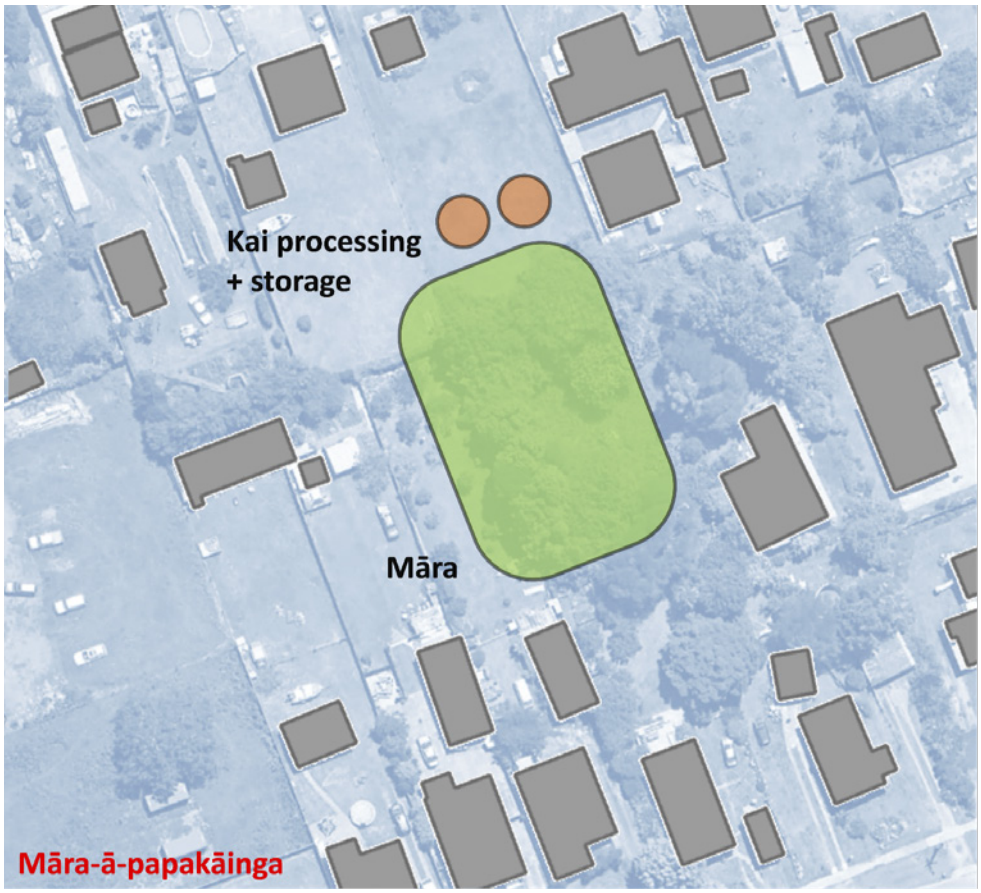

FIGURE 4 Māra-ā-papakāinga

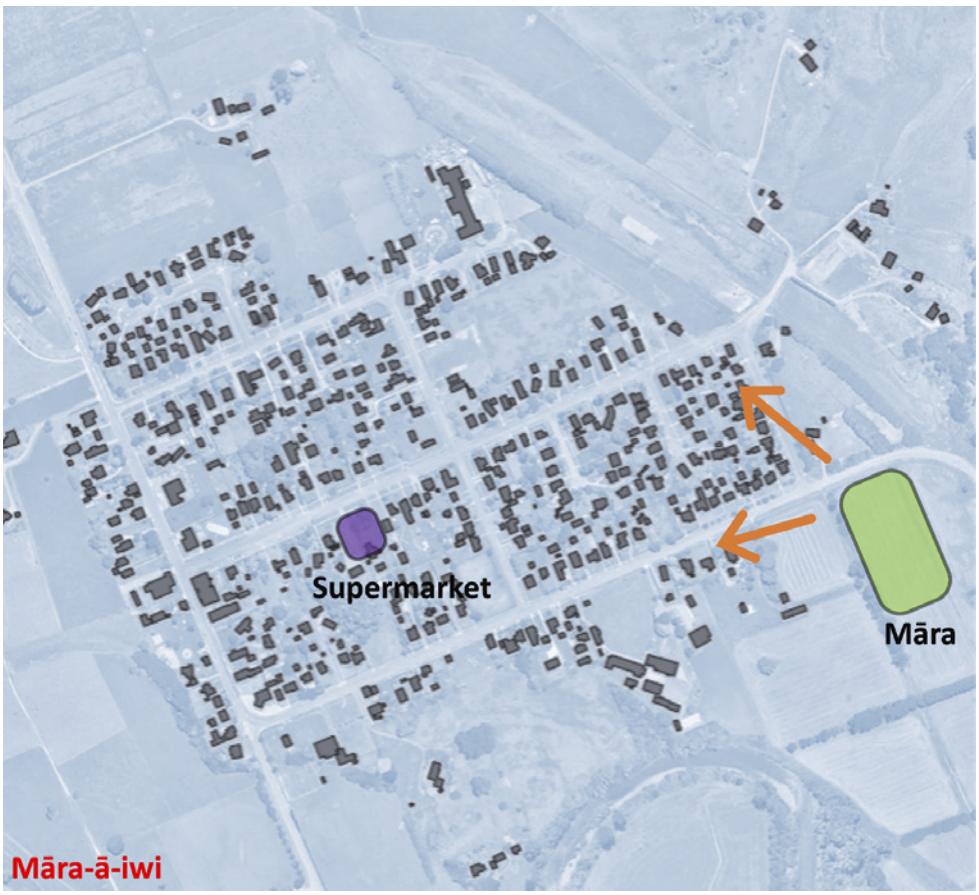

FIGURE 5 Māra-ā-iwi (orange arrows indicate mātauranga and learning outreach)

a tool to think about future kai security for the Ōpōtiki rohe. By sharing their mātauranga and memories of growing kai, they have inspired a compelling spatial framework for long-term urban planning.

> … Tē riro tō hū ki ngā kai
> O te kāinga o Maru-iwi,
> I whakataukī ai a Tapui-kākahu,
> "Te kai hoki i Wai-aua!"
> He whare moenga nōu, nō te tangata,
> Hei kume kupenga ki te ākau …
>
> … *Unsated was your desire for food*
> *At the home of the Maru-iwi,*
> *Of which Tapui-kākahu boasted,*
> *"Ah, the food of Wai-aua!"*
> *"'Twas a sleeping house for you, for all men,*
> *Where nets are hauled upon the beach …*
> (pātere of Te Whakatōhea)

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Glossary

Aotearoa	Māori name for New Zealand; lit. "land of the long white cloud"
aruhe	edible rhizome of brackenfern, *Pteridium esculentum*
hāngī	earth oven

