Redemption Stream
Architecturally weaving the Waihorotiu stream through Māori and Pakeha culture

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Explanatory Document

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ABSTRACT

The meaningless pattern of buildings, monotony, and fast pace of the city has created a disconnection between people and the Auckland CBD environment. As a consequence people are largely unaware of the diverse and meaningful experiences of the city, weakening the significance of place for individuals, and cultures.

This research project, *Architecturally weaving the Waihorotiu stream through Maori and Pakeha culture*, explores the possibility of strengthening the meaningful relationship between people and the environment through a synthesis of the urban and natural in central Auckland.

The project analyses the social, urban and cultural values of the central Auckland context in conjunction with an evaluation of architectural elements that increase experiential time, and create an engagement of people with the significant buildings, and restored stream. The combining of these core elements suggests the possibility of a common cultural understanding of caretaking for the land through the participation in common experiences, where common meanings and symbols are created and understood.
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To my family, friends and classmates for conversations and encouragement, support and wisdom I am continually grateful.
“stop
your snivelling
creek bed;
come rain, hail
and flood water
laugh again”

Hone Tuwhare
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1. INTRODUCTION

1.1 RESEARCH QUESTION

What architectural intervention can encourage cultural understanding between Maori and Pakeha with respects to attitudes toward the environment through day lighting the Waihorotiu stream?
“By cultivating a greater awareness of who we are, we are better able to understand the beliefs and values we share collectively, and to comprehend the differences in world view and experience that makes us distinct from one another, and when we have deeper understanding of the things that are important to us we make decisions about the future that are informed by who we were, who we are, and who we would like to be.”

1.2 INTRODUCTION

A general awareness of environmental issues, from regional issues of air pollution and polluted beaches, to global issues such as climate change can be attributed to the increasing importance of the urban ecology and environmental health of Auckland city to its people. Economic and social well-being are fundamentally linked to the environment and there are growing expectations for urban designers and city planners to develop cultural and environmental strategies. Additional motivating factors for effective environmentally focused planning and design include:

- Urban areas produce noise, heat, airborne and waterborne pollution.

- Parklands and ecological habitat in urban areas improve quality of life through benefits to the community, mental health, education, and recreation.

- As cultural awareness becomes an issue for regional design, the importance of consulting local Iwi on new design is essential, with Māori values and goals of Kaitiakitanga being recognised and respected.

The natural streams that can be attributed for the original growth and well-being of central Auckland have not realised their full potential in the modern built environment. During early European settlement of Auckland, the streams were polluted uncontrollably and restrained to engineered structures due to a presumed lack of ecological awareness and understanding of the lands environmental systems. The streams became the cities storm water and sewage systems or have been covered over by road and rail infrastructure.

Auckland’s main CBD road, Queen Street, provides a visible connection between the cities coast and ridgeline environments. Many Aucklanders may be unaware that the road follows the original path of the Waihorotiu stream. The Waihorotiu stream, which was the water source for early European Auckland, and once harboured waka and sailing ships, still runs beneath Queen Street in a maze of storm water pipes and leftover 19th century culverts.

4 Ibid, pg. 3
5 Ibid, pg. 3
6 Ibid, pg. 3
Fig 1 Historic path of Waihorotiu stream and original foreshore in black
1.3 SHORT HISTORY

Approximately 700 years ago local Māori used the area for agriculture. The stream flowed from treeless slopes and fern was dominant vegetation.

During early European settlement in the late 1800’s the stream was a source of drinking water and had small native trout and eels.

The Stream soon became polluted with rubbish and sewage, so in 1842 an open drain was engineered (Ligar canal).

1873 the open canal was replaced by a fully enclosed brick barrel drain.

1987 old brick barrel drain is made redundant by modern concrete drainage.
Fig 1.5 Original brick barrel drain plans

Fig 1.6 Brick barrel drain present day.

Fig 1.7 Modern concrete drains.
1.4 DESIGN OBJECTIVES

My aim is to design an architectural intervention that can encourage cultural understanding between Māori and Pakeha with respects toward the environment—through day lighting the Waihorotiu stream. As such, my objectives are:

- To identify any key themes of Maori and Pakeha culture to find any common threads of understanding so people can engage on a cultural and physical level with the design.

- To identify what elements of the city environment that have caused the weakening of people’s ability to experience the meaningful and interesting experiences of the city. e.g. Historic buildings and other people.

- To investigate what urban aspects contribute to the CBD performing as an urban space currently.

- To identify what current attributes of the city already exist that add to the cities sense of place.

- To investigate what architectural devices can be used to slow people down in a busy city environment, allowing an interaction of people with the built and natural environment.
1.5 SCOPE AND LIMITATIONS

The day lighting of the Waihorotiu in terms of this project will not be a re-naturalisation of Queen street, it will take into account the historical natural landscape, and the present urban landscape integrating the two to evolve the Auckland CBD environment. It is also not known exactly where the streams current path flows, so I am assuming it runs directly under queen street through the maze of storm water drains that currently exist. I have also found through research that it is unknown whether there is any flow of water from the original source spring at the top of Myers park, so I am presuming there is a small flow from the underground spring that will feed the new design, but most water flow will come from storm water run of, thus the new Stream design can function in flux.
2. BACKGROUND

2.1 STREAM DAYLIGHTING

To restore buried streams to the surface and restore their natural systems and processes has been termed ‘stream day lighting’. Stream day lighting is a form of stream restoration, which returns pipes and culverts to open water systems. Ecological function and processes of a city are restored by the streams, and enhance the urban habitat and filter the harmful effects produced by the urban environment. Urban streams can provide new and diverse functions, creating open space and urban ecological infrastructure. There are many varied benefits of stream day lighting, and include economic, environmental and cultural advantages.

Economic benefits:

- Provides an attraction for recreation and tourist based economies.
- Provides open storm-water infrastructure, relieving pressure on existing underground systems.

Environmental benefits:

- Improves water quality through natural systems and processes.
- Provides green space buffers against urban noise, dust and pollution.
- Reduces run-off velocities through natural stream channels.

