Relocating Tokelau:

Recreating Island Villages in the Urban/Suburban Settings of New Zealand

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A 120-point thesis submitted to the Victoria University of Wellington
in partial fulfilment of the requirements for the degree of Master of Architecture (Professional)

Victoria University of Wellington, School of Architecture and Design

2015

Abstract

Many Pacific Island communities face having to leave their homeland to other countries due to effects of climate change, extreme weather events, rising sea levels and the subsequent economic impacts. Tokelau, a country comprised of three small atolls in the South Pacific represents one of these effected communities. The extreme cultural shift from an incredibly isolated and densely populated environment where collective culture, elder governance and multigenerational living thrive, to New Zealand's capitalist economy and individualistic family living has considerably challenged the traditional Tokelau way of living. The aim of the thesis is to develop a greater understanding of the role that architecture can play in facilitating; successful cultural relocation and preservation, and the strengthening of migrated community groups in foreign contexts. The thesis argues that the essence of a Tokelau village can be captured in the design of a Tokelau community centre in the suburban setting of New Zealand through; understanding and interpreting the culture and lifestyle of the Tokelau community in New Zealand through participatory design; designing hybrid Tokelau architecture which draws from traditional Tokelau construction, contemporary design and the built environment of New Zealand; embodying sociocultural Tokelau principles in design; and lastly, designing resilient community facilities for collective use that accommodate the cultural practices of the Tokelau community and the desires of all age and gender groups.

Acknowledgements

First I would like to thank my family, friends and colleagues who have provided continuous support and positive encouragement throughout my thesis and university life.

Secondly, I would like to acknowledge my awesome supervisor, Jacqueline McIntosh, who has given outstanding dedication, guidance and wisdom.

Lastly, I would like to acknowledge the Tokelau Community: Te Umiumiga a Tokelau Hutt Valley for their generosity in sharing their culture and knowledge. Their contribution has provided invaluable research for my thesis.

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Fig. 1.1.
Location
of Tokelau

1.0 Introduction

1.1 Migration of the Tokelau Community

Tokelau, a small country of three atolls in the South Pacific represents one of the many cultural groups forced to migrate into foreign settings due to the effects of climate change and subsequent economic impacts. “With the land about one metre above sea level, if there is continued melting of the polar ice due to global warming, Tokelau will be the first Pacific Island country to disappear under the sea” (IRENA 3). The Intergovernmental Panel for Climate Change identified in their fifth assessment report that sea levels could rise by as much as one metre by 2100, which suggests the atolls of Tokelau could be largely submerged in less than 100 years (Stocker 1204). With the growing threats and limited opportunities on the islands, presently, today over 70% of Tokelau population have migrated to New Zealand (Statistics New Zealand).

Tokelau is one of the most remote countries in the world and this isolation has resulted in a robust culture and community lifestyle, which is reflected in the living conditions of the migrated

Tokelau communities in New Zealand. In New Zealand, the largest Tokelau community groups are situated in the low-income suburbs of Wellington in the Hutt Valley and Porirua. There are three main groups in Wellington, which mainly represent each atoll and each group has a dedicated community centre for gathering and celebrating their culture. The Tokelau community is widely spread in the suburbs so opportunities for gathering other than the community centre or church are limited. With limited education or training available on the atolls, the Tokelau community have been ill prepared to succeed in the capitalist economy of New Zealand. As a result, they represent one of the most socio-economically deprived communities in New Zealand with unemployment rates almost three times that of the New Zealand population (Statistics New Zealand).

Fig. 1.2.
The Three Atolls of Tokelau

Fig. 1.3.
Distance Measured by Travel Time

Fig. 1.4.
Tokelau: Nukunonu Atoll Current Contours

1.2 Designing for a Migrated Tokelauan Community

Architecture can play a significant role in accommodating the cultural needs of migrants and allowing these groups to evolve and integrate successfully in new contexts. However, the architectural challenge is to not only understand how design can capture and strengthen a culture and accommodate past traditions, but how it can adapt to support the future and cultural change in the new environment.

Te Umiumiga a Tokelau Hutt Valley, the Tokelau community of the Hutt Valley, Wellington, represents one of the large migrated Tokelau groups affected by cultural relocation. The elders of this community approached the School of Architecture seeking assistance to redesign a community

centre, which captures the essence of a Tokelau Village. The community had purchased a series of manufactured buildings in the Wellington suburb of Naenae, which they currently use as a community centre, however the complex is poorly suited to their culture and way of life. To understand how to design for a large migrated Tokelau community, the research introduces participatory design¹ processes with the community to understand their desires, lifestyle, culture and the role of the Tokelau community centre in New Zealand.

Fig. 1.5.
Location of Tokelau
People in New Zealand
Fig. 1.6.
Tokelau Communities in
Wellington

¹ *Participatory design* is also known as community planning, community architecture, community development, community participation, social architecture, social design and architecture for people (Toker 309).

1.3 Thesis Question and Aims

Research Question

How can the essence of a Tokelau village be captured in the design of a community centre in the suburban setting of New Zealand?

Aims

- To design a cluster of buildings to facilitate cultural relocation, preservation, and community strengthening of the migrated Tokelau community group (Te Umiumiga a Tokelau Hutt Valley) in the foreign context of suburban New Zealand.
- To design facilities which embody Tokelau architecture, culture and values while exhibiting contemporary design techniques and construction.
- To design resilient² community facilities for collective use that accommodate a wide range of programs and uses fitting for all age and gender groups of the Tokelau community.
- To strengthen community and communicate architectural ideas to diverse cultural groups through collaborative design with the Tokelau community.

² *Resilience* refers to durable architecture that is climatically and environmentally appropriate, well used, and flexible for accommodating activities and future programs during its lifecycle.

1.4 Design Methodology

The research began with a critical review of several bodies of literature including theories and practices from sociology, ethnographies, and architecture and design that aligned with the design problem, research question and aims identified in the introduction.

Case studies were subsequently investigated to understand how other architects and designers have addressed similar design problems.

Next, the existing site of the Tokelau community centre was analysed to understand the overall context, and the opportunities and limitations of the site.

Multiple participatory design processes were then explored to learn the Tokelau culture and its integration in the New Zealand context, and to also check understanding. These processes were used throughout the research however they have been condensed into a single chapter.

Lastly, an iterative design process was used to thoroughly test ideas to meet the requirements of the aims, research question and established design criteria. Iterative testing of design ideas through; participatory design; drawing; planning; master planning; and 2D and 3D modelling were undertaken, and then evaluated to identify the strengths and weaknesses of each idea. At key stages, designs were formally reviewed by a number of architectural practitioners and New Zealand and international academics. Their feedback combined with my own design reflections informed the subsequent stages of the design development.

Design ideas were thereby developed, refined and integrated in the final design of the Tokelau community centre. The scope of the research is limited to the architectural design of an existing site and community. While conscious of cost, the focus of the thesis is designing for a migrated cultural community rather than creating an economic reality.

Participatory Design Process

Fig. 1.7.
Participatory
Design Process

Elders

He toeaina ke i te mulivaka: An elder to be in the canoes stern

Participatory design was employed to provide the framework for understanding and interpreting the Tokelau culture into architecture. Widely accepted for collaborative design with complex communities, participatory design was used to address the significant challenge of understanding the culture of the Tokelau community in New Zealand. The author is not of Tokelau or Pacific Island descent and much of the culture remains unknown due to limited publications and literature. Information gathering was further complicated by cultural change resulting from the relocation to New Zealand.

Challenges included addressing the established hierarchical social structure of the Tokelau community where age reflects the hierarchy of authority. “Anyone older is entitled to command anyone younger, and the younger person is expected to comply” (Huntsman and Hooper 46). This is a long-standing tradition that is still predominant in New Zealand. As shown in Figure 1.8 there is a distinction between elders, men, women, youth, infants and guests/outside. The process of attempting to understand all the community groups’ desires is complicated as the elders, who are the authority and voice of the community, are finding it difficult to engage and represent the younger New Zealand generation with the growing cultural division.

These challenges were tackled through discussion and review with a wide range of individuals including: a number of architectural practitioners who have designed in the Pacific, highly educated academics, the former High Commissioner of Tokelau, senior government officials, ethnographers, museum officials, artists, photographers, and a vast number of Tokelauans in Wellington. Additionally, the process involved facilitating and attending many Tokelau events including: numerous community meetings and workshops, book launches, conferences, public celebrations and Tokelau Youth Camps.

Fig. 1.8.
Tokelau Village
Social Structure

1.5 Thesis Structure

Fig. 1.9.
Thesis Structure

Fig. 2.1.
Tokelau Atoll

2.0 Literature Review

Culture, identity, memory and its role in vernacular and hybrid architecture is a heavily researched field that plays a significant role in successful integration of migrated communities such as the Tokelau community. The concept of a community centre is crucial to the cultural sustainability of these groups. To capture the essence of a migrated cultural community, it is first important to understand the culture of Tokelau and the context of their homeland from which they came. It is equally important to hear the voice of the migrated community to understand their current situation and their desires. Therefore, participatory design has been examined to understand its role and the benefits that might be achieved as well as how it should be implemented for complex cultural groups.

2.1 Culture, Identity and Memory in Architecture

Fig. 2.2.
Cultural Identity

This section delves into cross-disciplinary perspectives of culture, identity and memory and investigates the architectural debate of cultural identity in vernacular and hybrid architecture.

Cultural Identity

The understanding of cultural identity is important when designing for a relocated Tokelau community. Stuart Hall, a renowned cultural theorist and sociologist, suggests there are at least two different ways of thinking about cultural identity. The first defines cultural identity as a collective entity that is embedded in other ‘superficial’ or ‘artificial’ entities, which people with a shared history and ancestry hold in common. (Hall 223). His second position defines cultural identity as a concept in the state of flux, which constantly evolves from ever changing events of the past, present and future (Hall 223). The two ideas implicate cultural identity as a collective entity that is ever evolving and an embodied artefact.