hapū	sub-tribe
hauora	health
Hawaiki	ancient homeland—the places from which Māori migrated to Aotearoa
hui	meeting
iwi	tribal group descended from a common ancestor and associated with a distinct territory
kahawai	Australian salmon, *Arripis trutta*
kai	food
kāinga	home(s)
kākā	large forest parrot, *Nestor meridionalis*
kākāriki	rock melon
kamokamo	squash, *Cucurbita pepo*
kānga pirau	fermented corn porridge, a sweet delicacy
kānga pungarehu	boiled corn cooked with ashes, a sweet delicacy
kānuka	white tea-tree, *Kunzea ericoides*
karamū	shrubs and small trees with pale bark and large leathery glossy leaves, *Coprosma lucida*, *Coprosma macrocarpa* and *Coprosma robusta*
kaumātua	Māori elder
kaupapa	guiding principles
Kei te hiakai tēnā?	Are you hungry?
kererū	New Zealand pigeon, *Hemiphaga novaeseelandiae*
kiekie	thick native vine, *Freycinetia baueriana* subsp. *banksii*
kina	sea egg, common sea urchin, *Evechinus chloroticus*
kōpeha	food store below ground
kōputu	heap, pile, collection
kōrero	talk, discussion
kōtero	fermented rīwai
kōuka	cabbage tree, *Cordyline australis*
kōura	salt-water crayfish, *Jasus edwardsii*
kuia	female elder
kūmara	sweet potato, *Ipomoea batatas*
mahinga kai	cultivation; food gathering place and practice
mana whenua	territorial rights, power from the land, authority over land or territory
mānuka	tea-tree, *Leptospermum scoparium*
Māori	Indigenous peoples of New Zealand
māra	garden
marae	open area in front of a meeting house
māra kai	food garden
māratautāne	sacred garden
mātauranga	knowledge, wisdom, understanding, education
Māui	demigod and a trickster, famous for his exploits and cleverness
me	and
merikaurau	marigold corn cultivar
mōteatea	lament, traditional chant, sung poetry
Muriwai	founding ancestress of Te Whakatōhea and wife of Tamatea
nihoniho	white maize
ohu	collective endeavour
Omarumutu	community in the Ōpōtiki District
Ōpape	small coastal settlement in the Ōpōtiki District
Ōpōtiki	traditional centre of Te Whakatōhea iwi; town in the eastern Bay of Plenty
pā	fortified village
Pākehā	New Zealander of European descent
paku(paku)	small ones (tubers)
papakāinga	communal Māori land, village, home
Papatūānuku	Earth Mother
pātere	song form used by women to express defiance and refute accusations or insults publicly
pikopiko	common shield fern, *Polystichum neozelandicum* subsp. *zerophyllum*
pungarehu	ash
purapura	large ones (tubers)
pūriri	large spreading tree of the northern North Island, *Vitex lucens*
rangatira	chief
Raukūmara	North Island mountain range, the western side of which is in the Ōpōtiki District
raupatu	confiscation
rīwai	potato, *Solanum tuberosum*
rohe	iwi territory
Rongomātāne	god of kūmara
rua	food store above ground
takiwā	district; often refers to hapū territory
tamariki	children

Tamatea	ancestor who navigated extensively throughout Aotearoa and husband of Muriwai
tangi(hanga)	rites for the dead, funeral
Tapui-kākahau	ancestor of Te Whakatōhea associated with the Waiaua area, from whom a well-known whakataukī referencing the abundance of kai within the rohe originates
tapu	sacrosanct, protected
taonga	treasure
Tarawa	founding ancestor of Te Whakatōhea, builder of the *Te Araumauma* waka
te tāwhara	the edible bracts of the kiekie
Te Tiriti o Waitangi	the Treaty of Waitangi (1840), the founding document of New Zealand
te ure(ure)	the fruit of the kiekie
Te Whakatōhea	iwi of the eastern Bay of Plenty region of New Zealand
tikanga	customary practices or behaviours
tīpuna	ancestors
tītī	muttonbird, *Puffinus griseus*
Tīwakawaka	grandson of the demigod Māui
Toi-te-huatahi	ancestor of many iwi from the Bay of Plenty area, including Te Whakatōhea
urupā	burial grounds
waiata	song, chant, psalm
Wai-aua (Waiaua)	rural locality and river in the Bay of Plenty near Ōpōtiki
waka	canoe
weka	woodhen, *Gallirallus australis greyi*, *Gallirallus australis australis*
whakakitenga-nui	concept framing how kai planning can connect ancestral mātauranga to future land use planning and wellbeing strategies (Maxwell, 2025)
whakapapa	genealogy, lineage
whakataukī	proverb
whānau	family; nuclear/extended family
whenua	land

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