Cultural benefits:

- Enhances community character and a sense of place by protecting natural and cultural resources.
- Increases the Mauri (spirit of the land) of the area which is beneficial for the well-being/health of the land and people. In Maori culture people are seen as part of nature. Reinstating the stream and reconnecting people with the stream will engage their concept of Kaitiakitanga.

8Ibid, pg. 3
9Ibid, pg. 3
2.2 LOCAL IWI

The local Maori iwi of central Auckland are Ngati Whatua Orakei. They have an ‘iwi management plan’ which regards: planning, management, and development of heritage and resources in Auckland, which the territorial and regional authorities must take into account when preparing or changing policies and plans stated in the Resource Management Act. The plans’ main purposes include:

- Clear direction in how its values are to be implemented into resource/heritage management and planning decisions.
- Consistency in the approach and processes where Ngati Whatua are consulted on management and planning matters.
- Partnerships and education between the Auckland community and Ngati Whatua to achieve a greater understanding and acceptance of the iwis values, history and on-going role as Mana whenua (tribes that have local authority).

Through achieving these purposes, the plan will address the disparity and disempowerment between Ngati Whatua and local agencies it has to engage with regarding heritage, cultural, social and environmental issues.

These issues include:

- The ongoing diminishing of the mauri of harbour streams, wetlands and lakes.
- Streams being treated as discharge sites, littered and modified (i.e. piped).

Their objectives include:

- Incorporation of Matauranga Māori (Māori knowledge) and active exercise of kaitiakitanga in development and implementation of initiatives for sustainable water environments in the area.
- Fresh water streams, lakes, wetlands and rivers shall be managed and, where possible restored to maintain or enhance their mauri.

Methods implemented to achieve these goals are to encourage day lighting of stream paths and use of wetlands for on-land treatment of storm water, while restricting the further piping of streams.

HAS DAYLIGHTING THE WAIHOROTIU BEEN CONSIDERED BEFORE?

Day lighting of the Waihorotiu stream was investigated by the Auckland city council as part of their feasibility studies for Queen Street enhancements in 2007. The possibility was considered infeasible in the short-mid-term because of existing infrastructure and lack of storm water management within the catchment area to achieve water quality. However long term feasibility has not been ruled out. Mark Lewis who prepared the document for the council states that “to realise the streams potential would require significant investment in infrastructure and a vision that is shared by politicians, the public, and council departments.”

11 Ibid, p.4
12 Ibid, pg.4
13 Ibid, pg.4
Two underlying models of vernacular architecture exist in New Zealand: one of the indigenous Māori; and one of early European settlement. Both have different models of environmental response that show important cultural differences in the beliefs of both Māori and Pakeha. The Māori belief is one of symbiosis where people are seen as part of nature and there is no notion of improvement upon the natural world. The Māori concept of time emphasises the cyclical rather than the linear, so architecture is understood (as an extension of the natural world) with the anticipation it will ultimately dissolve back into the earth.

The early European settlers in New Zealand operated on western models with the notion that humans have authority over nature. The new world was menacing and hazardous and needed to be tamed to suit humanity. Settlement was developed primarily to lessen the possibly dangerous effects on humans, not to act symbolically with nature. Architecture is designed with durability in mind and is a barrier against and a shelter from the natural world.

These two opposite yet mutually beneficial perspectives of vernacular architecture still influence contemporary design, and can offer concepts that address environmental and cultural sustainability, even though they come from different perspectives. Early settler models respond to climatic conditions through technological responses, and indigenous Māori give insights into ecological stewardship. Both however in some ways are no longer feasible or appropriate in a contemporary environment. Traditional vernacular approaches to architecture are unable to cope with the requirements of an advanced post-industrial society that has certain requirements from the built environment. The goal is to instil vernacular elements that engage the concept of kaitiakitanga that still address safety, comfort and health standards and construct the foundation of modern technological building.

Kenneth Frampton’s 1983 essay “Towards a Critical Regionalism: Six Points for an Architecture of Resistance” addresses the pursuit of contemporary architecture that seeks a balance between local vernacular traditions and modern technologically advanced building practices. Frampton’s essay argues for a broader articulation of a contemporary sustainable architecture by addressing not just a technological but also a cultural articulation of sustainability. “Section 5: Culture...”

19 Ibid, pg.4538
20 Ibid, pg. 4538
22 Ibid, pg.4538
23 Ibid, pg.4538
Versus Nature: Topography, Context, Climate, Light and Tectonic Form” of the essay develops the idea of sustainable design that embodies the traditional energy efficiency with a cultural dialogue. Frampton defines his argument with the example of the “generic window”, which he states should be replaced with regional approaches to fenestration:

“There, clearly, the main antagonist of rooted culture is the ubiquitous air-conditioner, applied in all times and in all places, irrespective of the local climatic conditions which have a capacity to express the specific place and the seasonal variations of its climate. Wherever they occur, the fixed window and the remote controlled air-conditioning system are mutually indicative of domination by universal technique”.

This example relates to Frampton’s opening statement that “Modern building is now so universally conditioned by optimised technology that the possibility of creating significant urban form has become extremely limited”. Frampton believes also that Critical Regionalism should establish a stronger relationship with nature, and he relates this to the phenomenological idea of “place-making” and goes on to say that “a contemporary architectural response, sustainably appropriate to its context on a variety of levels, would tend to be linked with local traditions of the material culture of the region”. Frampton’s ideas notion towards the quest for an architecture that responds to local conditions that will embody greater efficiency of materials and energy, and respects local cultural tectonics and customs, and develops a greener and more meaningful architecture.
4. SPACE, PLACE AND PLACELESSNESS

Our experience and understanding of space ranges from our experience of sea, sky and landscape, to the built space of the street, the measured space of maps, plans and space possessed by cities or countries. Space is formless and intangible: no meaning or social connection has been given to the space— it is more or less abstract. Yet however we know or explain space, there is nearly always some associated sense or concept of place. In his book ‘Place and Placelessness’ Edward Relph states: “in general space provides the context for places but derives it meaning from particular places”.

