Masterton Playscapes

*Connecting children with landscapes through
interventions and design processes*

By

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Abstract

This thesis investigates the importance of connecting children to the landscape through creating child led designs. It explores the process undertaken when designing with children and shows how unconventional spaces called *playscapes* can benefit a child further than a standard playground. This thesis is taking place as research shows that too many children are spending time indoors, away from their outside environment. The disconnect has led to obvious developmental deficiencies within younger children which have, in turn, led to educational, social and physical problems as the child grows. The problem not only affects the household but the whole community as these children grow.

For this thesis, the research context situated in Masterton, Wairarapa, two hours from Wellington City, due to the increasing growth within the Wairarapa region. Masterton has already recognised the issues surrounding under-developed children however there has been no move in creating a playscape specifically for them.

The main theory is to show a process where children are directly involved in the design and how their input can pave the way for a beneficial playscape, giving another dimension to the designed space as adult's imagination becomes warped with the constructs of reality and the sense of play diminishes. This process will use several workshops to understand how a child works and invite them to create spaces and interventions that reflect their idea of play. Combined with design, these spaces became a collaboration of the children's outcomes as well as a space that can create connections between the past, present and future generations.

Throughout this thesis, a link to children will establish itself with the aim to create a landscape that children can relate to and grow through advancing their development. Through the environmental connection, the design will bring the children back to their ancestry and understand the relationship to the landscape that their ancestors had whether Maori or European.

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1.0

INTRODUCTION

1.1

Problem Statement

Play is the simple expression of enjoying oneself and having fun. The spontaneous activity that is enjoyed by people, although the age group associated with play is the younger generation. With such a broad term, “play’s” only restriction is the body, both physical and mental. “Play” is enhanced by both voice and apparatus. “Play is fuelled by curiosity and is driven by it” (Duerr Evaluation Resources). Play begins when the child does and develops throughout the child’s life, growing with more complexities and depth (Duerr Evaluation Resources).

The term “playscapes” is relatively new in the design and educational circles; however, it is growing rapidly and in popularity due to the positive connection between people and land that they occupy. Traditional play-spaces confine children to a playground. Employed are slides, swings, round-a-bouts and climbing frames constructed without thought of their environment and no relationship to the landscape. These spaces are beneficial for adults to watch their children. Although for the children, the playground leaves little room for imagination and self-prescribed play.

Playscape is the term for apparatus that responds to the landscape. “Playscapes are basically areas where people and children are entertained when they interact with the environment and its features” (Fernandez). This line of thinking that the surrounding natural environment plays a vital part in a child’s education has become more prominent as social space criteria.

This thesis is focusing on connecting children to their landscape as there has been a dramatic disconnect between children and their environments. This disconnect has led to a rise in anti-social behaviours and development issues, leaving children behind what their capabilities should be.

1.2

Research Questions, Aims and Objectives

This thesis will investigate the importance of natural play opportunities within a child's early development stage of life, therefore:

How can we connect children back into their landscape through their development of playscapes?

This question will investigate child-design integrated landscape through the following aims and objectives:

To create an environment designed by children for children.

Environmentally designed landscapes will be set up through interacting directly with the target stakeholder, understanding their ideas and thoughts. It will mean understanding their perspective in regards to the natural landscape and what they consider play to be.

To promote early stages of development and positive behaviours.

The developed designs will be used to create a space that will challenge children mentally and physically as well as engaging them in group and individual activities. The design will reflect positive engagement to the landscape and encourage a child's imagination.

To give an understanding of both the future generation's and landscape's heritage.

The designs will incorporate the old footprint of past generations in an innovative way that encourages children to understand their history and respect the land that they play on. In doing so, it will create the connection through user's histories and culture that the standard playgrounds ignore.

1.3

Design Method and Process

The thesis will investigate a range of sources that explore child integrated design and the playscape initiative. These include the design-led research constructed by Lucia Cha and Susan Wake who study the benefits of designing with children when designing new spaces.

The article, *A Case for Natural Playscapes* written by Jeffery Severin, investigates many different playgrounds and their advantages and issues. It shows how developmental and cognitive behaviours, as well as mental and physical aspects, are enhanced through playscapes that expand into the natural environment. This paper's research emulates the investigations of Shasta Children and Families First Commission and their research paper: *The Benefits of Playgrounds for Children Aged 0-5*. They also state that it is the child's imagination that is truly important and that it is the designers "duty" to create spaces that positively enhance this ability.

The thesis also investigates *Cap, de Creus* by EMF Landscape Architecture situated in Catalonia, Spain. It is designed as a restoration project as the architects listened to the landscape and designed a landscape reflective of the site's history and the environment. Further emulated by Duc Cuong Ha who designed *The Framed Landscape* in Quan Hoa, Vietnam and the West Philadelphia Landscape Project, Mill Creek, West Philadelphia. Both these projects have focused the community on understanding the damage to their landscape. This understanding has seen a stewardship of the landscape formed by the public as they take back responsibility for their environment. These case studies have strong principles that connect and reflect the values of the Masterton community.

This thesis includes children in the design process to show the vital connection between child and landscape. Through Landscape Architecture, the design will reflect the process with workshops and integrate the children's ideas and concepts. This engagement with children also relies on the community understanding the importance of children's development and investing in their future, as is reflected in the case studies. Inspired by the re-forming of Cap de Creus the design will take both from what was and what is now to create a space for the future. This analysis of design will lead the outcome to be tested with the children and in site to create a space beneficial for both landscape and child.

1.4

Scope of Research

From previous studies, there is a distinct lack of child integrated design consideration when designing townships. As a result of town layouts arising from economic functionality in which the social activities of children have no consideration, playgrounds sprout in spaces beneficial for the older generations. This thesis aims to change this pattern and show how child-led design spaces develop with a focus on creating invigorating playscapes within a township. Through creating a safe and comfortable playscape, children can engage in critical behavioural skills to excel their development.

The role of design will include investigations from child designs, connections with children and how designing for children can change the idea of playgrounds. In the discipline of Landscape Architecture what seems to be prevalent is a stock standard playground of slides, swings and a round-a-bout as the go-to way of creating a “brighter” environment. What happens if a playscape is encouraged and what ideas will be set up by the target stakeholders?

Fig. 1.1 Waipoua River and cycle way

1.5

Thesis Structure

The thesis will detail the process undertaken through selecting the site, interacting with the primary stakeholders, creating designs from the workshops and ultimately testing the designs on the site. Through creating a process in where the children's initiative and contribution becomes the forefront, it allows them to explore playscapes using their imagination.

Much of the thesis will be constructed by hand through both the children's and authors. The use of hand drawing will create a personal connection between children and author to relate in the design world what the playscape will convey. Through this, a range of materials will be encouraged, including pens, pencil, watercolour paints, play dough for three-dimensional modelling as well as a laser cutter to create a typology landscape model to explore the three-dimensional realm at a comprehensible scale.

2.0

SITE ANALYSIS

Fig. 2.1 Context Map

MASTERTON

2 300 km²

CASE STUDY as a New Zealand landscape

Largest development
withing the
Wairarapa district

- Gives ability for outcome to be created into a framework to spread
across the Wairarapa and create more child driven landscapes.

Stakeholder Interest

No "next step"

Invested in the future
Ready to make changes

Firstly move into
smaller towns then
to larger cities.

WELLINGTON CITY

HUTT CITY

PARAPARAUMU

Central hubs for other towns
- more facilities
- urban and rural spread
- grounded in agriculture

Greater population diversity
Population 24 400

Only development on main
river system (aside from
Martinborough)

Create a base framework for other areas within Wairarapa

Fig. 2.2 Masterton Development

2.1

Introduction

The Wairarapa, named after its largest lake, is a sparsely populated region in the south-eastern area of the north island, south-west of Hawke's Bay. Predominately farmland of the beef variety, its largest town of 23,352 residents from the 2013 New Zealand Census, Masterton is situated on the northern half of the region (Statistics New Zealand). One hundred kilometers north-east of Wellington, Masterton is also known as *Whakaoriori* to local iwi (Masterton District Library), and the township's location pre-European settlement has been a source of life for Māori.

From its establishment to present form, Masterton has slowly succumbed to the 21st Century technologies, behaviours and attitudes. Through this, the township and community have disregarded their landscape and ignored the outstanding natural surroundings choosing to disengage with the environmental features. By doing so, it has left the community negatively impacted through the collective and individual abandonment of the landscape, including the Waipoua River that runs through the top third of the township. The river is vital to both Māori and European histories yet, like the landscape around it, has been forgotten and neglected.

Fig. 2.3 Masterton Typology

2.2

Land Processes

Many processes have contributed to the formation of the Wairarapa; these include the geological and resulting flora, hydrological and historical influences implemented through nature and man.

Wairarapa's geological base foundation sits on Torlesse Greywacke (a hardened mudstone and sandstone) that forms the Rimutaka Ranges. The rock bed also comprises of Chert and Pillow Lava composites. The region has also experienced several earthquakes, most notably the 1855 magnitude 8.5 earthquake (Lee and Begg).

