

*He kura kāinga e hokia, he
kura tangata e kore e hokia*

*A treasured home will endure,
not so a treasured person*

A reawakening of life
for Matekuare Whānau and
Tāwhitiwhiti of Ngāti Whare

*Te Tangi a te Poraka
“The Frogs’ Song”*



MATEKUARE
WHĀNAU TRUST
TĀWHITIWHITI

Contents

Mihi	1
Matekuare Whānau Trust	2
History	3
Te tangi o te poraka – The Frogs’ song	4
Realising Our Goals; Programme for Change	5
Matekuare Tāwhitiwhiti Papakāinga Master Plan	6
Tāwhitiwhiti Staged Development	8
Papakāinga Governance Structures	9
Māori Land Governance Structures	9
Tāwhitiwhiti Papakāinga Designs	10
Matekuare Whānau Centre Te Umu ki te Ngahere	12
Māra Development and Whangai Kararehe	13
Rongoā Māori	14
Tāwhitiwhiti Sustainable Energy Farm	15
Agricultural Centre	17
Accessing Papakāinga for Whānau	18
Papakāinga Zones	20



Figure 1: Chief Matekuare and his daughter Tuki outside a meeting house; Wharepakau Taotao ki te Kapua; Circa 1932

*Ref: APG-1676-1/2-G.
Alexander Turnbull Library,
Wellington, New Zealand. /
records/22536100*



Mihi

Ko Titokorangi me Otoihi nga maunga

Ko Whirinaki te ngahere, ko Whirinaki hoki te awa

Ko Murumurunga te mārae

Ko Wharepakau te wharenui tuatahi

Ko Eripitana te wharenui tuarua

Ko Te Ata Taua te wharekai

Ko Tāwhitiwhiti tōku papakāinga.

Tihei Mauriora

Whānau self-determination and wellness are the foundation stones of the papakāinga development at Tāwhitiwhiti. The land is the fundamental source of whānau, social and economic wellbeing.

Figure 2: Whānau photographed 2017 on the papakāinga site at the launch of the Building Better Homes, Towns and Cities; National Science Challenge; Toitū te Kāinga, Toitū te Ora, Toitū te Tangata (Sustainable Homes, Healthy People). L-R Damain Otto, Jamie Lee Houia, Nanny Lucy Houia, Hinerangi, Brandyn Koroa, Lionel Edge

Healing, returning to and sustainably reoccupying their ancestral lands is seen by the Whānau Matekuare as a pathway to economic wealth and wellbeing for successive generations.

There is a great potential for Māori to return to their homelands and build their own papakāinga in a way that creates a new type of society that is based upon their proven principles of culture and communal living.



Matekuare Whānau Trust

Hinerangi Goodman (Chair)

Eleanor Black

Elizabeth Palmer

Georgina McMillan

Lionel Edge

Meriana Taputu

Michelle Karepe

Phylis Houia

Tracey Waller

The Trustees have made sure to preserve the land and to operate it in such a way that it is beneficial to the landowners providing sustenance and housing for the wider whānau and hapu. They actively educate, in order that they can manage and operate the land to their benefit now and in the future.

The Trustees have had experience at managing their own affairs since the land was returned to their control from the Māori Trustee by the Māori Land Court in 2002.

Vision:

“To create a vibrant healthy whānau community culturally based and thriving on their whenua whilst residing in warm healthy homes all within a life of wellness”

The Trust will balance the papakāinga lifestyle with a planned mixture of healthy living, healthy environment, food sustainability, land-based work opportunities, on-line based work opportunities and leisure.

The Trust has incorporated the direction of an “Architectural Landscaper” whose brief is to ensure that the houses and buildings relate to each other and ensure that occupants relate to each other in a cultural sense.

History

From the time of Te Hira Matekuare in the 1930's, Te Hira's descendants have been aware of his wishes to develop a papakāinga on the 50 hectares at Tāwhitiwhiti.

New houses would replace the abandoned homes that once adorned the land (before the arrival of logging and sawmilling in the area) resulting in the movement of people to Minginui. Moreover, Te Hira ensured that this would happen by adding a clause allowing for 10 acres to be extracted from the lease agreements if it became possible to construct a papakāinga on the land. That condition stood there for the next 70 years of leasehold occupation.



Figure 3: [Ryan, Thomas], 1864-1927 Te Whaiti-nui-a-toi; looking down the Whirinaki Valley showing Te Whaiti settlement. 1891].

Ref: B-159-009-1. Alexander Turnbull Library, Wellington, New Zealand. /records/23152552

Includes view of the dwellings of Te Whaiti, on an area on the left. The river winds over the plain on the right, with wooded hills in the distance and further right.

Notice in the painting of Te Whaiti Pa above, that the wharenuī is to the left with the associated whare physically located in a circle. It is almost prophetic as it seems to be located on the Murumurunga Marae site and partly on Tāwhitiwhiti Block. The Matekuare Tāwhitiwhiti Papakāinga is based upon a similar plan.

Te tangi o te poraka – The Frogs’ song

*Haruru ana te whenua o
Tāwhitiwhiti e te tangi o te poraka...*

*Tāwhitiwhiti reverberates to the
resounding song of the frogs.*

(Hinerangi Goodman, 2018, Tāwhitiwhiti)

INTRODUCTION

– setting the scene

Signifying a return of hauora (life force, vitality, and wellness) to the land, in recent times, frog song has once again become a familiar sound at Tāwhitiwhiti. A 49.9-hectare block of Māori freehold land,¹ Tāwhitiwhiti is located at Te Whaiti nui a Toi (the Great Canyon of Toi) in the central North Island of Aotearoa New Zealand. The whenua (land) is the ūkaipō (place of sustenance and nurturing) for the Matekuare whānau (family) of Ngāti Whare-Tuhoe who, after many years or separation, are re-establishing their papakāinga (communal home) there. This chapter tells the story of the Matekuare whānau journey back to Tāwhitiwhiti.

The Matekuare journey home to Tāwhitiwhiti is set against an indomitable backdrop of Government legislation systemically designed to control and alienate Māori land. Tāwhitiwhiti was not exempt and, in the early 1940s, the whenua was taken over and leased out by the Māori Trustee (the statutory official administering leases and properties on behalf of Māori landowners). Converting the land to pasture for farming, in their wisdom, the then Pākehā lessees drained the large natural lake on the whenua known as Poukura. Consequently, not only was an important natural food source destroyed, so too was the wildlife including the frogs from whence, in the 1920s, came the Matekuare whānau nickname ‘the frogs.’

