



KI TE HAU KAINGA

NEW PERSPECTIVES ON MĀORI HOUSING SOLUTIONS

AUGUST 2014 EDITION



HE WHAKATAUKĪ

“He tangata i akona ki te kāinga, tunga ki te marae, tau ana”

A person trained at home will stand on the Marae with dignity

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GLOSSARY OF MĀORI WORDS

Hui	Formal meeting
Kaimoana	Seafood
Kaumātua	Elder, elderly person
Ki te Hau Kāinga	To return to, or aspire to, one's true home
Kohanga Reo	Early childhood centre
Mahau	Porch
Manuhiri	Visitor / Guest
Marae	Meeting place
Mauri	Life force / essence
Noa	Profane, common
Papakāinga	Village / Settlement
Papatūānuku	Earth mother
Rangatahi	Youth
Tamariki	Children
Tangihanga	Funeral
Tapu	Sacred, prohibited
Tūpuna	Ancestor
Ukaipo	Ancestral Land
Whānau	Family - generally extended
Wharepaku	Toilet
Wharenuī / Wharehui	Meeting House
Whare tāpiri	Connected bedroom wing or sleepout



Contact period papakāinga: Te Pa o Titari, Bay of Islands, 1841



Post-contact papakāinga: Parihaka, 1880's



1930's shanty

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Suburban Papakāinga



State Housing, 1980's



Stevens House, Lake Tarawera, 2000
Architect: Fred Stevens

1.0 INTRODUCTION

MĀORI HOUSING SOLUTIONS

This document updates the original 2002 'Ki te hau Kāinga' design guide with some recent examples and references to other design guide information. It is proposed to regularly update this document as Māori housing exemplar projects are developed.

Māori are well used to inadequate and culturally insensitive housing solutions. The State Housing stock that soaked up the majority of the post-war Māori urbanisation was a "one size fits all" approach to housing and while generally offering superior accommodation than both the private sector and the rural homes Māori had come from, these dwellings have generally fallen well short of ideal housing solutions for Māori.

What then constitutes an appropriate Māori housing solution? This has been the principle question underlying the development of the following design guide. New housing solutions tailored to the specific needs of Māori communities are fundamental to Māori social, cultural and economic aspirations. The following housing patterns are considered the most appropriate options for Māori housing solutions:

- **Sub/urban Whānau Homes** - individual sections which are master planned to allow for the range of cultural and social dynamics operating within urban Māori society with particular reference to urban extended whānau
- **Sub/urban Papakāinga** - infill or new communal housing developments which seek to encourage mutual support and sharing of communal facilities while preserving the option of privacy for all homes
- **Rural Whānau homes** - master planned larger sites with multiple buildings catering for extended rural Māori whānau
- **Rural Papakāinga** - new or redeveloped Papakāinga sites which provide for appropriate technology design solutions with a strong emphasis on the outdoor environment

DESIGN PROCESS

It is essential that Māori housing solutions are conceived, planned and delivered in concert "with" the Māori Community, not "for" the Māori community. This is as important in urban areas as it is on rural Māori land. Māori must own the entire process from the "Vision" through to the construction. In this regard HNZC and other agencies become facilitating partners in the design and delivery of housing solutions rather than paternal welfare agencies. Similarly, Māori become empowered participants as opposed to passive recipients of State housing.

The concept design which gives shape to the vision must similarly arise from the whānau group themselves, with designers also acting as facilitators. In this approach, it is imperative for the designers involved to be experienced in participatory and community design as their level of skill in these situations impacts directly on ensuring that whānau are able to bring their knowledge, life experiences and preferences to bear in the design of their own physical environments.

Therefore, ensure that Māori client groups are identified and involved in all aspects of the provision of their own housing solutions.

Ensure that designers are equipped with the necessary cultural knowledge as well as experience in community design processes. The use of physical models in facilitated community design workshops is highly recommended as it provides an accessible design and communication tool for non-designers.



Mangatangi Marae Development - Group Design Sessions

2.0 PAPA KĀINGA DESIGN

DESIGN CONSIDERATIONS

'Papakāinga' refers to 'papa' or Papatūānuku as the ancestral earth mother and 'kainga' as the village communal living environment. Today the term is used to define both an ancestral land base as well as a collection of dwellings occupied Māori connected by common kinship or kaupapa, located in reasonable proximity to each other and normally relating to a marae or other communal area or building.

While traditionally papakāinga are generally conceived of as being rural in nature, with 83% of Māori now urbanised, increasingly such developments will desirably be developed in urban and peri-urban areas, and definitions may need to be expanded and special provisions made for papakāinga development in urban areas.

Māori housing must be developed as an integral part of a holistic approach to Māori economic, cultural, educational, social and environmental development.

In keeping with historical precedents, Māori generally prefer low density residential developments which allow for good opportunities for outdoor living, communal gatherings, gardens and tamariki play space.

Urban Māori such as Ngāti Whātua Ōrākei are currently developing medium density papakāinga housing at Ōrākei and it is proposed to profile this work in upcoming versions of this guide.

The presence of communal spaces, buildings, centres or a Mārae within or close to the Papakāinga will allow for essential gatherings to occur which in turn cement the interrelationship of the residents.

Whānau Dynamics

Within papakāinga developments, it is important to specifically provide for the full range of Māori family groupings, including kaumātua who prefer their independence, solo parents, extended whānau homes (with multiple buildings) and single couples.

Thus a range of house sizes will allow for the full age range of Māori to be represented in such Papakāinga with family groups rotating within the village over time as their housing needs change.

Community Amenities

As with any residential development, it is important that Māori housing developments are located close to essential amenities. A well-served neighbourhood will ensure greater stability in tenure of HNZA homes and will allow whānau to readily develop necessary community links and support systems.

Specifically, the proximity of culturally appropriate pre-school, primary, secondary school facilities is important in establishing long term relationships with educational communities.

In rural areas, the availability of such community amenities is often overlooked by Māori with a strong desire to return to one's "ukaipo" or ancestral land. In such cases, it is important to design for holistic developments which can provide over time such essential community facilities inside or within close proximity to the Papakāinga.

Therefore it is necessary to think of Papakāinga as much more than just housing developments and instead as growing and living communities.

The location of Papakāinga in reasonable proximity to marae is seen as appropriate in acknowledging the range of cultural support systems afforded by this institution. The ability for marae to provide a wide range of community amenities including health facilities, Kohanga Reo, and administration services is not to be underestimated.

Therefore, locate Māori housing developments with due regard to the availability of essential community amenities including transport, educational, retail, health, employment, recreational and whānau / cultural support systems.

In rural areas there is a need to master plan Papakāinga to provide for a wide range of amenities over time. It is desirable to locate of Papakāinga in reasonable proximity to the Marae.



Mokai Marae Papakāinga Proposal - includes 28 whānau homes, 2 restored historic homes, communal administration centre, communal laundry and safe pedestrian network

Local Resources, Skills and Sweat Equity

In planning rural Māori housing developments in particular, it is important to look to utilising as many local physical and skill resources as possible. This inventory process of the available local skills and resources should be undertaken prior to design of the papakāinga dwellings so that these local ingredients can inform this process from the outset.

This local investigation process will necessarily involve the identification of community members capable of assuming leadership roles in the design, coordination, construction and ongoing building of “community consciousness” within the papakāinga. This latter ingredient is critical in building successful communities with key individuals required to take on long-term leadership roles in the building of communities.