The Waipoua River's northern reaches consist of a battle between indigenous and exotic flora species. Unlike the other western rivers within the Wairarapa of which their steep gradient at their sources has allowed the water to weather and reveal the greywacke bedrock that forms the mountain range, the Waipoua begins at the base of the Tararua foothills. The river systematically carries gravel down from the foothills and into the Ruamahanga, a process that intensifies during flood season (Greater Wellington Regional Council). "It's location subjects it to the cool, wet to extremely wet climatic conditions that occur in the Tararua Range" (Greater Wellington Regional Council). The Waipoua traditionally follows a single river braid, being a smaller river with a narrower river bed. Its seven-day mean annual low flow (MALF) of 490 L/s means that the river is relatively low when compared to the Waingawa (1,720 L/s) just south of Masterton. While initially seen as an asset to the township, the Waipoua proved to have significant consequence during flood season (Greater Wellington Regional Council).

Historically in Masterton, European settlers used stop banks to control the water and flooding. Currently, the Masterton District Council (MDC) and the Greater Wellington Regional Council (GWRC) are collaborating on a new approach to flood protection in the township. The contradicting information given to residents regarding the level of flood protection implemented has seen both councils accept climate change and extreme weather a serious risk, working together to create a suitable solution (Farmer).

The Wairarapa has also seen many disputes between the people who have inhabited its region, Māori and European alike. It has also seen many years of peace between the two people, and although we are in a time of peace, the region has grown restless. There is tantamount desire to allow the region to express itself and heal from the impact of

Fig. 2.6 Community Connections

previous and current processes.

On Friday 18th March 1853 with the goal of engaging working people into the landscape through permanent settling, Wellington's "working men" finalised the establishment of Masterton through the "Small Farms Association" headed by Joseph Masters (Masterton District Library). Because of Masterton being the main centre within the Wairarapa and its potential for farming realised, the flat terrain within the area allowed for the township to develop with little resistance.

However, before European settlers, there were many trades, wars, land disputes and semi-nomadic settling between different Māori tribes (Schrader). Retimana Te Korou was a "principal Māori chief involved in the sale of land for the township of Masterton... Whose life was severely disrupted following the displacement of peoples during the Musket Wars" (Wairarapa Archive). Te Korou eventually resided at Kaikokirikiri Pa giving his support to the Small Farms Association.

There are four significant sites, Nagaumutawa, Matua and Kaikokirikiri Pas and the Akura Marae, that connected the Waipoua to the Māori people. A popular story tells about Haunui-a-nanaia, who chases his wife after she ran away with a slave, on the way back he names his surroundings. One such river he comes across is the Waipoua. The story describes how "he tested the depth [of the river] with his tokotoko/walking stick and gave it the name Waipoua. Another term for tokotoko is pou and wai is water" (Waipuka, The Story of Haunui-a-nanaia). After speaking with a local community member, there is knowledge in local histories that Haunui-a-nanaia established a tribe who became the residents of Kaikokirikiri Pa (now Mahanga Golf Club).

The Pa was extremely successful, situated out of the main river flow, even in flood season, with the river banks lined with flax and other native plants. The river was also full of tuna (eel) and sustained many flora and fauna that the Māori people harvested and hunted. As Masterton's community has strong ties with the land, European as well as Māori, it is vital to the region that future generations know the influence their ancestors had on the land, how they shaped and understood it.

2.3

Township Amenities

Masterton has established itself as the hub of the Wairarapa. With multiple education centres from kindergarten and primary to college, the Wairarapa Hospital, supermarkets and other activity hubs, the township has a bit of everything for most inhabitants as well as the traditional hospitality and retail stores. Masterton also has multiple exterior activity spaces to entertain such as the outdoor swimming pool, paddle boats, a skate park, basketball courts and a significant wooden playground.

Recently, the Masterton District Council has implemented a cycle path that travels from Colombo Road north-west to the train bridge alongside the Waipoua River. With proposals of extending this cycle way, it is also an activating space for users. It was designed to draw people down to the river and create that spatial interaction and mitigate the undesirable atmosphere. However, the river still holds negative connotations by local children and teenagers due to the unsavoury activities that once took place and been told the river is “dangerous” and unsafe.” Most people who “activate” space are adults, usually exercising.

With the design of the cycle way, placement of “play” amenities and general focus of the township still faces away and ignores the river. Even though there have been attempts to engage the community with the river, such as implemented swimming holes and native planting, there is still no direct, consistent relationship the community has with the water. What Masterton does offer is a fenced in the playground where children are under their parent’s supervision.

Figure 2.11 gives a spatial location to “play” amenities.

Main bridge across Waipoua. Also main connection between both sides of river.

Pedestrian Bridge

Only pedestrian bridge across river. Swing bridge significantly elevated over river.

Colombo Road

Second vehicular bridge across Waipoua.

Courts

Henley Park Leisureland

Designed park space for public usage. Unresponsive design to surroundings.

McJorrow Park

Wide open field space with football goal posts.

Playground

Child's playground on back with plastic and wooden play equipment. Youth Age 3+.

Courts

Singular Basketball Court. Youth Age 8+.

Ruamahanga - Waipoua Confluence

Meeting of two rivers. Important cultural and historical space for Maori.

Fig. 2.12 Waipoua North Collage

Fig. 2.13 Waipoua Upper Swimming Hole Collage

Fig. 2.14 Waipoua Lower Swimming Hole Collage

Fig. 2.15 Waipoua and Ruamahanga Confluence Collage

Fig. 2.16 A-A' : Waipoua North Thresholds

Fig. 2.17 B-B' : Waipoua Upper Swimming Hole Thresholds

Fig. 2.18 C-C' : Waipoua Lower Swimming Hole Thresholds

Fig. 2.19 D-D' : Waipoua and Ruamahanga Confluence Thresholds

2.5

Site Extents

The proposed river section for this development runs from Railway Crescent to the Waipoua - Ruamahanga Confluence. The reason for this being that this is the space has the most potential to be in direct contact with community members. Most community space development has taken part on the western side of the river leaving the eastern side for higher end housing development, and the lower west side, closest to the confluence for lower socio-economic housing. The design will primarily explore the west side as a catalyst and explore different levels of connecting the community to the river that will benefit the residents, especially along the lower reaches.

The design will focus mainly on the river, and how it can immediately interact with the community, there will also be a focus on the connections between spaces around, crossing and to the river. Any pre-existing design such as Henley Park will be exempt from the design. However, there will be investigations into how the boundaries will either merge or remain distinct.

Fig. 2.21 Rocks in Rapids

Fig. 2.22 Rivers meeting

Fig. 2.23 Walkway on Stop bank

Fig. 2.24 Railway Crescent and Bridge

Fig. 2.25 Steepest are of Waipoua - 3m drop from pathway

Fig. 2.26 Gradient begins to decrease - most publicly accessible space

Fig. 2.27 Opaki main road access to river - current earthworks (2016 - 2017) and re-vitalisation of bridge area underway

Fig. 2.28 River backs onto Elizabeth Park - stop banks intersect the two

Fig. 2.29 Stop banks continue - used by spectators to watch games on fields

Fig. 2.30 Waipoua begins to open up to nature - mixture of grass land, shrubs and pine

Fig. 2.31 Waipoua meets Ruamahanga - space known by locals but left to nature. MDC replacing vegetation (2016-2017)

North Scale - 1 : 4 000

Fig. 2.32 Stop banks behind trees

Fig. 2.36 Drain to river

Fig. 2.33 Stop bank with seating and walkway

Fig. 2.37 Landscape overtaken by vegetation

Fig. 2.34 Path under bridge

Fig. 2.38 Bridge over river

Fig. 2.35 Rock intervention placed in river

Fig. 2.39 North end of site opposite river

2.6

Site Infrastructure

The Waipoua River is a band of green running through Masterton. It has both hard and soft infrastructures in its current make up. From the invasive stop banks to native planting the Waipoua River is struggling with its identity and being considered a serious asset to the Masterton community. It has a conflict between “hard” and “soft” infrastructure through being a sporadic sprawl of intense exotic and native vegetation interspersed with open spaces and designed play features.

Through current analysis of the site, presented several spaces that have an existing layout (including the cycle track and Henley Park). It also includes spaces that are overlooked or have a program hastily implemented on the space (Waipoua swimming holes and the Waipoua - Ruamahanga Confluence) as well as spaces that have been left to roam free and be governed by nature. However, these spaces cannot be categorised in such a way as they are all interlinked and influenced by the neighbouring typologies.

The majority of the vegetation that lines the Waipoua’s banks are either exotic species or weeds. This array of undesirable species has been due to the neglected nature of the site, especially in places where people no longer go. Along the more dynamic stretch of the cycle way, there have been sections of native plants implemented, mainly flax and grasses that will both hold the river bank steady and replace the willows, pine, Manuka and other species deemed less desirable.

Both the northern end of the site (Railway Crescent Train Bridge) has a less used, forgotten atmosphere and the south (Waipoua – Ruamahanga Confluence) more so. For the train bridge, this is due to the surrounding areas mainly being farmland and industrial warehouses. While the Confluence backs on to Masterton’s eastern suburb, one that comprises of the lower socio-economic residents.

Fig. 2.40 Gratified Tree

Fig. 2.41 Pathway with trees (North end)

Fig. 2.42 Children playing in trees

Fig. 2.43 Gradient down to river

Fig. 2.44 Northern Waipoua River Reaches

Fig. 2.45 Southern Waipoua River Reaches

2.7

Spatial Analysis

From the overall site infrastructure analysis this section looks at the spatial topologies along the river:

- What is happening where and why?
- What are the influences that affect this site?
- Why are these systems behaving in a particular way?
- Moreover, most importantly where is the community connection to the river?
- Is it relevant or validated?