HE TOHU HAUORA

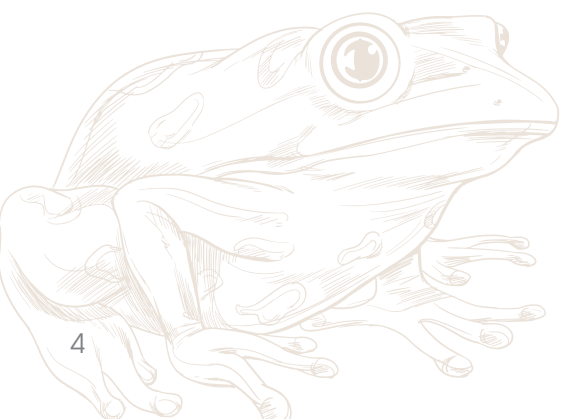
– a sign of health and wellbeing

In times past, the tangi o te poraka (the song of the frog) was a tohu hauora (a wellbeing indicator) for the people of Tāwhitiwhiti. As such, for the Matekuare whānau, restoring this indicator has taken primacy with the commencement of the wetland restoration at Tāwhitiwhiti in 2010. A series of nine small lakes (Poukura Lakes,) as part of the papakāinga planning, have been re-established and, in recent times, the “died out frogs” have returned with a gusto. Birdlife, including some rare species is also prolific.

The return of frog song to the environs is significant. Heralding a new beginning for the natural food chain once lost; the croaking frogs signify the renewal of te hau, te ora, te reo, te mauri me te whānaungatanga o te whenua - the breath, the vitality, the voice and the essence of the land, and relationship to it. Together, these elements are the papa (layers) that underpin the papakāinga as the ahi kaa (te ahi-ka-inga) the place where the home fires burn and the people who keep them reside.

Restoring hauora to the whenua, as the principal source of hauora for the papakāinga, is demonstrative of the holistic approach to papakāinga design and development taken by the whānau. Further supporting this approach, and in readiness for their return, communal gardens, a tree nursery and an animal husbandry area are also under development. Together, these elements all provide assurance that the Matekuare ahi kaa (enduring physical presence and permanency on the land) can, in time, prevail. To date no houses have been built however, through the whānau engagement in the National Science Challenge, Building Better Homes Towns and Cities research, the whānau has access to tailored, architecturally designed, and scientifically modelled plans for healthy, affordable (over a life time), prefabricated houses; as a vital step in the re-establishment of ahi kaa at Tāwhitiwhiti.

Resolute in their belief that the birds, trees, insects and animals are their tuakana (elder siblings), that Hinepukohurangi (the mist maiden who shrouds Tāwhitiwhiti) is their protector and that the people and the land are one (ko āu ko te whenua ko te whenua ko āu), for the Matekuare whānau, restoring hauora to the whenua is essential to restoring hauora to themselves.



¹ <https://whenuaviz.landcareresearch.co.nz/parcel/36345>

Realising Our Goals; Programme for Change



For years the small village of Minginui in the Bay of Plenty has been promised help to improve substandard homes, but literally sick of waiting, as their physical health declines, the community is backing themselves to finally make change. Source: 1 NEWS, 29 June.

Watch online: www.tvnz.co.nz/one-news/new-zealand/small-bay-plenty-town-backs-itself-make-positive-change

A village gutted by the economic reforms of the 1980s, successive governments have been assessing housing needs in Minginui for decades.

The problem has been looked at by ministers but has not been solved.

“There were ministers traipsing through their houses in the worst of weather with rain and storms coming down through the ceilings, buckets of water catching the rain and they sidestepped all of that and said they’d be back and never did.” says Matekuare Whānau Trust chairwoman, Hinerangi Goodman.

The Matekuare Whānau has had enough and is now driving a programme of change - getting funding for a study to establish hard data around just how sick these homes are making the residents.

Researchers found that 88 per cent of occupants had long term physical or mental illness.

Respiratory disease is also entrenched in the community, driven by cold, mouldy and damp housing.

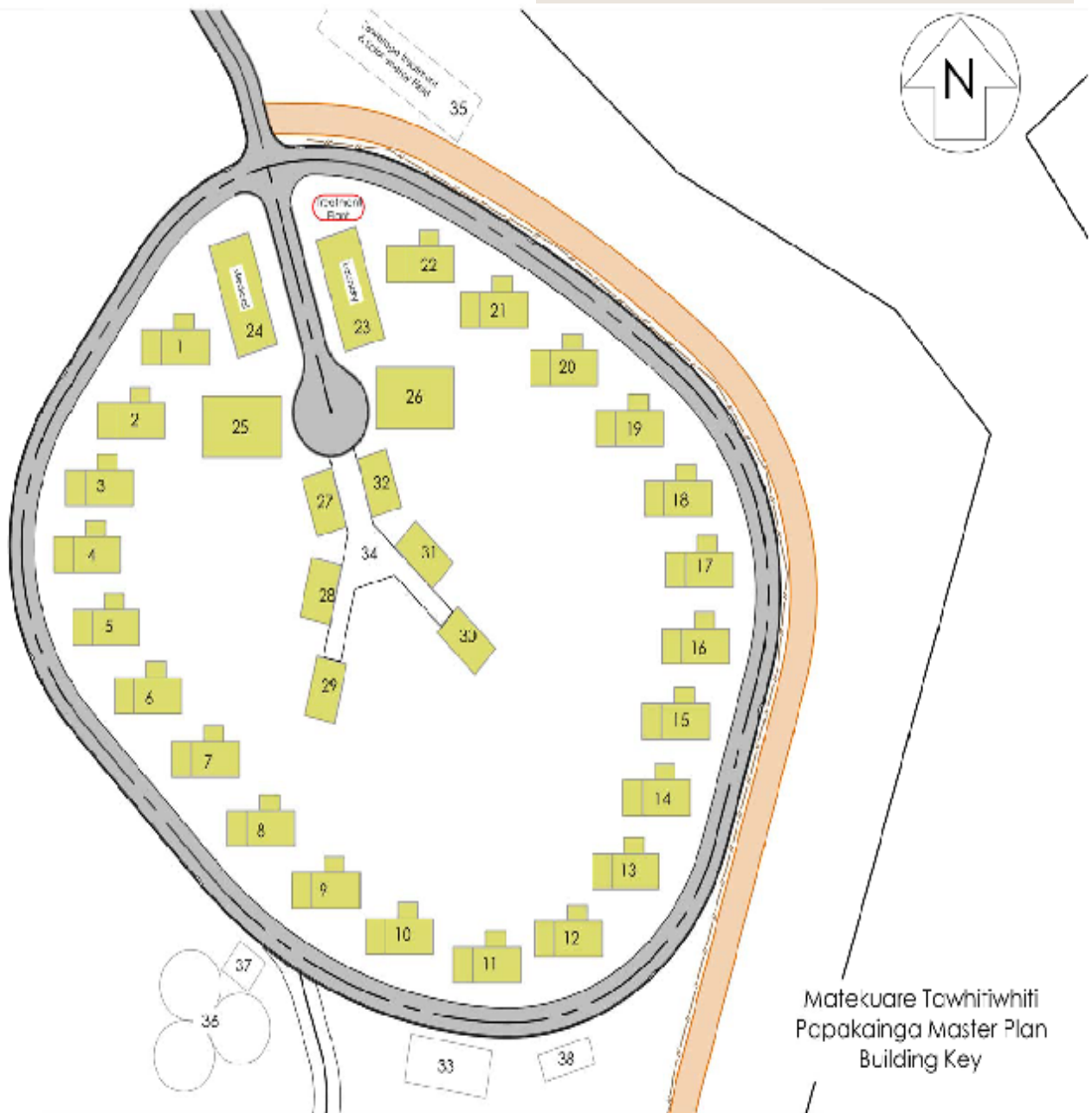
Infrastructure is now going in on the Matekuare’s land - a heavy focus on thermal and moisture control, combined with energy efficiency with the aim to make homes more affordable over their lifetime.