4.1 PLACE

Establishment of a meaningful relationship between people and a given environment is to create a ‘place’. Places are a synthesis of human and natural rhythms, and are the significant centres of our direct experiences of the world. They are directly experienced elements of the tangible world and are full of experiential meanings, with real objects and ongoing activities. Places provide individual and communal identity for people, and can be significant centres of human life with which people have deep emotional and psychological bonds. Due to this focusing they remain a part of the surrounding space but are also set apart from it. The understanding of place is important because a better knowledge of the character of place can contribute to the preservation and cultivation of existing places and the design of new places.

30 E Relph, Place and placelessness, Pion Limited, London, 1976, p.8
31 Ibid, p.8
32 Ibid, p.141
33 Ibid, p.141
34 Ibid, p.141
35 Ibid, p.44
A place may come about in the following ways:

Through natural assets: enjoyment of beautiful scenery provides plenty of natural stimuli to assist in the incidence of a favourite place.\(^\text{36}\)

Through association with a historic building: public markets are located in historic buildings in many major cities and generate a highly concentrated point of social contact and activities and hold an historical narrative about a place.\(^\text{37}\)

Through sensory enjoyment and comfort: enjoyment of a fresh breeze, the sounds of birds, and the clear sunlit views together suggest a place for sensory pleasure.\(^\text{38}\)

Through a narrative: comments about the pleasure of having visited the re-instated Waihorotiu stream in Auckland, New Zealand, for example may become a point of common interest.\(^\text{39}\)

According to Edward Relph “If places are indeed a fundamental aspect of man’s existence in the world, if they are sources of orientation and identity for individuals and groups of people, then it is important that the means of experiencing, creating and maintaining significant places are not lost. Moreover there are many signs that these very means are disappearing and that ‘placelessness’- the weakening of distinct and diverse experiences and identities of places- is now a dominant force.”\(^\text{40}\)

\(^36\) Castello, Lineu, Rethinking the Meaning of Place, Conceiving Place in Architecture, Ashgate publishing Limited, 2010, p.4
\(^37\) Ibid, p.4
\(^38\) Ibid,p.4
\(^39\) Ibid,p.4
\(^40\) E Relph, Place and placelessness,PionLimited,London, 1976,p.6
4.2 PLACELESSNESS

Placelessness defines environments that have no significant places and that don’t recognise meaning in places. Conceptual order replaces experiential order and diversity is replaced by uniformity.41 C. W. Moore has written that “the richly varied places of the world... are rapidly being obliterated under a meaningless pattern of buildings, monotonous and chaotic”.42 Uniformity in geography and culture is not a new occurrence. All over the world diverse cultures and landscapes had homogeneity imposed on them by the spread of Greek civilisation, the Romans, and even the notion of the city. Improved communications, increased mobility and imitation has given rise to the uniformity of placelessness. The general consequence is the weakening of the significance of place for individuals and cultures, and the diverse and meaningful places of the world being replaced by unspecified spaces and transferable environments.43

41 E Relph, Place and placelessness, Pion Limited, London, 1976, p. 143
42 Ibid., p. 79
43 E Relph, Place and Placelessness, Pion Limited, London, 1976, p. 143
Some manifestations of uniformity in the city, are skyscrapers and the city grid:

-Skyscrapers can give a city a distinctive profile from a distance but from within they create wells of steel and concrete that offer few clues to the identity of the city, and although skyscrapers make up the built identity they can mask the natural identity of the landscape.

-The city grid organises space the most efficient way possible to locate activities and use land the ‘best’ way possible with little regard for the local topography.

Along with these issues that are present in the Auckland CBD, I feel the most significant issue that prevents any meaningful experiences and relationships is the busy pace of the city. Due largely to the dominance of the four lane road running down the middle of the street. The middle of a busy road is not a comfortable place to be as a pedestrian, nor is the noise and air pollution particularly inviting. It also pushes people against the sides of the street condensing pedestrian movement against the shop facades, where the fast pace is determined by people rushing to work and even if you don’t have to be anywhere it is easy to get caught up in this rat race environment. Consequently this fast, noisy, dirty environment makes it very difficult to slow down and experience and enjoy the surrounding environment and contemplate the interesting buildings and people.
4.3 TRANSCENDANCE

Although placelessness may be an inevitable phenomenon there is a possibility for maintaining and reviving people’s sense of place. “The possibilities do not lie in the preservation of old places- that would be ‘museumisation’; nor can it lie in the return to the traditional way of place making- that would require the regaining of lost state of innocence”\(^4\), according to Edward Relph. Instead, placelessness must be transcended in the same way all styles and trends have evolved, from something before them. George Matore has written “to compensate let the occupied, lived space acquire more cohesion, become as rich as possible, and grow large with the experience of living”. So to regain strength of place it is not necessary to wipe out the city and start again, it is about strengthening and connecting what is already there.

The relationship between a community and place is significant with each reinforcing the character of the other, and the landscape is a physical expression of the shared beliefs and values of this mutual participation.\(^5\) So they may be separated in conceptual terms but experientially they are very similar; simply put, people are the place and the place is the people. Places are public, and through participation in common experiences, common meanings and symbols are created and understood.\(^6\)

\(^{44}\) E Relph, Place and Placelessness, Pion Limited, London, 1976, p.145
\(^{45}\) Ibid, p.34
\(^{46}\) Ibid, p.34
The landscape is a medium of communication of messages. A landscape communicates its identity through various means such as: buildings, streets, and squares. These elements of the landscape lead to what Aldo van Eyck has called “a collectively conditioned place consciousness”\(^47\).

Public space physically or symbolically may be an intersection, central point or focus. Landmarks are a central focus and natural or man-made features can attract attention to themselves and can also define themselves as a place that stands out from its surrounding area. This can be due to their centrality, unusual natural features, or because of their associations with events of great significance.\(^48\) Day-lighting the Waihorotiu (which is a natural feature and in a central location) would be an engineering feat and also symbolic of our restoring of respect and value of the earth.