Memory and Place

Marc Treib, a well-published professor of architecture and historian, explains how the foundation of cultural identity is moulded through collective memory and space (64). He describes place as a space that you hold in your mind and that this capacity for remembering is what accrues significance (64). “Through incorporating elements of common experience, they help in the development of shared conceptions that bind our thoughts together” (Treib 64). He argues that there are two ways that spaces become memorable. The first is through “formal structures with special coherence or power” and the other is through “events that take place rooted to a location” (Treib 64). Similarly, Rahul Mehrotra, a principal of architecture and professor of urban design, agrees with this perspective through his research of the Indian culture. He describes a large part of the cultural landscape of the country is comprised of events and often these events become the loudest voices both auditory and visual (221). The authors

maintain that activities, events, place of performance and power structures are significant for establishing and defining a culture. Treib also concurs with Hall that memory is not a static entity.

According to Treib, the concept of memory is also an entity in flux, which aligns with Halls second view of cultural identity. “Memories remain embedded in the form, remain to be unearthed, read, and decoded - however imperfectly or incorrectly. Memories may metamorphose into meaning over time. But to these must be added the memories triggered by the built world that simulates accumulation or recall (Treib xi-xii). This idea emphasises the importance of capturing culture through significant architectural elements, which signify the past but can also evolve with the present and future.

These theories suggest that cultural identity is inseparable from architecture and the built environment and that it is not just rooted in the past. Instead, it evolves over time.

Therefore, architecture for a migrating community must successfully adapt to the new and evolving the cultural, environmental, political and social context while retaining significant elements and customs from the previous environment.

Fig. 2.3.
Vernacular Architecture
of Tokelau

Vernacular Architecture and Hybridisation

A popular area for research in cultural identity in architecture is the study of vernacular architecture³ (Arboleda). Vernacular architecture is commonly defined as a category of structures that have evolved as a direct long-term adaptation to the environmental, social, cultural, technological and historical context but without an architects' intervention (Asquith and Vellinga 23-24). Vernacular architecture encapsulates the 'traditional' lifestyle of a place and the belief, identities and values of a culture (Asquith and Vellinga 23-24). However, vernacular architecture has been criticised as static, neglecting the consideration of an active and ever-changing process (Asquith and Vellinga 94).

Evolving theories of contemporary vernacular architecture have focused on

challenges through hybridisation and intercultural exchanges (Hernandez 77). Chris Abel, a well-published architectural writer, theorist and educator describes hybrid architecture as a process where new architectural styles are produced from the combination of different architectural styles to respond to new contexts (159). Lindsay Asquith and Marcel Vellinga, significant researchers of vernacular architecture, also advocate this concept of contemporary hybrid vernacular architecture:

Often combining traditional elements with modern ones ... are nonetheless distinctive cultural artefacts which, as authentic expressions in their own right, are uniquely related to particular cultural and environmental context in which they are found. In that sense they are still vernacular, or in any case the outcome of the local

³ The terms: folk, indigenous, regional, primitive and traditional are also used to describe vernacular architecture.

vernacularization of modernity
(94).

Hybrid architecture not only addresses the challenges of expressing cultural identity in architecture but it also allows the architecture to adapt to the shifting environment (Abel 162). Many influential architects such as Glen Murcutt, a British born Australian architect and sole practitioner, practice this concept of hybrid architecture. Murcutt argues hybrid vernacular architecture must be “responsive to place, culture, and technology” and represent “an architecture of response rather than imposition” (Heath 175).

Hybrid vernacular architecture (combining traditional and contemporary elements in new contexts) is significant for creating a successful environment for the migrated Tokelau communities in New Zealand, as it allows for the integration and growth of the community in the new context while supporting their old traditions.

2.2 Cultural Sustainability and the Community Centre

Fig. 2.4.
Four Pillars of
Cultural Sustainability

The community centre has an important role for the cultural sustainability of migrated groups in foreign contexts (Nasser 72).

Zhang defines cultural sustainability as the adaptation and transmission of beneficial parts in a community's material (artefacts, artworks, buildings and sites) and immaterial/spiritual (beliefs, ideas, traditions, and practices) culture that are advantageous for the development of a group's present and future generations (31). He describes four significant pillars, which encapsulate cultural sustainability. The first pillar is environmental responsibility, which leads to ecological design. The environmental contexts create connections between people, history and place (Orr, qtd. in Zhang 24). The second pillar is economic viability of a building, site or material object. David Throsby elaborates that the real economic value lies in its cultural value to the community; in the aesthetic, spiritual, symbolic and other attributes that transcend the economic measure (Zhang 25). The third pillar is social equity and

emphasises the provision of cultural infrastructure that allows for cultural celebration, exchange, expression, and participation. All of which promote creativity, and the health and wellbeing of the community (Zhang 26-27). The last pillar is cultural vitality, which refers to creativity, diversity, human wellbeing and innovation; to create a meaningful built environment, which embodies a culture.

Increasingly cultural community centres are an integral part of cultural sustainability for migrated communities. They provide new cultural infrastructure and gathering areas for migrant groups to practice their culture in the foreign context (City Network of Canada, qtd. in Zhang 27). Duxbury and Jeannotte emphasise the importance of the creativity and design of these places as these ultimately contribute to the social and cultural transformation of the communities (qtd. in Zhang 27).

There is a clear distinction between general community centres and cultural community centres. General community centres are used by the public and usually accommodate: care facilities; educational facilities like libraries; teaching rooms and pre-school provision; large and small gathering spaces for events; and recreational facilities like sports areas and gyms (Smith). However, cultural community centres are purpose-built for migrant groups to maintain their ethnic identity and support their sociocultural needs in the foreign context (Bekerman and Ezra). The role and programs of the cultural community centre are determined by the needs of the migrated groups.

For Te Umiumiga a Tokelau Hutt Valley, the role of their community centre is to function as a cultural community centre. It provides an opportunity and gathering space for their culture and traditions of village life to prosper, in the foreign context of New Zealand. The design of the Tokelau community centre must accommodate cultural infrastructure

and address the pillars of cultural sustainability to create a successful environment for the migrated Tokelau community.

2.3 The Culture of Tokelau

To address the request for a community centre that captures the essence of a Tokelau village it is necessary to understand the customs of village life and community on the atolls. Two of the leading researchers of Tokelau culture are Judith Huntsman a world expert in anthropology, and Antony Hooper, an independent researcher of Polynesia. According to Huntsman and Hooper, there are three significant principles that encapsulate the Tokelau culture; *maopoopo* (unity); *inati* (equality and sharing); and *faitu* (friendly competition and sides). According to Vai Lui, a spokesperson and representative of Te Umiumiga a Tokelau Hutt Valley, these principles are still relevant to the Hutt Valley Community.

Maopoopo

The most significant Tokelau principle is the idea of *maopoopo*, which encompasses all life in the village. *Maopoopo* is best described in terms of unity, relationships, reciprocity and participation (Huntsman and Hooper 41). Lui elaborates:

Maopoopo is a guiding principle of Tokelau culture. The principle is described as a unity of a common purpose and harmony. Maopoopo is cultivated through family and wider community relationships and responsibilities; from community meetings and gatherings, hosting diplomatic visits, recreational activities like sports, fishing expeditions, church, and village/ national days of significance (Lui).

Fig. 2.5.
Cultivating Maopoopo through
Community Gatherings

In architecture, this principle emphasises the importance of engaging the whole community (elders, men, women, youth and infants) in design to create a positive environment that cultivates *maopoopo* through the activities and use.

Inati

Another important Tokelau principle is *inati*, which is best interpreted in terms of sharing food and resources, collective responsibility and equity (Huntsman and Hooper 76).

Inati is the Tokelau cultural system of collective responsibility through the contribution and distribution of village resources to ensure that every Tokelau person and their families are given an equitable share. (Te Umiuiga a Tokelau Hutt Valley).

This concept is commonly associated with communal fishing, collective plantation harvesting and the equal distribution of food; however, it is also associated with looking after the vulnerable (Lui). All members of the community whether young or old, male or female, are worth the same *inati* value (Huntsman and Hooper 76). Architecturally, this concept highlights the importance of equality in addressing the desires of all parties and also creating an environment that cultivates *inati*.

Fig. 2.6.
Cultivating *Inati*
through the Sharing of Food

Faitu

The last significant principle is the concept of *faitu*, which is best described in terms of sides, village rivalry, and patriotism (Huntsman and Hooper 83). Lui explains:

Each Tokelau village is divided into two sides organised by territory, known as Faitu. Faitu plays a significant part of Tokelau village life emphasising the importance of camaraderie, good-natured competition, and team enthusiasm, which keeps spirits high in the village. Kilikiti (Cricket) is one of the main village sports played with the teams coming together with a display of team uniforms, exchange of team banter, cultural dance and singing, and punishment to losing teams (Lui).

In architecture, this idea can be cultivated through providing activities and spaces for ‘good-natured competition’ to occur. For example, providing areas for singing, dancing and spectators and also introducing sports and recreation in the design.

These significant principles embody much of the Tokelau culture and way of life on the atolls so they must be adapted and integrated in design of the community centre.

