



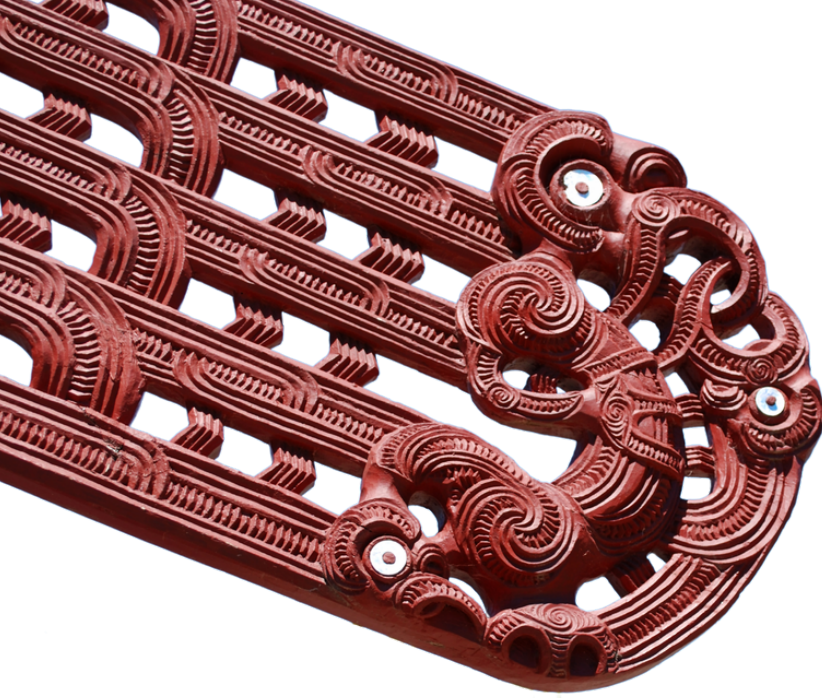
Research Report

Māori values



people+cities+nature

restoring indigenous nature in urban environments



Māori values in urban restoration

Erana Walker

The content of this report is derived from the Doctoral Thesis titled "Kei hea te tangi a te Tūi? An exploration of Kaitiakitanga in urban spaces" authored by Erana Walker.

More in-depth detail about the research project can be found in the thesis.

Background

Migrating from home spaces to urban areas comes with many challenges to cultural practices and knowledge of Indigenous communities like Māori. There are often difficulties in enacting cultural practices in urban areas as these spaces have contributed to cultural loss, disconnection from communities and separation from nature. Obligations to nature and ancestors are cemented through traditional narratives which informs cultural practices, identity and essentially connects Māori to the natural world (Ka'ai & Higgins, 2004; Kawharu, 2000). One way in which this connection is maintained is through a concept known as Kaitiakitanga.

In Aotearoa, Kaitiakitanga is used to express roles of care and protection of nature by Māori communities and is informed by whakapapa, place, mātauranga and tikanga. However, the Resource Management Act 1991 (RMA), which enables environmental management to mitigate negative environmental activities (Ruru, 2018), confines Kaitiakitanga to ideas of guardianship and environmental stewardship. This legal definition de-emphasises cultural understandings of kaitiakitanga departing from philosophical underpinnings of important connections established through whakapapa to nature (Clarke, 2004; Kawharu, 2000; Ruru, 2018; Walker, Wehi, Nelson, Beggs & Whaanga, 2019). This further changes the way nature is viewed and applies a lens of ownership rather than connection (Marsden & Henare, 1992). There is a need to reclaim this concept and ensure that all aspects including its spiritual significance are expressed in how kaitiakitanga is interpreted and shared amongst wider Aotearoa society, particularly in urban areas.

The Māori population sits at around 850,500 (Statistics New Zealand, 2020) with expected growth over the coming years. Most of this population are predicted to reside within the urban space and create communities that incorporate practices of both traditional and modern origin (Meredith, 2015). A growing Māori population in urban centres can require increasing need for resources, housing and support services (Arthur-Worsop, 2018; Gray & Hoare, 2010). There is opportunity to further support Māori connection to nature through the expression of kaitiakitanga practices and knowledge, however, this area of knowledge about Māori and urban nature is limited.

Encouraging narratives of kaitiakitanga to surface within academic literature will support in limiting its misuse and misinterpretation, and give an opportunity

for Māori communities to share their expressions and understandings of this concept in ways that consider whakapapa connections held by both Mana Whenua and Mātāwaka.

Exploring different narratives of kaitiakitanga will provide an opportunity to see the culturally significant knowledge that exist within kaitiakitanga and draw from this knowledge to support efforts of nature restoration in urban areas.

Decreasing nature in urban spaces due to growing populations and increased development has placed pressure on city infrastructure and resources, prompting cities to seek out ways to become more sustainable and utilise resources wisely (Baker, 2012; Cuerrier, Turner, Gomes et al., 2015; Jim, 2013). In conjunction with local communities, cities have mobilised to undertake restoration of nature. Efforts for nature restoration in urban areas have largely drawn on western ideologies to achieve restoration goals (Peters et al., 2015).

There is an opportunity to expand these efforts and include Indigenous knowledge like Kaitiakitanga in constructing and implementing restoration work. However, there are limited examples that use Māori values as a basis to create such projects (Walker et al., 2019).

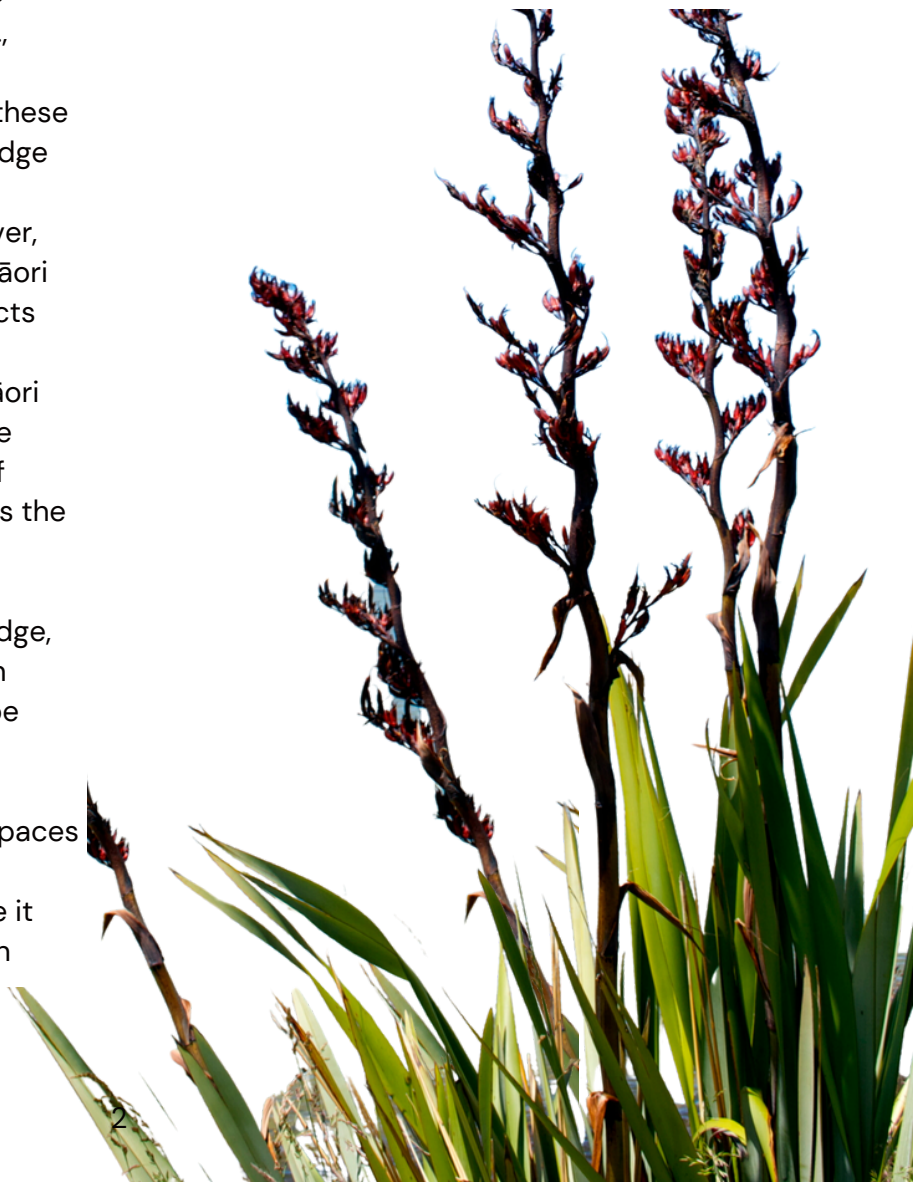
Given the connections between Māori and the natural world, projects that are undertaken to restore the remnants of urban nature could use kaitiakitanga as the foundation for restoration projects. However, doing so requires a clear understanding of kaitiakitanga knowledge, how it is currently undertaken in urban areas and what considerations must be made to ensure its appropriate use.