Looking local will ensure “ownership” of the design process and product, provide for economies in labour, in the acquisition of materials and reduce transport costs. Here, home owners themselves can also become part of this process through applying their own “sweat equity” to the building of their houses and associated communal facilities.



Utilising Sweat Equity & Local Materials - Ahkaaroa Trust, Ahipara

Relocation of Existing Dwellings

The relocation & renovation of existing HNZN housing stock as the basis of new Papakainga presents a separate set of design & development challenges:

- HNZN has access to large stocks of State Houses built from the 1930s - 1960s
- Many of these houses are ready to be comprehensively upgraded
- Although often poorly sited and oriented, these houses are basically sound and built of natural materials

These houses are capable of providing cost-effective timely Māori housing solutions. The following steps indicate the primary areas of renovation required to convert a standard state house into a Whānau home:

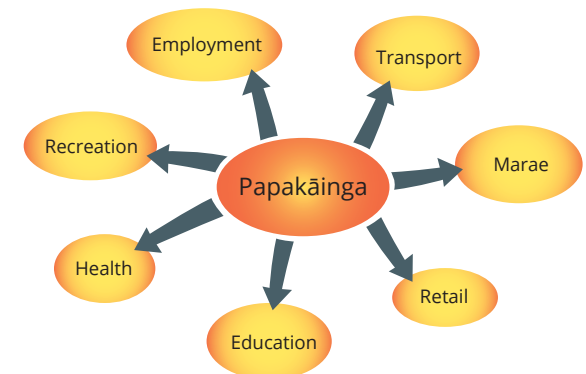
- Resiting dwellings within master planned Papakāinga development including communal facilities
- Upgrade or enhance entry ensuring good street presence
- Upgrade kitchen & bathroom (relocate/enlarge where necessary)
- Plan for or build Whare tapiri / sleep-outs to provide extra bedroom space for adult family members.
- Site houses as close as possible to ground level and ensure multiple easy outdoor connections
- Provide for enhanced connection to site through the addition of French doors on to pergola covered decks and porches
- Addition of carports
- Polished Native timber Floors



First State house, Fife Lane, Mirimar, 1937



Relocated & Retrofitted Former Defence Force Home - Ngāti Whatua Nga Rima o Kaipara, Helensville



DESIGN GUIDELINES

Masterplanning

It is important to provide for opportunities for the living site to be modified to accommodate the long term changing needs of Māori whānau.

Here the placement/position of the house needs to be able to utilize space efficiently so that the house and land can act as a multi-functional unit. Master planning for each site will allow for future garage, sleepout or kaumātua flats should the need arise in the future.

It is important for whānau homes to acknowledge communal spaces and other buildings within the same development / papakāinga, thus maintaining a “cultural dialogue” with the wider community. Orientating the houses towards these spaces also enhances the security of these communal spaces and allows easy supervision of children playing in them.

Rainwater Collection

From economic, environmental and cultural perspectives consideration should be given to rain water retention systems for garden, toilet and washing machine use.

This practice is also supported by regional councils in terms of alleviating stormwater runoff issues.

Food Gardens & Permaculture

Permaculture is a design system for creating sustainable human environments. Permaculture embodies the use of ecology as the basis for designing integrated systems of food production, housing, appropriate technology, and community development. Permaculture is built upon an ethic of caring for the earth and interacting with the environment in mutually beneficial ways.

The presence of a vegetable garden as part of whānau homes and papakāinga is important for economic, health and cultural reasons.

With few rangatahi that have skills in gardening, the garden generally becomes something that the old people maintain on behalf of the whole whānau. A communal vegetable garden with smaller individual plots is seen as a positive way to promote both healthy activity and healthy eating. This process also allows for multiple generations to work alongside each other, thus learning and transferring essential skills and knowledge.

Therefore:

- Masterplan each site for Permaculture based gardens
- A papakāinga development which includes kaumātua will allow essential gardening skills to be passed on and will help sustain the papakāinga
- Allow for a kitchen garden as close as possible to the main entry of the house
- Allow also for larger plots to the rear of the site

Fencing & Privacy

High & close boarded fences are a characteristic of Māori kāinga or villages from pre-European times. They are still relevant today as a means of allowing for privacy, particularly for tangihanga and larger family gatherings. Such fences are more appropriate to the rear of the house with fences on the street side needing to be lower to maintain more connection to the street and wider community.



Pehiaweri Marae Mara Kai

Where however neighbours are related or on friendly terms, it is important for side and rear fences to be permeable or have gates to facilitate interactions between neighbouring adults as well as children.

When planning for papakāinga, no fences between dwellings can increase community cohesion (whilst still considering the need for private spaces) and enable the implementation of a communal maintenance plan.

Communal Play Areas

Safe and accessible communal children's play areas are extremely important. Here the kitchen and dining room play an important part in monitoring both inside and outside children's play.

This arrangement with adequate fencing will ensure that tamariki are able to play and exercise safely within the section. It is important to provide communal play areas which are also easily accessed and monitored by more than one whānau home. A large central courtyard located between 5-6 homes is one way of achieving such a safe communal play area.



DESIGN CONCEPTS

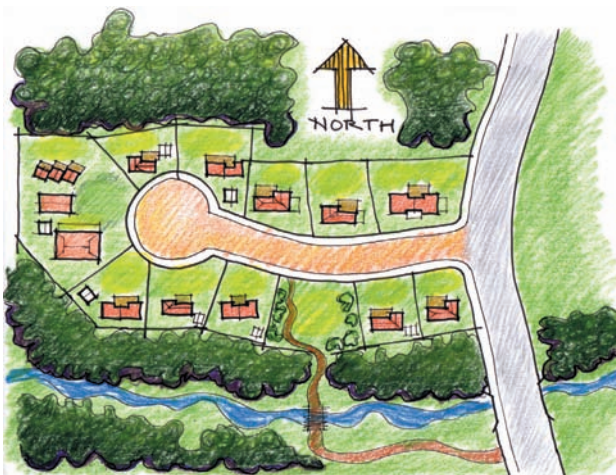
Cul de Sac Papakāinga

It is common for Māori family members to locate themselves in the same suburb, area or even street as other family members. Many would live next door if they had the opportunity.

The stable nature of the cul de sac street layout encourages positive support systems, security and a stronger sense of community. Coupled with a centrally located reserve, the cul de sac provides for a safe environment for children with greater shared responsibility for tamariki through the sense of community engendered and the ease of supervision afforded.

Cul de sacs also results in slower localised traffic, making the street a safer place to play in. Here the size of the reserve included in the development is less important than its location, definition and the amenities included within it.

While maintaining conventional land/home ownership patterns, the cul de sac papakāinga with up to 20 homes has the potential to encourage critical whānau and community support dynamics and social stability for Māori housing developments.



Cul de sac Papakainga showing Marae facilities to the far left and a reserve area centrally located. Note that all houses have large north-facing outdoor areas.

Kaupapa Māori Cohousing

Co-housing is a semi-communal housing model, first developed in Denmark and the United States in the 1970's, that provides for individual ownership of a house and dwelling site coupled with shared ownership of communal land and facilities. A large common house provides the focus for communal activities and often includes dining, office / computer, childcare, teenager and entertainment facilities. Co-housing bears a remarkable similarity to traditional Māori Papakāinga and provides a modern model of semi-communal living which is capable of being customised for Māori needs.