People develop associations with places where we are born, where we live, or have had emotional experiences. Individual and cultural identity and security are formed from these associations, and create a point from which to orientate ourselves in the world.\(^49\)

This point is an important psychological and spiritual attachment to somewhere particular for people to look out and understand their position in the world.\(^50\)

Fields of care are our literal attachment to places. An area we have had various experiences that can evoke emotional responses. Caring for a place is based on past experiences, future expectations, and most importantly a social responsibility\(^51\). This complete commitment to place is important for people as care taking is the “basis for man’s relation to the world”\(^52\).

This responsibility and commitment is what the western philosopher Martin Heidegger has called ‘sparing’: “sparing is letting things, or in this context places, be the way they are; it is a tolerance for them in their own essence; it is taking care of them through building or cultivating without trying to subordinate them to human will. Sparing is a willingness to leave places alone and not to change them casually or arbitrarily, and not to exploit them.”\(^53\)

\(^{47}\) E Relph, Place and Placelessness, Pion Limited, London, 1976, p.145
\(^{48}\) Ibid, p.35
\(^{49}\) Sharr, Adam, Heidegger for architects, Routledge, 2007, p.43
\(^{50}\) Ibid, p.38
\(^{51}\) E Relph, Place and placelessness, Pion Limited, London, 1976, p.38
\(^{53}\) E Relph, Place and placelessness, Pion Limited, London, 1976, p.38,39


5. CARETAKING

5.1 KAITIAKITANGA

Kaitiakitanga is the Māori term for guardianship, and is a theme that describes the care taken to preserve the heritage and character of an area while revitalizing it and making it more accessible to the public. It is a way of managing the environment, based on the Māori world view.54

In the Māori world view, people are closely connected to the land and nature, Kaitiakitanga is based on this idea of humans as part of the natural world.55

A kaitiaki is a guardian. This can be a person or group that cares for an area such as a lake, forest or stream. They are given that role by the local tribe.

In the past, people followed traditional practices when they were hunting, fishing, growing or finding food. These helped them to care for the environment.56


5.2 WEAVING ‘the eternal thread’

For Māori culture weaving (Whatu) is significant to the concept of Kaitiakitanga. The weaving patterns embody and pass on stories, knowledge and beliefs of Māori culture.57 The significance of weaving to this project is that fundamentally weaving is many different strands interlocking to create a whole, a ‘unity in diversity’.

5.3 COMMUNICATION, UNDERSTANDING, LEARNING

In order to communicate people need a common thread of understanding. When we can understand each other we can communicate, and when we can communicate we can learn from each other and about each other, growing and cultivating relationships.

In our contemporary environment the growing ecological awareness is an understanding shared by our multi-cultural community. This awareness can be related to Heidegger’s philosophy of ‘Sparing’ and the Māori concept of ‘Kaitiakitanga’. With this caretaking and cultivating of the land we have our common thread of understanding from which the two diverse cultures can be weaved together to form a ‘unity in diversity’58 creating a cultural relationship between Māori and Pakeha that more recent migrant cultures could also begin to understand and relate to.

57 Te Kanawa, Kahutai Mere, Toi Maramatanga, A visual Expression of Meaning, ...
5.4 UNITY IN DIVERSITY

The city should offer a sense of belonging in spite of individual choice. When this is the case we possess a common place, a collective dwelling.\textsuperscript{59}

Collective dwelling is not a mere coming together or meeting, but a being in the world somewhere as somebody. It is the somewhere, the place, which makes life visible and allows us to orientate ourselves in the world, and the image the place offers gives us choices and allows us to identify with that area, and we can say for instance “I am in Auckland.”\textsuperscript{60}

Meeting and choice as the function of urban space are the experiential dimensions of the city, and the primary types of the concrete urban space are the centre and path.

A centre represents the meaning of meeting and is represented in the town square. The path is what links the centres together and is represented in the urban street. The square condenses what is spread out along the street into a complex but comprehensive image, thus choice is facilitated. These choices are the different activities, professions and cultures that the place offers, the choices are the images in life that we as individuals are free to choose from, and gain our identity, and we may say for example “I am an architect from Auckland.”

The street is a horizontal rhythm that expresses the process of meeting and discovery. It is experienced as a succession of variations, the same unit repeated but never exactly alike in a continual movement from centre to centre. According to Christian Norberg-Shulz the continuity means more than a “linear succession, it also means that variety should appear as variations on a clearly stated local theme”\textsuperscript{61} which is expressed by the land and buildings. Thus the street becomes a manifestation of the process of discovery. We are lead step by step, being always within the urban space, and at each step the within reveals another possibility of itself.\textsuperscript{62}

The crossing/intersection of streets may be considered a “quasi square”. It intensifies the sense of meeting, implies a possible change of direction, a general kind of choice. It also slows down the continuous movement of the street.

\textsuperscript{59} Norberg-Shulz, Christian, The concept of dwelling, On the way to figurative architecture, Electa/Rizzoli, New York, 1984, p. 51
\textsuperscript{60} Ibid.,p.13
\textsuperscript{61} Norberg- Shulz, Christian, The concept of dwelling, On the way to figurative architecture, Electa/Rizzoli, New York, 1984, p.56
\textsuperscript{62} Norberg-Shulz, Christian, The concept of dwelling, On the way to figurative architecture, Electa/Rizzoli, New York, 1984, p.56
6. PRECEDENTS

6.1 CHEONGGYEcheon STREAM

Soul, South Korea, 2003-2005

The Cheonggyecheon stream is a 10.9km long modern public recreation space in downtown, Seoul, South Korea. The urban renewal project is on the site of a stream that flowed before post-war economic development required it to be covered by transportation infrastructure. The purpose of the stream restoration was:

- To preserve the unique identity of the natural environment and the historic resources of the Seoul CBD.
- Encourage the return of pedestrian friendly road networks connecting the stream with the urban environment.
- Build a cultural and environmental foundation for the city.