Exploring current practices and knowledges of kaitiakitanga in urban spaces can provide a lens to understand the motivations of this practice and where it might support ecological restoration in urban areas to further increase Māori

participation.

This research strives to understand these challenges for Māori in urban areas by examining how our environments influence and shape our practices and knowledge, but also how we connect to these spaces through cultural knowledge and practices. Our experiences are often as varied as the environments we live in; therefore, this research project provides a platform to seek out the different ways kaitiakitanga exists within the urban space. In short, how do we maintain connection and belonging in an ever-changing landscape and what does this mean for Mana Whenua and Mātāwaka alike?

Through data collected from urban Māori across Aotearoa and those residing in Kirikiriroa, this research brings together experiences of Māori in urban areas related to practices and knowledges of kaitiakitanga.



1



Kaitiakitanga Practice

- How is kaitiakitanga practiced in urban Kirikiriroa?
- Is there a relationship between kaitiakitanga practice and opportunities for placemaking in urban settings?
- What influences engagement of participants in restoration?

2



Mana & Place

- How does mana and place influence kaitiakitanga knowledge and its application within the urban space?
- How do hapū influence kaitiakitanga practices?

Research aims

The primary aim of our research was to seek narratives from urban Māori in Kirikiriroa about their knowledge and practices of kaitiakitanga. In pursuing such narratives, the research allowed a critical examination of urban space and to question its influence on Māori cultural values. Utilising literature, a survey, focus groups and interviews, our research answered two key questions:

1. How is kaitiakitanga practiced in urban Kirikiriroa?; and
2. How does mana and place influence kaitiakitanga knowledge and its application within the urban space?

These research questions allowed the analysis of the role of:

- Mana;
- Place;
- Kaitiakitanga;
- The urban space;
- Cultural practice;
- Restoration and;
- Urban nature.

Methods

This research project required the use of a multimethod approach (using qualitative and quantitative methods) for collecting data from different places in Aotearoa. Drawing from both Kaupapa Māori and Pūrākau methodologies, this project collected data using a literature review, survey, focus groups and interviews.

A *literature review* was conducted to identify the gaps in wider literature. The literature that was reviewed for the purpose of this research project covered topics such as:

- Environments and Indigenous Peoples;
- Environments, Place, Land and Māori;
- Connection to Land;
- Colonisation and Māori;
- Urban 'Place';
- Māori Diaspora;
- Mana Whenua and Mātāwaka;

- Indigenous knowledge;
- Māori values;
- Kaitiakitanga;
- Urban experiences;
- Nature and the urban space;
- Environmental Planning; and
- Ecological science and Mātauranga Māori.

These topics allowed a space to critically examine traditional, historic and current knowledge of kaitiakitanga and the urban space. The literature review drew from international, national and Māori literature to illustrate key components of kaitiakitanga, nature, place, knowledge and practice.

The *survey method* was used in this research project to gather wider perspectives on kaitiakitanga within the urban space. Surveys align with the Kaupapa Māori and Pūrākau methodology as it can be seen as an inclusive process for data gathering. Respondents of the survey were of Māori and non-Māori heritage. The survey asked questions about the participants:

- Location;
- Hapū affiliations;
- Engagement with Māori cultural practices;
- Occupation of urban spaces;
- Resource use;
- Engagement with hapū;
- Understandings of kaitiakitanga; and
- Engagement with restoration projects.

The survey was constructed using the Qualtrics Software. The survey was distributed through both the networks of the author and the author's supervisory panel via email and social media. The rationale for this type of distribution was to include a diverse group of people and to also distribute the survey in a timely manner.

Two hundred and forty-four participants took part in the survey which collected data from a range of participants throughout

Aotearoa and abroad. Participants of this study were made up of 24.78% male and 74.35% female. One respondent identified as gender fluid and one response was captured in the 'prefer not to answer' category.

The *focus groups* used information and themes from the survey to help structure the focus group questions and activities. The focus groups participants shared information about their:

- Current location;
- Distance travelled to gather resources;
- Place they practiced kaitiakitanga;
- Understanding of kaitiakitanga; and
- Area they practice other cultural practices.

Participants were given 45 minutes to 1 hour to complete the activities and contribute to the discussions of the focus groups.

The first focus group was held at the Hine e Hine Workshop held at the Meteor in Kirikiriroa, Aotearoa. Ten participants in total were present for the first focus group. All participants of this focus group were female and located or resided in Kirikiriroa. Participants were also of Māori and non-Māori heritage.

The second focus group was held at the Ruaawaawa Charitable Trust. Four participants were recruited for this focus group and were over the age of 50. There were three male participants and one female participant. The group of kaumātua were all Mātāwaka and grew up outside of the Kirikiriroa area. Participants were of Māori descent, with one participant highlighting their connection to Rarotonga.

Interviews were shaped to encourage a reciprocal flow of information between the participants and the researcher. The interviews were shaped to suit a "whakawhiti kōrero" environment (see Elder & Kersten, 2015), whereby participant and researcher were encouraged to share kōrero during the interview. The interviews allowed

a deeper discussion to occur about kaitiakitanga practices in the Kirikiriroa area. The findings from both the survey and focus groups informed prompting questions to be formulated for the interviews. The participants were given the opportunity to present their thoughts in a safe environment.

The interviews covered discussion points such as:

- Kaitiakitanga;
- The cultural practices undertaken by participants;
- The participants connection to place;
- The participants understandings of Mana Whenua and Mātāwaka

The interviews took up to an hour and a half, where participants share in kōrero about understandings of kaitiakitanga and the urban space. The participants chose the venue for the interview process and each participant was voice recorded during the interviews. Twenty participants took part in the interviews of which all were of Māori decent and resided in Kirikiriroa. Participants were a mix of Mātāwaka and Mana whenua descendants.

Findings

1



Kaitiakitanga Practice

- How is kaitiakitanga practiced in urban Kirikiriroa?
- Is there a relationship between kaitiakitanga practice and opportunities for placemaking in urban settings?
- What influences engagement of participants in restoration?

Our research highlighted several key findings:

- The importance of childhood places for informing kaitiakitanga practices
- The role of urban places on kaitiakitanga practices
- The different places we use in urban areas for kaitiakitanga,
- and the important role of nature in how we theorise and apply kaitiakitanga

The importance of childhood places for informing kaitiakitanga practices

Highlighted by the participants was the strong connection to childhood places and the knowledge and practices that are fostered in these areas. The grounding that participants received from these places grew their connection to nature and subsequently the practice of kaitiakitanga.

Two thirds (66.3%) of participants reported that they grew up in an urban area



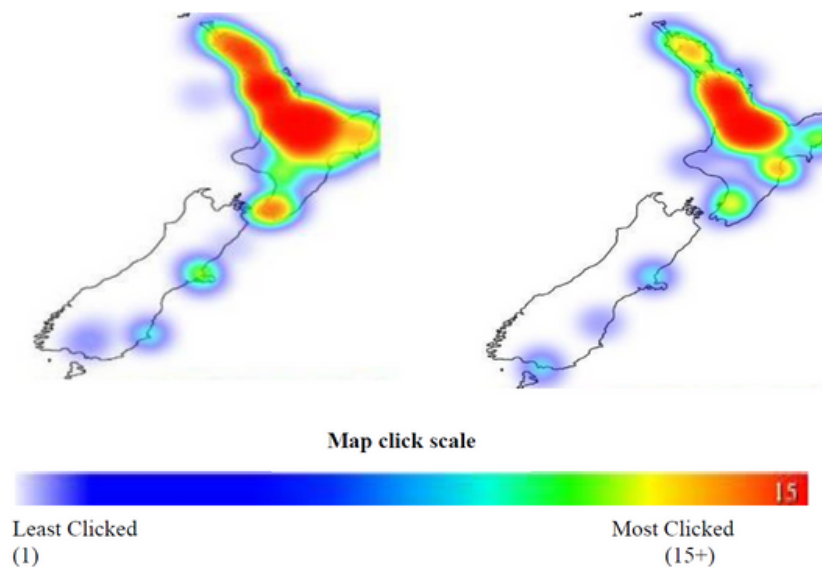


Figure 1: Heat map of childhood places (Left) and heat map of participants movements (Right)

in contrast to 33.68% of participants that stated they had lived in a rural area. Of the 66.3% of participants who grew up in urban areas (Figure 1), 62.4% of participants said they did not move during their childhood while 37.5% said that they had moved during their childhood.

