A Space to Call Our Own

An investigation into designing for play in urban environments

by

Hayley Webber

A 120-point thesis submitted to Victoria University of Wellington in partial fulfilment of the requirements for the degree of Masters of Landscape Architecture.

Under the supervision of Carles Martinez Almoyna Gual.

Victoria University of Wellington School of Architecture

I

To my supervisor Carles Martinez Almoyna Gual, to my family, and my friends. Many thanks to you all, for the guidance, support and encoragement.

ш

Abstract.

Play is an act of discovery and stimulation. As children, we play to learn and grow. As adults, we play for freedom and to escape from reality. The action of play is a largely neglected aspect of peoples experience in urban public space. It is the un-functional and impractical use of the environment that fulfils a human instinct and curiosity that can spark conversation and spontaneity in public spaces. The development of the built environment has centred on improving the efficiency of daily life and little attention has been given to the informal synergies that urban public space can enable. Yet this space plays a central role in the formation of our culture and communities. With increasing trends of migration and urbanisation, New Zealand has become a multicultural society, but the quality of our public spaces and a distinct lack of meaningful interaction is causing increased levels of social fragmentation. The universal action of play can be used as a design tool to increase the level of meaningful activity and interaction in these spaces.

This thesis aims to understand how the inclusion of play and playful behaviour can create polycentric environments that can contribute to the reversal of social fragmentation between our ethnic communities and improve social cohesion and resilience within Newtown and Berhampore, socially deprived suburbs in Wellington, New Zealand.

The method of this research focuses on combining methods of spatial assessment and community engagement to develop a holistic understanding of play across social, cultural and physical dimensions. Observational studies, public surveying and community workshops combined with a comparative study across a series of case studies provided a foundation of knowledge that was then able to be applied to the design of physical playful spaces.

The design response across three test sites vary in scale between small tactical additions and overall redesign of space. These responses display how play can facilitate new forms of social interaction and spark spontaneity. The improved sense of community, familiarity and overall playfulness, increase overall resilience and overturn effects of social fragmentation. This thesis demonstrates how landscape architects can engage with the concept of play to reignite passion within a community and support social network growth.

Ethics.

Research Ethics approval was obtained from Victoria University Human Resource Committee in order to conduct this thesis.

Approval no. 0000027551

Contents.

01

Introduction

Introduction
Research Question
Aims and Objectives
Methodology

Theoretical Framework

- 2 Chapter Introduction
- 5 Types of Play
- 7 History of Play8 Play Space Typ
 - Play Space Types18Literature ReviewSocial Integration in Public Space 20Urban Ludic Design24Temporary Public Space Design28Reflection33

02 Setting the 03 Scene

13

14

16

Chapter Introduction	37
Wellington social facilities	38
Wellington play network	40
Location Short List	42
Newtown and Berhampore	44
Justification for Site Selection	46
Reflections	53

Developing a 04 Site refinement05 play tool kit

Chapter Introduction	57
Formal and Informal Tool kit	
Case Study; playground locations	60
Playground Types	62
Observational Study	68
Survey of Play Spaces	70
Comparative Study	74
Visualising Tendencies	76
Tool kit Development	92
Tool kit	98
Incidental Tool kit	
Case Study; Incidental play spaces	102
Comparative Study	106
Visualising Tendencies	108
Tool kit	115
Reflection	117

57	Chapter Introduction	121
	Berhampore Introduction	122
60	Application of the Tool kit	125
62	Site Selection Method	126
68	Community Workshop	134
70	Public Opinion	138
74	Design Approach	140
76	Formal Play Sites	142
92	Site Typologies	144
98	Incidental and Informal Sites	146
	Site Typologies	148
102	Reflection	151
106		
108		

Designing for Play **06**

6.1 Formal Play

Site Analysis
Community Impression
Site Opportunities
Design Massing
Initial Concepts
Design Testing
Developed Concepts
Final Design
Planting Plan

Conclusion

Conclusions	240
Limitations	242
Reflections	243
References	245
Figures	248

162

164

166

168 172

174

188

190 192

07

6.2 Informal Play 6.3 Incidental Play

Site Analysis	196	Site Analysis	222
Site Opportunities	198	Site Opportunities	224
Design Massing	199	Concept Iterations	226
Initial Concepts	200	Site Opportunities	228
Design Testing	202	Pedestrian Movement	230
Developed Concepts	210	Design Testing	231
Final Design	212	Final Design	234
Design Zooms	214	Planting Plan	236

One Introduction.

1



Introduction.

Public space and the physical and social dynamics within these spaces play a central role in the formation of our communities and culture. Streets, plazas, parks and playgrounds offer an infinite range of experiences and human connection. They are places of opportunity, activism and expression. The motivations for this research stems from how the successful design of public space can facilitate and induce new forms of meaningful interactions and create a strong sense of community.

Another driver for this research comes from an interest in play and how such a fun and simple act of enjoyment can be universally recognised across all ages and all cultures. These interests present an opportunity for research; to understand how play can be used as design tool to create public spaces that enhance meaningful social interaction and in turn increase community cohesion and resilience.