Co-housing has been found to be sustainable for 15 to 40 families and as this represents a reasonably large housing development, it has the capacity to provide for the economic provision of services, economies of scale in building materials and sweat equity with the replication of housing plans. Other advantages of Co-housing include the option of shared dining on a nightly basis, access to larger outdoor communal spaces as well as communal gardens and orchards.

In a Māori model, the Common house could be replaced by an expanded Marae complex. Communal land ownership in conjunction with occupation licenses granted by the Māori Land Court could replace the ownership of individual lots.

A Kaupapa Māori Co-Housing model has the potential to combine the essence of traditional Papakāinga living with the economies and modern amenities of its Western equivalent.



Earthsong Eco-neighbourhood, Ranui, Waitakere City

3.0 WHARE DESIGN

DESIGN CONSIDERATIONS

Siting of Dwellings / Living Environments

Perhaps one of the most important considerations in the planning of any living environment is the careful attention to the siting of dwellings. Here as much attention should be given to the “left over” outdoor spaces as that given to the location of buildings. This will ensure that outdoor spaces become positive, useful areas with specific activities capable of being carried out within them.

As with all well designed residential areas, locate dwellings with due regard to sun, microclimates (including cold winds) and provision for good indoor outdoor flow. Houses should generally be oriented so that the length of the house faces North and so that the building acts as a shelter to play and outdoor activity / dining areas from prevailing and or cold winds. Ensure that there is level open space in front of the living room where manuhiri can be welcomed if necessary and where tamariki can be easily supervised.

With sloping sites it is important to take extra care in ensuring good indoor outdoor connections with the wider site. While this may require additional earthworks, decks or ramps, any such actions are an investment when considering the life of the dwelling and the positive living opportunities that such connections afford.

Generally the following rules apply:

- Ensure length of building is oriented North
- Ensure maximum North facing open & accessible space
- Ensure dwellings have a grounded and accessible connection to the wider site
- Shelter outdoor environments from prevailing / cold winds
- Master plan to allow for extensions / additional dwelling buildings

Energy Efficient Design

Consideration should be given to building energy-efficient designs that reduce the ongoing energy costs faced by the inhabitants. If the cost of energy is calculated over the life of the house, then there are compelling reasons to use measures such as passive solar heating and solar water heating. Energy-efficient designs that reduce ongoing energy costs over the life of the dwelling are desirable.

Such measures include:

- Super insulation - above code requirements for insulation
- Greater thermal mass in building (up to 200mm floor slab thickness).
- Floor slab insulation (40mm polystyrene).
- Attention to North orientation and eave overhangs.
- Minimise south facing windows.
- Double glazing.
- Installation of solar hot water heating systems.



Use of a solar hot water panel on North-facing roof

Materials

Ecologically sustainable materials are favoured because of the following considerations:

- Promotion of Health by eliminating the emissions from synthetic materials and non-water based paint systems
- Respect for natural environment / atua
- Durability (solid timber as opposed to Particle board floors)
- Aesthetics - natural look & feel
- Materials with mana / mauri reinforce the “Papakāinga feel” of the whānau home - a sense of security and familiarity - and help generate pride in one's home
- Timber - renewable, culturally & aesthetically supported, familiar, appropriate for sweat equity



The use of natural and hard-wearing materials - Brick Bay House

Fire Safety

The alarming Māori house fire mortality rate (especially in Northland) has several implications for the provision of new Māori housing solutions:

- Install hard wired smoke detectors in all new dwellings
- Install domestic sprinkler systems in all new dwellings. (these systems have been developed in conjunction with BRANZ (Building Research association of New Zealand) and have been costed at as low as \$1000.00
- Ensure multiple exit points from dwellings with large windows and French doors off communal sleeping areas
- Avoid the use of artificial materials and fibres in the construction of dwellings as the toxicity of fumes given off by these materials in a fire situation is a major cause of fatalities

Tapu and Noa / Cultural Sensitivities

In Māori society there is a need to keep certain household functions separate from others in order to preserve their tapu or noa nature. With food being the most noa or common/profane element and bathrooms/toilets being the most tapu / sacred (as bodily functions), there is a need to keep all food related facilities quite separate from bathrooms and toilets.

While these concepts may appear foreign to some people, they are very real to many Māori who have in many cases been forced to live in houses which include conflicts between tapu and noa activities / facilities.

Often it is the perception of a conflict in planning which is more important than the actual physical proximity of elements. Thus attention to providing discrete entry points to various parts of the house (especially toilets) is important and can allow for plumbing services to be still located in the same general area of the house while maintaining perceptions of culturally sensitive planning.

Other functions have degrees of tapu and noa attached to them which also affect their desirable location within a dwelling as described by the following Table. In the table a cross represents a proximity of two functions which is not desirable where a tick represents a desirable relationship. The wave represents a neutral relationship.

Careful planning of living environments with due regard to issues of tapu and noa will ensure that Māori cultural practices are facilitated and maintained.

	MAIN ENTRY	LAUNDRY	TOILET	BATHROOM	LIVING RM	DINING RM
KITCHEN	~	×	×	×	✓	✓
DINING RM	~	×	×	×	✓	
LIVING RM	✓	×	×	×		
BATHROOM	×	~	×			
TOILET	×	×				
LAUNDRY	×					

Tapu = Sacred or prohibited

Noa = Common or profane

Flexibility

The greatest need for Māori homes is for them to be flexible in catering to continually changing needs and fluctuating occupancies. The most efficient approach is to ensure that living and bedrooms are generously sized, allowing for greater occupancies when required. A removable wall between the living room and bedroom is also desirable, as is a lined double garage or sleepout.

Manuhiri / Tangihanga

While acknowledging the role of the whānau home as a base for large family gatherings it is important to provide for a degree of stability and privacy for younger family members and teenagers. Ensuring homes contain semi self contained wings with separate toilet facilities will help to ensure that both manuhiri and tamariki needs are looked after during peak demand occasions.

Although urban Marae have begun to cater for more tangi it is still common for the deceased to spend at least one night in the whānau home. Thus the availability of a large or second living room and a well equipped double garage or sleepout is important in accommodating the enormous demands placed upon a whānau home during a tangi.

The ability for the kitchen space to be divided off from the main Tangi activity for example through the use of cavity sliders is also important as is the ability to set up an outdoor cooking area to cope with catering for large numbers of visitors.

With most whānau accommodating manuhiri by converting the lounge into a marae style sleeping area, there is a need to ensure that this area is large, warm and well ventilated without being draft prone.

The space most commonly used for marae style sleeping should also have a self contained feel with not have too many doors and a handy toilet and bathroom. If the main living area is used as a marae style sleeping area a second living room is important in allowing younger members of the house to continue to go about their business and maintain some privacy. Such a second sitting room can also double as a spare bedroom for long term whānau stays.

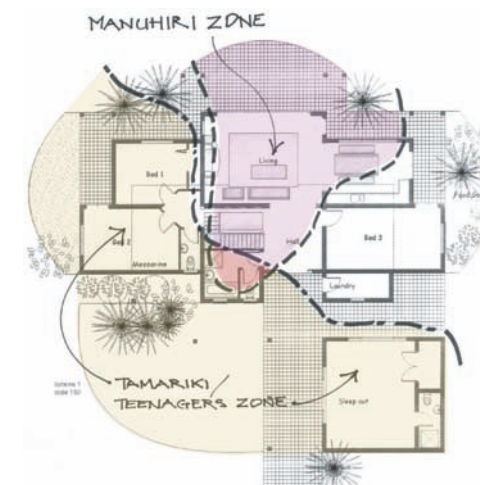


Diagram showing zones for manuhiri and tamariki / teenagers
Careful planning will allow for separate uses to occur simultaneously

Tamariki / Young Children

Children and especially under-5's require specific attention in the design of Māori homes as over 40% of the Māori population is under 18 years old.