Despite a large proportion of participants residing in urban areas, they still presented in-depth understandings of kaitiakitanga. This departs from historic narratives of urban Māori being disconnected from cultural knowledges and practice (see Walker, 1990) and demonstrates ideas of adaptation and cultural flourishing. Interestingly, this type of adaptation is seen in urban spaces across Aotearoa and may be linked to migrating knowledges from rural spaces to urban communities (King et al., 2018; Williams, 2015).

Participants discussed the important role of their homelands and the practices of kaitiakitanga that they undertook in these areas. Participants highlighted kaitiakitanga practices undertaken in urban spaces that are informed by traditional knowledge like the establishment of mārā kumara in urban homes. Although participants expressed varying mechanisms of migration into urban spaces, the traditional kaitiakitanga knowledge were

very similar as both captured an inherent need to care and protect ancestral knowledges and practices related to place. This may be a result of kaitiakitanga knowledge being sustained over generations in urban areas. The expression of this knowledge also varied with the need to recognise the mana of local hapū.

Nature experiences and engagement are particularly important in childhood as they contribute to pro-environmental behaviours that we carry into adulthood (Hand, Freeman, Seddon et al., 2018; Soga & Gaston, 2016). Nature relationships established in our childhood help in creating lifelong nature practices (Soga et al., 2020) and this is evident in the data of the research participants. The participants of this research have shown the value of childhood experiences of nature relationships but also illustrate that these types of connections can be fostered in urban places. Such connections rely on practices with nature like the establishment of urban gardens which can also support the connection of migrant people to place and also the longevity of cultural knowledge (Ghose & Pettygrove, 2014).

As with nature, the participants highlighted some cultural spaces such as marae as important areas for Kaitiakitanga.

Tapsell (2014) shares the important role of marae in facilitating the sharing of knowledges between old and young generations of Māori. Such sharing has been highlighted by participants as important in their expression and understanding of kaitiakitanga today. This further supports the need for spaces within urban areas to be culturally responsive and ensure the safe expression of kaitiakitanga by urban Māori.

The influence of urban places on kaitiakitanga practices

Using cultural knowledges is important for Indigenous peoples to reconcile with colonial urban spaces (Nejad, Walker & Newhouse, 2020). The importance of Māori cultural knowledges in urban spaces must further be made visible to support the flourishing of local narratives but also the opportunities for Māori to connect to urban spaces (Matunga, 2013). Moreover, the establishment of such connections asserts the placemaking processes that are being forged by the participants. Hes, Mateo-Babiano and Lee (2020) share that placemaking processes allow people to

shape spaces through cultural knowledges and practice. Here, the participants have supported this sentiment but further highlight that such processes can still be undertaken when residing in new tribal boundaries.

Participants recognised whakapapa, Māori narratives and places of significance in their urban spaces. This fostered engagement and recognition of local hapū and historic narratives in how participants undertook their kaitiakitanga practices. This provides participants with opportunities to continue their kaitiakitanga practices but to also remain respectful in how this is undertaken in new tribal areas.

*Waiwhakareke Natural
Heritage Park, Hamilton*



Table 1: Places to practice kaitiakitanga

PLACES TO PRACTISE KAITIAKITANGA	RESPONSES
At my house	37%
Marae	29%
At a nearby park	3%
Other	16%
I don't have a place	5%

Places for kaitiakitanga practice

The homes (36.8%) of participants, marae (28.5%) and nearby parks (13.2%) were listed as areas most used by participants for the purpose of practicing kaitiakitanga (see Table 1). There were participants who did not have a place to practice kaitiakitanga (5%) and participants who practiced kaitiakitanga in other (16%) places not listed in the survey. The responses in the other category noted areas such as amongst communities, at work, at pā harakeke, near beaches, at kōhanga reo, in mountain areas, in and near rivers, forest areas, on papakāinga, at kura and within participants businesses. There was also mention by participants that kaitiakitanga is practiced everywhere they go.

Thirty five percent did not know how much time they spent practicing kaitiakitanga while 34% said they continuously practiced kaitiakitanga. There were 4.8% who never practice kaitiakitanga and others who practice for 30 minutes a day (12.8%), 1 hour a day (1.8%), 2 hours a day (.6%), half a day each week (1.2%), 1 day a week (1.2%) and more than 2 days each week (7.3%). The availability of space to undertake kaitiakitanga may contribute to participants practices being continuous or spread throughout the week.

The practices of kaitiakitanga were mostly undertaken in places that were of value to the participants like their homes and marae. Williams (2015) highlights this attachment to home spaces by Māori as integral to building levels of comfort


amongst urban Māori communities. Such places can be seen as integral to participants opportunity to place-make in urban areas but also to seek out similar networks of people in urban areas.

For focus group participants, gardening and teaching were easier ways for them to care for nature and to continue their kaitiakitanga practices, while other participants noted environmentally focused activities as well as increasing awareness amongst their communities about environmental issues like climate change.

The survey and focus group data also aligned with comments by interview participants about kaitiakitanga being part of day-to-day activities and were not reserved for particular occasions. Rather, the practices of kaitiakitanga were intertwined into nature activities that participants could easily undertake in the safety and comfort of their homes and marae.

Although, most participants were located in urban areas they were able to create a form of place connection that intertwines cultural knowledge and practices with nature that are integral to indigenous identity (Wehi & Wehi, 2010). Recognising these efforts shows the importance of cultural knowledge and practices with nature in supporting kaitiakitanga practices in urban spaces. Moreover, it highlights the role that kaitiakitanga can play in creating place-based connections in urban areas.

Table 2: Aspects of nature in participants discussion



NATURE ASPECT	QUOTES FROM FOCUS GROUP PARTICIPANTS
Conservation	"I practice kaitiakitanga through conservation efforts and also my work on climate action and sharing/applying indigenous values to the work that I do."
Taiao Ethical decision	"connecting to self, whakapapa, Kaupapa Māori, taiao. Making conscious ethical decisions and living that."
Garden Wellbeing	"I care for the soil in my garden so it provides me with nutrition. I care for my neighbours to help them with their wellbeing."
Ground Nature Seed	"I maintain this practice to this very day. I don't put poison into my ground, and it might seem like it's growing a little bit slower than normal but that's what nature is about. It's not about you trying to hurry things up, push the button and everything happens. Today everything is push the button and there it is, we do not enjoy, even appreciate when something so tiny out of a seed grows naturally."
Garden Vegetable Kai	"yep growing vegetable gardens and we have two litre ice cream containers and we have one for vegetable peelings and fruit peelings and we have one for left-over kai that goes in another one."

Nature and kaitiakitanga

The knowledge that participants held about kaitiakitanga ranged from relationships to Māori gods, nature, culture, and the Māori spiritual world. The recognition of these aspects supported the participants to express kaitiakitanga practices in ways that aligned with the level of knowledge that participants held. These relationships to nature allowed the participants to merge their cultural understanding in the protection of cultural knowledge, water, and land resources as well as the protection and care of people.

Data pertaining to the participants surroundings also shows the value of certain features in supporting kaitiakitanga like rivers, oceans, and marae. Evidence of the importance of water to indigenous communities like Māori have been reflected in efforts for water protection such as Te Waihora by Ngāi Tahu, the Waikato river by

Tainui hapū and Lake Omāpere by hapū of Ngāpuhi (Henwood & Henwood, 2011; Memon & Kirk, 2012; Te Aho, 2009). In addition opportunities to protect waterbodies not only reflects the importance of kaitiakitanga but also the synergies that kaitiakitanga shares with rangatiratanga and mana (Jackson, Hepburn & Flack, 2018). The act of protecting waterbodies encourages and invokes aspects of kaitiakitanga as seen in the establishment of restoration projects and taiāpure (see Henwood & Henwood, 2011; Jackson et al., 2018).