The restoration successfully created a connection between the north and south areas of Seoul that were previously divided into two parts based on their features, functions and the motorway passing between them. The stream helped join the two creating a new urban structure connecting the cultural and environmental resources resulting in a balanced and sustainable development of the north and south areas of the CBD. This is similar to my goal of engaging people with the environmental and cultural elements of Auckland’s CBD.

The stream features three zones:

- History-Underground waterways redirected to create a new stream bed with landscaped banks; former bridges used as decorative elements; seating to encourage the public to use the space.
- Urban and Culture-A park was created in the centre of the city with recreation areas, waterfront decks and stepping stones; designed using environmentally friendly materials, with artwork and maps on walls along the river.
- Nature in the middle of the city- Designed to look natural and overgrown; sections of the pier and overpass left as industrial mementoes; wetland designated as an ecological conservation area.

Fig.6.1 Cheonggyecheon before and after.
I would consider Cheonggyecheon project to be landscape architecture, but it is daylighting a stream which is significant to my design. It integrates local cultural themes into the spaces it creates, and also aims to create an engagement of people with the natural environment of the stream. I found this element to be the most relevant to analyse in relation to my project.

Engagement was achieved through:

- 22 bridges connected at street level reflecting local themes.
- Seating and waterfront decks to encourage public usage.
- Stepping stones to encourage direct engagement with water.
- Artwork and maps along river.
- Pier and overpass left as industrial mementos of past environmental mistakes.

An issue that the completed design had was the access from street level to the lower stream level for the elderly and physically disabled. This issue was addressed by adding access ramps and lifts from street level down to the stream. This is an implication that I will keep in mind as exclusion of anybody would be against the goal of integration that I hope to achieve with this project.
6.2 THE JAPANESE TEA CEREMONY

The Japanese tea ceremony is significant to my project as it utilises architecture and landscape to slow people down and create an awareness of themselves and the environment.

The tea ceremony, *chanoyu*, and its setting are closely connected, and the understanding of the ‘way of tea’ is created through this relationship. A complex succession of symbolic gestures and actions present themselves throughout the tea ceremony with the goal of a realisation of a sacred experience.

The transitional route, or *roji*, is the element used to achieve this experience. It leads from the mundane outer world to the sacred inner sanctuary of the tea house.

The journey to the *chashitsu* (tea house) through the *chaniwa* (tea garden) is designed to increase the participant’s awareness of each action taken. The organisation and tools of the ceremony’s setting are used to create a higher state of awareness of the everyday activities of walking, eating and drinking that we would usually perform almost subconsciously. Zen philosophy informs this characteristic of the tea ceremony, and forms the basis in creating the art of tea, with the idea that “the more conscious we are of our daily activities, the more conscious we become of ourselves.” So the mundane task of having tea is transformed into one of spiritual significance.

The threshold is an important architectural element used in the setting of the tea ceremony. An emphasis is placed on the doors and gates which define the transition of spaces leading to the tea house to heighten awareness of movement from space to space. The religious historian Mircea Eliade investigates the symbolic importance of the threshold and concluded that the “threshold is the limit, the boundary, the frontier that distinguishes and opposes two spaces- and at the same time the paradoxical place where these spaces communicate, where passage from one to the other becomes possible.”

The *roji-mon*, is the initial entry gate that guests pass through into the ceremonial environment of the tea garden. It is left slightly open to communicate the host is ready for their arrival. This tool is repeated throughout the path to the tea house in order to indicate each threshold and the encompassing invitation to transition through it.
The chaniwa is divided into two areas, the outer soto-roji and the inner uchi-roji which are divided by the middle naka-kuguri gate. The soto-roji features rich foliage and planting with a more ordered and direct stone pathway, so the guests can focus on the environment around them, increasing their sensual experience, the participant sees, smells and hears the natural surroundings. The middle threshold, the naka-kuguri, highlights the movement between the soto-roji and the uchi-roji. It brings awareness to the threshold through the physical movement imposed by its one metre squared size and half metre height above the ground, guests must first step up onto large trump stones that are on either side of the gate and then bend down and squeeze through into the uchi-roji. The uchi-roji in comparison to the soto-roji, is sparsely vegetated and the stepping stones are arranged randomly to bring awareness to the simple act of walking, which creates a stronger relationship between the person and the environment. The nijiri-guchi is the last gateway and signifies the transition into the tea house. It measures one metre squared also and requires guests to bend down and crawl through into the chashitsu. This physical movement restricts the guests and performs as a tool to heighten awareness of their body and also “requires everyone to bow and be humbled, regardless of social status in the ordinary world”.

The roji’s sequential characteristic is significant to connecting the participant and natural environment. Architect Gunter Nitschke outlines the idea of ‘experiential time’ used as a tool in the tea garden to form the ceremonial setting and carries on to say that “space can be expanded by increasing experiential time through the reduction of speed and the obstruction of movement”. On the journey through the soto rochi and the uchi roji leading to the chashitsu, barriers like the naka-kuguri, and elements such as stepping stones and winding pathways are incorporated to slow down participant’s movement to increase awareness of every step they take. This allows time for guests to contemplate the environment of the tea house, ‘smelling the foliage of the garden, listening to the boiling water in the kettle, tasting the tea and handling the utensils.’

The Japanese tea ceremony uses the threshold, stepping stones and winding paths to increase experiential space in order to create a sensory and physical connection of person to environment. I feel similar features can be translated architecturally into my design to achieve the similar goal of connecting people with the natural and built Queen Street environment.