Fig. 2.7.
Cultivating *Faitu* through
Village Games

2.4 Participatory Design

Much of the Tokelau culture in New Zealand and their acclimatisation to the western lifestyle remains unpublished in the public realm. The traditional role of design where users' needs are transferred to the designers and then to downstream experts (Reich 165) is therefore ineffective for working with the Tokelau community. Much of the Tokelauans' desires and cultural practices in New Zealand are imbedded deep within the community, in the memory of the elders, men, women and youth (includes infants) and not in a handful of individuals

Participatory design is widely accepted, as an effective methodology for designing with diverse community groups like the Tokelau community and this method has been discussed on and off since at least the 1960s (Reich 165). Henry Sanoff, a well-recognised pioneer of participatory design, defines participatory design as a method “where the user is involved in the process of design decision-making” (i). While the methodology has developed over the past 50 years the original concept of participatory design remains much the same (Toker 320).

Dr Rachael Luck, a well published expert in participatory design argues: in participatory design, “learning is a two-way process: that participants will learn more about design and the purpose of an event, to have a better understanding of their situation, while designers learn about the participants' situation” (220). In participatory design, the role of the designer is to direct their energy and creativity in raising the level of awareness of the clients/users in discussion to generate a solution; the designer provides views, technical information and direction to the clients/users, just as the clients/users express their views and contribute their knowledge (Sanoff ii).

Participatory design is argued to have many benefits:

Firstly, from the social point of view, participation results in a greater meeting of social needs and an increasingly effective utilisation of resources at the disposal of a particular community. Secondly to the user group, it represents an increased sense of having influenced the design decisions made. Thirdly, to the designer it represents more relevant and up-to-date information than was possible before (Sanoff i).

Participatory design therefore provides an effective strategy for addressing the desires of the Tokelau community and for the designer to learn about their culture and traditions for design. This method also aligns with the Tokelau cultural concept of *maopoopo* where ‘unity of common purpose and harmony’ is cultivated through the collaborative process strengthening both the design and the community as a whole.

Dr Hamid Shirvani, an internationally renowned scholar of architecture, urban design and planning, separates participatory design into two major categories: the advocacy approach and the facilitator approach (qtd. in Toker 311). The facilitator approach is particularly appropriate for collaborative design with complex communities like the Tokelau community. The facilitator approach uses a range of participatory design methods for both problem definition and design solution generation with the aim to raise the users’ awareness of alternatives (Toker 311). Sanoff also defines facilitation as “a means of bringing people together to determine what they wish to do and helping them find ways to work together in deciding how to do it” (qtd. in Toker 311).

The participatory design tools and techniques that correspond with the facilitator approach are many; ranging from basic surveys, conferences, interviews, neighbourhood meetings, review boards, task forces and workshops, to more complex techniques such as design games, image comparisons, rating scales, three dimensional modelling and trade-offs. These methods are not catered to a specific group, situation or design process; however, Yoram Reich defines a good participatory design approach as an on-going collaboration process that evolves with the design throughout its entire lifecycle (168).

The facilitator approach provides a strong methodology for collaborative design with Tokelau community for problem definition, design solution generation, and community strengthening.

2.5 Summary

To design a community centre that captures the essence of a Tokelau village in the suburban setting of New Zealand, the design must reflect the past and encapsulate the Tokelau culture and the collective communities' desires, identity and lifestyle in New Zealand. The design should draw from both traditional Tokelau and contemporary architecture to reflect a new hybrid Tokelau architecture, which harmonises with the suburban context of New Zealand. Additionally, the design must provide cultural infrastructure for future Tokelau practices integrating cultural sustainability principles. Finally, the architecture must embody the Tokelau cultural principles of *maopoopo* (unity) *inati* (equality and sharing) and *faitu* (friendly competition and sides) and address the desires of all ages and gender groups. As an outsider of the Tokelau community, to design with the culture, lifestyle and values of Te Umiumiga a Tokelau Hutt Valley, participatory design methods (more specifically, the facilitator approach) have been employed.

Fig. 3.1.
Tokelau
Canoe (Vaka)

3.0 Case Studies

To understand how similar issues have been addressed in practice, a critical review of key precedents has been undertaken. Each case study highlights different approaches of embodying the essence of a culture in architecture.

Four key attributes have been formulated from the four pillars of cultural sustainability to analyse the success of the designs:

- *Resilience* aligns with the first pillar of *environmental responsibility* and is analysed by: the durability and climatic and environmental appropriateness of the architecture and construction, and the flexibility of the structure to accommodate activities and future uses during its lifecycle.
- *Contemporary* aligns with the second pillar of *economic viability* and is assessed by: its relevance to modern society and architecture including construction techniques, technology, lifestyle, program, and harmony with place.
- *Community* aligns with the third pillar of *social equity* and is examined through: the degree in which the architecture strengthens community by providing income, facilities, resources, and space for ceremonies, education, gatherings, recreation and spiritual activities.
- *Embodied culture* aligns with the last pillar of *cultural vitality* and is analysed through: the integration and expression of culture in architecture including: arts and crafts, cultural activities, philosophies and beliefs, and social structure in the details, form/structure, landscape and contexts, layout, materials and program.

Each case has been evaluated on a radial chart to show the degree to which the design achieves cultural sustainability.

Fig. 3.2.
Siheyuan

3.1 Siheyuan, Courtyard Housing Beijing, China / 1122 B.C to 256B.C

Siheyuan, the courtyard housing of Beijing is an example of one of the oldest dwelling typologies encompassing 3000 years of accumulated cultural wisdom and building knowledge incorporated with their philosophy of Feng Shui.

The exterior form aligns with cultural and religious ethics, which advocate enclosed space; the confined living arrangement separated from the exterior environment; and disconnected spaces emphasising individualism and self-awareness. The form and layout also permits the culture to flourish as it embraces the concept of extended family living and the celebration of cultural activities.

The Siheyuan courtyard housing is a useful case study for the design of the Tokelau community centre as the architecture demonstrates how form, program and spatial layout can be derived from lifestyles, cultural beliefs and social structures. Its significance lies in its strong embodiment of culture through numerous architectural elements for a private building of collective extended family living that has lasted for millennia.

Fig. 3.3.
Siheyuan Layout
Fig. 3.4.
Social Structure in Plan

Fig. 3.5.
Siheyuan Courtyard

Key Ideas

- Spatial layout drawn from cultural beliefs
- Spatial layout drawn from social structure and hierarchy
- Environment affected the layout of spaces to reflect the lifestyle and living arrangements of the culture

Fig. 3.6. Cultural Sustainability Analysis

Fig. 3.7.
Jean-Marie Tjibaou
Cultural Centre

3.2 Jean-Marie Tjibaou Cultural Centre
Renzo Piano / Nouméa, New Caledonia / 1998

The Jean-Marie Tjibaou Cultural Centre is a significant community complex, which celebrates the traditional culture of the Kanak civilisation and strengthens the connection between their history, people and place. Traditional Kanak construction draws upon nature and the temporal notion of the vernacular and is expressed through the building, construction patterns and building materials. The landscape is also a significant element connected with the traditional Kanak buildings and defines the site of the cultural centre.

The building uses local iroko timber as cladding to imitate the fibres of the traditional Kanak hut roofs. Contemporary materials of glass, steel and bamboo have also been integrated in the construction. The double-shelled construction has been adapted from the Kanak primitive building systems where wooden ribs and beams support the roof, however these wooden members have been rescaled, elongated and curved. The shell form was also adapted to suggest “similarity with the wind-blown vegetation” (qtd. in Asensio 108) sheltering from sea winds as well as filtering light and demonstrating passive ventilation principles.

Fig. 3.8.
Traditional Kanak Hut

Fig. 3.9.
Interpretation of Traditional Kanak Construction
Fig. 3.10.
Embodiment of Traditional Site Contexts

Fig. 3.11.
Jean-Marie Tjibaou
Cultural Centre Interior

The Jean-Marie Tjibaou Cultural Centre is a useful case study as an experiment of a cultural centre in its homeland. The design demonstrates how culture can be adapted and integrated with contemporary architecture, construction, climate, context and program to generate a hybridised cultural complex not reflective of a tasteless folklore imitation. While this complex was in the country of origin, the design reflects the desire to preserve heritage in a contemporary context.

Key Ideas

- Embodies beliefs and philosophies of culture in design
- Embodies characteristics of traditions through site location and landscaping
- Draws contemporary materials from imitations of old materials
- Adapts new construction techniques from primitive building systems
- Adapts new forms from traditional/vernacular buildings
- Integration of contemporary construction to address modern design challenges

Fig. 3.12.
Cultural Sustainability Analysis

Fig. 3.13.
Tucson Chinese
Cultural Centre

**3.3 Tucson Chinese Cultural Centre
The Architecture Company / Tucson, Arizona,
United States / 2005**

The Tucson Chinese Cultural Centre is a contemporary community complex built to accommodate the traditions and cultural heritage of the immigrant Chinese community in Tucson, Arizona.

The building is an example of hybrid architecture incorporating traditional Chinese and contemporary design elements. The entrance features a high tower clad in Zinc that references traditional entrances of Chinese architecture derived from ships. In addition, the building uses symbolic Chinese design elements including red bricks (which are associated with fortune and joy) and circular moon gates. Cultural display areas have also been incorporated throughout the complex.

The program accommodates traditional and contemporary programs for all ages of the Chinese community. A meditation and vegetable garden allows the Chinese seniors to grow traditional vegetables and the playground and basketball court is designed for the youth. The complex also houses a commercial kitchen, courtyard, library/conference room, lobby/recreation area, multi-purpose room, flexible classrooms, meeting rooms and offices.

Fig. 3.14.

Sheltered Basketball Court

Fig. 3.15.

Using the Basketball Area for Celebrations

Fig. 3.16.

Interior Cultural Display Areas

Fig. 3.17.
The Courtyard

The Tucson Chinese Cultural Centre is an important case study for the design of the Tokelau community centre as it reflects the design of a contemporary cultural facility built to accommodate the needs of a migrant community in a foreign context.