Respondents to the survey were asked if they used natural resources in their area and over 63% indicated yes while 36% indicated they did not use natural resources. See Table 3 for a list of resources collected by participants. For those who responded yes, they were asked about the types of resources that they collected for specific purposes which were outlined as

Table 3: Resources used by participants

TYPE	RESOURCE	PART	NATIVE
Medicinal plants	Kawakawa	Leaves	Native
	Kūmarahou	Leaves, flower	Native
	Kopakopa	Leaves	Native
	Tātarāmoa	Leaves	Native
	Harakeke	Leaves, flower	Native
	Karamū	Leaves , branch	Native
	Koromiko	Leaves	Native
	Lavender	Flower	Introduced
	Mānuka	Leaves, flower	Native
	Tūpākihi	Leaves	Native
Land-based foods	Pūhā	Whole plant	Native
	Beef	Meat	Introduced
	Watercress	Whole plant	Native
	Herbs	Leaves	Introduced
	Kūmara	Whole potato	Native
	Mutton	Meat	Introduced
	Cabbage	Whole plant	Introduced
	Feijoas	Fruits	Introduced
	Kale	Leaves	Introduced
	Mint	Leaves	Introduced
Water-based foods	Watercress	Whole plant	Native
	Pipi	Meat inside the shell	Native
	Pāua	Meat inside the shell	Native
	Kina	Row	Native
	Tuna	Meat	Native
	Tuangi	Meat inside the shell	Native
	Kūtai	Meat inside the shell	Native
	Kōura	Meat inside the shell	Native
	Oysters	Meat inside the shell	Native
Art and crafts	Harakeke	Whole plant	Native
	Kōrari	Stem	Native
	Feathers	Feathers	Introduced or native
	Pīngao	Leaves	Native
	Houhi	Bark, leaves	Native
	Hue	Gourd	Native
	Kiekie	Leaves	Native
	Muka	Fibre	Native
	Nīkau	Leaves, pith	Native
Carving woods	Mānuka	Wood	Native
	Tōtara	Wood	Native
	Pūriri	Wood	Native
	Rimu	Wood	Native
Other	Eggs	Food	Introduced
	Driftwood	Wood	Introduced
	Beehives	Honey, comb	Introduced
	Kōwhai	Flower	Native
	Shells	Shell	Native
	Twine	Twine	Introduced
	Containers	Containers	Introduced

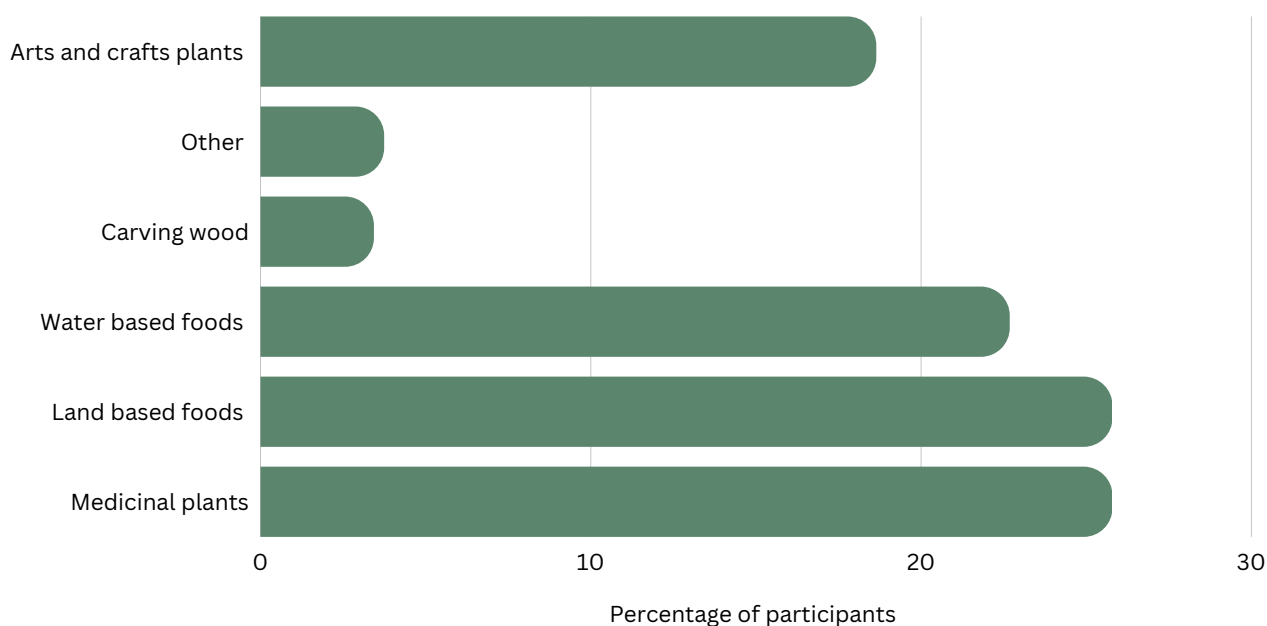


Figure 2: Resource collection by survey participants

being medicinal plants, land foods, water foods, arts and crafts resources, carving woods and other resources that may not fit into the listed groups.

Participants resource collection varied where 25.78% acquired medicinal plants, 25.78% collected land-based foods, 22.67% for water-based foods, 3.42% for carving woods, 18.63% for arts and crafts plants as well as 3.73% in the ‘other’ category. Figure 2 illustrates that both land-based foods and medicinal plants were the resources collected most by the participants.

The data from the survey highlights that resources gathered by participants were more likely to be used for food and medicinal purposes. Mobility also played a role in how participants collected their resources as some would travel outside of the urban space to collect natural resources and return them to the urban space. Participants also had an awareness about the appropriate way to collect resources by highlighting the need for different types of support such as through karakia or the guidance of senior people in their community.

Focus group participants noted recycling and gardening as general

practices that participants felt allowed them to undertake their practice of kaitiakitanga. There was also the recognition of spirituality as one participant mentioned practicing a spiritual component of kaitiakitanga which was to raise vibrational connections to spiritual beings. There were also comments by participants about Māori cultural aspects that enabled them to undertake kaitiakitanga such as sharing whakapapa to the urban space.

For those who did not practice kaitiakitanga, a lack of knowledge was attributed to their limited kaitiakitanga practice. Accessibility of resources for collection was also an issue for focus group participants who highlighted that their resources were brought to them and were collected from places near them. The data establishes some challenges with acquiring resources, but that participants were reliant on relationships with their homelands and wider whānau networks to access the resources they required. Participants did share that because of their limited accessibility to their required resources, they were also reliant on supermarkets for food sources.

All participants noted that there was no specific time or day to practice

kaitiakitanga. It was shared by participants that kaitiakitanga should be undertaken everyday as it is a commitment to the care and protection of relationships and resources. However, participants did state that seasonal changes also meant that kaitiakitanga would adapt according to the resource, place and environment. This highlighted that often kaitiakitanga would align to local maramataka and practices would differ between tribes. Seasonal variations also meant that some resources would only be available for a set period and thus, the kaitiakitanga practice would increase to ensure the proper protection of that resource.