Here it is important to allow for the following design attributes:

- Ensure ease of indoor - outdoor flow with minimal level changes between indoor and outdoor areas
- Ensure that the kitchen and dining room provide good indoor and outdoor tamariki supervision opportunities
- Ensure multiple fire exits - large low level windows or french doors in bedrooms/marae style sleeping areas opening to decks
- Ensure maximum covered decks/carports for wet weather play

Rangatahi / Teenagers

Children are staying in the family home a lot longer and in some cases their partners and children are also present leading to increased stress on housing and family dynamics. Here it is important that teenagers feel they have a valued place in the home and are able to study in focussed environments as well as being able to function within and maintain their own "personal space" during large whānau gatherings.

- Provide private zones where teenagers can study
- Ensure easy access to outside with security locks on windows
- Allow for larger bedrooms
- Allow for a second lounge area where teenagers can retreat to during whānau gatherings

Kaumātua / Kuia

Elderly whānau members bring a very specific set of design considerations with particular attention to danger from falling. Here floor surfaces need special attention and all steps are to be avoided. While most environments can be retrofitted to accommodate for the elderly, several of the following steps can be taken at the outset of design to better facilitate their needs:

- Ensure ease of indoor / outdoor flow - no steps
- Allow for quiet semi-detached accommodation for semi-independent kaumātua
- Ensure the heating system is safe, sufficient and economical
- A wet area disabled access shower is important as is provision for additional hand and grab rails

Accessibility / Whānau with Disabilities

Consider making the home, or at least the ground level of the home accessible to whānau with disabilities or to accommodate changing household needs as occupants age or in the event of injury. Retrofitting for accessibility can be costly if it is not considered in the original design. If standard house designs were more accessible, customised house modifications tailored to an individual's needs would be more affordable and better targeted.

- Level entry doorways
- Wider doors and corridors for extra manoeuvrability
- Light switches, powerpoints and other services controls located at heights that are easy to reach for all occupants
- Windows operable with one hand and at a height that enables all occupants, including those with limited reach, to operate the window
- Lever action door handles horizontally aligned with light switches
- Lever action tap fixtures
- Bed space and located on the primary living level
- Toilet and shower located on the primary living level
- Slip resistant flooring in wet areas
- Toilet and bathroom walls reinforced to provide a fixing surface for grab rails to be safely and economically installed in the future
- Reinforced stairway walls in multi-storey dwellings to accommodate the future installation of a stair lift

For further information please refer to the Lifemark Design Guidelines. Lifemark is an independent not-for profit established by CCS Disability Action. They award the 'Lifemark' - an independent seal of approval for accessible home design.



Moa Crescent Kaumātua Village - Te Rūnanga o Kirikiriroa, Hamilton



Accessible bathroom - Blundell Residence, Lower Hutt
Architect: Davor Mikulcic, Studio MWA

DESIGN GUIDELINES

Entry / Street Presence

It is important for the entry to Māori homes to be obvious and welcoming with front and back entries clearly articulated. Such attention to the entry area will assist in positive interactions with manuhiri / visitors.

Where ever possible, entry should be from the North as this allows the kitchen, dining and living areas to monitor the arrival of visitors. A large partially covered deck or porch is seen as an appropriate part of a main entry allowing for outdoor interaction with manuhiri before they enter the house proper.

If however entry from the South is necessitated, ensure the house is designed with dual fronts, creating a public entry front from the South while retaining a private front to the North. This situation also requires appropriate screening of the refuse, recycling and storage areas usually associated with and situated in the back or south side of the house.

Safety measures such as door closers on both front and back doors are seen as very important in stopping small fingers getting jammed. Likewise, multiple panel glass doors are to be avoided and large panels of glass in sliding doors or windows obviously need to comply with safety regulations.



Outdoor covered area
Pattison House - Architect: John Scott

Indoor / Outdoor Flow

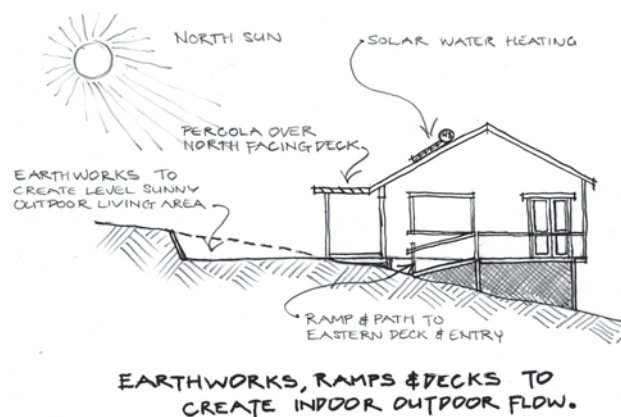
To relieve pressure on internal areas and promote healthy interaction with the outdoor environment it is important to provide multiple opportunities for indoor/outdoor flow within whanau homes. This generally means providing a concrete slab floor on grade or multiple decks to facilitate easy access to outdoor living, dining and play areas.

Mahau, verandahs, porches, patios and decks are key elements of Māori homes and provide essential transitional indoor/outdoor zones, connection to Papatuanuku/Earth Mother and relieve pressure on internal environments.

Front Porch / Mahau

The common use of the mahau on Pre-contact whanau and communal whare indicates the essential social role fulfilled by this space, allowing people to maintain contact with the wider environment from a secure, sheltered refuge.

It is important to allow for some cover to porches and verandahs through partially roofed pergolas and even drop-tarpaulins to enclose these areas at night or in wet weather. A covered north facing entry verandah directly off the living and dining areas can provide for a good welcoming/outdoor dining space.



Back Porch / Carport

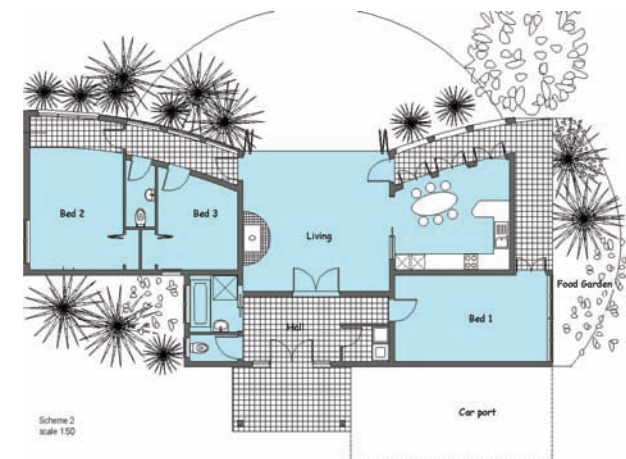
The rear carport or back porch can act as a multi-functional space and consideration must be given to its use as an outdoor food preparation and cooking area, especially for kaimoana preparation.

They are also ideal as dry places for clothes lines (especially in the winter) and shoes. Such a space could also link to a semi-detached sleepout, laundry and or bathroom.

Hallways

Whereas some form of privacy between rooms / house zones is required, other means should be explored to provide for this function as hallways are often cold and dark and considered a waste of valuable space.

Where appropriate, provide access halls with tiled or concrete floors along the warm side of the house to create heat sinks and positive spaces for children's play.