With the focus on engaging the community, particularly children with an area of the town that has dangerous connotations finding the baseline of the community to environment interaction is vital.

What will encourage people to engage with the site?

This analysis of the spatial qualities of the site allows for design decisions that will be child-friendly, include other community members and must change the atmosphere of the river into an inclusive, inviting area. As one of the objectives of the design to understand the history of the site through its people and environment gives a rich culture and further design element and relevance to the community.

Figure 2.46 illustrates this.

Wide open space behind backyards, typology is relatively flat with a few undulating knolls.

Potential to change the directions the houses face using the river as a part of the design features.

Create a designed space for Oxford Street and locals who have visited the site for generations.

UNMAINTAINED VEGETATION

Houses face away from the Waipoua River, vegetation has been left to grow wild.

Mainly native weeds, scrub bush and exotic species. There are limited native plants.

Opaki Road

Main bridge across Waipoua. Also main connection between both sides of river.

Stop Bank

Everything faces away from river.

Pedestrian Bridge

Only pedestrian bridge crossing the Waipoua.

Fig. 2.46 Spatial River Analysis North Scale - 1 : 4 000

DESIGN SPACE

Space has the ability to provide connections across the river.

SCATTERED VEGETATION

Designed and undesigned vegetation of mixture of native and exotic species.

Playing Fields

Playing fields for rugby, soccer etc.

Colombo Road

Only connection for lower third of river.

No pedestrian only access..

DESIGNED VEGETATION

Bordering Henley Park - Part of the "buffer zone."

Fig. 2.47 Low basin on west side with steep slope from river to eastern houses.

Fig. 2.48 West side steepens, river flows through a small gully.

Fig. 2.49 Stop banks showing where the flood prevention area begins.

Fig. 2.50 Landscape is still steep directly next to river edge.

Fig. 2.51 Landscape begins to flatten out, stop banks are implemented. Public use area

Fig. 2.57 Sections along River North Scale - 1 : 8 000

Fig. 2.52 River begins to flow through more natural vegetation.

Fig. 2.53 West side is boarded by QEII Park. No access over stop bank.

Fig. 2.54 Stop banks fade as residential buildings move away from river proximity.

Fig. 2.55 Wide open space with grass land (west) and Henley Park (east).

Fig. 2.56 Cole-de-sac at end of road. Landscape comes from weathering. Waipoua meets Ruamahanga.

Fig. 2.58 Graffiti under Opaki Bridge

2.8

Summary

The Waipoua River is an integral part of the Masterton Township, showing dramatic neglect. The potential that this space could hold within the community has only recently showcased through council efforts to change the negative connotations around the site to one of enjoyment, safety and play.

The council have “fixed” the site through implementing stop banks for flood issues and a cycle path to create a more energetic and outdoor township. However while these actions have changed the look of the site, many community members believe this is only cosmetic. The township needs to be able to relate further to their landscape and waterways, and without this, the river and environment will remain overlooked.

There needs to be direct contact and interaction with the river - and not only by currently active members of the community. The whole township needs to be involved in the landscape, most importantly the children. Children are the future. As Landscape Architects, Council members and people in environmental and town planning sectors as well as the public, it is the older generation’s duty to educate and preserve what spaces are available to our future children.

3.0

PLAYSCAPES

Literature Review - Case Study - Precedent Analysis

Fig. 3.1 Waipoua River with established trees

3.1

Introduction

There are many studies and papers written about the benefits that natural playgrounds and playscapes offer to children, whether this is through life and social skills, physical activities or creative thinking.

Spending time in nature is a major component of human health and development. For many, nature inspires curiosity, creativity and a sense of freedom. Moreover, playing in natural landscapes provides opportunities for motor development and sensory experiences not available in the classroom or even on the traditional playground (Severin).

As summarised by Severin, playscapes give children the opportunity to explore their natural environment and develop their “social, physical and cognitive skills”. The natural playground with rugged and natural landscapes allows children to explore their creativity, whereas traditional playground becomes repetitive, too familiar and does not push a child’s creativity. Playgrounds have strong boundaries and unspoken social rules that dictate what activity occupies space. Playscapes have shown to spark creativity allows for more positive individual and community development.

A natural playscape is a space that allows children to discover the world and how it works. Through abundant loose materials, the children are able of using their imagination and creativity to foster innovativeness and independence. Simon Nicholson wrote in 1971, “in any environment, both the degree of inventiveness and creativity and the possibilities of discovery are directly proportional to the number and kind of variables in it” (Gin).

With access to nature, regardless of socio-economic backgrounds, race, ethnicity or other categorising characteristics, being exposed to natural playscapes throughout childhood, children have shown to have a positive relationship with the landscape. This exposure at an early age to the natural landscape “significantly influences the development of lifelong environmental attitudes and values” (Strife and Downey) which in turn can improve the health of children.

3.2

Reflections on a Student Research-led Design Project involving Children, Climate Change and Landscape Architecture.

SUSAN WAKE AND LUCIA CHA

The paper “*Reflections on a student research-led design project involving children, climate change and landscape architecture*” is similar in topic to this thesis however instead of engaging with climate change, this thesis focus is on the revitalisation and enhancement of the landscape typologies. Throughout the paper, Wake and Cha analyse the process undertaken and explore the ways of actively engaging with children as well as overcoming the hurdle of those dismissing a child’s opinion. As Cha points out “the importance of nature in children’s lives, juxtaposed with their diminishing exposure to it and coupled with an investigation into ways of empowering children through engaging them meaningfully in the design process” allows for children engage with the overall design process.

The benefit of this lies in the children producing their design ideas and contributions that adults would fail to include or imagine. Over the course of the thesis, Cha and Wake explored the ability of the children’s interaction and how to maximise the time spent with the students. This interaction resulted in an excelled understanding through the design stage of how a finalised design would affect the community. Cha states “I decided to work with children as community members who have rights and valuable ideas to contribute to a design process.” Difficulties with engaging with children came from conveying ideas, changing the level of understanding and not knowing any possible outcomes. Another issue that Cha and Wake came across was the limited acceptance of including children within the design process.

Such as Cha and Wake, this thesis aims to reinvent the public space which will be able to utilise external space to connect children with their environment. By designing with children, it not only engages the younger population but brings forward the public’s responsibility they have towards space. It creates and awareness around the environment which then can build community connections.

3.2

Research Paper: The Benefit of Playgrounds for Children Aged 0-5

DUERR EVALUATION RESOURCES AND SHASTA CHILDREN AND FAMILIES FIRST COMMISSION

The *Research Paper: The Benefits of Playgrounds for Children Aged 0-5* is a study by the Shasta Children and Families First Commission under Duerr Evaluation Resources who developed playgrounds alongside local communities in Shasta County, California. Throughout this research, it proves that “playgrounds provide crucial and vital opportunities” (Duerr Evaluation Resources) and that the research shows “the clear link between play and brain development, motor skills and social capabilities” (Duerr Evaluation Resources). The paper describes how playgrounds can endorse various types of play that inform and help a child’s development. These types of play are crucial for the child’s social, physical, cognitive and emotional development. These not only include the child’s abilities but how to enhance and develop these abilities through free play brain development, motor skills, health and imagination.

The research paper, *Are Playgrounds still Viable in the 21st Century?* states that: “playgrounds provide an opportunity for free play. Free play differs from the structured play of school recess (school playtimes) or organised sports and games” (Hudson and Thompson). Further endorsed in Rivikin’s *Outdoor Experiences for Young Children* “the act of play by a child stimulates brain development and function” (Rivikin) and that is vital that children develop this interaction with the play environment within their first six years of life (Duerr Evaluation Resources). In turn, this helps develop the motor skills needed to engage in social and cultural situations. “An example of how free play in playgrounds aid that development of social skills is expressed in the spontaneous creation of ‘games’” (Duerr Evaluation Resources). The games can be real or fantasy, played individually or as a group. These games allow for children to learn the social and cultural rules that hide within society. “Children learn to negotiate, compromise, work together, and also control themselves and tolerate their frustrations To play successfully with their peers” (Duerr Evaluation Resources).

Opening the opportunity for Masterton to connect its landscape up to younger generations, there is the potential for younger children during the early stages of their childhood experience play designed spaces within their local region. Through designing the play site within the lower socio-economic area, this allows for children with higher risk of missing this development to experience their play place close to home. This connectivity to play also affords the ability for older children, teenagers and young adults to interact and look out for young children within a close-knit, family type community.

Fig. 3.2 Key Concepts Diagram

3.2

A Case for Natural Playscapes

JEFFERY SEVERIN

As with Duerr Evaluation Resources, Jeffrey Severin's article analyses the positive benefits of children at play and how their behaviours and well-being is positively affected by natural playscapes. He compares the difference between traditional and natural playgrounds, how the environment can be enhanced positively and the unfavourable impacts of society as well as the urbanisation sprawl. While Severin accepts that traditional playgrounds are more beneficial than no playground, he challenges communities to demand the natural playscape as these playgrounds have the ability to enhance a child's motor skills as a result from "more rugged, unstructured landscapes of natural environment during play" (Severin). Strengthened through his analysis of Helle Nebelong's work that "playing on traditional structures becomes simplified, and then the child does not have to pay attention to his or her movements" (Severin).