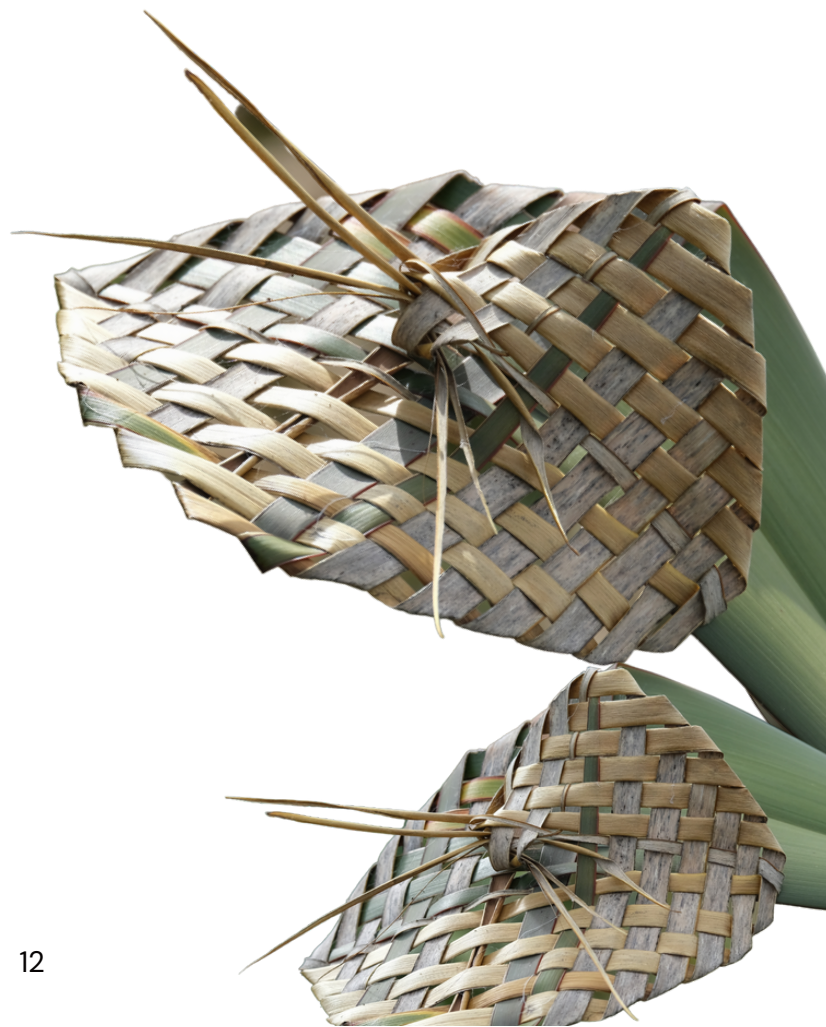
Understanding that there may be seasonal and environmental knowledge to undertake kaitiakitanga also highlights a need to understand how the urban space could encourage its own set of knowledge about seasonal changes, environmental signs and maramataka knowledge. This also supports the rationale for undertaking general practices related to nature in urban spaces as the development of such knowledge is still ongoing, particularly for Mātāwaka participants.

When asked if the participants applied kaitiakitanga collectively or on their own, these responses varied. Some participants noted that they actively practiced their understanding of kaitiakitanga on their own as their practice was specific to their worldview, values and hapū knowledge. Some participants also noted that they practiced kaitiakitanga as a collective by including their children and wider whānau in their efforts such as living a parakore lifestyle (waste free), creating gardens and harvesting foods. The participants noted that they include their whānau in how they share their knowledge and in how they care and protect the Māori language. These aspects allowed the participants to begin the process of knowledge transfer within their whānau albeit within the urban space.

Survey data pertaining to the

maintenance and restoration of resources shows medicinal plants (17.8%), land-based resources (28%) and fresh water-based resources (18.8%) as having the highest response from participants. Over 13% of participants shared that they did not restore or maintain resources that were listed in the survey while 5.6% of participants listed 'other' resources they restored or maintained. This shares similarities to the data about resource collection which suggests that participants both harvest and restore natural resources that are accessible to them and are of importance for particular practices.

Delving further into the restoration and maintenance of resources, Figure 3 demonstrates how each age group of the participants contributes to restoration with answers about contributions listed as funding, labour, land use, cultural guidance, tree planting, species protection, administration tasks and an 'other' category. In each age group certain practices like labour, tree planting and cultural guidance have high response rates.



More importantly, Figure 3 demonstrates that contributions to restoration events may change as we age as efforts become more targeted towards actions that are easily applicable by each age group.

Attendance of restoration events also varied amongst participants. Marae (16% regular attendance) and whānau (26.9%) categories had the highest numbers compared with restoration events hosted by Local council (5%), DOC (7%) and

religious groups (8%). Upon further analysis of the participants age in respect to practices of tree planting and species protection, species protection increases across all age groups. However, for tree planting, the age groups of 26-34, 45-54 and 65-74 show higher responses. Although higher responses in the 65-74 category could be due to a low sample size, the remaining responses indicate increased levels of care for nature.