Play contradicts the way we typically think about public space and the everyday functionality of the built environment (Stevens, 2007, p. 27). It uses these spaces in ways that they weren't designed for and sparks conversation and lateral thinking around the potential use of a space. Play has the power to reignite passion within a community and support social network growth. Much of the theory within this thesis builds on the work historian Johan Huizinga and urban designer Quentin Stevens. Huizinga, in his book Homo Ludens.He explores how play is a function of culture and a product of human nature. We play as it's an expression of our animalistic instincts (1955, p. 4). Stevens continues this argument and states that play has place in everyday life due to its transformative power and the impact it can have on everyday life. It has the possibility to lead to unexpected and impractical behaviour (2007, p. 27).

















Figure 1.1 Cuba Street, Wellington



Figure 1.2 Cuba Street, Wellington







Research Question.

(C How can play be used as a design tool to create socially inclusive public spaces

Research Intent.



Figure 1.3 Diagram of research aims

The aim of this design research is to explore how the implementation of different types of play can enhance social experience of public space. The secondary aim of this research is to understand how play and playful behaviour can create meaningful social interaction and support spontaneous actions.

Objectives

1.	To understand how play can affect both place and identity.
2.	To understand how the different types of play can create new social dynamics.
3.	To encourage new form of social interaction within socially deprived neighbourhoods.
4.	Through the re-design of existing public spaces encourage cross cultural and intergenerational social mixing.
5.	Develop a design framework that can be applied to the design of play and playful spaces.

Methodology.





Initial design phase

Research motivations Site justification

Theoretical foundation Literature review Social integration in public space Urban ludic design Temporary public space design Precedent review

Design Phase One

Contextual foundation Observational Study Surveys Mapping

Design Phase Two

Typological framework based off 3 play types Case studies of formal and informal play Incidental play analysis Comparative Study Design framework

Design Phase Three

Application and testing Jeypore Street – formal play space re-design Stanley Street – Informal play testing in existing public space Luxford Street – Incidental play opportunities in existing public space

Theoretical framework.

Chapter Introduction.

This chapter outlines the three different types of play that can be observed in public space. These include; formal play, informal play and incidental play (Wellington City Council, 2017). These three categories of play will be explored throughout the entirety of this thesis. Each type of play has a set of different implications on people, public space and social interaction.

The evolution of these play types has stemmed from the evolution of the formal playground and as play has become more welcomed in public life these types of play can be distinguished more readily.

This chapter also expands on the theoretical base that informed all stages of the design and framework development. It consists of a literature review and supplementary precedent review of work done in this field both locally and internationally.

The overarching topic that motivated this design research is play. In particular, how the inclusion of play in public space can support social integration, fuel curiosity and activate neighbourhoods. This core focus of play was separated into three key topics space, people and play initially. Over the course of the process, the scope of the research shifted and evolved. As a result, these topics were refined down to; Social integration in public space, urban ludic design and temporary public space. Drawn from these topics, studies and key authors were a series of key learnings that would be applied to the various stages of the design and framework.

Types of Play.

The three types of play that are being experimented with are;

Formal Play

This type of play is easiest to identify as it has been normalised in our public space for as long as can be remembered.

- Most structured form of play
- Predictable nature
- Occurs in a structured and pre-designed space
- Play equipment wall vary
- Gross motor skills and movements types developed will be the same at all play spaces



Formal Play

Informal Play

Informal play is a fluid form of play that generally involves the interaction between other users or the use of objects or equipment.

- Often part of recreation network
- Supported by variation in material and topography
- Informal use of formal play equipment
- Valuable for the development of imagination and social skills
- Increases liveliness of public space

Incidental Play

This type of play can occur anywhere and with anything, often incidental play occurs on objects that were constructed for a different intended purpose, yet they have qualities that afford playful behaviour.

- Can only occur in public space
- Unpredictable by nature
- Dependent on context and existing community
- Can be induced by form or material
- Often comes from a temporary action



Informal Play



Bollards along Wellington Waterfront.

Incidental Play

History of Formal Play in New Zealand.



2004

2006

<u>2015</u>

In 2004 safety standards in New Zealand and Australia were re-addressed and both countries adopted an European standard.

This allowed playground design to diversify and added elements of controlled risk.

Figure 2.7 Central Park, Brooklyn, Wellington

> Local councils created a number of play spaces across the city. However each of these space looked the same.

> > In 2006 the playground safety standards were re-addressed. A particular emphasis was placed on early childhood centres and the supervision associated.

> > > _ _ _ _ _ _ _ _

Figure 2.8 Botanical Gardens Christchurch in 2006

Figure 2.9 Cashmere, Christchurch 2007

under the Right of the Child that children 'shall have full opportunity for play and recreation, which should be directed to the same purposes as education'

In 2013 the United Nations declared

In 2015 the latest standard of playground safety was released. An emphasis on different types of play was addressed. Including nature play, free play and incidental play.