This enhancement of the natural landscape instead of implementing a traditional playground also gives the opportunity for children to create games, such as suggested by the Duerr Evaluation Resources findings. They have the ability to name and craft fantasy facades to particular areas of the playscape. "The natural environment fostered more creative play by providing unstructured playscapes, loose materials and natural objects to play with" (Severin). This ability gives rise to the notion that instead of creating actual playgrounds, it is the activating space for play that becomes the catalyst.

However, the struggle for natural playscapes or even the space for these areas is growing against the tide of urbanisation and society impacts. As the world's hard infrastructure grows, so too does the separation between children and the natural environment. "Through urbanisation, car-centred development, social deterioration, and pollution of water bodies, it has become increasingly difficult for youth to experience unguided encounters with nature" (Severin). As a result of this, it is becoming increasingly urgent that children have access to nature and natural playscapes to develop by themselves outside of parental, educational and technology based influences.

It is the ability to create natural playscapes that this thesis will focus on, using cues from the landscape to promote physical and cognitive development within Masterton's children. The "natural playground" will focus on "mimicking experiences in the natural environment and providing opportunities to explore more natural surroundings" (Severin). By allowing the communities children to grow and develop their skills within a setting that they will flourish creating a happier and healthier generation.

Fig. 3.3 Cap de Creus Look Out

Fig. 3.4 Cap de Creus before design revitalisation

3.3

Cap de Creus

EMF LANDSCAPE ARCHITECTS

Designing through understanding space and place is the fundamental layer when analysing Cap de Creus. During 2008 – 2010 Club Med, originally a private holiday village on one of the windiest headlands located in the far northeast of Catalonia, Spain, was redeveloped through a landscape architecture “deconstruction” project. Being one of the most dramatic movements in modern settlements in 1961 and becoming a Natural Park in 1998 due to several significant “outstanding geological and botanical values” (Landezine, Cap De Creus - EMF Landscape Architecture) informed the design.

When tasked with restoring the site back to a value that celebrates outstanding natural landscape, EMF Landscape Architecture merged the original and existing. Instead of completely removing what has been built and worn away by human influence, the team looked at how this joining of current and past to create a combined future look giving this overall atmosphere. “The work distills and enhances the consubstantial values of the site, the diversity of geological formations, the harshness and nakedness of the rock outcrops, the specialisation of native vegetation, the wind and the sea magnificence (Landezine, Cap De Creus - EMF Landscape Architecture).” Basically, how can this project capture the importance of the space through minimalistic design? This “deconstruction and restoration” method design links the initial landing when understanding the space and the ultimate design outcome.

It is this methodology of a minimalistic approach to a site that the thesis will try to emulate. The site itself ranges from highly designed to completely neglected therefore analysing the site to find its landscape typology will be part of the design process.

Fig. 3.5 Corten walls and natural rock features

Fig. 3.6 Empty lots before development

Fig. 3.7 Child working in community garden

Fig. 3.8 Children building new gardens

Fig. 3.9 Local school children showing proposed plans

3.3

West Philadelphia Landscape Project

WEST PHILADELPHIA COMMUNITY

The West Philadelphia Landscape Project (WPLP) is a project that started in 1987 with the purpose to work with both youth and adults. Situated in the Mill Creek watershed area, the project has used derelict lots and remaining land to create a necklace of community gardens and gathering spaces. Since the project has taken off and gained substantial ground, the government has now realised the benefit of creating community spaces that enable cross-age interactions and other relationships between all members of the community to build.

Empowered by the government supplying the funds for the clean-up of the water supply, this community engagement is creating jobs for those in the watershed, which happens to be one of the poorest places in Philadelphia. WPLP links people within their community setting by becoming an integral part of Mill Creek's resident's lives. From what started as altering a small plot of land has burst into a multi-million-dollar project that has spanned for almost forty years, with the core outline of "rebuilding a community and restoring nature" (West Philadelphia Landscape Project Community).

The project has designed frameworks for future projects of similar calibre. Out of all of this, their main aim has been with empowering youth, whether this is the young people within Mill Creek or the 400 students from schools as the WPLP becoming part of the curriculum, teaching youth about their space and place. With the ability to bring forward their ideas to the project, many have been able to watch their neighbourhood change in ways that they have inspired. The confidence has given the community control over their neighbourhood, bringing together a tight-knit community that, through a common interest has subsequently been able to build a stronger community.

The WPLP shows the high calibre atmosphere a community can create together coming through a common goal. Within Masterton, the aim is to recreate this positive atmosphere and demonstrate the community that by backing its youngest generations, the township can create a functioning and useful space that will become a catalyst for the rest of Masterton and ultimately the Wairarapa.

Fig. 3.10 Framed landscape showing polluted river

Fig. 3.11 Sketches of intervention

Fig. 3.12 Woman spending time in space

3.3

The Framed Landscape

DUC CUONG HA

The Framed Landscape in Quan Hoa, Thanh Hoa, Vietnam designed by Duc Cuong Ha. The landscape project is an installation set amongst the western mountains in the Thanh Hoa province. The site for this installation expresses Ha's intention through the different landscapes at such immediate proximity. What the installation shows are the natural beauty of the landscape, the rugged typology and the peacefulness of what exists naturally. What the installation turns away from is the multitudes of factories crammed into the landscape, the manufactured waste and daily household garbage thrown and poisoning the river.

Within the idea from David Storey that one is connected to the landscape and either positively or negatively affects the landscape, ultimately influences the well-being and lifestyle of the community. As the river and the surrounding environment become more vulnerable to the by-products of human waste and neglect, the community system begins to break down thus breeding neglect, despair and sickness of mind and body. With the ultimate goal of inviting individuals to take a moment in the space and become more aware of the issues surrounding the pollution of their environment, Ha hopes that his installation will be the starting point for the community to revitalise their space and place. The use of the frame is symbolic to directing the user's eye and focus of attention to the degrading beauty of the natural landscape. He hopes that giving people a chance to leave the crowded urban environment will be enough to begin the connection back to the landscape.

Through bringing attention to the site, it further enhances the idea that the location within Masterton can be a catalyst for the rest of the region. Masterton when compared to Quan Hoa, does not have the same level of pollution. However, the landscape holds neglect. Unlike the community of Quan Hoa, the majority of residents in Masterton have not challenged the "barriers" within their landscape and subsequently are not exploring or interacting with the land. This casual relationship with the land has left the Masterton community strangers to their landscape and children conforming to structural play instead of exploring their natural environment.

Fig. 3.13 Different activated spaces diagram

Fig. 3.14 Designed walking track

Fig. 3.15 Water spaces for direct interaction

3.4

Natural Playscape

RDG PLANNING AND DESIGN

“It is a place where kids play unstructured, unsigned, and where they’re not told what to do. It is free, creative play in a natural setting, not in a classroom or on manufactured equipment (Bell).” This notion of a playscape, an environment that is created for the enjoyment of all ages and can reflect the personal interactions created through an intervention. Through this, and with the help of Naturalist Lew Major, goal orientated design and public engagement, RDG Planning and Design set about creating a physical environment for its future generations.

The strong incentive to design this park came from American-based studies finding that most Americans are leading sedentary lifestyles. People are developing more health risks creating rising costs of this epidemic. This threat to the population is why in many countries, there has been an increase in the development of activating community spaces. These spaces are beneficial through their ability to be actively engaging and creating cross-age interactions bringing both children and adults outside.

Traditionally parks (park spaces) were designed for adult engagement and children were left to amuse themselves. Jester Park still engages with older generations but through its design, heavily interacts with young children, leading to further engagement between different generations. By using free, unstructured environments that allow creativity to flow rather than stay contained, the park has found a larger and more active involvement from the community. The park allows users engage with natural elements and uses nature to shape the forms within the park boundaries.

Fig. 3.16 Child engaging with natural landscape elements

Fig. 3.17 Diagram of incorporated spaces

Fig. 3.18 Children utilising playscapes

3.4

Margaret Mahy Playground

CHRISTCHURCH CITY COUNCIL

Since the 2011 Christchurch Earthquakes, the city has slowly been rebuilding itself. During this, the city has taken the opportunity to revitalise some of its underutilised spaces. The Council have commissioned a playground inspired by Margaret Mahy. The playground, which is still in the process of completion, uses multiple different types of activities from trampolines to swings, oversized tunnels and slides, food and resting spaces to engage with all generational groups.

This range in activity and intervention allows for cross-age interactions just though accommodating many different types of people. The park is also aware of its surroundings with a platform being implemented in the river to encourage kayakers and pontoons'. The park is successful as it has used external influences to draw people into the playscape. It reflects the ideas behind Masterton's design by using interventions to encourage people to the site. By first being attracted to one design area, people find themselves further drawn into the place by complimenting elements. The Masterton playscape will not have as many interventions as the Mahy playground. However, it shows that a unique design relevant and specific to the site and community can create a socially inclusive space.

Fig. 3.19 Children engaging in a wide range of activities with in a successful playscape

Fig. 3.20 Collage of playscape with many different positive elements

3.4

Sculptural Playground

ANNAHAU LANDSCAPE ARCHITECTS

The Sculptural Playground, designed by Annahau Landscape Architects, is a play space that not only provides a function for children but has incorporated the surroundings through “artistically and ambitiously shaped” forms (Landezine, Sculptural Playground). The playground area, designed to slot into the newly retrofitted space in Wiesbaden, Germany has an overall design that is in synchronisation with the redeveloped area, giving new life and purpose to space. The design is all inclusive of all age groups, including teens and young children. This age inclusive design is reflected in the range of activities that the park provides, using a unique structure for multiple purposes.