75 Ibid, pg.182
76 Ibid, pg.184
78 Ibid, pg.181
6.3 NEW YORK HIGLINE, Diller Scofidio + Renfro

New York, USA, 2009-2011

The High Line is a 2.33 km long urban public park built on a disused elevated railroad running from the Meatpacking district to the Hudson Rail yards in Manhattan, New York. The park features the cultivated, the natural and the communal, creating an urban space. The design idea is an evolution of what was there initially in a considered fashion. The park is part architecture and part landscape design. It translates its history and integrates the plant life that grew after the railroad became disused and decrepit, creating a series of site specific spaces that create areas to encourage people to slow down and interact or contemplate the city’s natural and built environment. The entry points are temporal experiences with the purpose of creating an awareness of the transition from the fast pace of the city up to the slower pace of the elevated urban park. This is similar to how the Japanese tea ceremony uses the thresholds to bring awareness to the gateways from the outside mundane world into the sacred environment of the tea house.

The ideas of the Highline that are significant to my Queen Street design is how the highline relates to the surrounding buildings and context, and how the spaces designed slow people down and encourage them to stop and appreciate the surrounding buildings and natural environment of the city.


81 Ibid, pg.'About
The Highline achieves this by:

- Connecting contemporary architecture of New York:
  - Shigeru bans condos
  - Frank Ghery’s office building
  - Renzo Piano’s Whitney Museum of American art
  - Neil Dinaris’ multi storied building

- Portions of old tracks are re-used for rolling lounges positioned for river views.

- Tracks run through the second floor of the Chelsea Market building, with side track and pedestrian bridge.

- Viewing spurs are used for people to view and contemplate the city.

- Urban theatre with a window over the street provides unique viewing of the city street.

- Materials are raw and industrial reflecting materials used throughout the city:
  - Disused mullions of old factories
  - Railway pylons.
7. CONTEXTUAL RESEARCH

7.1 ENVIRONMENTAL

Fig 7.1 CBD prevailing weather patterns.
The prevailing wind during the summer period in Auckland is from the north easterly direction, and during winter it comes from the south west. The combination of steep east west slopes and straight alignment of Queen Street creates heavy shading and wind tunnel environments. These features can make the area an uncomfortable place to be and will need to be addressed by the design in order to make the area more inviting and habitable.
7.2 LAND USE

On the stretch of Queen street between Wellesley and Victoria Street the buildings are mid-high-rise, with a mix of heritage and modern buildings that are predominantly used for commercial retail and offices, with civic and cultural buildings situated in the close surrounding area. Trees that sparsely line both sides of the street are juvenile and mature native Nikau, and cabbage trees.
Fig 7.3 Auckland CBD land use.
7.3 TRANSPORT CONNECTIONS

Wellesley and Victoria streets are both main bus cross routes connecting the city with the outer central suburbs. The City link and airport bus also run through the central city along Queen Street and Wynyard Quarter. To maintain accessibility into and out of the city centre. I think it is important for these transport routes to be maintained to some degree.
Fig 7.5

Fig 7.6 Victoria St transport corridor.

Fig 7.7 Wellesley St transport corridor.
8. DESIGN RESEARCH

8.1 SITE FOCUS

The CBD is full of interesting, significant experiences (historic buildings, transport hubs, and cultural/civic spaces), people are just largely unaware of their presence. The high rise buildings, grid of the city and dominance of road along Queen Street all weaken the opportunity for meaningful experience. Therefore it is necessary to strengthen these meaningful elements and experiences of the CBD through a reconnection of people with each other and their environment. Upon analysis of the place and placeless features along the historic path of the stream and Queen street, I have found the two blocks between Wellesley Street and Wyndham Street to be an area that suffers more from the placeless contributors, and also has fewer meaningful features, therefore this is an area I will focus on because it could be strengthened through a connecting of the higher concentration of place makers situated on the south end and north end of Queen street.
8.2 SITE FOCUS

Upon closer analysis of the street blocks between Wellesley and Wyndham Streets, I have focused into the street block between Wellesley and Victoria Streets. The area features a number of historic buildings, shared spaces in the surrounding area, main transport corridors at each end of the block, and six intersections. The intersections are significant to this choice because they act as centres, slowing people down and bringing them together. So this area is an ideal site to connect the meaningful elements already present in order to strengthen the sense of place.
Fig 8.7 Site focus.

Fig 8.8 Intersections & Historic Buildings

Fig 8.9 Victoria Street Intersection.
8.3 SIGNIFICANT BUILDINGS

- Site of Old Gaol & courthouse.
- 205 Queen Street, 1987, (5-star environmentally rated).
- Darby Building, 1908.
- X-Base Backpackers.
- The Strand Arcade, 1900.
- Mid City Centre, 1980, Sinclair Johns Architects.
- Smith & Caughey’s Department Store, 1927-28, Roy Lippencott, (Chicago style with hint of art deco).
- The Civic Hotel & London Bar, 1875.
- The Civic Theatre, 1929, Bohringer Taylor & Johnson.

Fig 8.10
Whitcoulls Building, 1899, John Carrie.

AMP Building, 1966, Jack Manning, (One of the earliest high rise buildings in Auckland city).

International Language School.

Old ASB Building, 1884, Edward Bartley.

Fig 8.11 View of The Civic Theatre, Smith & Caughey’s building and the reflective Mid city building.
8.4 PEOPLE STUDY

The people and activities along the site area of Queen Street are many and varied. Most people are travelling up and down the Street stopping for food and to smoke cigarettes. The most permanent residents are the homeless who are begging or sleeping on the benches, with the occasional busker performing to the predominantly transient crowd.
Fig 8.13 Eating.

Fig 8.14 Cycling.

Fig 8.15 Overseas students lining up outside International language school.

Fig 8.16 The homeless seemed to hang out on the ground, street benches, and in more enclosed spaces like doorways and lower overhangs.

Fig 8.17 Protesters.

Fig 8.18 Backpackers waiting outside the backpacker building orientating themselves in the city and using the bank for money exchange.
8.5 LAND FORMATION

The site of the design between Wellesley and Victoria street measures two hundred and 50 metres in length with an average width from facade to facade being 27 metres. Each foot path is seven metres wide, and the road is four lanes across measuring twelve metres in total. There is a five meter drop in elevation from the Wellesley intersection to the Victoria intersection, with the south half dropping a mellow half meter, and the north half of the road dropping four and a half meters.