Key Ideas

- Integration of traditional symbolic elements and cultural display areas in contemporary design
- Integrating of traditional programs for cultural activities with new programs to accommodate the evolving needs and context
- Providing activities for all ages of the community

Fig. 3.18.
Cultural Sustainability Analysis

Fig. 3.19.
Nga Purapura

3.4 Nga Purapura
Tennent + Brown / Wellington, New Zealand / 2012

Nga Purapura is a contemporary educational sport facility designed to foster the physical wellbeing of the Maori community in Otaki, New Zealand. The architecture embodies a holistic model of Maori health and philosophy, ‘Te Whare tapa Whā’ (the four sides of the house), as a design strategy to capture the Maori culture and community. The conceptual model addresses four principles for a balance in wellbeing: the mental and emotional (hinengaro), the physical (tinana), the social (whanau) and the spiritual (wairua).

This idea is first evident in the façade with the folded roof forms and their associated spaces. Each division represents a principle of the philosophy. Additionally, the kakano (seed), the pod located in the atrium of the building is a significant design element that embodies the spiritual concept and represents the heart of the building. The element was derived from a translation of the Maori community proverb: “I will never be lost, the seed which was sown from Rangiataea” and the unique space provides a place of tranquillity and reflection (Tennent + Brown).

The interior of the large concrete sports hall is also a significant space where Maori culture is captured in the design. Tāhuhu, the significant ridge beam of the traditional Maori community house has been integrated in the hall to support the roof structure. The tensile structure hanging off the beam mimics a Maori waka or canoe paddle (Fig. 3.23). The stepped acoustic panels replicate the poutama tukutuku panels (Maori pattern) symbolising the process of climbing for knowledge (Fig. 3.23).

Fig. 3.20.
The Kakano (Seed Pod)

Fig. 3.21.
Interpretation of the Four Maori Philosophies in Design

Fig. 3.22.
Integration of Traditional Maori Ridge Beam

Fig. 3.23.
Interior of the Sports Hall

The Nga Purapura is an important case study for the design of the Tokelau community centre as the design demonstrates how cultural philosophies and traditional art can drive contemporary architecture and design. The buildings significance lies in its design of contemporary hybrid architecture to advance the cultural and historical links of a local minority group.

Key Ideas

- Architectural layout and form drawn from new interpretations of cultural philosophies and proverbs
- Integration of art and cultural artefacts in the design
- Integration of traditional architectural elements in new spaces

Fig. 3.24.
Cultural Sustainability Analysis

3.5 Summary

Each case study illustrates a different approach to embodying culture in architecture and addressing the four pillars of cultural sustainability. The contemporary examples address similar concerns of design, which attempts to adapt and evolve a cultural group in a changing context.

Fig. 4.1.
Naenae Town
Centre

4.0 Site Analysis

4.1 Naenae

The site of Te Umiumiga a Tokelau Hutt Valley's community centre is located in Naenae, Lower Hutt, Wellington, New Zealand.

Naenae has a population of approximately 8000 people. While the population growth of Naenae is higher than the average of Lower Hutt City, the number of households has been increasing slower than the suburbs population growth (Viggers 2). The suburb is also more ethnically diverse than the national average with approximately 48% Maori and Pacific People compared to the New Zealand average of 21.5% (Viggers 20). It is one of the highest socio-economically deprived suburbs with a higher percentage receiving government benefits, as well as lower educational qualifications and average household incomes than national averages (Viggers 2-3). There are many households occupied by extended families with insufficient space and poor living conditions (Viggers 64).

Fig. 4.2.
Map of Naenae

Fig. 4.3.
Map of Areas in Naenae

Fig. 4.4.
Location of the Site
and Amenities

Fig. 4.5.
Naenae Town
Centre

Fig. 4.6.
Naenae
Recreation:
Olympic Pool

Fig. 4.7.
Naenae General
Business Area

Fig. 4.8.
Naenae
Residential Area

Internationally renowned architect and town planner Ernst Plischke designed the neighbourhood business centre to be a thriving environment with many small businesses, health and social services, recreation areas, a town square, a community hall and good integration of public transport. However, the suburb is not a thriving environment due to a large number of immigrant communities inhabiting the suburb with low socio-economic status (Bowman).

City council planners are seeking to revitalise the area and promoting greater community cohesiveness through the support of projects such as community gardens, community patrols, festivals, and education programs for advancing job-skills, finance, health, sports and youth support (Viggers 4).

Fig. 4.9.
Naenae Railway

Fig. 4.10.
Neighbouring Areas

4.2 The Tokelau Community Buildings

Fig. 4.11.
The Tokelau
Community
Buildings

The existing Tokelau community centre is a flat site surrounded by single-storey light industrial businesses. The neighbouring light industrial buildings are basic steel and concrete sheds with gable roofs and neutral colour tones. They lack character and distinctiveness and there is heavy car parking in front of these facilities. The area is not pedestrian friendly and lacks distinctiveness, identity and vitality.

Character

Fig. 4.12.
Neighbouring
Streets

North: Looking Away from Site

- Trees concealing train track with views of hills above the tree line in the distance.

Looking Towards Site

- High traffic road with views into community centre blocked by the tree line. Neighbouring wooden residential buildings with hip and valley roofs.

East: Looking Away from Site

- Light industrial concrete and steel warehouses with gable roofs and car parking in front.

Looking Towards Site

- Small streets with on-street car parking. Views into the community centre with car parks partially blocked by trees.

South: Looking Away from Site

- Light industrial concrete and steel warehouses with gable roofs. Neighbouring residential buildings. Views of hills above buildings in the distance.

Looking Towards Site

- Neighbouring small businesses with gable and hip roofs.

Environmental Conditions

Fig. 4.13.
Environmental
Conditions

0 25m

District Plan Regulations

The site is located in the General Business Activity Area of the Hutt City District Plan (6A) and is categorised as a place of assembly. The area accommodates a mix of commercial and industrial activities, which are incompatible with other areas. It also contains non-industrial activities such as training facilities, conference centres and places of assembly. The Tokelau community centre also has Marae status and falls into the Community Iwi Activity Area of the Plan (10A). In general, the site classifications impose very few restrictions on design.

Fig. 4.14.
District Plan
Regulations

Existing Buildings

Courtyard

- Used for outdoor cooking and to accommodate for the small kitchen in the hall
- Socialising area
- Partly sheltered but still largely exposed to the elements
- Lacks character and cultural expression

Youth Centre

- Reuse of a large light industrial warehouse, steel and concrete construction
- Single large volume, with no windows
- Rarely used for the youth
- Cold and dark space filled with storage
- Lacks character and cultural expression
- Hazardous asbestos drop ceiling and blocking skylights
- Poor thermal insulation

Workshop (Leased Building)

- Light industrial warehouse, steel and concrete construction
- Generates revenue for the site but not used by the Tokelauans
- Lacks character and cultural expression

Fig. 4.15.
Existing Buildings

Carpark

- Pedestrian unfriendly
- Takes up over one third of the site

Community Hall

- Wooden construction
- Too small for large gatherings and events
- Kitchen much too small and underutilised
- Funeral room too small
- Offices too small
- Lacks character and cultural expression
- Hazardous asbestos roof and leaking
- Toilets are old and poor
- Poor thermal insulation
- In poor condition

Cook House/Shed

- Wooden construction
- Required to accommodate for the small kitchen in the hall
- Relocatable
- Lacks character and cultural expression
- No water supply, yet used for cooking
- In poor condition
- Poor thermal insulation

Fig. 4.16.
Existing Buildings

4.3 Summary

The site has a number of positive attributes. There are many amenities and recreational activities in the immediate neighbourhood and the well-designed town centre is within walking distance. There is good transport access, low traffic and much on-street car parking around the site. Additionally, the site is flat and large, receives plenty of sunlight all year round and has few restrictions from the district plan.

There are also a number of undesirable qualities. The site is surrounded by light industrial and manufacturing businesses, which lack character and distinctiveness. Additionally, parking occupies the front of most businesses. The loud noises from the train to the north are undesirable. Also, the existing buildings on the site are industrial in nature and are in poor repair, low in permissible height and uninsulated. In summary, they lack vitality and functionality for their intended use and some contain hazards.

The site provides opportunity to potentially design with a blank site and increase the density. There is potential to design to the 12-metre height limit and capture views of the hills to the north and south of the site above the treelines and buildings. There is also opportunity for off-site car parking. Additionally, the design can contribute positively to the council plans.

Fig. 5.1.
Tokelau Day

5.0 Understanding the Tokelau Culture

The participatory design methods involved familiarised the participants with the purpose of the process and initiated communication for the designer to begin learning about their culture and desires. Learning the Tokelau culture and checking understanding became integral to further research providing a platform for strengthening community through collaborative learning and working towards a common goal. To understand the role of a Tokelau community centre, it was necessary to understand the sociocultural activities and processes taking place in their existing community centre. With this acquired knowledge, the last step was to generate programs with the Tokelau community to address the groups' future desires for their community centre design.

5.1 Introduction to the Tokelau Community

A communication wall was set up with information cards about the community members and the university. General information was acquired about members of the community including hobbies, skills, public involvement and their home suburb through informal interviews.

Fig. 5.2.
The Author with the
Tokelau Community

Fig. 5.3.
Setting up the Communication Wall
Fig. 5.4.
Information Cards Gathered from the Community

5.2 Learning the Traditional Tokelau Culture and Checking Understanding

Museum Exhibition

The next milestone involved collaboratively designing a public exhibition in the community gallery in the Pataka Art + Museum with the Tokelau community during the Wellington Arts Festival. This participatory design strategy sought to discover, design, exhibit and obtain feedback on the important aspects of the Tokelau culture. The theme of the exhibition was *Then Now, Now Then*, which reflected the process of cultural change of the migrated Tokelau community from the past to the present culture on the atolls and then from the present culture in New Zealand to the future. The process involved showcasing the significant cultural principles of *maopoopo* (unity) and *inati* (equality and sharing) as interactive tools to demonstrate how they worked. *Faitu* (friendly competition and sides) was also displayed in an exhibit.