“It’s bringing a whole whānau together. It’s making our whānau wholesome, healthy - all the things that are really quite basic for our people,” says Mrs Goodman.

Matekuare Tāwhitiwhiti Papakāinga Master Plan

The plan shows the ring road and 22 houses sited inside it. There are no houses on the outside, it being the intention that every home will have a sunny position and face into the central “village green” garden and lawn area.

*Figure 4; Matekuare Tāwhitiwhiti
Papakāinga Master Plan, Cheal Consultants*



BUILDING NUMBER	DESCRIPTION
1 to 22	Individual homes of varying designs and number of bedrooms
23	Community Laundry including manager's residence
24	Whānau Ora Telemedicine Centre including nurse's residence
25 and 26	Emergency and Interim houses later to become Whānau Homestay Units
27 to 32	Semi-detached Kaumatua Flats
33	Manager's residence/ Innovation Show Home also serving as the papakāinga office and construction site-office
34	Community Centre Kaumatua Flats that provides a large community kitchen, dining hall and meeting room
35	Sewerage Plant and Soakage Field over which is located the Energy Farm comprising of Solar Electricity and Solar Hot Water collection panels as well as a multi-purpose combined machinery and control room
36	Back-up emergency water storage tank farm to cover supply line shortages or outages plus fire-fighting bulk supply
37	Pump house and controls (automatically activated)
38	Grid-tied electricity connection equipment and controls

The cul-de-sac road services the Whānau Ora Medical Centre, the community laundry, two large houses or whare, whose purpose will initially be interim houses for those awaiting completion of their permanent homes. Alternatively, they can be used for emergency housing and in the long run will become Whānau Homestay Units.

The large building at the end of the cul-de-sac is a Community Centre (34) attached to which will be six self-contained Kaumatua flats.

The central Community Centre will consist of a community kitchen and lounge area. The entrance part of the building will be a Whare Tapere or community meeting and facilities room. This is an important part of the papakāinga. Its suggested name is **"Whare Tapere o Poukura"**.

So, in total planning is aligned to:

- 22 permanent homes
 - 6 Kaumatua flats
 - 2 Whānau homestays (visitor or emergency) units
 - 1 Whānau Ora Medical Centre including nurse's flat
 - 1 Community laundry including operator's flat
 - 1 Innovation Show Home including project office and manager's flat
- = **33 homes in total**



The houses shown are only for comparison of size with the whole site. In practice, they will not be the same and will not be "in a line". Some will be located a little further in from the road and each will be designed and placed to ensure privacy.

The road shown in light orange colour is the farm access road ensuring a separation between moving stock, farm tractors etc. and the papakāinga.

Tāwhitiwhiti Staged Development

STAGE 1.

- Site Earthworks
- Roadway from entrance to house #11
- Underground services from house #1 to house #11 and house #33
- Tank Farm # 36 and Pump House #37
- Stage 1 share of 35 (designed to expand as demand grows)
- Electricity connection #38
- Construction of houses numbers 4 to 11 and house number 33
- Laundry #23 and manager's residence.

STAGE 2.

- Roadway from entrance to cul-de-sac
- Houses #27 to 32 and community centre #34
- Whānau Ora Telemedicine centre and nurse's residence #24
- Emergency shelter and interim occupants' homes #25 and #26
- Services for above.

STAGE 3.

- Balance of circular roadway and services
- Houses #1, 2 and 3 and houses 12 to 22
- Balance of Sewerage Plant and Energy Farm.



Papakāinga Governance Structures

The Matekuare Whānau Trust have consulted its legal advisors who have outlined, for discussion, the following Governance Structures:

- Ahu Whenua Trust,
- Māori Reservation Trust,
- Whenua Topu Trust,
- Māori Incorporation.

Māori Land Governance Structures

The primary land based trusts to manage Māori land blocks are:

a. Ahu Whenua Trust

- i. Designed to manage whole blocks of Māori land, including Māori Freehold Land and General Land owned by Māori
- ii. Often used for commercial purposes (e.g. farms)
- iii. The legal responsibility for the administration of the land is vested in the trustees
- iv. Set Trust Order setting out the duties, powers and obligations of the Trustees
- v. Pros
 - (1) Is commonly used for papakāinga projects
 - (2) Owners remain a beneficial owner in the block and can participate in owner meetings and decisions about the direction of the trust and the management of the Trust assets
 - (3) Subject to the restrictions on alienation, the trust order can give trustees wide and flexible powers
 - (4) Generally has authority to issue licences to occupy
 - (5) Ahu Whenua Trusts are also permitted over Māori reserved land
 - (6) Māori Land Court (“MLC”) jurisdiction ensures accountability of the trustees and protection of the whenua

vi. Cons

- (1) Trust may have little income and not much of an internal structure (staff, systems and processes) to deal with a housing project
- (2) Trust might not have the security required by the Bank
- (3) Trustees might be limited by the trust order and require changes, to be approved by the MLC, which can be time consuming

b. CASE STUDY 1 – Ngāti Hinewera

Ahu Whenua Trust,¹ which has been set up over general land to manage and maintain a papakāinga development with 10 homes. The Waiohiki Charitable Trust has also been established and is a registered Community Housing Provider (CHP). The Trust also operates as a Property Manager for the development (note that some tenants receive an income related rent subsidy from the Ministry of Social Development).

c. CASE STUDY 2 – Pirihihi Ahu

Whenua Trust was set up to administer and manage kaumātua flats that were to be built next to a Marae in Welcome Bay, but the Trust did not have the capacity to deal with the project. Ngā Potiki a Tamapahore Trust, who have a tribal housing strategy to develop affordable housing, essentially became the ‘umbrella’ Trust and acted as the agent, obtained funding, and managed the budget.