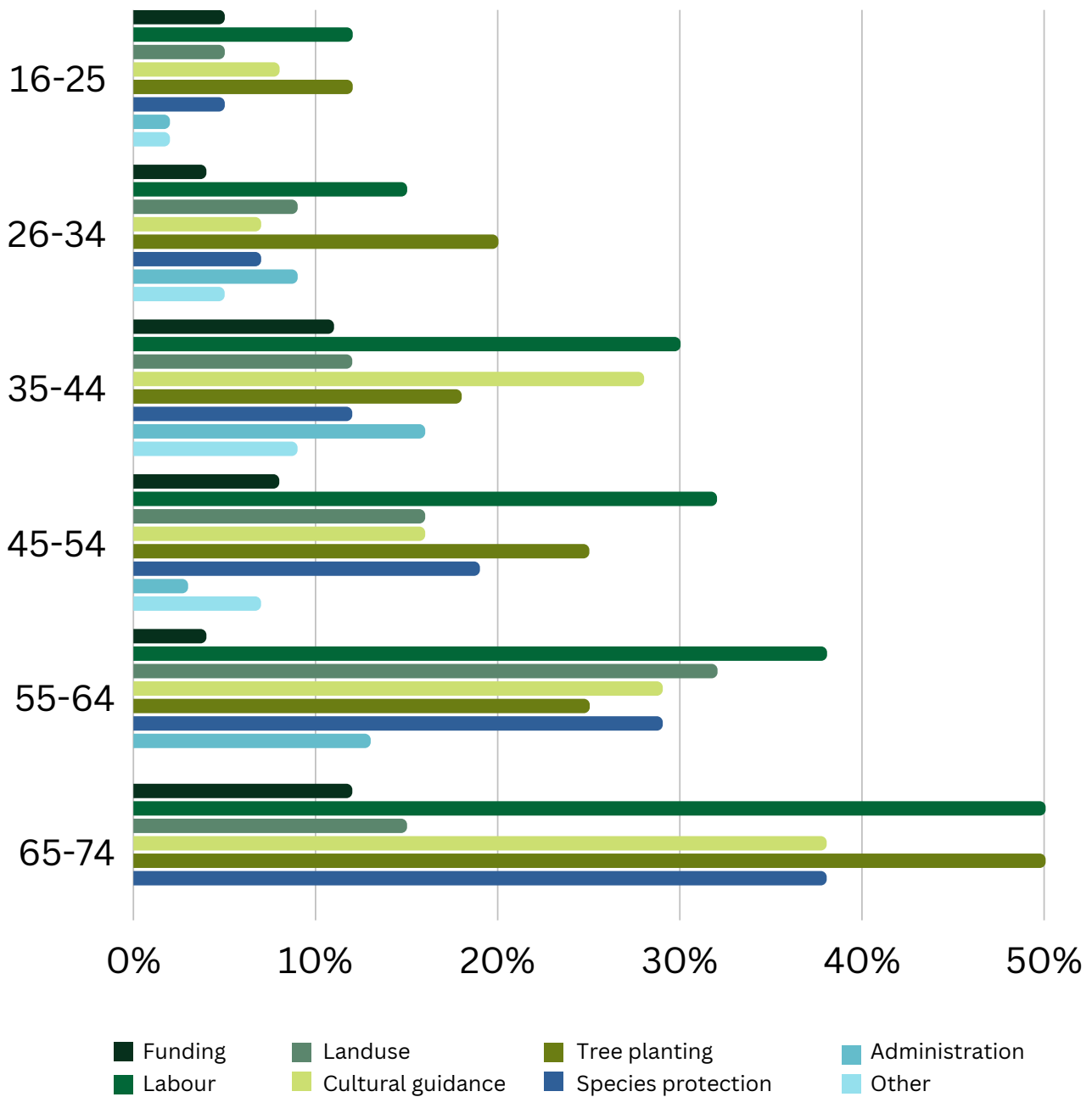


Figure 3: Age and contribution to restoration

Table 4: Kiatiakitanga practices mentioned by participants

PRACTICE	QUOTES
<ul style="list-style-type: none"> Pick up rubbish Raising vibrations Connecting with kaitiaki 	<p>"Yes, physically by picking up rubbish anywhere me and my kids go. Spiritually by raising vibrations and connection with kaitiaki."</p>
<ul style="list-style-type: none"> Recycling Rubbish collection Community events 	<p>"I don't practice it except recycling, picking up rubbish, being involved in community events, I would like to volunteer/plant, be more sustainable but feel restricted by city life."</p>
<ul style="list-style-type: none"> Cultural monitoring 	<p>"Yes cultural monitoring with Ngāti Korokī Kahukura."</p>
<ul style="list-style-type: none"> Environmental practices Community engagement 	<p>"Yes, give advice, occasionally go to planting days, trap predators, encourage others through public talks and my work."</p>
<ul style="list-style-type: none"> Gardening Caring for people 	<p>"I care for the soil in my garden, so it provides me with nutrition. I care for my neighbours to help them with their wellbeing."</p>
<ul style="list-style-type: none"> Spiritual connections Gardening 	<p>"Yes, build soil through my food garden, spend time daily in the wild areas, connecting spiritually, speak out for clean water, speak out and run workshops on relationships with land and nature."</p>
<ul style="list-style-type: none"> Conservation 	<p>"I practice kaitiakitanga through conservation efforts and also my work on climate action and sharing/ applying indigenous values to the work that I do."</p>
<ul style="list-style-type: none"> Gardening Small actions 	<p>"I think we all do our little bits ay, help out in one way yeah we got gardens at the back that's for all of us."</p>
<ul style="list-style-type: none"> Passing on knowledge 	<p>"He teaches things, about what we are supposed to be doing, looking after nature and things that are important to us as kids. Because he passed on his knowledge onto us and that's what I try to teach my kids."</p>
<ul style="list-style-type: none"> Gardening Independence 	<p>"This year I did the garden myself because last year he grew them too close, I said that's why they're not growing, look they're too close. But I went and planted, my cauli and my broccoli."</p>
<ul style="list-style-type: none"> Recognition of knowledge from elders Nature engagement 	<p>"Yup, I'll go back to my tūpuna. When my grandfather was still alive and my grandmother they were the kaitiaki of the bush...When our tūpuna came across from Hawaiki...they came in with some taro...they grow and you pick them, you take the end and get the root and plant it back in...that's what the tūpuna grew in the bush...Our whānau still go up the bush to get some taro and then they replant them again. So that's what you call a kaitiaki ay."</p>



Findings

2



Mana & Place

- How does mana and place influence kaitiakitanga knowledge and its application within the urban space?
- How do hapū influence kaitiakitanga practices?

Historic wrong doings by settler groups forced many indigenous communities away from their significant places and the narratives embedded in these sites (Wilson et al., 2018). Moreover, many indigenous communities have been marginalised within urban spaces, experiencing increased disconnection from culture, higher levels of poverty as well negative health outcomes (Figueroa-Huencho, Lagos-Fernández, Manriquez-Hizaut & Rebolledo-Sanhueza, 2020; Weaver, 2012). Those who migrate away from traditional territories have historically found difficulties in adapting to new environments such as the urban space as they can often experience disconnection from tribal identities (Grau & Aide, 2007; Tapsell, 2014; Williams, 2015). The adaptation to urban environments tests the capabilities of urban peoples to maintain their traditional practices and connections to home while altering their behaviours to suit their new environments (Grau & Aide, 2007; Berkes, 2012).

In this section we explore our findings on

how mana and place affect kaitiakitanga knowledge and application within the urban space.

Kaitiakitanga knowledge

Participants were asked how they received the knowledge that they hold about kaitiakitanga. Participants had the option to choose multiple answers about how they received their knowledge such as passed down from someone, read about it in a book, learnt through practice, watched others practice kaitiakitanga and an 'other' category. Responses for this category were high in answers like passed down from someone (28.75%), watched others practice kaitiakitanga (25.75%), learnt through practice (24.25%), and relatively low in read about it in a book (15.5%) and the 'other' (5.75%) category.

Comments captured through the 'other' category noted that participants information came from institutions of learning such as school or university, their own research and learning about the concept on their own. Further analysis of this data shows that learning about kaitiakitanga by someone passing the knowledge to them, learnt through practice and watching others practice are important for learning about kaitiakitanga regardless of our residence in rural or urban areas, as both participants from urban and rural areas shared similar responses levels.

The participants were asked about what might impede their kaitiakitanga practice with answers listed as laws and policies, neighbours, space, limited knowledge and an 'other' category. Response to this question noted 24.39% for laws and policies while limited knowledge received the largest response of 33% (Figure 4). Such provisions could relate to the gathering of traditional resources as most respondents were gathering their resources from their home addresses. When asked if these challenges stop participants kaitiakitanga practice 81% said yes, while 18% stated it did not stop them from practicing.

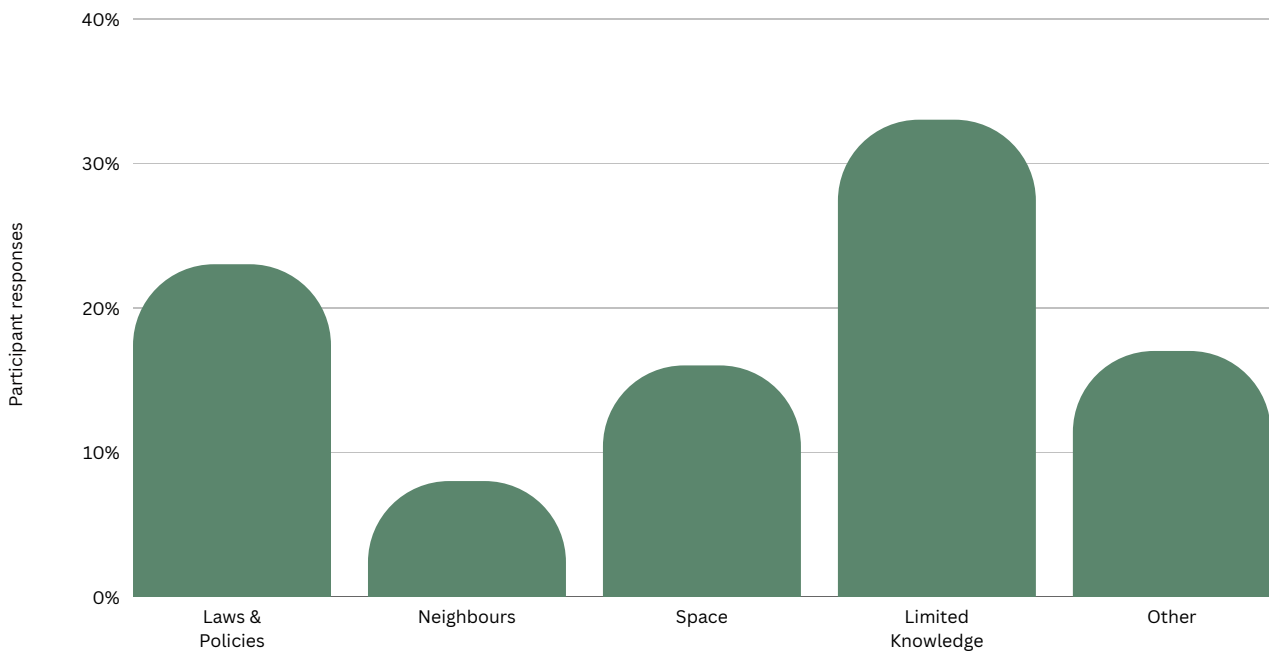


Figure 4: Challenges for kaitiakitanga identified by survey participants

Knowledge and mana

The idea of mana and how this is both acknowledged and maintained in the urban space contributes to kaitiakitanga practices. For some participants, the role of mana played an important part in how they shaped engagement with local hapū and sites of significance. This would also influence the degree of kaitiakitanga practices that they would undertake in the urban space.

There was a strong relationship between knowing about local hapū who held mana over their region and the application of generic practices of kaitiakitanga. Often if Mātāwaka participants were aware of local hapū and had engaged with these hapū on one or more occasions, they would alter their practice to be more generic comparative to kaitiakitanga practices they undertook in their childhood homelands. The recognition of this mana that hapū held ensured respectful and appropriate practices of kaitiakitanga by Mātāwaka. These generic practices were also evident in those who did not engage with local hapū, further showing the importance of mana in providing guidance for Mātāwaka in new tribal areas. This was an important

finding in this project as it gives light to an area of urban Māori experiences that has long called for recognition and examination (see Ryks et al., 2019 and Walker et al., 2019). As more narratives emerge of Mātāwaka, their experiences play an integral role in helping to understand place attachment, cultural knowledge migration and cultural development in urban spaces.