Fig. 5.5.
The Tokelau Exhibition:
Opening Day

Fig. 5.6 - 5.9.
The Tokelau
Exhibition

Fig. 5.10. Maopoopo Exhibit
 Fig. 5.11. Village Building Game
 Fig. 5.12. Inati Interactive Exhibit
 Fig. 5.13. Faitu Exhibit

Maopoopo: The Village Building Game

In Tokelau, there is only one village on each atoll. The uses of spaces are similar across all three atolls. The participatory design process, 'build your own village game,' aimed to uncover the organising principles of a village. Choices were limited to a maximum of five community facilities out of ten possible facilities including:

- 3 different church types
- Community centre (meeting house)
- Community garden
- Community open gathering space
- Cricket pitch
- Medical centre
- School

And two choices of houses for 20 families:

- The traditional houses which required a nearby separate cook house and communal toilets but could accommodate two families.
- Modern state houses, which had all the modern facilities but could only accommodate one family.

The process of controlled selection and planning provided significant information about the cultural concepts, traditions and

Fig. 5.14.
Elder Men Playing
the Game

Fig. 5.15.
Elder Women
Playing the Game

Fig. 5.16.
Men and Women
Playing the Game

Fig. 5.17.
Youth Playing the
Game

Fig. 5.18.
Diagram Showing the Heart
of the Village as Community

values.

The elders, men, women and youth all designed differently however a consistent pattern in the planning was the location of community spaces placed in the centre of the village. *The heart of the village was the community gathering spaces*, which bring the village together (*Maopopo*). This significant idea is taken through to the architectural planning and design.

Tokelau Day

The exhibition had an official opening where the Mayor of Porirua and a Member of Parliament for Mana Party officially opened the exhibition. Other people that attended the event and provided their feedback included members of parliament, the former high commissioner of Tokelau, senior government officials, ethnographers, museum officials, and a vast number of Tokelauans and members of the public. To accommodate demonstrations and cultural activities, the museum offered the community a special “Tokelau Day.” During their day, many other Tokelau events were organised. These included book launches, Tokelau performances, an elder’s dominoes competition, weaving workshops, market stalls selling Tokelau art and crafts, a Tokelau food celebration and a formal conference addressing family violence.

Fig. 5.19.
Tokelau
Conference

Fig. 5.20.
Book Launches

Fig. 5.21.
Dominoes
Competition

Fig. 5.22.
Weaving
Workshop

Feedback Board

Fig. 5.23.
Exhibition
Feedback Board

Another important feature of the exhibition was a feedback board. Each day, the board was photographed and wiped clean. The feedback received from the exhibition was very positive and confirmed the correct interpretation of the village principles.

Summary

The exhibition process provided valuable information and a mandate to take these principles of Tokelau culture forward into the design of the Tokelau community centre. The exhibition process was extremely successful by validating and strengthening the Tokelau community of the Wellington region, bringing the three atoll communities together.

5.3 Learning the Sociocultural Activities and Processes in the Existing Community Centre

The next step involved learning about current cultural activities and how the existing community centre accommodated these programs. A diagramming exercise was performed with Vai Lui (a representative of Te Umiumiga a Tokelau Hutt Valley) showing the cultural activities and daily operations on site.

Fig. 5.24.
Events in the Community Centre: Cooking
and Dining Process for Large Events

Fig. 5.25.
Events in the
Community
Centre: Cooking
and Dining
Process for Small
Events

Fig. 5.26.
Easter
Tournaments

Events in the Community Centre:
Cooking and Dining Process for Small Events

Overlay of Process

Easter Tournaments

Overlay of Process Excluding Catering

Fig. 5.27.
Funeral Process

Fig. 5.28.
Crafting and Weaving
Workshops

Other Tokelau Activities and On-going Participatory Design Research

Fig. 5.31.
Facilitating Tokelau
Youth Construction
Workshops

Fig. 5.32.
Facilitating a
Planning Workshop
in Youth Camp

Fig. 5.33.
Tokelau Community
Meeting

Fig. 5.34.
Planning activities
at a Tokelau
Executive
Committee Meeting

5.4 Generating Program with the Tokelau Community

Fig. 5.35.
Program Cards

The last step of generating program involved splitting the community into small groups of elders, men, women and youth (includes infants). This process of dividing the groups was developed from observing the influence of elders and their authority on the rest of the community. Following a general brainstorming session, programs were generated and created into simple visual cards. The groups were then invited to assess each program in terms of desirability on a scale of:

- Essential/Must Have
- Nice to have
- Possibly
- Not needed

The results were recorded, analysed and displayed back to the community to show agreement and disagreement. Following a general discussion, a more formal program was developed.

Fig 5.36 - 5.37.
Tokelau Community
Arranging Program
Cards

Summary of Programs: Programs of Agreement

Landscaping/Outdoors

Outdoor Kitchen
Community Gardens
Courtyard
Seating Areas
Trees/Planting
Garden Shed

Community

Community Hall
Cultural Display Areas
Outdoor Kitchen
Crafting/Weaving Areas
Housing
Funeral Room/Sleeping Area
Indoor Dining Area

Recreational/Leisure

Lounge/Socialising Areas
Dominoes Area
Childrens Play Area
Small Playground
Sports Facility
Youth Centre

Educational/Business

Childcare
Teaching Rooms
Meeting/Conference Room
Computer Room
Offices

Other

Car Parking
Storage
Showers
Toilets

Fig. 5.38.
Programs of Agreement

Summary of Programs: Programs of Difference

Community

Educational/Business

Fig. 5.39.
Programs of
Difference

5.5 Summary

Participatory design processes were extremely successful in learning the culture and practices of the Tokelau community in the Wellington region. The process identified their desires for the use of the community centre and helped generate a concept for design that addressed the concerns of all groups of the community. The processes helped the author understand that the essence of a Tokelau village was not about a heroic design but more about people and fostering spaces that allowed them to come together and practice their cultural traditions.

Fig. 5.40.
Tokelau Cultural Principles
Embedded in Program

6.0 Design Process

This chapter is divided into three sections to document the iterative nature of the design process. The first iteration follows from the literature review, case study review, site analysis and a series of participatory design exercises with the Tokelau community. The designs were presented to the Tokelau community, a panel of academics and architectural practitioners. Feedback was documented, changes were made, additional research was undertaken and further iterations were developed.

6.1 Design Phase One

The first design phase explores how form and spatial arrangement can embody cultural principles. Additionally a series of experiments were undertaken to examine how culture can be captured in architecture through the expression of traditional art and crafts in contemporary form and structure.

Embodying Cultural Principles through Form and Spatial Arrangement

The preliminary sketches examine how the Tokelau cultural principles of *maopoopo* (unity) *inati* (equality and sharing) and *faitu* (friendly competition and sides) can establish the layout of the community centre facilities.

Fig. 6.1.
Form and Spatial Arrangement Using
Tokelau Cultural Principles

Program Sizes and Relationships

Fig. 6.2.
Program Sizes and Relationships

Initial Masterplanning

The first step of masterplanning involved shuffling program over a scaled site map of the Tokelau community centre. Numerous iterations were tested with the community to create promising program and site relationships while integrating cultural layout concepts. The iterative process involved much discussion and debate by community members, which serve to highlight successful and unsuccessful patterns and relationships of program. From this exercise, two preferred options were selected by the author.

Fig. 6.3.
Iterative Testing of Program
Arrangement on Site

Fig. 6.4.
Two Preferred
Options Program
Arrangement on Site

Tokelau Art and Crafts

An exploration of contemporary art and crafts was undertaken to inform design.

Much contemporary Tokelau art draws from the traditional forms and everyday objects from the atolls. They commonly exhibit a repetition of geometric shapes and forms.

Weaving is also a significant part of Tokelau culture and mainly performed by the women of Tokelau. Objects and handicrafts like, bowls, fans, fishing equipment, mats, and other decorative and fashion accessories are commonly valued in the Tokelau community.

Fig. 6.5.
Tokelau Art
and Weaving

Handcrafting canoes, tools and fishing equipment is a long-standing tradition of Tokelau culture performed mainly by the men of Tokelau. On the atolls of Tokelau, there are insufficient full lengths of timber to construct large objects like boats so many unique methods of joining timber are exhibited.

Fig. 6.6.
Tokelau Crafts

Form Development

These initial series of design experiments were inspired by Tokelau arts and crafts to produce form and structure that could potentially be used in the community centre facilities.

Fig. 6.7.
3D Modeling:
Generating Form
from Tokelau Arts
and Crafts

Fig. 6.8.
3D Modeling:
Generating Form
from Tokelau Arts
and Crafts

Fig. 6.9.
Forms Inspired by
Tokelau Arts and
Crafts

6.2 Design Iteration One

Fig. 6.10.
Design Iteration
One

Fig. 6.11.
Design Iteration
One

6.3 Summary

Design Review

Strengths

- The research question and design objectives are strong and clear.
- The adaptation of art and crafts in form and structure is a promising approach to embodying culture in architecture.

Weaknesses

- The forms do not fit into the context of Naenae with the light industrial hip and gable roof warehouses.
- Many of the forms represent an unfamiliar aesthetic that is not recognisable as 'Tokelau architecture' or 'hybrid' Tokelau architecture.
- The essence of Tokelau village begins to feel lost in the masterplanning shuffling process.