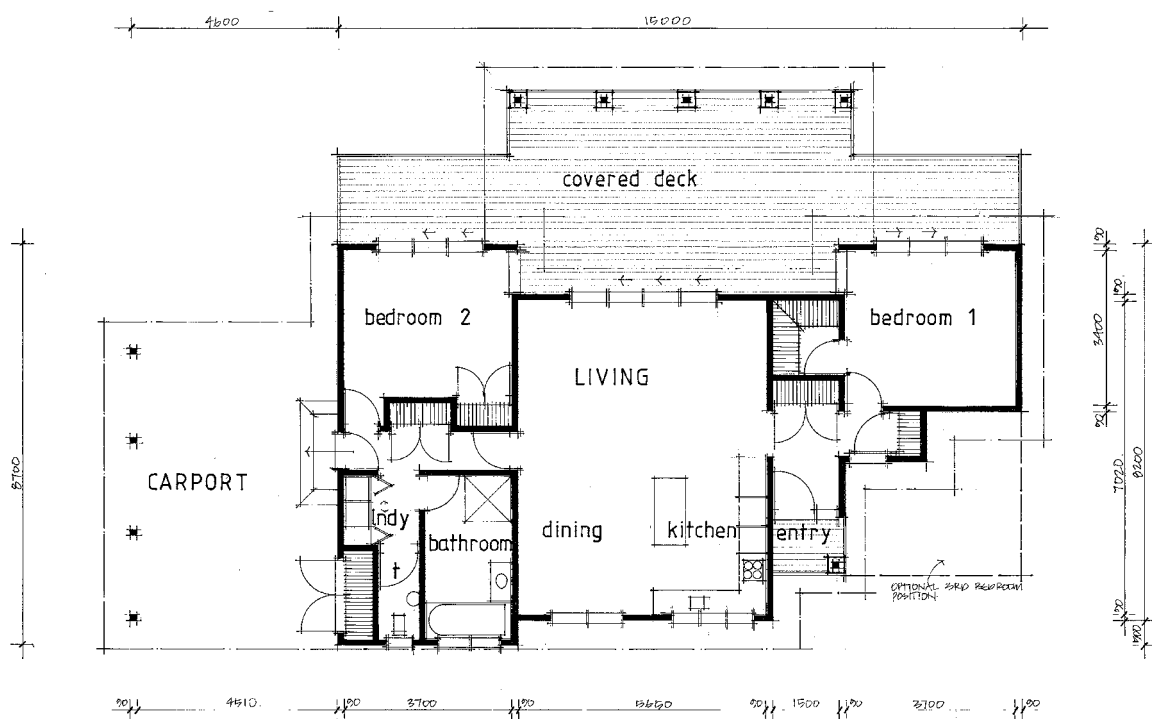
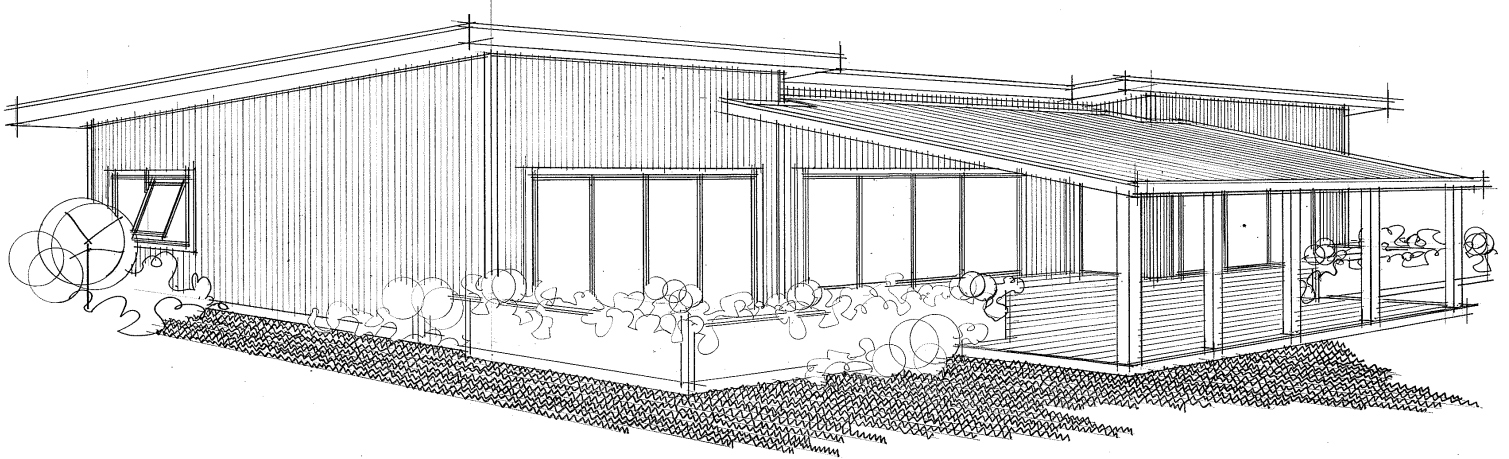
¹ A Guide to Papakāinga Housing by TPK at p 20.

² www.psladvisory.co.nz/nga-potiki-pirihihi-papakāinga.html

Tāwhitiwhiti Papakāinga Designs

DARIN GRANT DESIGN

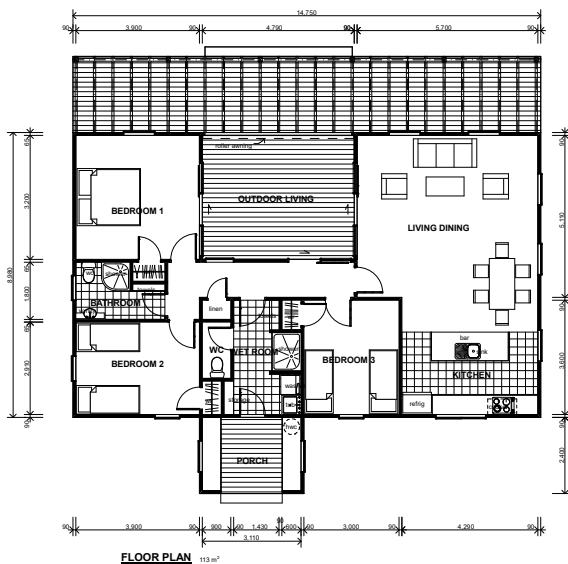
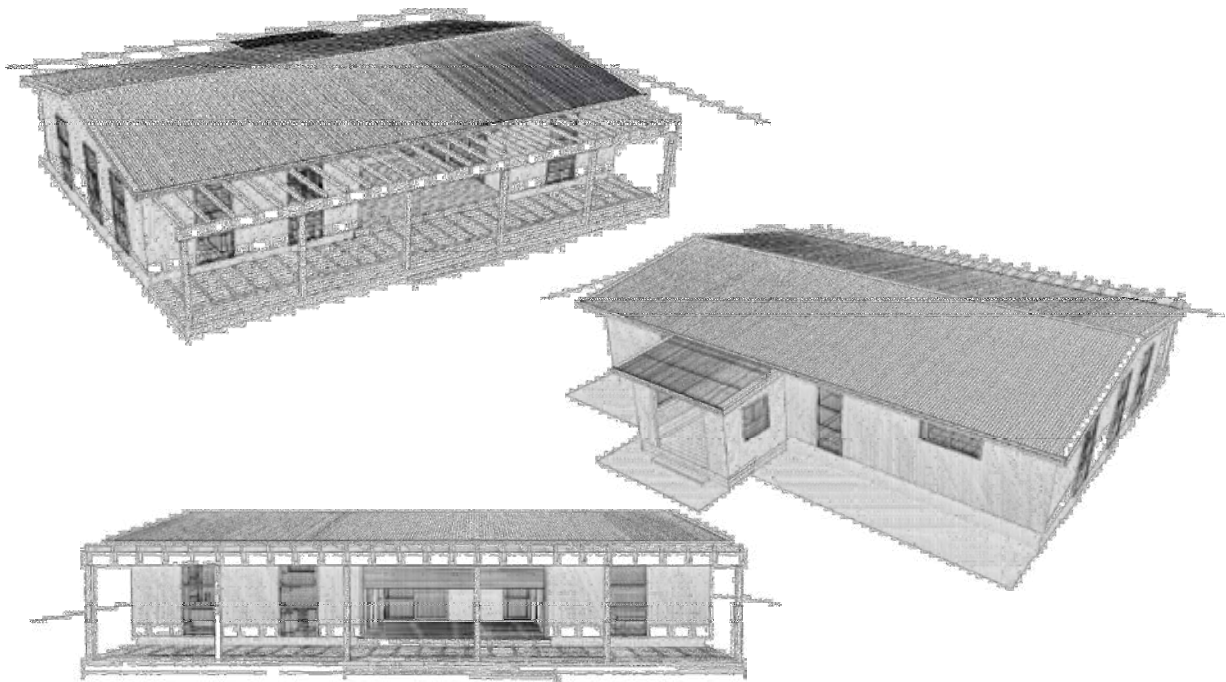
Head of Design and Architectural Landscaper.
Responsible for the “look and feel” and cultural
liveability of the papakāinga.