Design concept showing tiled corridor along sunny side of house

Whare Tāpiri / Connected Wings

The double garage has become a “cultural icon” for many Māori whānau because of its ability to provide a valuable detached multi-purpose space. It has however been a mixed blessing with regard to providing sleeping accommodation because it is generally not equipped to adequately perform this function.

The lack of proper insulation, wall and ceiling linings and damp-proofing to the slab has lead to respiratory and bronchial ailments being common among people who sleep in such damp, cold garages.

While acknowledging the important historical role that the double garage has played, this guide contends that detached sleeping accommodation should be purpose-designed with carports provided for vehicular shelter.

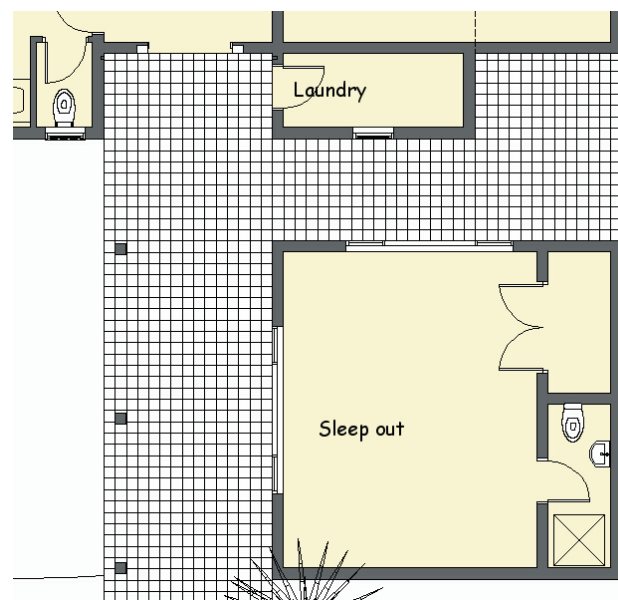
A simple detached sleepout should be purpose designed as a space for visiting relatives or returning whānau members and will provide essential and appropriate short term or long term accommodation.



Blenheim Whare - Sketch design showing small internally connected wing to the West

It is important for the whare tapiri to have its own toilet and bathroom facilities as well as covered ready access to kitchen facilities and the house proper.

- Ensure whare tāpiri / sleepouts are master planned at the outset to allow for their appropriate integration into the whanau living environment when the need arises.
- Utilise whare tāpiri to screen and contain positive outdoor spaces
- Ensure easy connection to core dwellings and facilities
- Locate the double garages to the rear of the site to allow for maximum flexibility of use
- Ensure DPC & insulation under garage slabs and proper window joinery to allow for future lining of these spaces

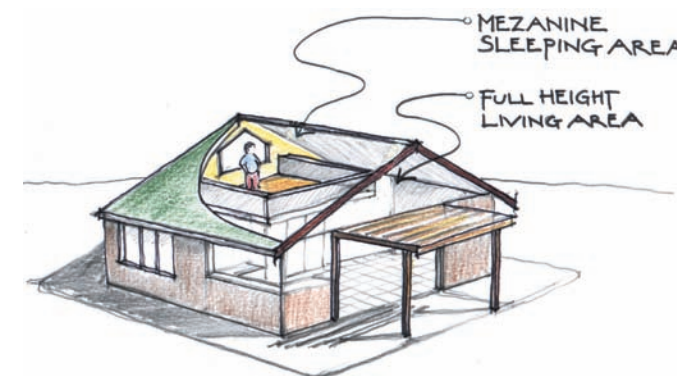


Sketch design showing connection of sleepout to main house

Mezzanines

Mezzanine areas allow for valuable multi purpose spaces which make good use of ceiling height over humble spaces / services areas.

While seen as less appropriate for the elderly and toddlers, mezzanine areas are potentially important spaces in terms of visitor overflow, marae style sleeping, dormitory sleeping for older children, office space or secondary living area. These spaces are flexible by their nature and being elevated are generally warm and dry and allow precious outside area to be maximized by reducing the house footprint.



Roof volume above private areas utilised as a mezzanine multi-purpose area



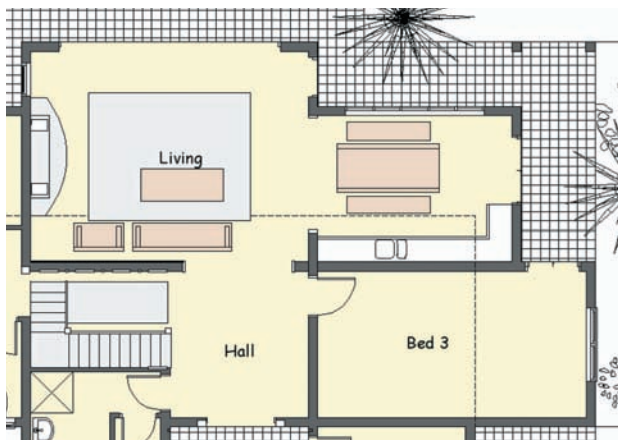
Mezzanine in use for marae-style sleeping area

Living / whānau room

The living or whānau room is the heart of the Māori home and can be likened to a marae wharehui / meeting house. It is here that visitors are received, welcomed and slept, where meetings and celebrations are held and sometimes where a tupapaku (deceased family member) will lie.

A passive solar or active slab heating system may be appropriate to heat such a large living space. Because of the variety of functions this space must accommodate, it is important for floor and wall surfaces to be durable and easily cleaned. Timber or coloured concrete slab floors with large carpet squares fulfil the above functions while also being practical in keeping dust levels down to a minimum.

The living room needs to be large enough (5m x 6m approx) to accommodate the average size whanau gathering of up to 20 people.



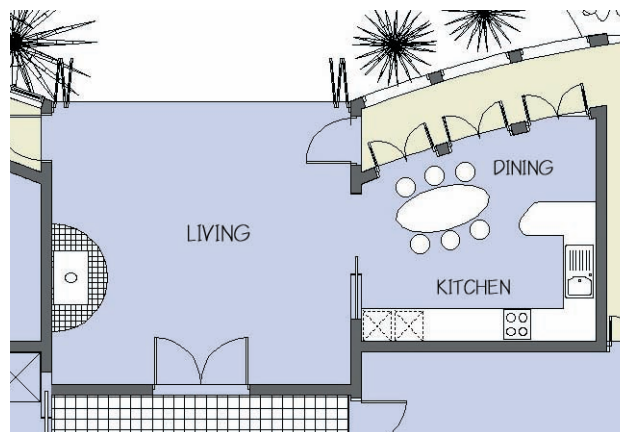
Kitchen and Dining

From a cultural and practical point of view kitchens need to comfortably accommodate at least two or more people (especially when catering for gatherings). The kitchen plays an important part in monitoring both inside and outside children's play.

If the lounge was to be used for marae style sleeping, family gatherings and tangihanga then the kitchen needs to be able to be closed off. With kitchen storage space highlighted walk in pantrys are also supported.

A dining area off the kitchen is seen as an important social space and also needs to be large. This does not need to be separated from the lounge or kitchen and could flow into and extend the lounge area when necessary.