Direction

- The relationships of the neighbouring buildings and context need to be addressed.
- Hybrid architecture should be explored to connect traditional Tokelau architecture elements with contemporary architecture.
- The “essence” needs to be further explored and then translated to the planning and program. “Is the essence referring to the community hall or the courtyard? Because it feels like it should be – these are very important.”
- Consider the integration of the individual community groups (elders, men, women, youth and infants) so the design appeals to all (*inati*) as well as addressing the collective.

Reflection

The first design phase highlighted the significance of further developing the design concept of the ‘essence of a Tokelau village’ and addressing the individual community groups and the collective. The adaptation of arts and crafts in form and structure is an acceptable process for embodying culture and identity; however, the further exploration of hybrid Tokelau architecture is necessary.

6.4 Design Phase Two

Masterplanning using Maopoopo, Inati and the “Heart of the Village.”

The concept of the *heart of the village as community gathering spaces* has been re-developed integrating cultural principles of *maopoopo* and *inati* into the spatial layout. The central location of the community hall encapsulates the Tokelau principles of *maopoopo* (unity) and *inati* (equality and sharing). It accommodates the social structure and both the traditional and contemporary activities of the community.

Fig. 6.12.
Masterplan Development
of the Heart of the Village

Traditional Tokelau Architecture Typology Analysis

Fig. 6.13.
Historic Tokelau
Houses

Fig. 6.14.
Historic Tokelau
House Interior

Fig. 6.15.
Traditional Tokelau
Meeting House,
2013

Fig. 6.16.
Traditional Tokelau
Meeting Interior,
2013

Steel Sheet Roofing

Heavy Thatched Roof

Pull Down Woven Mat Blinds tucked under eaves

Repetition of wooden columns with unglazed openings

Half Height Woven Mat Walls

Full Height Woven Mat Walls

Concrete or Bedrock Foundations

Wooden post and beams Connections made with rope ties, interlocking grooves and nail connections

Tokelau House

Traditional Tokelau House

Traditional Tokelau House

Fig. 6.17.
Tokelau Houses

Traditional Tokelau House

Traditional Tokelau House

Fig. 6.18.
Traditional
Tokelau Houses

0 5m

Large Traditional Tokelau House

Fig. 6.19.
Traditional
Tokelau House

SECTION

Traditional Tokelau Meeting House

Fig. 6.20.
Traditional Tokelau
Meeting House

Fig. 6.21.
Traditional Tokelau
Architecture Analysis

Hybrid Tokelau Architecture: Structure and Roof Development

Fig. 6.22.
Structure and Roof
Development of
the Community Hall

Traditional Tokelau structural frames use rope and nail connections, and grooves to connect timber poles. For structural frames in Wellington, they require stronger connections for wind and seismic loads.

Fig. 6.23.
Construction of the
Structural Frames

Entrance Canopy and Facade Development

Developing a distinct entrance for the community hall, which visually harmonises with the rest of the structure.

Fig. 6.24.
Entrance Canopy
and Facade
Development

Fig. 6.25.
Entrance Canopy
and Facade
Development

Testing Patterning
on Facade: Integrating
Tokelau Arts and Crafts

**2nd Element: Repetition
of Elements in Facade**

Overhangs

Fig. 6.26. East and
West Facade
Development

Youth Centre Development

Exploring Program

Re-using Existing Structure

Testing the Integration of the Youth Centre and the Infant Care Facility

The infant care works with the youth centre however, it would be better integrated with an eldercare because of the cultural dynamic of elders looking after youth

Fig. 6.27.
Youth Centre Plan
Development

Existing Structure

Reducing the roof height of the lounge, computer room and toilets area

Adapting Existing Structure

Openness in the Facade

Shifting Canopy to Roof:
Creates a Sheltered
Second Level

Adapting Existing Structure

Heavy Roof
band: Links with
the Community Hall

**Repetition
of Columns**

Access to Roof
Hang Out Space

**Seating Referencing
Raised Heavy
Foundations**

Framing Existing Structure

Outdoor Kitchen
Connecting the Hall
and the Youth centre

Potential Entrance

Access to Roof
Hang Out Space

Framing Existing Structure

Fig. 6.28.
Youth Centre Form
and Structure
Development

Re-using Existing Structure

Fig. 6.29.
Youth Centre Form
and Structure
Development

6.5 Design Iteration Two

Fig. 6.30.
View from North
Entrance

Fig. 6.31.
View from East

Fig. 6.32.
Ground Floor Plans

Fig. 6.83.
First Floor Plan

Fig. 6.34.
Elevations

North Elevation

East Elevation (Community Hall)

East Elevation (Youth Centre)

South Elevation

0 25m

Section 1

Section B

Section A

Section 2

0 25m

Fig. 6.35.
Sections

6.6 Summary

Design Review

Strengths

- The integration of the traditional Tokelau architectural elements is strong.
- The program arrangement and facilities are working well.

Weaknesses

- The form of the community hall roof is a bit generic.
- The sections of rising roof forms make the community hall read as separate structures instead of as a whole to emphasise the hall as the ‘heart of the village.’
- The community hall entrance is not integrated well with the form as a whole.

Direction

- Further development of the community hall form to reinforce the hall as the ‘heart of the village.’
- The development of materiality will strongly influence the design.
- The other facilities and outdoor spaces need to be developed to examine the design as a whole.

Roof Form Development

Fig. 6.36.
Roof Form
Development

Fig. 6.37.
Roof Form
Development

Significance of the Community Hall is
Emphasised Through the New Roof Form

NZ Roof Pitch

Tokelau Roof Pitch

Expressing Traditional Tokelau
Construction in the Exterior

NZ Roof Pitch
Funeral Room/
Meeting Rooms/
Lounge

Roof Should Read
as One Form:
Broken by Roof Band

Fig. 6.38.
Roof Form
Development

Material Analysis: Comparing Traditional to Contemporary Materials

	Tokelau Architecture				Context (Naenae)			
Roof/Ceiling	Wood Beams	Wood and Mats	Thatch	Corrugated Iron/Steel	Ceiling Tiles	Fibreboard and Wood	Corrugated Iron/Steel	Corrugated Asbestos
Walls/Structure	Wood Post	Weaved Mats	Wood Column		Corrugated Steel	Plaster	Steel Roller Door	Painted Concrete Block
					Glass	Corrugated Iron	Concrete	Painted Brick
Floors	Weaved Mats	Weaved Mat	Concrete	Weaved Mat	Rug	Wood Floor Boards	Concrete	Painted Concrete
Foundations	Bedrock	Concrete	Bedrock	Bedrock	Concrete	Painted Wood and Concrete		
Ground	Sand	Sand	Stones		Concrete	Concrete	Asphalt	Grass
Fences					Wood Boards	Steel Chain	Wood Boards	

Fig. 6.39.
Material Analysis

The traditional Tokelau materials are different from the contemporary materials on site. The Tokelau materials are locally sourced, natural, mostly handcrafted, textured, feature warm colour tones and have a short life cycle. The contemporary materials on site are manufactured, have low texture, neutral colour tones and have a long life cycle. To create a design, which is resilient and embodies Tokelau architecture, it is important to express the vibrant colours, patterning and texture, and natural aesthetic of the traditional materials with a durable material pallet of contemporary materials.

Outdoor Space Development

The courtyard is a significant space that develops from village life on the atolls of Tokelau. The activity of viewing all village life from inside and outside buildings is important. The courtyard aims to connect all the Tokelau spaces in the community centre to provide a similar environment of activity and vibrancy.

The community garden promotes the activity of communal food production and distribution, cultivating the principle of *inati*. The garden provides planting to revitalise the site and soften the harsh industrial context.

Fig. 6.40.
Courtyard and
Community Garden
Plan Development

Connection of the Community Garden
to the Care Facility/Housing

Outdoor
Play Area

Linear Paths
Connecting
Spaces

Fig. 6.41.
Courtyard and
Community Garden
Plan Development

6.7 Design Iteration Three

GROUND FLOOR PLAN

Fig. 6.43.
Ground Floor Plan

Fig. 6.44.
First Floor Plan

NORTH ELEVATION

EAST ELEVATION

SOUTH ELEVATION

Fig. 6.45.
Elevations

SECTION A

SECTION 1

SECTION 2

Fig. 6.46.
Sections

Fig. 6.47.
Clendon Street
View (East)

Fig. 6.48.
Community Hall
Entrance

Fig. 6.49.
Courtyard

Fig. 6.50.
Community Hall
Interior

Fig. 6.51,
Youth Centre
Sports Hall/Gym

6.8 Summary

Professional Design Review

Strengths

- The ‘design feels good.’ The forms and materiality are on target.
- The community hall is working well, especially the roof and interior spaces of the hall. There is good integration of airflow in the hall through the clerestory windows and sliding glass façade.
- The texture of weaving is a good driver throughout the project.
- The idea of community is well integrated in the courtyard concept of activities on all sides.

Weaknesses

- The car parks detract from the design; there is potential to make better use of this area by removing all car parks off site, as there is much parking around the site.
- The courtyard area feels overcrowded as the garden is taking over areas for community gatherings.
- The basketball area is too large and can be made smaller.
- The community hall toilets could be more detached from the lobby area by introducing a separation.
- The corners of the site (north east and south east) can be improved, as they are important spaces and are currently underdeveloped.

Direction

- Potentially move the garden further south so the plants get less shade from the hall, which will also provide a generous courtyard area for large groups of people to gather.
- There is potential for more greenery on site.
- Play with the levels and edges of the courtyard to create a vibrant area with seating and give more emphasis to the umu (earth oven/outdoor cooking).
- The main entrance works (public) however the secondary entrance (Tokelau) into the community gardens should consider being equally important. Link this idea back to the Tokelau customs of guest and community members.