Matekuare - Floor Plan

HUGH DOUGLAS DESIGNS

Figure 5; Tāwhitiwhiti Three Bedroom House Designs



The research questions investigated by the *Toitū te kāinga, toitū te ora, toitū te tangata: Healthy homes, healthy people* Report for Building Better Homes, Towns and Cities Kāinga Tahī, Kāinga Rua regarding the house designs reflect;

- Can we apply the vision of Te Ao Māori, a holistic systems approach guided by mātauranga and tikanga, to create buildings and build environments that become part of the whakapapa?
- Will those designs be affordable? [defined as cost-effectiveness that integrates both development (building) and operational (living) outcomes].
- Will the designs deliver optimised internal living environments? [specifically, relative to how people originally lived (before/after research design), and more generally in relation to accepted baseline standards for human housing]
- Can the designs deliver measurable improvements to wellbeing?

Matekuare Whānau Centre Te Umu ki te Ngahere



A new Tāwhitiwhiti/Te Whaiti Community Health Centre is planned to be built as part of a new 33 home papakāinga development at the Tāwhitiwhiti site. This will include on-line medical equipment for telemedicine as well as an onsite nurse's flat.

A community programme to combat respiratory disease, that includes monitoring and offering traditional medicine remedies in parallel with more accepted medical practice, is planned for the Matekuare Whānau based at Te Whaiti.

The new, well-designed homes will be monitored to ensure that they are safe, and the hope is that incidence of respiratory disease will be gradually lowered.

Researchers will continue with the analysis of the high incidence of whānau respiratory disease via regular lung function / spirometry testing but will also investigate traditional remedies for respiratory disease using Rongoā Māori that can be locally sourced and grown in the established māra at Te Whaiti.

There appears to be a connection between sustaining rongoā Māori and improving indigenous/Māori wellbeing. Both involve the same elements: social, cultural, economic, and environmental wellbeing.

Māra Development and Whangai Kararehe

Traditionally a large Māra made an important contribution to whānau ora.

In keeping with this tradition, and as the foundation for exploring whenua-use options, Tāwhitiwhiti has a substantial Māra that offers whānau some opportunities.

- Establish a large Māra as part of the development of the Poukura Native Plant Nursery,
- Use Te Whaiti climate data, soil maps and local knowledge to successfully grow small test-crops of a range of vegetables,
- Develop low-cost methods by using fast-composts and mulches to eliminate use of fossil fuel-based inputs including chemical fertilisers, fungicides and pesticides,
- Provide a range of vegetables for whānau, some mārae functions and for manuhiri staying locally,
- Involve the local school to successfully re-establish traditional crops (kumāra, taro, hue) at their Māra.

The horticulture area is of sufficient size and could be managed in several different configurations.

Non-exclusive options include:

- As a market garden and orchard managed on behalf of the whānau,
- As individual allotment style plots for each dwelling in the papakāinga,
- As a set of smaller individual allotments with a cropping/orchard area for producing bulk crops,
- As one or more commercial cropping areas.



Figure 6; Growing a Māra Kai Garden

Agriculture at Tāwhitiwhiti is important for Matekuare. It is envisaged that, initially, small herds of milking goats, milking sheep, dairy cows, pigs and fowl will be bred and farmed. These will (along with vegetables and fruit as above) become the feedstock for our Agricultural Products Processing Centre.

At Tāwhitiwhiti, 18 hectares has been set aside and developed as wetlands and riparian margin reserves. This area has all been planted in native trees and shrubs and protected through a Ngā Whenua Rahui Kawenata.

From the land remainder of 32 hectares must be deducted that allocated for Whānau Housing, eventually envisaged to cover some 10 hectares. The remaining 22 hectares will be used for sustainable and intensive horticulture and agriculture.

Rongoā Māori

Rongoā species will help connect whānau to the wider landscape as this project, through alternative whenua-use options, reconnects ngahere and wetland into productive landscapes. Most Rongoā species are to be found on the regenerating fringe of the forest and along the edges of riparian areas. Planting Rongoā species in areas that are unsuitable for other activities, e.g. housing, horticulture, agriculture, will not only help create an integrated landscape but could provide some commercial opportunities.

Rongoā species planted in the Māra or collected from our nearby forests, will help connect whānau to the wider landscape by helping them to get to know species and the natural ecological processes which are fundamental for its health. The Whirinaki Forest is world famous, yet many of the wider whānau living away know little about it and feel little connection to it. Restoring Rongoā species will help address issues that emerge from that by contributing to the growth of the knowledge needed to be a part of such activities.

Rongoā Māori offers health advantages to whānau via a range of diagnostic and treatment modalities, and its availability/accessibility could enable wider health service delivery choice. Māori have always used a range of traditional methods to deal with illness. Plants such as kawakawa, harakeke (flax), kōwhai and manuka are readily available in the Te Whāiti region and have been important for healing for the healthy futures for Māori. Although Māori largely accept Western concepts of health and illness and use the mainstream health system, there is significant demand for rongoā today.



Figure 7; New Opportunities for Growing Rongoā Māori

Matekuare Trust follows the wisdom and information set out in two books authored by Rob McGowan.

- “Rongoā Māori”
- “Tiwaiwaka”

Rob McGowan is Matekuare’s advisor on all things Rongoā.

Tāwhitiwhiti Sustainable Energy Farm

The Sustainable Energy Farm consists of both *Solar Electricity Collectors* and separate (and totally different) *Solar Hot Water Collectors*. The energy from each system of solar powered collectors will be processed and stored in a solar machinery building.