The “sculpture” blends into the site’s redevelopment, not through appearance but function. Through being available to all ages, it opens up the site creating meaningful cross-age connections that a vital to community development, especially when revitalising a forgotten space. While there has been a significant increase in the place after the redevelopment, the design relates differently to this thesis proposal as it does not fully interact with its surroundings. The playground while being new and innovative doesn’t pay tribute to the historical value of the site. It does not proceed as a tool for education, just entertainment.

Fig. 3.21 Children playing in field next to the Waipoua River

Summary

From analysing the literature review, case studies and precedents, the possibility of the thesis has been able not necessarily to broaden but understand the scope of research. Through multiple views across a wide variety of disciplines and specialities, the research analysis has summarised the importance of children integrated within their landscapes. As well as this, there is the overall understanding that children, however, small and input they have will influence the path of design and with their influence create more successful, cross-age interactions within the community environment.

The thesis will aim to emulate the methodology of Cap De Creus through enhancing site by understanding what is existing, creating interventions that are relevant to the site and are reflective of the community. The overall design will incorporate a high calibre atmosphere to encourage the community to interact with space and for the site to be, and extension of residents own back yards. This responsibility to the site will give ownership and accountability to the community to create a mutual respect for their landscape. The design implemented will create this space through physical and experiential development and relationships.

Fig. 3.22 Literature, Case Studies and Precedent Analysis Diagram

4.0

PRELIMINARY DESIGN

Fig. 4.1 Cycle path alongside Waipoua River

4.1

Introduction

This chapter focuses on the physical aspects of the playscape, what it is, where the playscape is situated and why. The Waipoua River is such an integral element within Masterton's township with a strong history; therefore it is imperative that the river is returned to the community to enhance township development.

The design will investigate using the river as a catalyst for creating socially inclusive spaces for children to develop outside of educational and parental influences. The playscape will be a place for young children to explore and develop vital skills for their futures.

The initial site concepts came through surveying and experiencing the place. First reactions to the Waipoua River were mixed as multiple other spaces around Masterton such as Millennium Reserve, the natural springs along Ngaumutawa Road and Waingawa River were possibilities for the design proposal.

Selected was the Waipoua River for its history, culture, vegetation, typology, accessibility, neglect and potential. When looking at the Waipoua River, multiple layers of intrigue through being based around water, one being the river itself. However, the majority of the Wairarapa's waterways have serious pollutants, and users are advised to refrain from swimming, fishing or interacting with them. This polluted network of water includes the Waipoua River and gives the opportunity to create a space where the river once more celebrates itself and becomes a part of the journey through the site as well as a potential destination.

Fig. 4.2 Playscape analysis of natural and man-made elements

4.2

Playscape Analysis

Playscapes are becoming more and more popular within park designs. The research shows that they can stimulate a child's development further than the typical slide, swings and round-a-bout playground. This development and stimulation are challenging the child to use their imagination to create their spaces within in site, enhance their cognitive skills by creating physical interventions that provide initiative and incentive as well as behaviour skills by interacting with other children and adults.

Within the Waipoua River, many spaces offer themselves to the space for child's play. With the natural setting of the river, the opportunity opened for elements that include soft and hard-scaping.

There are two contemporary styles for playscapes, those that blend into the natural surroundings and those that explode with colour and intangible shapes. However all are focused on the interaction of children, whether this is through recycled materials, challenging obstacles, natural elements or individual and group tasks to achieve a goal or specific part of the playscape. The overall design will aim to be a combination of both styles. By creating bold and bright design interventions, it gives a point to be attracted to and creates a more structural intervention. The natural part of the design will focus on exploring what exists on the site, whether is it contrasting the immediate surroundings through emphasising certain natural features or creating "paths" through the site so the user can experience a range of typologies.

Fig. 4.3 Proposed Sites along Waipoua River

North

Scale - 1 : 8 000

4.3

Proposed Sites

Initially, four sites have been chosen to test the playscape design across. These proposed sites include the Railway Crescent Train Bridge and Oxford Street, Waipoua Swimming Hole, Mcjorrow Park and the Waipoua – Ruamahanga Confluence. These sites were chosen due to their accessibility to the township, connectivity to the river and relationship to spaces of human interaction.

However, through the sketch stage of what these spaces would potentially look like, they feel short in truly enhancing the natural elements of the site and failed to create an invigorating, interactive space.

Fig. 4.4 Oxford Street Sketch

Fig. 4.5 Waipoua Swimming Hole Sketch

Fig. 4.6 Oxford Street

Fig. 4.7 Swimming Hole

Fig. 4.8 McJorror Park

Fig. 4.9 Confluence

Fig. 4.10 Re-testing different sites along the Waipoua River

4.4

Re-Testing Sites

The investigations of the location also brought forth the feelings and experiences such as being enclosed and exposed across the Waipoua River. The Waipoua River has a strong physical interaction from the township to the river. This engagement to the river is vital when integrating children within the landscape. It links into the visual aspects that the site gives, from enclosed space to wide fields, changes in height, textures and compositions, as well as applying to the safety of users within the site and their caregivers.

Therefore the sites were re-tested and explored through returning to the site, analysing site photographs and sketching out the key attributes from the river. Re-testing the design meant looking into the structural side for the design. This little investigation led to another sketch series that examined mainly small interactive interventions along the river side and how a child could potentially interact with them.

This investigation series was a vital stage of the design process as it showed the majority of positive interaction was design and created in the lower reaches of the river throughout McJorror Park and the Waipoua – Ruamahanga confluence. The placement of the potential design site is also beneficial to the community that lives in the residential area. By being situated close to the lower socio-economic neighbourhood, it gives the town's children a space for themselves as throughout Masterton it is the area that lacks specific child orientated play.

Fig. 4.11 Oxford Street interactive design

Fig. 4.12 Oxford St characteristics

Fig. 4.13 Colombo Bridge interactive design

Fig. 4.14 Colombo St characteristics

Fig. 4.15 Upper Mcjorror Park interactive design

Fig. 4.16 Upper Mcjorror Park characteristics

Fig. 4.17 Lower McJorror Park interactive design

Fig. 4.18 Lower McJorror Park characteristics

Fig. 4.19 Confluence interactive design

Fig. 4.20 Confluence characteristics

Fig. 4.21 Confluence interactive design

Fig. 4.22 Confluence characteristics

Fig. 4.23 Intervention Sketch One

Fig. 4.24 Intervention Sketch Two

4.5

Preliminary Design

Therefore, the preliminary design focused on multiple structural elements that created beacon like spaces to attract and draw children and other users too. The use of structures gives that familiar element of a playground but uses elevation to show children other elements of the site through visual cues. The design uses natural landscape materials such as wood and rock to blend in with the environment.

The idea to interact and draw children in with many different interventions is apparent. However, there are issues within the overall design that do not reflect the concept of a playscape. Even though natural elements create the design, and invites children in, there is a distinct lack of depth within the design. The interventions hold only the space they occupy and do not interact with the space surrounding the site. A playscape is more successful than just interventions scattered haphazardly. The depth in design through experiential play and interaction needs to increase, develop and grow through the interventions.

Fig. 4.25 *Rendered Intervention Concept*

4.6

Summary

The preliminary design has allowed for the concept to start forming within site. The design decisions made showed that there is a current disconnect between children and the actual design. By understanding that the current design lacks a child's ideas and contribution, the developed design will be constructed based on the conversations and sessions held with the target stakeholders.

While the preliminary design is implemented within a suggested site along the Waipoua River, to benefit the design and community truly, it will be more beneficial to create a site-specific design that pulls out particular essential elements. This method of the design process will, in turn, offer more opportunities when engaging with the landscape.

As well as this, the design needs to analyse what specifically about the river is important. Whether it is directly engaging children with the water or creating suggested paths through the landscape that will ultimately lead to the river. It is important to include the river in the design decisions as the Waipoua is one of the main reasons for the original settlements, both with Maori and European.

The analysis of the current design is an important part of the design process as it is conditioning the site for the rest of the thesis. The design will follow on from the preliminary design stage through interacting with the main target stakeholders as well as others within the community.

5.0

STAKEHOLDER INTERACTION

Engaging with Children

Fig. 5.1 Masterton Region and Suburbs

5.1

Introduction

The Masterton District consist of several profile areas/suburbs which include Homebush, Te Ore Ore, and Whareama to the west, Kopuaranga, Opaki and Fernridge to the east and Lansdowne, Masterton East, West, Central and Railway, Ngaumutawa and Solway North and South around the town centre.

Masterton West, Central and Railway have established township areas that include residential, commercial and industrial land uses (ID Community). Masterton East is singularly residential, the second densest land area and predominately has the lowest socio-economic income across the district (ID Community). Masterton East is the chosen space along the Waipoua that the design will reside. This suburb was selected as it is closest to the most neglected part of the river.

Total 2013 Population Age Group Breakdown

Total Population: 23 352

Fig. 5.2 Service Age Groups 2013 Census

5.2

Stakeholder Analysis

The targeted age group was initially twelve to seventeen-year-olds, however by engaging with the district's secondary school aged children; it became apparent that beneficial interaction would be more successful by designing for younger children. This idea of interacting with younger children to integrate them with the landscape at an earlier age is supported by Jeffrey Severin and the Duerr Evaluation Resources group. When a child is experiencing development at a younger age, they have the ability to excel further in what they do, whether this is in education circumstances, at home or in the outside environment. By designing for five to eleven-year-olds, the design becomes about the children exploring their environment and uses more creativity and freedom to create invigorating spaces.