Reflection

The second design phase has been a solid iterative process that has produced a strong design concept that embodies Tokelau traditions and cultural principles through hybrid architecture. The program for individual and collective use of the Tokelau community in New Zealand has been well resolved. The last design phase is to complete the remaining facilities and develop the site as a whole to fully understand how the essence of a Tokelau village can be captured in the design of a community centre in the suburban setting of New Zealand.

6.9 Design Phase Three

The Tokelau Entrance and the Public Entrance Development

The Tokelau culture prefers a clear distinction between how guests and community members are greeted. In addition, the community requires a public front for business. The development of both a meaningful Tokelau entrance and public entrance is important.

Fig. 6.52.
Development
of the Entrances

Public Entrance

Tokelau Entrance

Fig. 6.53.
Development
of the Entrances

Development of the Infant and Elder Care Facility and Housing

Iteration 1

Cross-programming the childcare and eldercare

Iteration 2

Stepping the programs out so the areas can view the activity in the courtyard

Fig. 6.54.
Care Facility/
Housing Plan
Development

Iteration 3
Developing the
Plan and Housing

Fig. 6.55.
Care Facility/
Housing Plan
Development

Fig. 6.56.
Care Facility/Housing
Development

Hybrid Tokelau Architecture Form Development

Fig. 6.57.
Care Facility/Housing
Development

Hybrid Tokelau Architecture Form Development

Roof of the Shared Facility
Visually Distinguishes
the Two Programs

Hybrid Forms Harmonise with
the Other Buildings

View to the Gardens
and Courtyard

Angled Columns
Do Not Match
the Other Buildings

Play Area Connects
the Care Facility and
the Youth Centre

Sheltered
Veranda

Fig. 6.58.
Care Facility/Housing
Development: Redefining
the Traditional Tokelau Forms

Hybrid Tokelau Architecture Form Development

Redefining the Tokelau Heavy Thatched Roof Form

The last design iteration of the care facility/housing provides a more extravagant design solution to addressing hybrid Tokelau architecture. This approach is promising however, the more traditional forms provide a stronger design for harmonising with site and the other buildings, and it also provides an aesthetic that is more familiar as Tokelau architecture.

6.10 Final Design

Fig. 6.59.
The Tokelau
Community Centre

The final design of the Tokelau community centre in Naenae acts as a cultural medium that responds to the sociocultural sustainability and strengthening of a migrated community group in a foreign environment. It proposes the design of a new community centre that uses hybrid architecture and draws from; Tokelau sociocultural concepts and values; traditional Tokelau architecture; modern construction and design; Tokelau arts and crafts; and the suburban context of New Zealand, to create an environment that allows the culture of the relocated Tokelau community to thrive. The programs accommodate Tokelau traditions and cultural practices of the community in New Zealand and addresses modern architectural program to create a resilient community centre for collective use.

The design appeals to each group (elders, men, women, youth, infants and visitors) implementing the concept of *inati* (equity and sharing). The activities and cultural practices designed for include: care giving, business, funerals, food processes, performance, playing and socialising. Additionally, the concepts of *maopoopo*, *inati* and *faitu* (friendly competition and sides) are embodied in the program.

Fig. 6.60.
Cultural Sustainability Analysis

Fig. 6.61.
Masterplan

Fig. 6.62.
Elevations

0 25m

NORTH ELEVATION

EAST ELEVATION

SOUTH ELEVATION

Fig. 6.63.
Sections

0 25m

SECTION 1

SECTION A

Fig. 6.64.
Sections

0 25m

SECTION 2

SECTION 3

SECTION B

Design based on Tokelau Sociocultural Principles

Fig. 6.65.
Maopopo (Unity)
and *Inati* (Equality
and Sharing):
The Community
Hall as the Heart of
the Village

A major governing idea uncovered from the participatory design research of playing the ideal village building game with the Tokelau community was the concept of the heart of the village as community gathering spaces. This identified the community hall (equivalent to the traditional meeting house on Tokelau) as the most important facility, which is placed in the centre of the site.

Fig. 6.66.
Inati: Food Process

The communal production, collection and sharing of food is significant in Tokelau culture as it cultivates the cultural concept of *inati*. In Tokelau, food is collected from fishing in the lagoon and ocean, and fruit and vegetables are collected from the plantations around the island. These are brought together, cooked and equally shared with the whole community. The same process is captured in the design of the community centre. The community gardens provide food, and the umu (earth oven) and kitchens (centred in the Tokelau spaces) allow cooking and sharing to take place.

Fig. 6.67.
Faitu: Competition
and Sides in
Program

It is important to provide areas for friendly competition including games, performances and sports as it reflects the village principle of *faitu* and introduces fun activities for the whole community.

The Community hall

Fig. 6.68.
East Street Facade

The most significant building in the community centre is the community hall. The hall represents the New Zealand equivalent of the Tokelau Meeting House, where celebrations, cultural ceremonies and community gatherings occur. This building represents the heart of their culture in New Zealand and its significance is emphasised through the design. The extravagant rising gable roof of the community hall stands out from the rest of the community facilities and its form is derived from the analysis of traditional Tokelau construction. The pitch and interior structure (moment resistant frames) start at 40 degrees and sinks to 30 degrees, which references the traditional Tokelau meeting houses. Then it sinks to 15°, which references the average New Zealand house roof pitch. The significance of the roof is further highlighted through the clerestory windows, which powerfully elevate the form while providing natural light and ventilation into the hall. The structure and interior space takes advantage of vibrant materials drawn from traditional Tokelau architecture. The elements of the hall express the construction of the traditional Tokelau meeting house through exposed frames constructed from large round wooden members and the exposed roof structure. This distinct structural frame is also highlighted from the exterior through the glazing at the face of the roof form.

The other buildings have a smaller and more regular roof pitch, which harmonise with the context of the neighbouring light industrial warehouses. Overall, the design helps revitalise the suburban context by adding a vibrancy of activity, colour, culture, decoration, form, materiality, and planting to an otherwise bland light industrial business area.

Fig. 6.69.
Community
Hall Interior

The Public Spaces

Fig. 6.70.
Public Entrance
(North Street Facade)

The public face is the arrival area for visitors to be greeted before entering the 'village.' This area has visitors' car parks, a garden, a lobby, toilets, offices, and a drop off zone for food delivery and waste collection for the community kitchen.

Fig. 6.71.
Public Entrance Plan

The Funeral Room

The funeral room is where the Tokelauans perform their cultural processes for a funeral. This area can also be used as meeting rooms or enlarged for hall space when there is no funeral service.

Fig. 6.72.
The Funeral
Process

Fig. 6.73.
Funeral Room

The Cooking Area

Food preparation areas must accommodate cooking for large quantities of food for community celebrations and gatherings.

Fig. 6.74.
The Cooking Areas

Fig. 6.75.
The Kitchen

Men's and Women's Area

This area consists of a lounge/weaving room connected to the community hall for the women to practice their crafts and a workshop for the men to practice their carving. There is also a sheltered outdoor space in-between for them to perform activities outdoors.

Fig. 6.76.
The Men and
Womens Area

The Courtyard

The courtyard provides a large performance and gathering space in the centre and perimeter seating around the outside and along the edges of the buildings. The visual permeability of the facades of the buildings creates a strong connection to this area allowing views of all village life from inside and outside. Additionally, an earth oven (umu), which is a significant outdoor cooking tradition in Tokelau culture, has been designed in the centre of the courtyard and community gardens.

Fig. 6.77.
Courtyard

Fig. 6.79.
Community
Garden and
Courtyard

The Tokelau Entrance: Collective Food Production and Distribution

The Tokelau entrance arrives straight into the community environment of the community gardens and the courtyard. This area (Tokelau face) is the collective food production, gathering and consumption side, while the public face is the delivery and removal side.

Fig. 6.80.
Tokelau Community
Entrance (South
Street Facade)

Childcare and Eldercare

Fig. 6.81.
Ground Floor Plan
(Care Facility)

This area consist of a cross programmed day-care for infants and elders, with shared facilities, and a deck and play area outside. The building contains housing above, which encourages Tokelau and Pacific communal living and thereby provides constant activity and security on site.

FIRST FLOOR PLAN

0 15m

Fig. 6.82.
First Floor Plan
(Housing)

Fig. 6.83.
Care Facility Interior
(Ground Floor)

Fig. 6.84.
Housing Interior
(First Floor)

The Youth Centre

Fig. 6.85.
Youth Centre
Ground Floor Plan

The renovated youth centre building is designed to appeal to the sports, entertainment and social lifestyle of Tokelau Youth living in New Zealand. The facility contains a computer area, deck, lounge, gym/sports area, outdoors play area, toilets and an upstairs attic for hanging out, storage, sleeping or studying.

FIRST FLOOR PLAN

Fig. 6.86.
Youth Centre
First Floor Plan

Fig. 6.87
Youth Centre
Interior

Hybrid Tokelau Architecture: Drawing from Traditional
Tokelau Architecture and Contemporary Design

Fig. 6.88.
Courtyard

All the buildings in the community centre read together visually and represent a hybrid Tokelau architecture, which draws from contemporary design, and traditional Tokelau architecture.

The heavy exterior roof aesthetic of traditional Tokelau architecture is highlighted in the design through the solidity and mass of wood with minimal penetrations, which make the form read as one mass. Additionally, the roof ends and eaves are designed low to increase the roof mass. The lightness of the interior of traditional Tokelau architecture is also expressed in the interior design through the exposed repetition of small rafters and beams on the ceilings and roof.