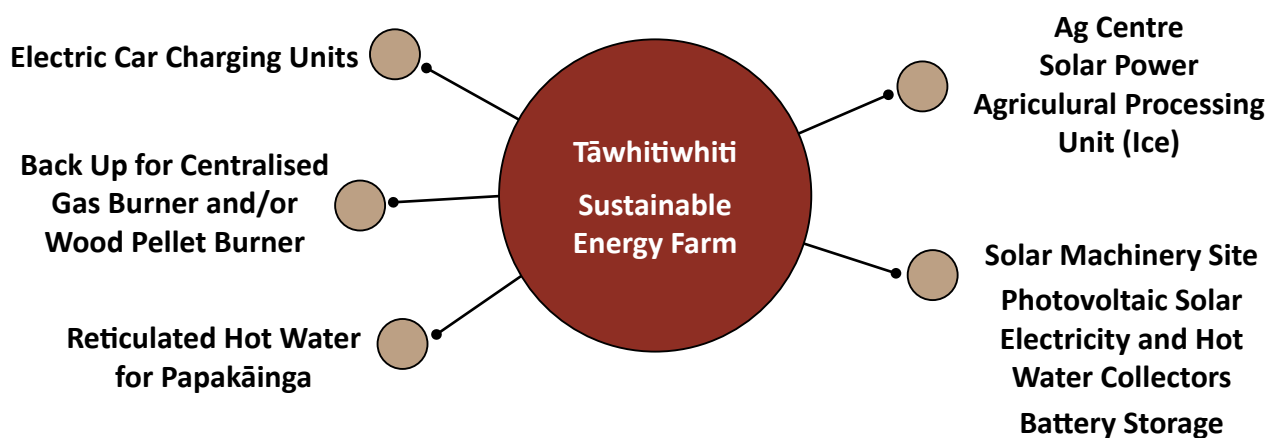


Figure 8; Tāwhitiwhiti Sustainable Energy Diagram

The solar electricity energy is collected during daylight hours, some of which will be used as it is produced with the balance being stored in on-site batteries and for electric vehicle battery charging. It is becoming common practice to also use the combined storage capacity of electric vehicle batteries as booster storage for the whole village. Any surplus will be sold to the power company via the papakāinga grid connection. Once the battery stored electricity is used up the grid connection will supply any electricity shortfall.

Matekuare Tāwhitiwhiti Papakāinga whānau will be using electric vehicles within a very few years.

Just like the electricity needing battery storage and grid connection, the solar hot water system will not always provide sufficient hot water, especially on cloudy days. When this happens a centralised gas burner will top up the required heat. There may also be an on-site wood-waste pallet producing machine that will produce fuel

for a pallet wood-fired burner producing more hot water. Hot water will be stored in insulated tanks so as to continue to provide energy in times of high demand.

Part of the sustainability plan for Tāwhitiwhiti lies in the growing, production and processing of agricultural produce. Refrigeration is essential and one of the largest production costs, using copious amounts of electricity. The Tāwhitiwhiti Energy Farm will produce all its electricity during daylight hours when often there is not a big demand.

Battery storage of electricity is expensive, and batteries deteriorate over the years and must be replaced.

It takes a lot of energy to produce ice but once formed it holds its energy if insulated. So, it can be produced during daylight hours from surplus electricity and used for refrigeration day and night. It's a free energy store and NEVER wears out!



Figure 9; Solar Hot Water Collector, (10) ground mounted, totaling 85 square metres.

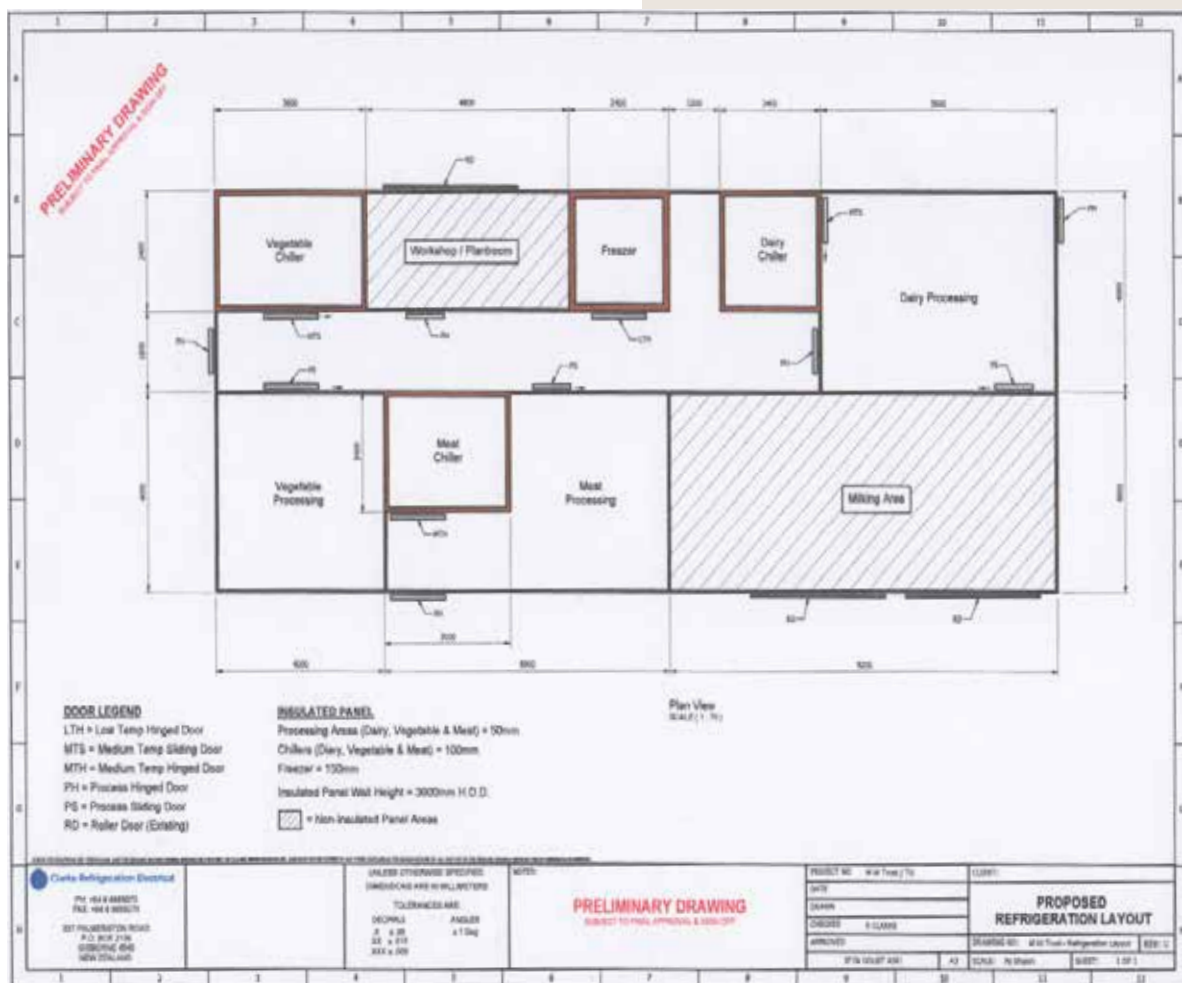
Figure 10; Solar Electricity Collectors ground mounted.