For participants with Mana Whenua connections, the recognition of mana played a part in how they undertook kaitiakitanga. However, they were also aware that they shared the urban area with other hapū and therefore, recognised the boundaries that existed between each of these hapū. To ensure respectful approaches, Mana Whenua participants noted that they would recognise the principles of kaitiakitanga in order to make appropriate decisions about resource use in the urban space. This idea was also applied in the way that they would engage with other hapū and crown entities. In addition to this, there were comments by participants about mana in urban spaces, where hapū may have working relationships with local entities in the management of resources within urban areas and thus share decision making abilities in these processes.

This signals a need to ensure that engagement approaches today include the



*Mangaharakeke Pa,
Hamilton*

recognition of the role of local hapū in urban space design, resource use and planning. The recognition of local hapū mana should encourage kaitiakitanga practice that aligns to the respective regions of hapū. The value of mana within urban spaces is a new finding particularly as it relates to Mana Whenua and Mātāwaka relationships through kaitiakitanga.

Acknowledging Mana Whenua in urban spaces provides an opportunity for local hapū to reclaim their spaces and visualise a way to include practices used by Mātāwaka in the urban space in an appropriate manner. Recognising Indigenous peoples within urban spaces has been echoed through academic writing. Nejad, Walker and Newhouse (2020) share the importance of such inclusion:

Incorporating indigenous approaches to placemaking, therefore, generates potential for transforming oppressive and privileging social structures.

Accomplishing this for contemporary urbanism in settler cities will not be easy and requires an ontological and epistemological transformation in conventional Eurocentric conceptions of placemaking and urban design. (p.440)

The participants of this study share similar ideas to Nejad, Walker and Newhouse (2020), but also display that kaitiakitanga can be used as a vehicle to transform place attachment and challenge the western influence that underpins the construction of urban spaces.

Our findings highlight that urban practices of kaitiakitanga are continuing to adapt to changes experienced by the participants of this research. More importantly, these key themes enable the reader to see that our relationships that we create to people, place, nature and culture are all part of the kaitiakitanga concept. Therefore, we should consider a holistic approach in supporting kaitiakitanga by both Mana Whenua and Mātāwaka in urban spaces like Kirikiriroa.

Conclusions

Kaitiakitanga is being practiced in the urban space by Mana Whenua and Mātāwaka in varying ways. This research intertwines and recognises our connection to childhood places and the connections to our new places we call home. Kaitiakitanga in urban spaces relies on the support of whānau to maintain traditional knowledges and practices from our childhood places. It further recognises the role of mana in how we undertake practices in urban areas.

Practices of kaitiakitanga in urban spaces allow for connection to nature to be established through environmental practices like gardening, recycling of rubbish, river walks, kayaking, resource gathering and engagement with some ecological restoration projects. It also includes undertaking cultural practices such as waiata, karakia, tohi, iriiri, rongoā, kai harvesting and protection of sites of significance. These practices represent diverse ways for kaitiakitanga to be carried out in urban spaces, supporting connection to urban places for both local and migrating people.

The findings of this research project both encourage and challenge our practices of kaitiakitanga, but also highlight the number of opportunities that exist to encourage continued practice and knowledge development. There is still much to learn about the complex web of practices and understandings of kaitiakitanga in urban spaces and this requires better integration of the concept itself into our daily activities and into our built environments.

There is an opportunity to ensure that relationships to nature can exist and be maintained through cultural concepts like kaitiakitanga. However we must seek to understand the basis for such practices and how best to support these aspects in modern environments.

1

Strong connection to childhood places impacts connection to nature and subsequent kaitiakitanga practice.

2

Homes and marae are important places for kaitiakitanga. They allow people to place-make in urban areas and build networks.

3

Collection of resources is important for kaitiakitanga and is impacted by knowledge and access.

4

Limited knowledge and laws and policies provide the most significant impediments to kaitiakitanga

5

There is a strong relationship between knowledge of local hapū mana and application of generic kaitiakitanga practice.

KEY FINDINGS

Recommendations

The following recommendations can be utilised to support the expression of kaitiakitanga in urban spaces. The research shows that there are particular areas of interest and support required for kaitiakitanga to be undertaken in a safe manner by urban Māori.

There are a range of practices that can encourage kaitiakitanga by urban dwellers.

1. Rōngoā
2. Harvesting food
3. Recycling
4. Picking up rubbish
5. Working with local councils
6. Including kaitiakitanga in workplace policy
7. Engaging with ecological restoration projects
8. Increasing whānau well-being
9. Protecting and sharing cultural knowledge

Engagement with restoration events in urban areas varied with research participants, however, projects that had direct benefits for the whānau or hapū were most valuable. These findings have formulated recommendations in the following areas:

SPACE

Participants of the study have shown that adequate space is required that departs from the more usual 'green field' structure in urban areas. Spaces in urban areas that actively encourage Māori to connect with the whenua and taiao are needed to support kaitiakitanga practices.

RESOURCE COLLECTION

The study shows that resource collection varies and that collection can impact how well practices of kaitiakitanga can be carried out by urban people.

KNOWLEDGE

Acquiring knowledge about urban spaces can be difficult and the participants of this study have shown how valuable this mātauranga can be when understanding how best to practice and support kaitiakitanga in urban areas.

ACCESS

The ability to access sites and resources was highlighted by the participants as impeding on their practices of kaitiakitanga in addition to a lack of spaces to practice and distance to natural areas, challenged opportunities to be immersed within nature.

SPIRITUALITY

The opportunity for Māori to maintain spiritual connection to nature is challenged by urban spaces as limited information is known about key kaitiaki of urban areas as well as a lack of space to carry out practices that encourage such connections.



RECOMMENDATIONS

SPACE

Recommendation:

Design urban green spaces to be multi-functional. Using narratives of place, Māori values and concepts can aid in creating green spaces that encourage kaitiakitanga practices and knowledges to flourish.



1

Recommendation:

Prioritise knowledges of mana whenua in how restoration activities are undertaken. Urban greenspaces and parks should encourage sustainable use of resources but also the opportunity to learn about local hapū, their cultural narratives and the practices they use to engage with nature.

Recommendation:

Design guidelines for kaitiakitanga practices and restoration practices for urban homes.



2

RESOURCE COLLECTION

Recommendation:

Increase native planting within urban areas particularly in urban green spaces. Create areas for plant harvesting for cultural practices and areas where local communities can help to manage or maintain native plants.



3

KNOWLEDGE

Recommendation:

Support the sharing of mātauranga (where appropriate) by local hapū through planting initiatives and green space development. This can be in the form of naming spaces, information boards through green spaces and the construction of pou whakairo. It can also be achieved through reinvigorating stories about native plant species and kaitiaki.



4

ACCESS

Recommendation:

Planning for increased nature spaces around urban spaces is recommended. In addition, ensuring that access to these spaces is suitable for all abilities is further required to support urban people to access nature.



5

SPIRITUALITY

Recommendation:

Share the stories of kaitiaki of urban spaces that are of importance to local hapū. This will require strong inclusion of local hapū in restoration planning and implementation.

Recommendation:

Work alongside local Hapū to help to reinstate the ideal habitats for kaitiaki species.