Fig 8.19 Cross section through Queen Street.
Fig 8.20 Site gradient looking West.
9. DESIGN PROCESS

9.1. WEAVING

Maori and Pakeha are the two underlying models of vernacular architecture in New Zealand. The Maori belief is one of symbiosis where people are seen as part of nature, so architecture is understood as an extension of the natural world. Pakeha have operated on the notion that humans have authority over nature, and settlement was developed primarily to lessen the possibly dangerous effects of nature on humans, not to act symbolically with it.

With this in mind Pakeha are represented with the city buildings, and the Maori with the landform. I will then use the stream to weave the two cultures together.
Fig 9.1 Weaving Maori & Pakeha cultures with the Waihorotiu Stream.
9.2 INTERSECTIONS

Intersections are centres where people slow down and come together. Therefore the six intersections are the initial points of departure for the location of architectural spaces along the site.
Fig 9.3 Spaces defined by intersections.
9.3 THE STREAM

The base of the brick barrel drain under the road is 1800mm under the current road level. I have used this level as the base depth of the stream down the entire length of the site peeling back the surface of the street.

Foot paths are 3 metres wide and run the length of the site to allow access to shops and offices. The profile of the ground gradually slopes down to the 1800mm deep centre of the street creating access to the water from both sides. This profile is constant down the street with the stream weaving from side to side carving into the banks, and where it crosses the centre of the street the two sides meet at an equal level. Terraces run into the side of the banked stream functioning as part of the filtering process, aerating the water, and also creating engagement to the water through the sound created by falling water.

The form of the ground plane allows the stream to function in flux. Interaction with the stream is possible with high and low flows of water.

The following two water filtering devices will be used in the design to achieve a safe degree of water quality:

Bio retention is a natural filtering process in which contaminants and sedimentation are removed from storm water run-off in urban areas. Storm water is collected into the treatment area(stream) which features a succession of filtering layers consisting of soil and vegetation. The Auckland city council specifies for the use in bio retention native trees, grasses and shrubs ranging from 300mm up to 10metres.82

Water aeration is also a natural filtering process, it works by increasing oxygen saturation in the water. The oxygenation is achieved through a movement or disturbance of the water caused by an incoming stream or waterfall.83

Fig 9.4 Terraced form allows for the filtering of stream water through bio retention and aeration.

Fig 9.5 Cross section of ground plane. Centre level of street at 1.8m allows for high and low levels of water.
9.4 PLAN DEVELOPMENT

Fig 9.6 Stream path from Wellesley to Victoria Street with terraces based on land contours.
Fig 9.7 At this stage the plan is fully pedestrian, and tends toward landscape architecture. The architectural spaces need to interact with the surrounding buildings more, and address the urban aspects of the site.

Fig 9.8 With the urban aspects of the site being considered, a tram has been incorporated into the street, and traffic can pass over the stream on the two lane bridges at Wellesley and Victoria Street. Overhangs and roofing are featured to guide where people walk and create more inviting spaces that encourage interaction with the stream.
9.5 URBAN CONTEXT

Focusing location of spaces for best points to contemplate significant buildings.
Fig 9.11 One of the earliest high rise buildings of Auckland, the AMP building (1966), sitting next to the Whitcoulls building (built in 1899).

Fig 9.12

Fig 9.13 View directions from space points.
9.6 HORIZONTAL/VERTICAL RHYTHMS

Fig 9.14  Building facade horizontal and vertical rhythms, and their relationship with each other, and plan of stream.
9.7 MATERIALS

Fig 9.15 East side facades.

Plaster  Brick  Steel  Blue/grey Basalt stone (footpaths & curbs)  Glass  Concrete

Fig 9.16 West side facades.
9.7 EXPERIENTIAL TIME

Obstacles such as stepping stones, terraces and thresholds will be incorporated in order to slow down peoples movements to increase experiential time when moving through and around the Stream. This will allow time for people to become more conscious of the environment they are moving through. Roofing and overhangs will be used to create more habitable spaces, protecting against the weather. Placement of overhangs will be used to create winding pathways through the stream as they push and pull from side to side. As the stream flows down the street it winds close to the buildings, carving away the footpath creating a tension between the two. Bringing the relationship of the urban and natural to attention.

Fig 9.18 Terraces provide seating and also help filter stream water.

Fig 9.19 Stepping stones create engagement with stream by slowing movement, and also provide a fun playground.
Fig 9.17 Roofing and overhangs provide shelter from natural elements and encourage walking paths.

Fig 9.20 Thresholds can create pressure then release in order to increase consciousness when moving between spaces.

Fig 9.21 Tension between building and stream.
10. DESIGN DEVELOPED

This developed design stage features three bridges: two bridges at both ends of the site which are two lane car and pedestrian bridges, and a Tram bridge in the centre of the design. Each bridge represents The stream chronologically through the materials used. The Wellesley bridge at the south end represents the early wooden bridges used to cross the stream during early European settlement, the tram bridge uses brick which was later used in CBD buildings, and finally the Victoria bridge is the modern material concrete.

Thresholds are created by the changing levels of overhangs, with each one indicating the passing into the three main spaces.

The two spaces on the outer areas of the design function to bring the stream to the attention of passerby’s, through the noise of water falling down the terraces, overhangs to sit under and contemplate the surroundings, and stepping stones to slow peoples movements to make them more conscious of the environment they are moving through.

As people move through the threshold from the outer spaces and into the main central space they pass beneath the low overhanging gabled roof, creating a feeling of pressure just before the central space opens up before them presenting the stream, buildings and sky.