The Tāwhitiwhiti Energy Farm will have 160 of these panels, but each being twice as large as the individual panels shown. These panels will produce up to 80 kilowatts.

Agricultural Centre

The Agricultural Centre is one of the cornerstones of sustainable and independent living that will be a big part of our papakāinga.



The above plan is “to scale” and allows for the inclusion of the following.

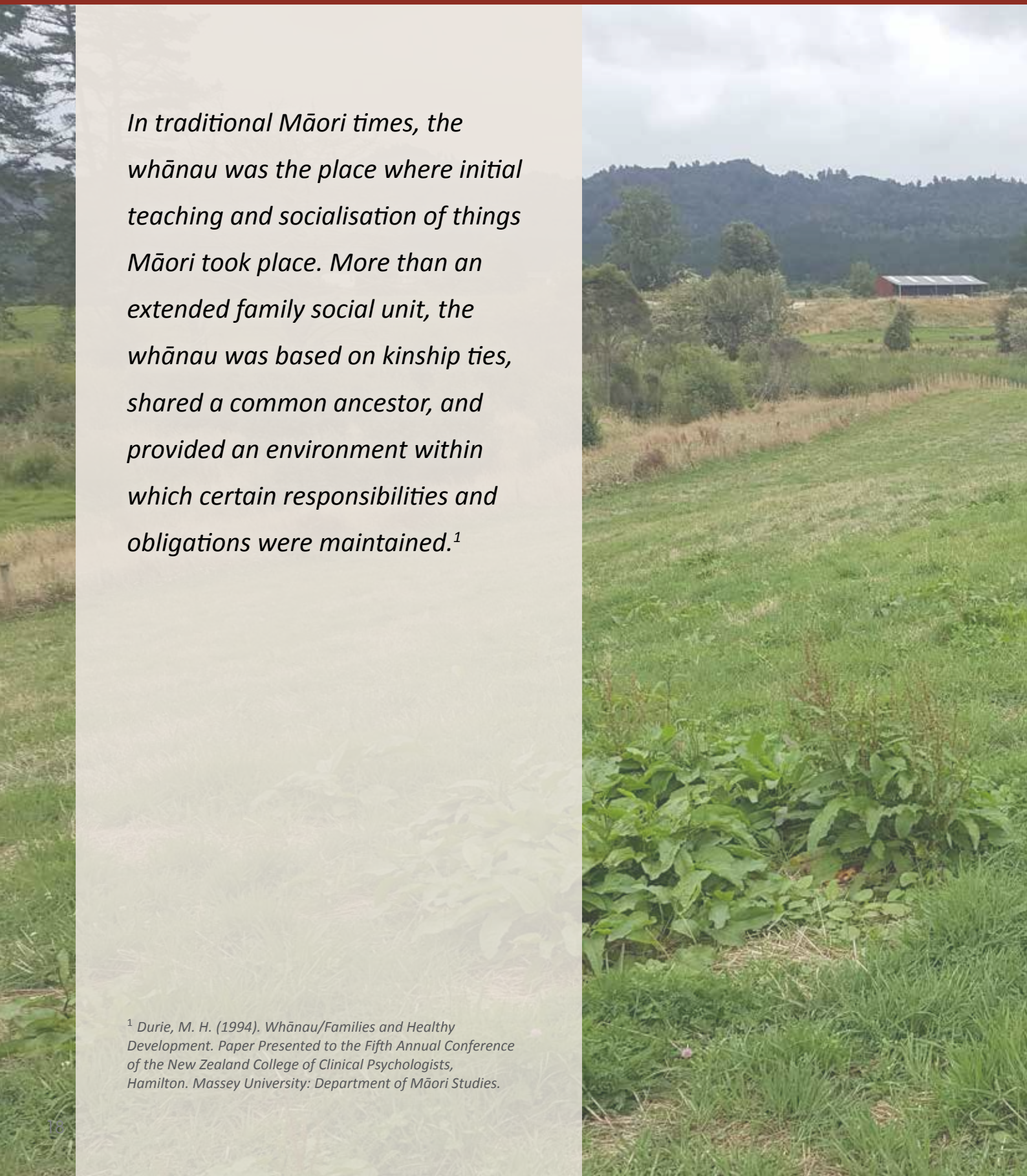
- Refrigeration including 3 solar powered chillers (vegetables, milk products and meat products) and 1 conventional freezer
- Cow, goat, and sheep milking shed
- Meat butchery and meat products area
- Solar Powered vegetable processing area