References

- Arthur-Worsop, A. (2014, April 7). Ngongotaha residents and iwi vow to fight 190-home development. *New Zealand Herald*.
http://www.nzherald.co.nz/rotorua-daily-post/property/news/article.cfm?c_id=1503427&objectid=1202_7156
- Baker, J. L. (2012). *Climate Change, Disaster Risk, and the Urban Poor*. In *Climate Change, Disaster Risk, and the Urban Poor*. World Bank Publications.
<https://doi.org/10.1596/978-0-8213-8845-7>
- Berkes, F. (2012). *Sacred Ecology*. In *Sacred Ecology*. Routledge. <https://doi.org/10.4324/9780203123843>
- Clarke, E. (2004). The Taniwha's Exile: The Exclusion of Maori Women from Environmental Policy and Decision-making in Aotearoa/New Zealand. *Hecate*, 30(1), 119-140.
- Cuerrier, A., Turner, N. J., Gomes, T. C., Garibaldi, A., & Downing, A. (2015). Cultural keystone places: conservation and restoration in cultural landscapes. *Journal of Ethnobiology*, 35(3), 427-448.
- Elder, H., & Kersten, P. (2015). Whakawhiti Kōrero, a Method for the Development of a Cultural Assessment Tool, Te Waka Kuaka, in *Māori Traumatic Brain Injury*. *Behavioural Neurology*, 2015, 137402-137408.
- Figueroa Huencho, V., Lagos Fernández, C., Manriquez Hizaut, M., & Rebolledo Sanhueza, J. (2020). Implementation challenges in public policies towards indigenous peoples: the impact of health policies in urban contexts. *Journal of Intercultural Studies*, 41(4), 405-423.
- Ghose, R., & Pettygrove, M. (2014). Urban Community Gardens as Spaces of Citizenship. *Antipode*, 46(4), 1092-1112. <https://doi.org/10.1111/anti.12077>
- Grau, H., & Aide, T. (2007). Are rural-urban migration and sustainable development compatible in mountain systems?. *Mountain research and development*, 27(2), 119-123.
- Gray, J., & Hoare, C. (2010). Suburban intensification and indigenous settlement patterns. In Stuart, K., Thompson-Fawcett, M., & New Zealand Centre for Sustainable Cities. *Tāone tupu ora: Indigenous knowledge and sustainable urban design* (pp. 60-81). Steele Roberts.
- Hand, K., Freeman, C., Seddon, P., Recio, M., Stein, A., & van Heezik, Y. (2018). Restricted home ranges reduce children's opportunities to connect to nature: Demographic, environmental and parental influences. *Landscape and Urban Planning*, 172, 69-77.
<https://doi.org/10.1016/j.landurbplan.2017.12.004>
- Henwood, W., & Henwood, R. (2011). Mana Whenua Kaitiakitanga in Action: Restoring the Mauri of Lake Ōmāpere. *AlterNative: An International Journal of Indigenous Peoples*, 7(3), 220-232.
- Jackson, A., Hepburn, C., & Flack, B. (2018). East Otago Taiāpure: sharing the underlying philosophies 26 years on. *New Zealand Journal of Marine and Freshwater Research*, 52(4), 577-589.
<https://doi.org/10.1080/00288330.2018.1536066>
- Jim, C. (2013). Sustainable urban greening strategies for compact cities in developing and developed economies. *Urban Ecosystems*, 16(4), 741-761.
- Ka'ai-Oldman, T., & Higgins, R. (2004). Te Ao Maori- The Māori world view. In Kaai-Oldman, T. *Ki te whaiao : An introduction to Māori culture and society*. Pearson Longman.
- Kawharu, M. (Ed.). (2002). *Whenua: Managing our resources*. Raupo.
- King, P., Hodgetts, D., Rua, M., & Morgan, M. (2018). When the Marae Moves into the City: Being Māori in Urban Palmerston North. *City & Community*, 17(4), 1189-1208. <https://doi.org/10.1111/cico.12355>
- Marsden, M., & Henare, T. A. (1992). *Kaitiakitanga: A definitive introduction to the holistic world view of the Māori*. Ministry for the Environment.
- Mateo-Babiano, I., & Lee, G. (2019). People in Place: Placemaking Fundamentals. In *Placemaking Fundamentals for the Built Environment* (pp. 15-38). Springer Singapore. https://doi.org/10.1007/978-981-32-9624-4_2
- Matunga, H. (2013). Theorizing Indigenous Planning. In *Reclaiming Indigenous Planning* (p. 3). MQUP.
- Memon, P., & Kirk, N. (2012). Role of indigenous Māori people in collaborative water governance in Aotearoa/New Zealand. *Journal of Environmental Planning and Management*, 55(7), 941-959.
<https://doi.org/10.1080/09640568.2011.634577>
- Meredith, P. (2015). Urban Māori – Urbanisation. *Te Ara – the Encyclopedia of New Zealand*. Retrieved from: <http://www.TeAra.govt.nz/en/urban-Māori/page-1>
- Nejad, S., Walker, R., & Newhouse, D. (2020). Indigenous placemaking and the built environment: toward transformative urban design. *Journal of Urban Design*, 25(4), 433-442.
- Nejad, S., Walker, R., Macdougall, B., Belanger, Y., & Newhouse, D. (2019). "This is an Indigenous city; why don't we see it?" Indigenous urbanism and spatial production in Winnipeg. *The Canadian Geographer*, 63(3), 413-424. <https://doi.org/10.1111/cag.12520>
- Peters, M., Hamilton, D., & Eames, C. (2015). Action on the ground: a review of community environmental groups' restoration objectives, activities and partnerships in New Zealand. *New Zealand Journal of Ecology*, 39(2), S1-S2.
- Ruru, J. (2018). Listening to Papatūānuku: A call to reform water law. *Journal of the Royal Society of New Zealand*, 48(2-3), 215-224.
- Ryks, J., Simmonds, N., & Whitehead, J. (2019). Cities and Indigenous Communities. In *Handbook of Global Urban Health* (1st ed., pp. 283-296). Routledge.
<https://doi.org/10.4324/9781315465456-18>
- Soga, M., & Gaston, K. (2016). Extinction of experience: The loss of human-nature interactions. In *Frontiers in Ecology and the Environment*.
<https://doi.org/10.1002/fee.1225>
- Soga, M., Evans, M., Yamanoi, T., Fukano, Y., Tsuchiya, K., Koyanagi, T., & Kanai, T. (2020). How can we mitigate against increasing biophobia among children during the extinction of experience? *Biological Conservation*, 242, 108420.
- Statistics New Zealand. (2020). Māori Population Estimates. <https://www.stats.govt.nz/information-releases/maori-population-estimates-at-30-june-2020#:~:text=At%2030%20June%202020%3A,16.7%20perce>
- Tapsell, P. (2014). Tribal Marae: Crisis? What Crisis?. In M. Kawharu (Ed.), *Maranga mai! te reo and marae in crisis?* (pp 38-63). Auckland University Press.

Te Aho, L. (2009). Negotiating co-management of the Waikato River. *Resource Management Journal* (Auckland, N.Z.: Online), 14–18.

Walker, E., Wehi, P., Nelson, N., Beggs, J., & Whaanga, H. (2019). Kaitiakitanga, place and the urban restoration agenda. *New Zealand Journal of Ecology*, 43(3), 1–8.

Walker, E.T. 2021. Kei hea te tangi a te Tūi? An exploration of Kaitiakitanga in urban spaces. University of Waikato.

Walker, R. (1990). *Ka whawhai tonu mātou: Struggle without end*. Penguin.

Weaver, H. N. (2012). Urban and Indigenous: The Challenges of being a Native American in the City. *Journal of Community Practice*, 20(4), 470–488.

Wehi, P., & Wehi, W. (2010). Traditional Plant Harvesting in Contemporary Fragmented and Urban Landscapes. *Conservation Biology*, 24(2), 594–604.

Williams, D. (1999). 'Te Kooti tango whenua': The Native Land Court 1864–1909. *Huia*.

Williams, M. (2015). *Panguru and the city : Kāinga tahi, kāinga rua*

Wilson, R., Pearce, T., Jones, K., Fleischfresser, S., Davis, B., Jones, G., & Lieske, S. (2018). Indigenous Land Management in Peri- Urban Landscapes: An Australian Example. *Society & Natural Resources*, 31(3), 335–350. <https://doi.org/10.1080/08941920.2017.1383543>

Glossary

Aute	Paper mulberry plant
Hapū	Subtribe, to be pregnant
Iriiri	To baptise
Kaitiaki	Protector, guardian, minder, caregiver
Kaitiakitanga	Guardianship
Karakia	Prayer, ritual, chant
Kaupapa	Subject, topic, matter for discussion
Kirikiriroa	Used in this report to describe Hamilton City
Kōhanga reo	Māori language preschool
Kōrero	To converse, discussion
Kura	School
Mana	Authority, prestige, power, influence, status
Mana whenua	Power associated with possession and occupation of tribal land
Mārā kumara	Gardening for kumara
Maramataka	Māori lunar calendar
Mātauranga Māori	Māori Knowledge
Mātāwaka	People who are distant from their tribal areas
Pā harakeke	A flax plantation
Papakāinga	Home base, original home, communal land
Parakore	Zero-waste
Pūrākau	Story
Rangatiratanga	Chieftainship, right to exercise authority
Rongoā	Māori medicine
Taiao	Environment
Taiāpure	Coastal reserve for resource gathering
Tangata	People, human beings
Taro	Root vegetable
Tohi	Bless
Tūpuna	Ancestor
Waiata	Song
Whakawhiti kōrero	To discuss, share thoughts
Whānau	Family





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