Five to eleven-year-olds are the primary subject group due to their natural curiosity and the design aim to create a space that was outside of the parental and educational influences. This age's group was also selected as it is the time in a person's life where the majority of behavioural, social, mental and physical development begins around peers. A group of children aged 7 – 9 from Douglas Park School became the focus group for the design. These children were integrated into the design process as they were already past the initial stages of their development and supplied insight into important features for initial growth.

Fig. 5.3 Children drawing concepts

Fig. 5.6 Children drawing concepts

Fig. 5.4 Children drawing concepts

Fig. 5.7 Children drawing concepts

Fig. 5.5 Children drawing concepts

Fig. 5.8 Workshop One with the class

5.3

Workshop One

Working with children aged five to seven created several problems, the first of which was to interact with the children. With the chance to engage with these children, contact enabled with Douglas Park School proved invaluable. The first workshop with the children involved the idea that water was something to enjoy. Some of the children had been to the Waipoua River, however, were told to stay away from the river as it is dangerous and unsafe.

Many of the children had not been to the river regardless of living within a ten-minute drive radius. The majority of the reason was the negative connotations around the river; also there is nothing to give a reason for children to be in the design area. Therefore the workshop ultimately was about their experiences with water, when they engaged with water and where. The workshop also included what they wanted to see within a river space and how they conveyed those ideas through drawings.

The drawings mainly consisted of most the children indulging in the creative freedom of this task. However, a couple of children designed spaces similar to the typical slide and swing playground. When asked why they decided to draw this, the common theme was this is the playground that they know. They were invited to explain what interested them within the traditional playground. This led to a discussion on “cool play stuff that was a bit different,” that enjoyment came from finding other children to “make up games with” and that the conventional structures were deemed boring and for children under the age of four to six (School). The distinct lack in challenging play spaces for children wanting to expand and develop their social, cognitive and behavioural skills was evident.

One of the problems posed by the site was that many of the children had only been to a single part of the river (man-made swimming hole next to Opaki Bridge) or not at all. The limited interaction is due to the site’s recent development with vegetation and the cycle path, stop banks that do not allow a visual connection and the stigma of the site from previous generations.

*you have to use a bridge to cross
the river because it is too
dangerous and fast and wet*

*we got to the river on
holiday and go to this
house*

*this is the bubble gum
bridge to cross the river
because it is very deep in
winter and full of green in
summer*

*the house gets wet
when we play in the
sea*

*there are lots
of stairs on
holiday*

Fig. 5.9 Children's drawings

*you can
climb up
the light
house*

*there is water
everywhere*

*the light house is
really tall*

*if you pretend that
the water is lava you
can't touch it*

*you can cross the river by using
cheese, like a really really thick slice
of cheese, you have to use a ladder
to climb up it, or you can eat
through it, but that's a lot of cheese,
I like cheese though so I don't mind*

*we're not old enough
to drive cars but it's
too far to walk*

*we always drive
to the water is
far far away*

*you have to walk to the
river*

*there are jelly fish and
they sting*

*swimming in the water is
only okay if you are a big
person*

Fig. 5.10 Children's drawings

Fig. 5.11 Children's drawings

*when there is rain
the river gets full and
is dangerous*

*it rains on some
days and we
can't go outside*

*there is
always the
sun in the
sky*

*burning the water
means we can get
to the other side
and not get wet*

*the smoke comes
from the fire and
the fire comes
from the water*

*blowing the air out of
the water to make the
water go away*

*sometimes the water is brown
and black and the dog is not
allowed to play in it*

*you have to walk along the
path*

Fig. 5.12 Children's drawings

using colourful rocks to
get from one side of the
river to the other

using shapes to help us cross the river-
the bridge is too dangerous for us, we
have to hold onto the rail and stay
away from the edge where the cars go

freezing the river to not
get wet and get to the
other side of the river

being able to
breathe
underwater
so we can get
to the other
side of the
river

the sun is happy
because the sun is
hot

we can't walk on water -
that's silly

we can use the
sun to jump over
the river

a balloon can help us to
get to the other side by
taking us up high

we are able to breath
underwater because
of the special toy we
got at christmas

we want to cross the river
but have to use the bridge
where the cars go and they
go really fast

Fig. 5.13 Children's drawings

our friends come with us to the river
and we can walk along the path -
she has fairy wings and I have my
crown

we can run
around outside
when the sun is
shinning

fruit trees
to play
under

land is the
saftey

colourful sun

island

water

the sun
must have
sunglasses

the sun has to have hair, otherwise it'll
get cold

rainbows happen when it rains

the clouds sometimes cry

you can make a
swing in the trees
and then swing on it

Fig. 5.14 Children's drawings

Fig. 5.16 Collage of children's work describing ideas and modelling concepts

5.4

Workshop Two

The second workshop took place as a physical visualisation development on the two-dimensional sketches produced in Workshop One. During this workshop, the same group of children followed on from their sketch work to create a play-dough model of their designs. This time they were asked to figure out the spatial qualities of their designs, whether the outcome was textural or experiential. How would someone be able to interact with the structure? Does this seem like a fun element to play around?

While the workshop was beneficial in involving the children to understand interaction with water, by not knowing the site they still had no real communication in their designs to the river. The designs were also mainly physical with little thought to the experience of the intervention. For the majority of the children, they relied on their own and peers ideas rather than what they have seen in previous playgrounds. They did not see the river as a playground, rather as space to “go explore” and “do our own thing” because it “had lots of hiding places” (School). This approach to the site was a drastic change from those before that were stuck with the tradition playground idea. The children who initially struggled with the designing concept ultimately created the more imaginative and seemingly wildly impossible designs which relied heavily on their imagination. The more they were pushed, the more creative the children’s ideas became.

*initial starting point - understanding
the properties of the material*

creating a cave

*adding to the volcano
design*

creating a volcano

ri

starting again

*figuring out how to convey what is
imagined to reality*

*playing with diffe
to find th*

Fig. 5.17 Further development with concepts

*giving the structure a purpose -
understanding why the medium was
manipulated*

*altering the initial form - changing
the purpose of the structure*

*entrance onto the
island*

*more access
points*

*creating a bridge for
people to cross over*

ridges and valleys added

*different shapes
d the final form*

*adding extra elements
to the design*

*manipulating the
medium further to
actually portray
what is being*

Fig. 5.18 Children playing with tree

5.5

Summary

The design will take valuable lessons from the workshops with the children as well as significant elements from their designs. The way that children use their imagination is completely unhindered by the realities of cost, construction, health and safety and other restrictions. They have total freedom when it comes to creating and explore a new area. Due to this, the developed design will be able to absorb the moments of creativity and play within the design space. Furthermore, by using the children's ideas and influences, it gives the site a strong connection between children and landscape.

The designs will be incorporated with the authors own designs influences to create a playscape that is both a mix of natural and man-made interventions. These interventions will facilitate play and offer opportunities for children to utilise their imagination and build upon and enhance their developmental skills.

One of the initial struggles when interacting with children was realising the difference in behaviours between adult and child. This difference between life cycle stages was an important lesson to learn as conveying ideas hinged on understanding one another. Even though the conversation was relatively straightforward, the imagination and creativity put forward by the children were far superior due to their simplified understanding of the world. It became apparent that this was an experience to treasure as when growing up the child will ultimately lose this unlimited freedom.

6.0

DEVELOPED DESIGN

Fig. 6.1 Implementing children's designs into site - Cycle way fields

Fig. 6.2 Implementing children's designs into site - Oxford Street

Fig. 6.3 Implementing children's designs into site - Swimming Hole

Fig. 6.4 Implementing children's designs into site - Confluence

6.1

Introduction

The site designs reflect strongly to the workshops which a vital step to the design process as the children's ideas and concepts need to be carried through to the final design stage. It allows a complete connection from the ideas the children came up with for their space and the outcome. By engaging with the children and completing a design that links to them, it creates a sense of purpose and responsibility within the community. The connection between child and land helps the community understand the importance of raising a strong, healthy and educated generation.

The designs will develop through taking important parts of both workshops and bringing to life designs from the children. The designs will be simple in nature yet explore all aspects such as height, colour, visual reach, texture and spatial thresholds.

Fig. 6.5 Bridge to cross river concept

Fig. 6.7 Netted "trampoline" concept

Fig. 6.6 Concept of netted play area under bridge

Fig. 6.8 Trampoline running alongside river bank

Fig. 6.7 Workshop two models rendered from children's ideas

Fig. 6.8 Workshop two models rendered from children's ideas

Fig. 6.9 Workshop two models rendered from children's ideas

Fig. 6.10 Workshop two models rendered from children's ideas

Fig. 6.11 Workshop two models rendered from children's ideas

Fig. 6.12 Workshop two models rendered from children's ideas

Fig. 6.13 Northern section of Waipoua river

Fig. 6.14 Mid section of the Waipoua River

Fig. 6.15 Southern section of Waipoua River at confluence

6.2

Design Model

The model was created to understand the landscape typology of the site. The first model looks at the overall whole river system within the township to explore the difference in typology, from the wide open to steep cliffs and enclosed. This model was beneficial and vital to the final design stage as it became an integral part of the design process through analysing the children's models through workshops and realising the need to create a three-dimensional visual model to aid in understanding the changes in typology and location of important elements that two-dimensional maps could not afford.