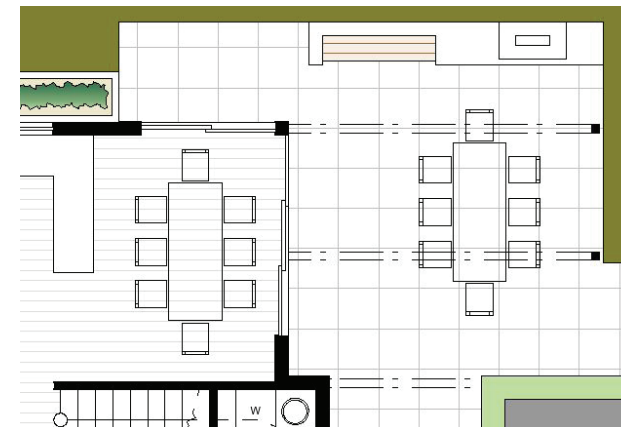
The dining room table is a nerve center for the house and along with the kitchen needs to provide good visual access to both indoor and outdoor play areas.



Use of a cavity slider to separate kitchen/dining and living areas

Outdoor Cooking

Outdoor cooking and dining are part of Māori cultural heritage with indoor dining only becoming a feature of marae activities and buildings in the early 20th century. Provide for specific outdoor cooking and dining areas through a covered porch, preparation bench and cooking areas with a large wash trough for kaimoana. Also consider the location of a hangi area when master planning whānau homes and papakāinga.



Bedrooms

With greater occupancy of Māori homes it is important that bedrooms are larger as they are often required to accommodate two or more children or adults. Larger bedrooms also assist in providing study space for high school and tertiary students as well as accommodating couples returning home to live with parents.

While the number of bedrooms will vary from whānau to whānau, it can be seen that even for Kaumātua flats the minimum number of bedrooms is 2 (allowing for a grandchild or caregiver to live in).

The maximum number of bedrooms is largely determined by the site constraints. In most cases perhaps 5 bedrooms is a maximum for a single dwelling. Should any more bedroom space be required beyond this figure, it should be accommodated in semi detached sleepout spaces with a covered connection to the house and toilet facilities.

It is important for all bedrooms to have large windows or French doors opening out onto grade to allow for easy fire egress in case of emergency, as well as easier contact with the outdoor environment.

Bathrooms

Bathrooms require at least a shub and a separate shower (slide arm). From a Māori cultural perspective, toilets are generally not supported in bathrooms. Wet area showers where the floor is sloped to a waste are favoured because of ease of cleaning and access for the elderly and disabled. It is also desirable to use an efficient hot water system with mains pressure where ever possible. Gas and solar water heating are favoured for economic reasons.

In larger whānau homes a semi detached ablution block (located off a back porch) is seen as desirable because it can better accommodate large numbers of children as well as manuhiri.

Wharepaku / Toilet Facilities

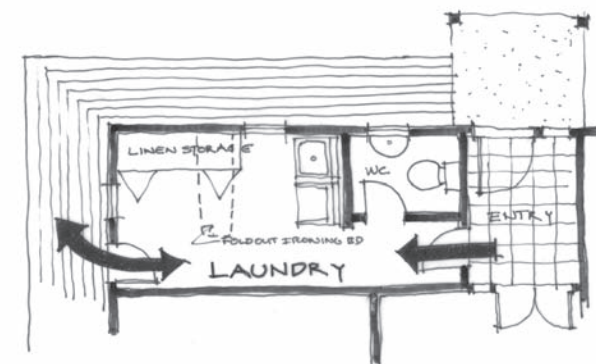
There is a need to provide for two toilets in whānau homes as the pressure on a single toilet is often too great especially when manuhiri are present. The preferred location for a second toilet is outside off a covered way or porch allowing for use from outdoors as well as indoors.

Provide for two toilets per whānau home with one accessible from an outside porch area.

Laundry / Linen Cupboards

A proper laundry space (as opposed to cupboard laundry of the 80s and 90s) is preferred so that this space can remain well ventilated. This space should be quite separate from the kitchen and could be accommodated off a back porch. This laundry space is also seen as a good place for storage especially safe storage of cleaning products, medicines etc with high level shelves.

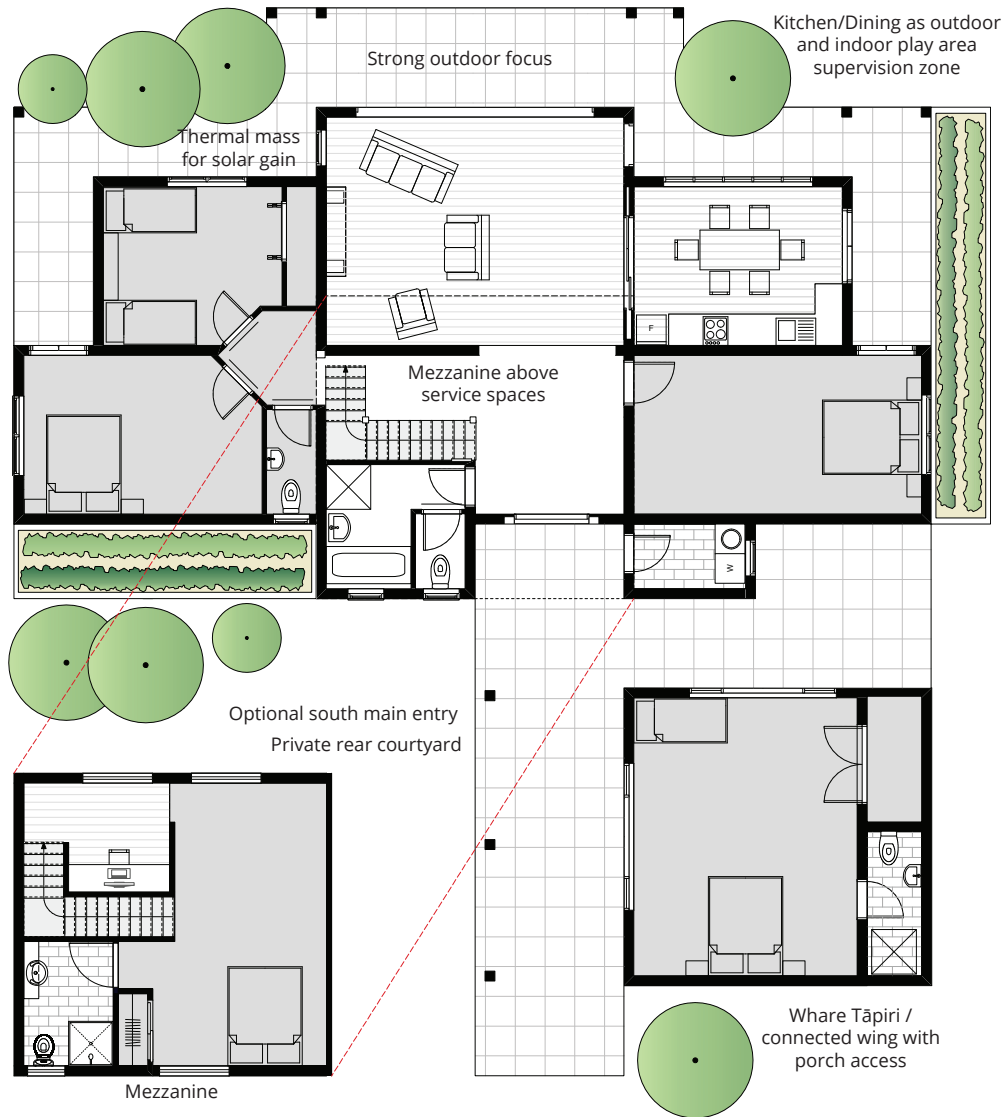
Laundry and bathrooms should generally be kept separate or given a clearly defined space. Linen cupboards in kitchens should be avoided as it is inappropriate to store bed linen or personal items of clothing in the kitchen