Traditional Tokelau architecture façades display a strong degree of permeability, ornamentation through weaving and repetition of vertical structure. Tokelau weaving patterns are etched onto the concrete exterior walls of the buildings and the other walls are either fully glazed or half glazed. The repetition of timber columns are integrated into every façade to link the buildings visually.

Large concrete blocks are integrated around the perimeter of the buildings to provide outdoor seating for the community. This design feature is derived from the heavy bedrock and concrete foundations of traditional Tokelau architecture. Additionally the perimeter fence also incorporates this design feature.

The materiality of the architecture also draws from traditional Tokelau architecture with heavy use of timber, stone, concrete, and light and natural colours.

6.11 Summary

Professional Design Review

Strengths

- The concepts and cultural principles in the spatial layout are strong and well-articulated in plan.
- The significance of community hall and courtyard is working well in the design.
- The program is well defined and successfully integrated into the concept, culture and design.
- The integration of hybrid Tokelau architecture is convincing in the design.

Weaknesses

- The windows in the housing could be further investigated in terms of their integration.

5.0 Conclusions and Critical Reflection

A critical sociocultural issue in modern society is the challenge of successfully integrating migrated cultural communities in contemporary foreign contexts, where their culture and traditions can adapt and thrive. The efforts of the Tokelau community to adjust to the completely different cultural context of New Zealand have been challenging and they are concerned for the preservation of their culture. The community centre purchased by Te Umiumiga a Tokelau Hutt Valley falls short of the architectural quality, cultural expression and functionality for strengthening their collective culture and as a result, it is underutilised and inadequate. The thesis proposed the architectural design of a new community centre, which used: participatory design processes to learn and uncover the essence of their culture; hybrid Tokelau architecture; and integrated significant Tokelau sociocultural principles and modern architecture and design to create a resilient and thriving community centre for the Tokelau community group. Hereby ensuring social and cultural sustainability

and community strengthening of the Tokelau community and allowing their old and new traditions to thrive in New Zealand.

The initial research from the literature review was critical in developing the design methodology for capturing culture in architecture and learning the culture of the Tokelau community group in New Zealand. The examination of embodying culture and identity in hybrid architecture was successful and carried through to the final design. The analysis of the role of cultural sustainability in contemporary community centres was also important in the later processes of participatory design for generating program with the Tokelau community. Additionally, the significant Tokelau principles of *maopoopo*, *inati* and *faitu* identified in the literature and tested with the Tokelau community proved highly important in the overall design. Arguably, the most significant and successful methodology for the thesis was also highlighted in the literature review and this was the process of participatory design. The research in

the literature review was invaluable to the addressing the design aims and research question.

The case studies were very important for examining a range of different design methods for embodying culture in design through: the interpretation of culture beliefs and social structure in architecture; the hybridisation of traditional and contemporary architectural elements; and drawing design elements from other cultural areas such as art, crafts and artefacts. These methods were tested and exhibited throughout the design process and the final design making these precedents substantial to addressing the design aims and research question.

One of the most important lessons learnt from designing for a diverse migrated community was the importance of understanding their lifestyle and culture through participatory design. The process was extensive and challenging however, the information discovered about: their lifestyle in New Zealand; the various age and gender groups with the community; the cultural

processes; and the desired programs was crucial to the design. Additionally, this process helped strengthened the community through participation and collaboration, which made them learn and reflect on their culture, challenges, desires and lifestyles in Tokelau and New Zealand.

The iterative design processes, which involved participatory design; drawing; planning; master planning; and 2D and 3D modelling were crucial to development of the Tokelau community centre. In addition, an added level of testing and evaluation by academics, architectural practitioners and the Tokelau community helped the design advance well.

The first design phase examined the adaptation of arts and craft in form and structure to embody culture in architecture. This process was very constructive and an adapted approach of the integration of arts and crafts was evident in the final design. However, this initial method showed weaknesses in how the forms related to the context of Naenae or became recognisable as

Tokelau architecture. This process led to a stronger design approach of testing hybrid Tokelau architecture.

The integration of hybrid Tokelau architecture was successful in the final design of the community centre. The approach drew design elements from traditional Tokelau architecture, modern construction and design and the built environment of New Zealand. This process met the design aim of addressing cultural sustainability and providing a contemporary design, which embodied Tokelau architecture while harmonising and revitalising the suburban setting of Naenae, New Zealand.

The project was asked to capture the essence of a Tokelau village, and the essence discovered was not about buildings but about people and fostering dense activity. The idea integrated significant Tokelau cultural principles of *maopoopo* (unity), *inati* (equality and sharing) and *faitu* (friendly competition and sides), and addressed the individual groups and visitors of the community to inform the

spatial layout. The concept achieved the design aim of embodying Tokelau culture and values in architecture.

The design led research has resulted in the design of a Tokelau community centre, which successfully captures the essence of a Tokelau village in the suburban setting of New Zealand. There is much opportunity for further research and explorations of different architectural outcomes. These may include; further analysis and development of the participatory design techniques implemented for low income community groups; exploring more extravagant design of hybrid Tokelau architecture, integration of sustainability and green technology in the design; exploration of business and economic opportunities for generating income and resources in the community centre; the cost evaluation of the buildings; and the staging process for constructing the facilities.

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 Fig. 6.41. Courtyard and Community Garden Development
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Fig. 6.63 - 6.64. Sections

Fig. 6.65. *Maopoopo* (Unity) and *Inati* (Equality and Sharing): The Community Hall as the Heart of the Village
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Appendices

FACULTY OF ARCHITECTURE & DESIGN Te Wāhanga Waihangā-Hoahoa
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Participant Information Sheet for Participatory Design Processes

Title of Project: Relocating Tokelau: Recreating Island Villages in the Urban/Suburban Settings of New Zealand

Researcher: Henry Huang
School of Architecture, Victoria University of Wellington

Principle Investigator: Henry Huang

I am a Masters architecture student at Victoria University of Wellington. As part of this degree I am undertaking a research project leading to a thesis. My project investigates how the essence of a Tokelau village can be recreated in the design of a community facility in the urban/suburban settings of New Zealand. The research primarily involves collaborative design with the Tokelauan community of the Hutt Valley, (Te Umiumiga a Tokelau Hutt Valley) where participatory design processes will be rigorously tested. The Tokelauan community centre in Naenae will provide the testing grounds for this project. This research project has received approval from the Victoria University Human Ethics Committee.

I am inviting all members of the community to participate in this research. Participants will asked to participate in a series of participatory design processes including community workshops, interviews, games, questionnaires, group reviews, photography and story telling. All interviews will be held in English. Participants will receive copies of all interviews, recordings, photographs and transcripts. The participatory design processes will have varied times for completion. Community members will also be invited to participate in the Tokelau exhibition, "Then Now / Now Then, I te taimi teia, I te taimi tenei / I te taimi tenei, I te taimi teia: to be held in the Pataka Bottle Creek gallery opening February 20, 2014

Should any participants wish to not participate or pull out of any participatory design process, they may do so without question. Should any participants feel the need to withdraw from the project, they may do so without question at any time before 16/02/15.

Excluding the public exhibition, my research project will be put into a visual and written report. Without your written permission, it will not be possible for you to be identified personally. Only grouped responses will be presented the report. All material collected will be kept confidential. No other person besides me, my supervisor (Ms Jacqueline McIntosh) and other approved Victoria university staff (involved in this project or a related project that is associated with the Hutt Valley Tokelauan Community) will be able to view the gathered information.

The thesis will be submitted for marking to the School of Architecture and deposited in the University Library. It is possible that one or more articles will be submitted for publication in scholarly journals.

If you have any further questions or would like to receive further information about the project, please contact me:

Fig. a.
Participant
Information Sheet

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Consent to Participate in Research

Title of Project: Relocating Tokelau: Recreating Island Villages in the Urban/Suburban Settings of New Zealand

Researcher: Henry Huang
School of Architecture, Victoria University of Wellington

I have been given and have understood an explanation of this research project. I have had an opportunity to ask questions and have had them answered to my satisfaction. I understand that I may withdraw myself (or any information I have provided) from this project before 16/02/2015 without having to give reasons.

- I understand that any information I provide will be only used for the research.
- I understand that if a photograph of me is displayed in the exhibition, that it is part of the research and I will provide my written consent for its display.
- I understand that any further use of the information will for the academic research of the Tokelauan community with the university.
- I consent to information or opinions, which I have given being attributed to me in any reports on this research.
- I would like the tape recordings of my interview returned to me at the conclusion of the project.
- I understand that I will have an opportunity to check the transcripts of the interview or information I have provided before publication.
- I understand that the University retains insurance cover against claims relating to harm, loss or damage suffered by participants in research projects as a result of any negligent act, error or omission by or on behalf of the University.
- I agree to take part in this research.

Do you want a summary of your interview, recoding, photograph or transcript?

Signed:

Name of participant:

Date:

Fig. b.
Participant
Consent Form

MEMORANDUM

Phone 0-4-463 5676
Fax 0-4-463 5209
Email Allison.kirkman@vuw.ac.nz

TO	Henry Huang
COPY TO	Jacqueline McIntosh
FROM	Dr Allison Kirkman, Convener, Human Ethics Committee
DATE	29 March 2014
PAGES	1
SUBJECT	Ethics Approval: 20630 Relocating Tokelau: Recreating Island Villages in the Urban/Suburban Settings of New Zealand

Thank you for your application for ethical approval, which has now been considered by the Standing Committee of the Human Ethics Committee.

Your application has been approved from the above date and this approval continues until 16 March 2015. If your data collection is not completed by this date you should apply to the Human Ethics Committee for an extension to this approval.

Best wishes with the research.

Allison Kirkman
Human Ethics Committee

Fig. c.
Ethics Approval Form