The stream also winds within 2.5 metres of the building facades on the east side and west side to bring the stream to the attention of people as the walk close to it. This also creates a visible relationship between the urban buildings and the natural stream.
Overhang’s against the facades are situated against the buildings where people need shelter while waiting outside to enter them, such as the backpackers, international language school, and the homeless who dwell outside McDonalds. Roofing is mostly situated over the stream area to encourage people to inhabit these areas where they can contemplate the buildings and stream. The location of the spaces have been determined by the intersections, and the best position to experience the significant buildings. The roofing and overhangs also function to frame views of the buildings by their shape, material’s, and direction angle.
11. DESIGN OUTCOME

Fig 11.1 South entrance

Fig 11.2 Site plan NTS
In order to slow people down obstacles such as stepped terraces, columns, and thresholds have been used throughout the design which will force people to slow their movement and become more conscious of each step taken.

The design is experienced as a journey through two main zones mirrored on each side of the centre space. The transitional thresholds into and between each zone is defined by bridges which people have to climb over or walk around, this physical movement imposed on them brings awareness to the transition into each zone.

**Zone 1** features a more ordered set of terraced steps, column layout, and pergola overhead, so people can focus on the environment around them, seeing, smelling, and hearing their surroundings.

**Zone 2**, columns and terraces are arranged more sporadically to bring awareness to the simple act of walking, which creates a stronger relationship between the person and the environment.

After moving through the first zone where your senses have been reawakened, and the second zone where we become more attuned to the environment, the centre space opens up and the buildings, the stream, and the people come together with time to observe our unity in diversity.
11.1 DESIGN FEATURES

The timber columns throughout the design reference a Nikau forest, and support the overhead pergola. The pergola features glass and vine roofing. The roofing is positioned throughout the design to offer areas to stop and relax, and allow the best views of particular significant buildings. Overhangs from the buildings run the length of the street but are not constant, they push and pull away from the building facades to encourage different walking paths and allow instances of building views in a much less proscribed way than the standard overhang present on Queen Street. The diagonal wires that criss-cross along the design have their position defined by the boundaries of the buildings with the diagonal geometry referencing the Nikau palm frond.

The bridges that define the thresholds also represent the chronological materiality of the city. The Wellesley St Bridge represents the early timber buildings and bridges across the stream, the second main bridge is the center brick bridge which represents the later brick buildings of the city, and the final bridge is made of concrete, the material of modern day construction.

SUSTAINABILITY

Sustainability of the design is expressed through:

- Materials that reference the cultural context, like the main pergola support gables being made from recycled Kauri/Rimu beams from surrounding demolished buildings. Bricks used are also recycled from surrounding buildings.

- Overhead vines create shade in summer, and drop their leaves in winter when more light is required.

- Storm water quality and capacity is greatly improved by the above ground reticulation, and filtration through bio-retention, and aeration. Storm water would otherwise just flow down the concrete pipes and straight into the ocean.
12. CONCLUSION

The aim of this Research Project was to design an architectural intervention that could bring cultural understanding between Maori and Pakeha in regards to attitudes towards the environment through day-lighting the Waihorotiu stream.

Day-lighting the stream itself can achieve this aim as it would address environmental issues of local Maori, and would allow them to exercise their care for the land (Kaitiakitanga). Caring for the land is also relevant to most New Zealanders as the general awareness of environmental issues grow.

However there was a danger that the design could become landscape architecture, and in order for the project to become architecture, the urban aspects of the city would have to be looked at more closely.

Upon closer analysis of the Auckland CBD it became apparent that the city features many significant aspects that contribute to the city's sense of place. However these aspects are becoming less appreciated, and a meaningful experience of the city has become weakened. This is due largely to a uniformity from the city grid, high rises and the dominance of the car. These issues helped to focus an area where the design could help strengthen the sense of place, and also outlined the parameters of the design, highlighting the need to slow people down and engage them with the significant built and natural environment of the CBD.

From the three precedents studied I found architectural features being used to achieve the same goal of slowing people down, and increasing their experiential time to create an engagement with the environment via movement and sensory experiences. These elements were used to enhance the experiential quality of the spaces. The finer grain and details of the buildings and context revealed rhythms and materials to use in the design to form a relationship, integrating not only people into the environment but also the design itself.

At present the road along Queen street divides the people, the buildings, and silences the stream. As people slow down and take notice of the significant buildings, interact with the stream, and start to appreciate and care for these things they will experience the area meaningfully and develop a better relationship with the environment, built and natural, creating a common place of understanding where people can visually observe and experience each other allowing time for a basic understanding between the two underlying Maori and Pakeha cultures of New Zealand.
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HISTORY

The Waihorotiu originally flowed from a spring at the top of Myers Park and was fed by smaller streams flowing from the surrounding slopes into the valley that is now Queen Street. Approximately 700 years ago the area was used by Maori for agriculture with a village known as NgaWharau a Tako situated on the Hobson street ridgeline. The stream flowed from treeless slopes and fern was the dominant vegetation.\textsuperscript{84}

During early European settlement in the late 1800’s the stream was a source of drinking water and was reported to have small native trout and eels. With settlement growing north of Victoria Street, the stream soon became polluted with rubbish and sewage. In 1842 an open drain was engineered and named after the survey general at the time Charles Whybrow Ligar.\textsuperscript{85}

The Ligar canal could not cope with heavy rains and between 1843 and 1860 its banks continually gave way.\textsuperscript{86}

The length of canal between Victoria to Wellesley Streets caused ongoing public concern, and in 1869 it had become “the receptacle of abominable filth of every kind, night soil, garbage, the putrescent carcasses of animals, and every conceivable kind of rubbish left to stagnate and fester, liable to generate plague and pestilence in the very heart of the city”.\textsuperscript{87} By 1873 the open canal was replaced by a fully enclosed brick barrel drain, and then later with concrete drains.\textsuperscript{88}

And by 1987 the brick barrel drain had been completely replaced by modern drainage that had been laid over the last century. At this point the Ligar canal was said to be “only about 25 yards long before it terminated in a brick wall with the raw sewage flowing through a low gap”.\textsuperscript{89}


\textsuperscript{85} Ibid, pg. 29

\textsuperscript{86} Ibid, pg. 29

\textsuperscript{87} Ibid, pg. 29

\textsuperscript{88} Ibid, pg. 29

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