Laundry room with external and main entry access points

DESIGN CONCEPTS EXTENDED WHĀNAU WHARE

Whānau Whare with Whare Tāpiri

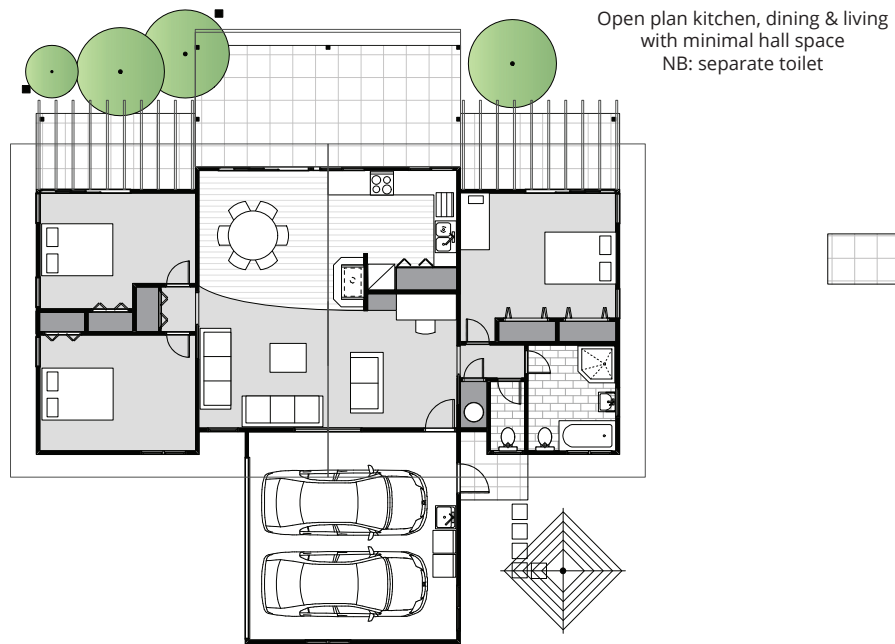


Exterior perspective showing pergola over main entry patio



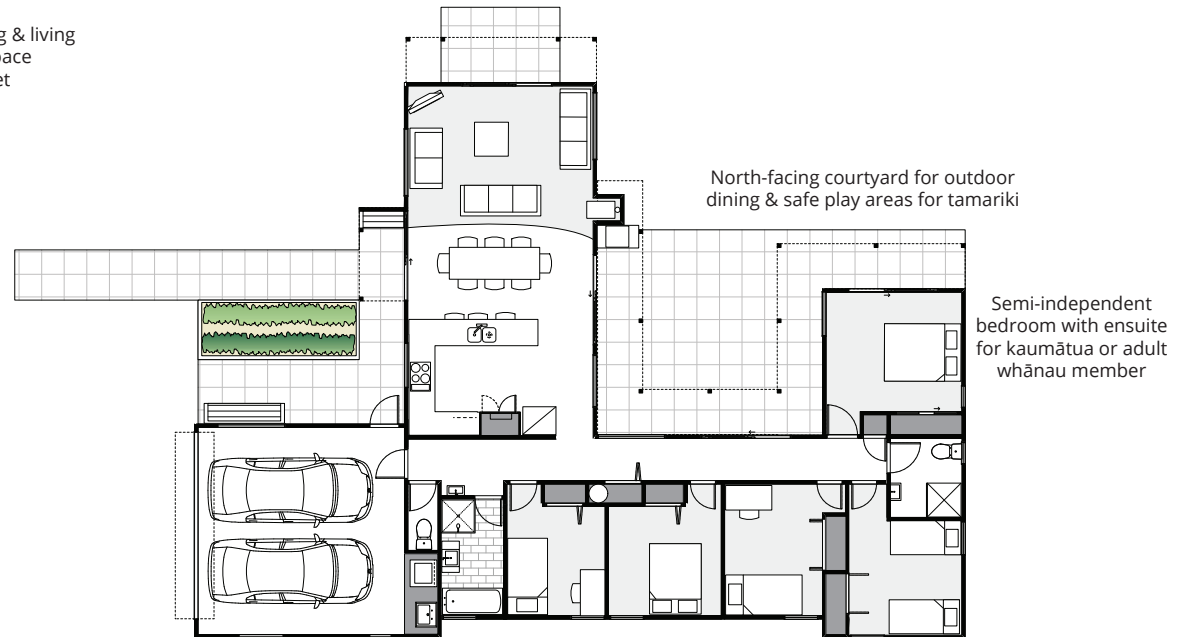
Interior perspective showing mezzanine

3-Bed Extended Whānau Whare



3 bedroom whare, Pūkaki Papakāinga, Mangere, Auckland

5-Bed Extended Whānau Whare



5 bedroom whare, Pūkaki Papakāinga, Mangere, Auckland

DESIGN CONCEPTS SUBURBAN PAPA KĀINGA

Option #1

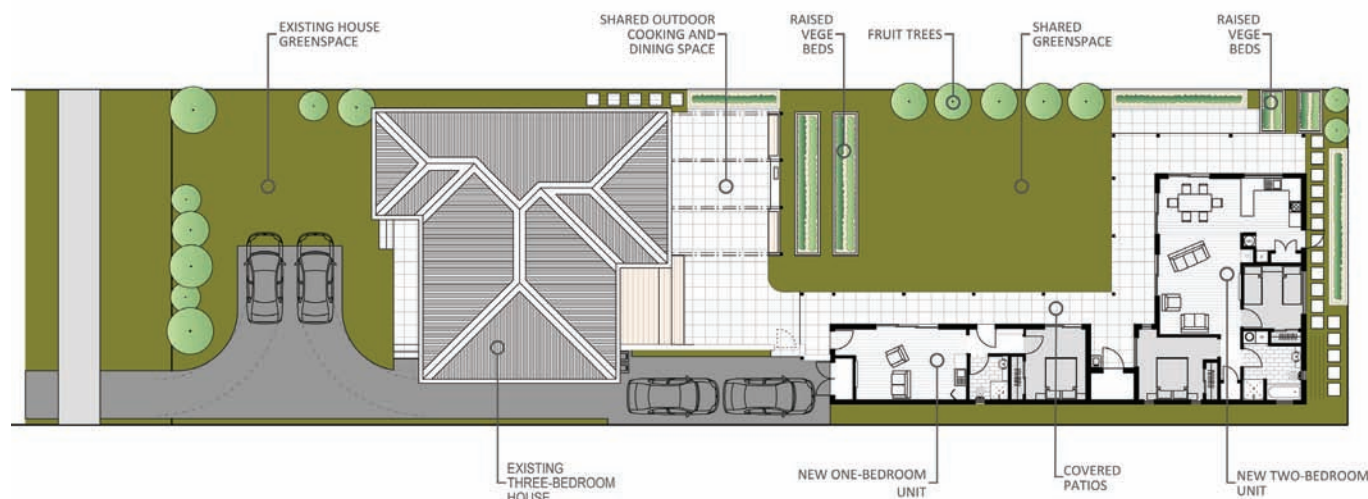
This project focuses on a typical 900 m² suburban Auckland site (16 m wide by 56 m long), which is typical of 1940s-60s 1/4 acre sections around Aotearoa New Zealand, and retains the existing single-storey 3-bedroom house while adding additional one bedroom and two bedroom single storey dwellings to accommodate up to 12 members of an extended whānau.