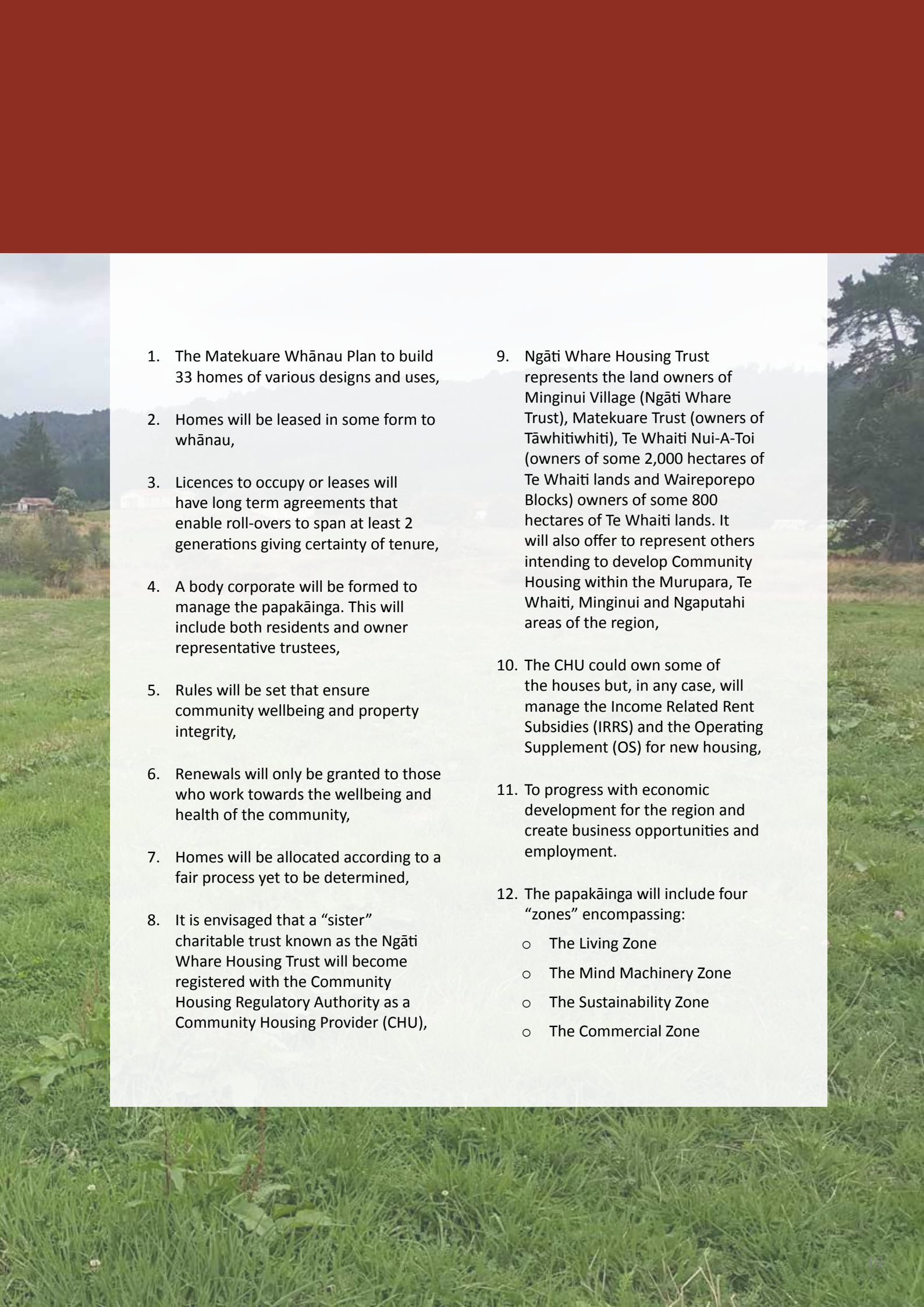
Figure 11: Multi Use Ag Center

Accessing Papakāinga for Whānau

In traditional Māori times, the whānau was the place where initial teaching and socialisation of things Māori took place. More than an extended family social unit, the whānau was based on kinship ties, shared a common ancestor, and provided an environment within which certain responsibilities and obligations were maintained.¹

¹ Durie, M. H. (1994). Whānau/Families and Healthy Development. Paper Presented to the Fifth Annual Conference of the New Zealand College of Clinical Psychologists, Hamilton. Massey University: Department of Māori Studies.



- 
1. The Matekuare Whānau Plan to build 33 homes of various designs and uses,
 2. Homes will be leased in some form to whānau,
 3. Licences to occupy or leases will have long term agreements that enable roll-overs to span at least 2 generations giving certainty of tenure,
 4. A body corporate will be formed to manage the papakāinga. This will include both residents and owner representative trustees,
 5. Rules will be set that ensure community wellbeing and property integrity,
 6. Renewals will only be granted to those who work towards the wellbeing and health of the community,
 7. Homes will be allocated according to a fair process yet to be determined,
 8. It is envisaged that a “sister” charitable trust known as the Ngāti Whare Housing Trust will become registered with the Community Housing Regulatory Authority as a Community Housing Provider (CHU),
 9. Ngāti Whare Housing Trust represents the land owners of Minginui Village (Ngāti Whare Trust), Matekuare Trust (owners of Tāwhitiwhiti), Te Whaiti Nui-A-Toi (owners of some 2,000 hectares of Te Whaiti lands and Waireporepo Blocks) owners of some 800 hectares of Te Whaiti lands. It will also offer to represent others intending to develop Community Housing within the Murupara, Te Whaiti, Minginui and Ngaputahi areas of the region,
 10. The CHU could own some of the houses but, in any case, will manage the Income Related Rent Subsidies (IRRS) and the Operating Supplement (OS) for new housing,
 11. To progress with economic development for the region and create business opportunities and employment.
 12. The papakāinga will include four “zones” encompassing:
 - The Living Zone
 - The Mind Machinery Zone
 - The Sustainability Zone
 - The Commercial Zone

Papakāinga Zones

The combining of Physical Movement with Electronic Movement

Zone One – The Hub – The Living Zone – The Coherent Force

- | | |
|--|---|
| 1. Papakainga Rental Social Housing | 11. Waste water and grey water re-use |
| 2. Superannuant and Kaumatua Housing | 12. Community Health Clinic and Exercise Centre |
| 3. Whanau Homestay and Visitor Accommodation | 13. Autonomous Vehicle Garage |
| 4. Social Gathering Centre/Anti Loneliness Centre | 14. Smart Homes made from Prefab wood and ultra-efficient and healthy |
| 5. Pre-school, Kohanga Reo and Kura Kaupapa | 15. Solar hot water |
| 6. Education and Distance Learning | 16. Distributed Electricity Generation (solar etc) plus Grid Connection where possible |
| 7. Wharekai and Automated Cooking Centre | 17. Infrastructure – roads, drinking water, waste water, storm water, Communications networks |
| 8. Community gardens, lawns, flowers, fruit and vegetables | 18. Sustainable energy and food |
| 9. Green waste recycle centre | |
| 10. Composting and worm farm | |

Zone Two – The Mind Machinery Zone

- | | |
|--|--|
| 19. AI – Artificial Intelligence | 32. Machine Vision |
| 20. Computers and Algorithms | 33. Robotic Process Automation – typing etc |
| 21. Cloud Based Collaboration | 34. Robots |
| 22. Telecommuting | 35. Drones |
| 23. E-Commerce | 36. 3D Printing |
| 24. Connected Commerce | 37. Autonomous Vehicles |
| 25. IoT – Internet of Things | 38. Great Transformation – Spatial Economics (Bain Report ¹) |
| 26. Virtual Reality | 39. Conversion of Physical Movement to Electronic Movement |
| 27. Augmented Reality | |
| 28. Genetic Sequestration – for everybody | |
| 29. On-site Medical Diagnostics and Treatments | |
| 30. Speech Recognition | |
| 31. Machine Learning | |

¹ Taken from ; <https://www.bain.com/insights/spatial-economics-the-declining-cost-of-distance>
Spatial Economics: The Declining Cost of Distance; The next big economic shift will reshape industries, social patterns and the global economy. February 10, 2016

Zone Three – The Land Based Productive Zone

- 40. Agricultural Products Processing Zone
- 41. Wetlands
- 42. Riparian Margins
- 43. Clean Waterways
- 44. Clean Groundwater
- 45. Riparian Growing Reserves
- 46. Plant Nursery
- 47. Farm forestry used for the production of Bio Char and subsequent sequestration of atmospheric carbon into the soil and as a soil enhancer
- 48. Vegetable gardens
- 49. Rongoā Māori
- 50. Orchards
- 51. Carbon capturing and soil enhancing plants and farming methods
- 52. Goat and sheep grazing and milking
- 53. Other animals – cows, alpacas, chooks, etc
- 54. Cow milking stand
- 55. Dairy processing and manufacturing
- 56. Slaughter house and meat processing and small goods manufacture
- 57. Vegetable processing and preserving
- 58. Super chilled water machinery
- 59. Chillers and freezers
- 60. Woolshed and shearing
- 61. Animal yards including loading ramps and transport
- 62. Support farm machinery and workshops
- 63. Hobby workshops and support equipment
- 64. Woodworking, metal working etc machinery and workshops

Zone Four – Commercial Activities

- 65. Agriculture
- 66. Poultry
- 67. Horticulture
- 68. Fresh Water Aquaculture
- 69. Wetland and Browsing Areas Crops
- 70. Worm Farm
- 71. Hydroponics and Aquaponics
- 72. Tourism



www.matekuare.co.nz