The second model is indicative of the site where the designs will be situated. This model became vital to the design process as it shows the particular typology where a design could be. The three-dimensional aspect of these models enables the design to form in the correct spaces along the river.

Fig. 6.20 Sample site of Mcjorror Park and confluence

North Scale - 1 : 8 000

6.3

Sample Site

Throughout the developed design a sample site has been taken to show how potential designs integrate into the landscape. The design takes what the children produced alongside learning from the process. The site offers multiple different spaces and sits on a less used area within the township. This site is unique to the Masterton Township as it is in an area at the end of the cycleway development. Space consists of a large open grassy area that then becomes enclosed and vegetated towards the confluence. There are also exotic tree species (including *Pinus radiata*) dotted in a strip next to the river. A stop bank runs roughly parallel to the river, however; it disappears when approaching the more neglected bottom area of the site. The different changes in space create multiple thresholds for the design to integrate across.

By spending time around the Masterton East residential district that borders the sample site, showed that the majority of houses were family homes with the evidence of small clothing items on washing lines, children's play equipment scattered across lawns and most importantly children running from house to house. This hub of activity influenced the decision to design in this space. The design will create a new space for all age groups to interact with, and the interventions designed with no age restriction.

Fig. 6.21 Site One

Fig. 6.22 Site Two

Fig. 6.23 Site Three

Fig. 6.24 Site Four

6.4

Developed Design

Within site, selected different approaches became utilised when designing the different spaces. These spaces used the basic idea from the children's workshops, such as height, space, structure and access. These ideas formed design spaces that can encourage children to interact with their landscape. The paper, *Interdisciplinary, Collaborative Design-led Research for Culturally-Diverse Communities* discuss integrating the community into the design process. It summarises that "rich and empowering design" can be achieved through involving the understanding of place, earning trust through relationships, respect by engaging in sensitive facilitation as well as the sharing of knowledge through participation (McIntosh and Marques).

This study has been able to achieve a design that is focused and has involved children by forging relationships, sharing knowledge and earning respect. With the complexities and differences between the individual child, the children respond to multiple differing designs, and the chosen site needs to reflect this. It is important for variety to show within playscapes for children as different elements attract different individuals. This diversity affords the opportunity for an all-inclusive playscape and encourages children to interact with invigorating and challenging intervention.

This thesis predominantly focuses on the sharing of knowledge through engaging children within the design process and the consideration of the landscape they inhabit. Through understanding their design ideas and concepts, it has enabled the evolving relationship between the author and the children.

Fig. 6.25 Site visualisation and experience at particular points

Fig. 6.26 Transect of site across playscapes in Site One

6.5

Site One

The first site sits at the northern end of the park. This design within this site is to enhance the structural features of the area. It offers the opportunity to incorporate the designs of the fort-like structures produced from the workshops. These play-forts were designed to have many different elements that strongly differed from the standard tower. The many different elements to the play-forts give the opportunity to create a miniature play-fort development. The reason for more than one play-fort to be designed and constructed gives children multiple options between the different structures. It encourages play and the use of imagination to create their purposes and games for the individual interventions and the area as a whole (Duerr Evaluation Resources). The high structures also allow for children to experience a different view of the space they are utilising. This elevation that comes from the play-forts gives a higher visual description of the site than a typical child sees. It complements the design by showing other design elements within site, creating figure points to head towards and a break in the landscape.

This section of the sample site also uses trees, some that are already in site and others that will be implemented. The use of these trees is to mimic the elevation created by the play-forts which create a structural to natural level across the landscape that allows children to follow the elevated level. The trees also supplement the river space by creating a threshold that allows the site's users to experience an enclosed space before emerging out into the water.

Fig. 6.27 Detail of McJorror Park with design

North

Scale - 1 : 20

Fig. 6.28 Section of landscape traversing through man-made to natural elevations

Fig. 6.29 Elevated tower design

Fig. 6.30 Elevated tower plan

Fig. 6.31 Rendered setting of structure

Fig. 6.35 Site visualisation and experience at particular points

Fig. 6.36 Sections through landscape showing typology

6.6

Site Two

The second space within site gives way to a different open space. By using natural landforms and vegetation to sculpt the landscape, users are exposed to the raw landscape typology which allows users to understand the land that they live in and play on. In contrasting with site one, the natural feel of this space enables children to further develop without relying on set structures. It pushes users to experience the site in their way.

The change in levels is also significant as it differs from site one's elevation through using the natural landscape to create a vastly different effect on the site's perception. By keeping the land relatively flat, users can see the changing typology as small hills, but the views behind these hills are obstructed. When reaching the knolls, the next space becomes into view, opening a cut between the stop banks to open to the river. This covering and then the opening of the landscape creates a sense of entrance and passage through the landscape that can connect future generations with their ancestors as they took their journey through the same land.

The site also uses more vegetation to encourage natural play. By using the vegetation, children are not afraid to explore in the natural setting. This constant interaction with the natural environment allows the children to develop their independence away from built environments.

Fig. 6.37 Detail of McJorror Park with design

North

Scale - 1 : 20

Fig. 6.38 Section across typography

Fig. 6.39 Example of 'knolls'

Fig. 6.40 Plan of 'knolls' spreading through site

Fig. 6.41 Rendered setting of undulating landscape

Fig. 6.42 Section through stop banks

Fig. 6.43 Path through stop bank

Fig. 6.44 Rendered setting of division between stop banks

Fig. 6.45 Site visualisation and experience at particular points

Fig. 6.46 Sketch of netted structure

6.7

Site Three

The third area combines both natural and man-made elements. The design consists of a netted climbing structure and concrete forms which protrude across the grass with the aim of encouraging users to make their way through the site using just the concrete slabs. This journey then leads down to the river where the concrete colour is emulated in the grey stones.

The design gives a more structured element across the site with the concrete slabs heavily hinting at the desired path. This still asks the users to invoke their cognitive and physical skills to jump from one slab to the next. The netted climbing frame also relies on the user's ability to navigate the different types of rope forms. By not being uniform it encourages the user to use both mental and physical aspects to traverse the frame.

The design aims to create a linear axis through the site so that users can travel straight from the road, and down to the river, therefore connecting people directly from Masterton East. The netted structure also gives a point of reference, yet allows users to see through the structure to the river beyond which creates a series of phases throughout the space that all can be destinations or part of a larger journey. The netted structure is also connected to the structures in the first site through the visual connection of elevation.

Fig. 6.47 Detail of McJorror Park with design

North Scale - 1 : 20

Fig. 6.48 Section through site of typology

Fig. 6.49 Netted climbing structure diagram

Fig. 6.50 Structure in plan

Fig. 6.51 Rendered setting of netted structure

Fig. 6.52 Elevation levels across concrete

Fig. 6.53 Concrete 'floating' layout

Fig. 6.54 Rendered setting of 'floating' concrete spaces

Fig. 6.55 Site visualisation and experience at particular points

Fig. 6.56 Sample site of Mcjorrow Park and confluence

6.8

Site Four

A combination of both structural and free flowing forms, this section of the Waipoua has heavily relied on the input given at the workshops. This section uses colour, forms, access and a strong historical reference. By using big wooden poles at different points within site, the poles bring notice to the certain significant areas. Whether these be spaces that enclose or open, give height or obstruct space and are all traversed differently. The wooden poles are also significant to Haunui-a-nanaia who brought the first Māori settlement to the Waipoua River and would test the depth of the river with his tokotoko (walking stick) which gives the Waipoua its name, wai being water and pou meaning stick.

The site also plays on the freedom and enjoyment that children experience through the bright splashes of colour and forms. It allows children (and adults) to engage in singular or group activities, uses cognitive skills as well as other behavioural aspects that will enhance a child's development and wellbeing. The site is a jumble of design elements that strongly reflect the process that was engaged in during the workshops. It shows how the standard swings and slide set in every settlement does not fulfill the requirements of all the different children.

The first design component comprises a series of wooden poles that use netting to link them. This design decision to incorporate netting strongly engages with the history of the site being symbolic of past generations hunting and netting resources. The structures also form different spaces that need several different types of interaction to utilise each space. The non-uniformity further allows the child to experience challenges in the playscape.

The second area is directly in line with the confluence. The wooden posts protruding from the grass offer a staggered pathway to the mouth of the Waipoua River. The posts use their height and shape to create a build up to the reveal of the river. This is significant as generations past used the river for many resources and the mouth of the Waipoua where it meets the Ruamahanga being the most important along the water course, particularly to the traditional and cultural heritage of the Māori people.

The colourful bubble bridge designed by the children in the workshop is the only connection to the other bank. This connection is vital in creating a free flowing space between the Masterton East suburb and Henley Park. By implementing the bridge, it creates easy access to all users, and the brightly colour bridge challenges the norms of a crossing.