This design solution maintains the height and scale of the existing front house (and neighbouring houses) while arranging additional dwellings around a communal grassed area and covered outdoor dining area. Care has been taken to keep vehicular access and parking spaces (x4) to the south and separate from outdoor play areas. North- and west-facing roofed patios allowed for sheltered circulation between the existing and new dwellings while all dining areas focus out to the large north-facing grassed courtyard.

MULTI-GENERATIONAL / WHĀNAU HOUSING CONCEPT — OPTION 1

Retain existing three-bedroom house, build new two-bedroom unit and new one-bedroom unit connected by covered ways

7 Hikurangi Street, Te Atatū Peninsula used as a case study
Section size 908 m²



While the emphasis is on encouraging communal dining and outdoor activity both major dwellings maintain sunny private outdoor withdrawal areas.

While the one bedroom unit would be appropriate for a grandparent or young couple it would equally be suitable for a sole parent who is able to receive strong whānau support while maintaining a level of independence.

Raised-bed gardens and fruit trees help to maximise the productive use of yard areas while maintaining focal, easily supervised open space / tamariki play areas.

The provision of three-, two- and one-bedroom units in this design option allows for maximum flexibility in accommodating multiple generations and for changing occupancies over time.



DESIGN CONCEPTS SUBURBAN PAPA KĀINGA

Option #2

This project focuses on a typical 900 m² suburban Auckland site (16 m wide by 56 m long), which is typical of 1940s-60s 1/4 acre sections around Aotearoa New Zealand, and removes the existing single-storey 3-bedroom house and adds a 4-5 bedroom, two-storey house to the front of the site, a single-storey bedsit to the middle and a 4-bedroom (including mezzanine) two-storey dwelling to the rear, to accommodate up to 16 members of an extended whānau.

This option involves a two-storey gable design solution for the larger dwellings working with height in relation to boundary controls and arranging all dwellings around a communal grassed area and covered outdoor dining area.

Care has been taken to keep vehicular access and parking (x4) to the south and separate from outdoor play areas as well as ensuring that vehicles can turn around on site avoiding potential reversing accidents.

North- and west-facing roofed patios on the rear dwellings allow for sheltered circulation while all dining areas focus out to the large north-facing grassed courtyard.

While the emphasis is on encouraging communal dining and outdoor activity both major dwellings maintain sunny private outdoor withdrawal areas.

Raised bed gardens and fruit trees help to maximise the productive use of yard areas while maintaining focal, easily supervised open space / tamariki play areas.

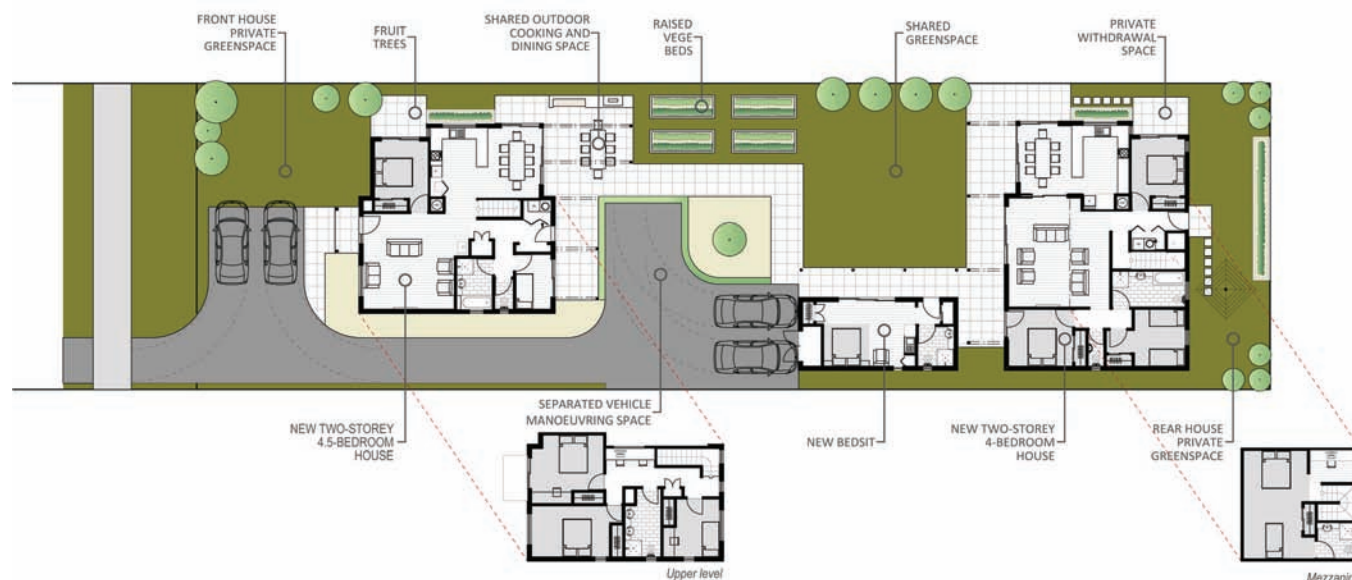
While the bedsit would be appropriate for a grandparent or young couple it would equally be suitable for a sole parent who is able to receive strong whānau support while maintaining a level of independence.



MULTI-GENERATIONAL / WHĀNAU HOUSING CONCEPT — OPTION 2

Replace existing three-bedroom house with new two-storey 4.5-bedroom house, build new two-storey four-bedroom house at rear and single bedsit unit connected by covered ways

7 Hikurangi Street, Te Atatū Peninsula used as a case study
Section size 908 m²



ADDITIONAL RESOURCES

Te Matapihi Website

The Te Matapihi website was launched in February 2014 and is a platform for dissemination of high quality information pertaining to Māori housing.

<http://www.tematapihi.maori.nz>

Te Keteparaha Mo Ngā Papakāinga - Māori Housing Toolkit

The Māori Housing Toolkit is a step-by-step guide designed to assist Māori to develop papakāinga proposals (development plan) on multiple owned Māori land. The definition of papakāinga development has been expanded beyond Māori housing in a Marae setting to include any land in the traditional rohe of tangata whenua that is developed for live, work and play, including but not limited to residential, social, cultural, conservation and recreation activities.

Production and implementation of Te Keteparaha Mo Nga Papakāinga (Māori Housing Toolkit) is an action of Smart-Growth. SmartGrowth is a strategy to sustainably manage growth in the Western Bay of Plenty. It is a joint initiative of Environment Bay of Plenty, Tauranga City Council and Western Bay of Plenty District Council with support from Tangata Whenua and community groups.

<http://www.westernbay.govt.nz/services/Te-Keteparaha-Mo-Nga-Papakāinga---Maori-Housing-Toolkit/>

Papakāinga Development Guide (Hastings)

The Papakāinga Development Guide was published in 2008; a joint project by the three agencies: Hastings District Council, the Māori Land Court: Takitimu, and Te Puni Kōkiri: Takitimu Region. It was identified that the three agencies shared the same objective to assist Maori to reoccupy their ancestral land, but their respective processes did not harmonise and this presented an obstacle to applicants.

The agencies agreed to harmonise their processes through the production of the Papakāinga Development Guide. The guide is laid out as a workbook to cover each stage of a papakāinga development project, thus: whānau (getting the approval and viable relationships within the collective ownership of land); whenua (the legal forms under which the land may be occupied); and, where (the consents required – building, waste water management, for example).

<http://www.hastingsdc.govt.nz/papakāinga-development-guide>