Fig. 6.57 Detail of McJorror Park with design

North Scale - 1 : 20

Fig. 6.58 Section across interventions

Fig. 6.59 Example of intervention

Fig. 6.60 Intervention plan view

Fig. 6.61 Rendered setting of intervention

Fig. 6.62 Example of intervention

Fig. 6.63 Intervention in plan

Fig. 6.64 Rendered setting of intervention

Fig. 6.65 Transect through interventions

Fig. 6.66 Example of intervention

Fig. 6.67 Intervention example plan

Fig. 6.68 Rendered setting of walking stick intervention

Fig. 6.69 Sketch of bridge

Fig. 6.70 Bridge plan

Fig. 6.71 Rendered setting of 'bubble' bridge

Fig. 6.72 *Carex lessoniana*

Carex lessoniana

Wetland sedge

Will grow on the Waipoua river bank

Creates a wave-like typology across the landscape

Fig. 6.73 *Cordyline australis*

***Cordyline australis* - Cabbage Tree/ Ti Kouka**

Strong root system to hold river banks

The tree has many different medicinal and resource uses

Tall form creates visual points through vegetation

Fig. 6.74 *Phormium tenax*

***Phormium tenax* - Harakeke/ Common flax**

Grows well on river banks

Has many different uses and can be cultivated

'Bubble'-like structure has ability to create density

Fig. 6.75 *Clianthus maximus*

***Clianthus maximus* - Kakabeak/kowhai ngutukaka**

Short lived plant that produces lots of seeds

Used traditionally as a gift by Māori

Currently slowly reintroducing species into wild

Fig. 6.76 *Sophora microphylla*

***Sophora microphylla* - Kōwhai**

Introduce bird species into the Waipoua

Valued for it's hard wood and medicinal properties

Becomes a ideal climbing tree for explorative children

Fig. 6.78 *Carex secta*

***Carex secta* - Pūrei**

Creates small boulder like appearance

Native to the Wairarapa

Unusual plant interactive with children

6.9

Vegetation

While designing the infrastructure with the landscape, many different types of vegetation offered themselves to the design, and while the surrounding vegetation is not immediate to the design, it helps support the overall feel of the site. The vegetation allows the users to explore the natural landscape which can be enhanced through particular flora species.

Species such as *Carex lessoniana* and *Carex secta* (Purei) offer intrigue into the unusual shapes they form. The *Carex lessoniana* is also known as the Spreading Swamp Sedge that can grow along smaller rivers like the Waipoua. This sedge forms small fields that ripple and change in the wind or when walked through. This interaction of flora creates another interactive space for the children to explore. Similar is to be said for *Carex secta* that grows in a small bubble like clump on top of thick but short tree trunks. By having lower, interesting and interactive plants, it allows for the children to play around the species. The sedges offer something to pull, climb on and run through.

Species of trees and flax are beneficial in the site to hold the steep river banks and to provide shade and shelter. Trees that offer climbing perches such as *Sophora microphylla* (Kowhai) appeals to older children who have developed their skills and are looking to explore their abilities and the site. The *Sophora microphylla* is a popular plant amongst birds and will encourage native bird species.

The vegetation suggested for the site are species chosen as they either enhance the site's atmosphere or have the ability to contribute to the well-being of the community, whether the plants are harvested, used as flood protection measure or provide entertainment. With a real design setting, native species such as these would provide the base layer that would be added to by suitable other native species. This implementation of native species would force exotic species to be removed, creating a vegetated setting similar to pre-European settlers.

Fig. 6.79 Rendered example of interventions

Fig. 6.80 Oxford Street access

6.10

Summary

With the aim through the thesis focusing on the process of integrating children's ideas and suggestions into the design and how interacting with children can change the face of the design process, the overall designs all came from the ideas put forward at the workshops.

This gave an excellent opportunity to explore something different than just creating a design without fully knowing the design audience. It also gives a deeper sense of purpose within the design knowing that children can help to create something that is beneficial for them and will teach them life lessons and skills that are vital for adulthood.

This connection to the children allowed for a whole new design world to be opened. Through this, interaction with children had to be learned. Communication between child and adult was very different to typical design conversations as well as the actual drawing outcomes.

7.0

CRITICAL REFLECTION

7.1

Critical Reflection

Although the thesis initially started with exploring the importance of playscape, it is the connection between generations and the significance of children and landscape that hold the most importance when designing spaces. From these designs, children can learn and play within their heritage and explore their future. Understanding and learning skills from the designs can enable children to develop in a more advanced manner compared to those with limited or no connection to the environment. The importance of the designs comes from the variability and flow. It allows children to use their imaginations to appropriate the space how they perceive it to be, whether a structure becomes a spaceship or rolling grassy knolls become gigantic mountains. It is the freedom and imagination of the design that proves a successful space for children to flourish.

The workshops proved that designs for children do not have to be structured and rigid elements that are found at every settlement. Children have an incredible freedom of creative imagination, and we lose that part of ourselves when growing up. It is vital that in the age of technology we encourage our future generations to leave home and explore their external environment and encourage play and curiosity wherever possible.

Although the time spent with the children in the workshops was very limited, it created a new area of design that is, for the most part, overlooked. However, this is changing all over the globe. When benefitting and creating a better environment and ultimately society for children, we are in turn creating a better place for everyone. Where playscapes are becoming more popular through testing and research so too will hopefully engaging children at the design stage.

What the struggle throughout this thesis was to understand that it is not about creating a final design but understanding the design process and conveying the interaction between children and their environment, with the designer becoming the facilitator and not the leader. Directly conveying ideas with children proved difficult because as adults we are warped through the practical impact of the world and lose the freedom and imagination that childhood is. It is this pure form of play in a child's life that needs to be enhanced, nurtured and treasured and playscapes are a way to achieve this.

While only a small space along the Waipoua was used in the design, the original idea was to create a playscape along the length of the river banks. This link would have proved more beneficial to the overall design as it would give a language to the site that one space cannot truly express. As well as this, a deeper connection to the water would enable children and adults to interact more frequently with the river. This relationship

would, in turn, show the issues currently polluting the waterways. With these further design elements, the design would connect with the children through the interventions and environment, but it would also be able to connect with the older generation as they see the landscape change.

It would be beneficial to have had more time not only with the children but to fully implement a physical testing stage within site to see how children would react to the physical interventions. By doing so, it would enable the final testing stage to analyse how the interventions performed with child interaction which leads past the original scope of the thesis. However, the process can be transformed into a framework that can be utilised throughout the Wairarapa Region and can be achieved through simple tools, understanding the landscape and most importantly, engaging children in the design process to truly create a connection between child and land.

However, the overall design created an initial starting point for progressive design. This design was created by children, for children. By interacting directly with the children, it allowed for their perspective to be understood and their ideas of play designed. As a future step, to see more realistic designs for children that came through the workshops would be key to see as many ideas were lost in translation or were not fully conveyed from imagination to paper. The challenging elements that they put forward, although not necessarily communicated as strongly through their drawings have been implemented to push children through the stages of development and promote healthy behaviours. The interventions themselves were also modified to create the connection through history to the younger generations. This link allows the children to learn the history of their landscape and where and whom they are descended from.

This study has contributed to the discipline of Landscape Architecture as it is beginning to open the door to not old child-led design but to involving other target groups directly within the design processes. This thesis shows the struggles of communicating with a younger audience and how more experienced people within the education sector would help the project. By encouraging external groups to fully be a part of the design process, it invites people to understand the Landscape Architecture discipline and creates a new or deepened understanding of the landscape. Through opening the discipline to others, it showcases transformations that Landscape Architecture can have on the environment, different systems, people and other areas that are not usually connected to Landscape Architecture.

8.0

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8.2

Sources of Figures

All following figures are embedded into this thesis and all figures not attributed are authors own.

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<i>Fig. 2.9 Masterton Skate Park</i>	Masterton Skate park. Masterton, New Zealand. 18 March 2016. Web. < Http://www.localist.co.nz/l/nndbpi >
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<i>Fig. 3.4 Cap de Creus before design revitalisation</i>	
<i>Fig. 3.5 Corten walls and natural rock features</i>	Building of the Week. Catatonia, Spain. 26 June 2013. 18 March 2016. Web. < Http://www.uncubemagazine.com/blog/9726665 >
<i>Fig. 3.6 Empty lots before development</i>	West Philadelphia Landscape Project. Mill Creek, West Philadelphia. 1987. 20 March 2016. Web < http://www.wplp.net/ >
<i>Fig. 3.7 Child working in community garden</i>	
<i>Fig. 3.8 Children building new gardens</i>	
<i>Fig. 3.9 Local school children showing proposed plans</i>	
<i>Fig. 3.10 Framed landscape showing polluted river</i>	World Landscape Architect. Quan Hoa, Vietnam, 2007. 20 March 2016. Web. < Http://worldlandscapearchitect.com/the-framed-landscape/#.v9yqlal9xh0 >
<i>Fig. 3.11 Sketches of intervention</i>	
<i>Fig. 3.12 Woman spending time in space</i>	

- Fig. 3.14* Designed walking track
- Fig. 3.15* Water spaces for direct interaction
- Fig. 3.16* Child engaging with natural landscape elements
- Fig. 3.20* Collage of playscape with many different positive elements
- Fig. 6.72* *Carex lessoniana*
- Fig. 6.73* *Cordyline australis*
- Fig. 6.74* *Phormium tenax*
- Fig. 6.75* *Clianthus maximus*
- Fig. 6.76* *Sophora microphylla*
- Fig. 6.78* *Carex secta*
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8.3

Appendix

Ethics

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MEMORANDUM

TO	Emma Erasmus
COPY TO	Bruno Marques
FROM	AProf Susan Corbett, Convener, Human Ethics Committee
DATE	8 July 2016
PAGES	1
SUBJECT	Ethics Approval: 22894 Paysage and continuity: creating equitable and liveable spaces inclusive of communities youth

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 28 February 2017. 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.

Kind regards

A handwritten signature in black ink that reads 'Susan Corbett'.

Susan Corbett
Convener, Victoria University Human Ethics Committee