_ _ _ _ _ _ _ _ _ _ _ _ _

Figure 2.10 Margaret Mahy Park, Christchurch. Designed by WPOUS Completed 2015.

> Figure 2.11 Matairangi Nature Trail Mt Victoria Completed 2017

Play Space Types.



Regional Scale



Neighbourhood Scale

- 6 regional level (Karori Park, Botanic Gardens Playground, Waitangi Park, Frank Kitts, Central Park and Matairangi Nature Trail)
- 16 district-scale (Freyberg playground, Khandallah Park, Newtown Park and Ben Burn Park)
- 85 neighbourhood scale (Wellington City Council, 2017, p. 22).

Play spaces typically designed to fit in one of three scales of play space. These scales will determine what amenities, play types, age catchment and infrastructure will be provided. (City of Ballarat, 2017).

Neighbourhood scale is a play space that services the local area.

- In a walk-able distance
- Basic level of facilities
- Serve younger demographic

District scales is a play space that will serve the wider suburbs and often an intersuburb draw.

- Often walked and driven to
- Longer visits
- More amenities needed
- Typically larger

Regional scale play space will service the entire region as well as immediate suburbs.

- Journey to park is planned
- Long visits typically all day
- Full amenities needed
- Wide range of play opportunities

Regional Scale





Neighbourhood Scale



Figure 2.13 Diagram of playground scales

Social Integration in Public Space.

'Societies in which residents feel a strong sense of togetherness and community are more sustainable than societies that lack this social cohesion'. (Lind, 2016, p. 6).

Social integration has been discussed throughout literature at lengths, particularly in regards to the role of the designer in their design of public spaces. Three key learnings or design principles can be taken from this body of literature; the importance of familiarity, the value of placemaking and also establishing a sense of belonging.

Social inclusion is both a personal and social process. It can be felt as an 'intimate feeling of being at home' in a place or comes from feeling part of a network or the 'social fabric' (Spaaij, 2015, p. 305). Social networks are generally established by associations within communal activities such as sport or recreation, but can also be founded by the familiarity on the footpath. In Life Between Buildings Jan Gehl talks about how people become familiar with the faces in their community and feel reassured by their presence, whilst the physical social ties may be weak, and no dialogue is shared, the comfort comes from knowing they are around, and nothing has changed. As continuously reaffirmed in the writing of Jan Gehl; public space is the medium for social networks to be formed, essentially the genesis of social relationships and more importantly interethnic bonding. (Gehl, 2011).

Creating a feeling of belonging and comfort is important for many different social groups, one group that it is particularly important for is refugees. New Zealand is one of 37 countries around the world which participate in the refugee resettlement programme facilitated by the United Nations High Commissioner for Refugees. New Zealand has an annual quota of around 1000 refugees. This resettlement programme adds to New Zealand's already ethnically diverse population (Around 25% of the population are overseas arrivals). There is value in the resettlement programme as it offers refugees protection of their human rights and provides the opportunity to begin a new life away from harm and distress. (Marlowe & Elliott, 2014). Discussed in most literature around the resettlement of refugees, one of the hardest struggles that come with the adjustment to a new life is the feeling of isolation and lack of supportive social networks. Sampson and Gifford discuss how public space can be a particularly overwhelming territory

in a new environment. Parks, street fronts and plazas are full of foreign languages, customs and faces. Designers have the opportunity to create public spaces that are safe and supportive, filled with home comforts for a variety of different users. (Sampson & Gifford, 2010).

Sampson and Gifford conducted an ethnographic study in Melbourne to observe the relationship between placemaking and resettlement, in particular how youth make themselves feel supported and recognised in their new environment. (Sampson & Gifford, 2010). Placemaking is a valuable tool that should be encouraged by municipal authorities and active community groups to assist in creating inclusive public spaces that cater for all generations and ethnicities. Designers can create the spaces however as Jane Jacobs infers; you cannot just create space and expect people to come. Designers create the groundwork that the community can build upon. (Jacobs, 1961).

Most literature speaks on how public space can be the medium, the genesis for social inclusion. However, social inclusion just supports a feeling and public space should facilitate more than just recognition and establish and promote a strong sense of belonging. This feeling of belonging requires the support and backing of the community. A commonly discussed method for creating a sense of belonging is a sport and being a part of a team. A study done in Australia explored diversity among women in sport and how enhancing access to welcoming sport environments can play a key role in supporting social inclusion. Whilst this study does go through how sport, unfortunately, requires conformity to social and cultural norms it does go through to say how the participation in sport can have levelling potential. Sport helps retain community networks and provides a space for social action; space to overcome patterns of marginalisation and inequality. (Cortis, 2009).

Similar findings have been discussed among refugee youth. An ethnographic fieldwork study among Somali Australian youth in football clubs found that the involvement within the sport made the boys feel at home and supported their rehabilitation into their new environment. The study continued to state that establishing a sense of belonging is both a personal and social matter. How people make themselves feel at home is often associated with an emotional attachment. Making themselves feel this way (at home) and also the way they make themselves feel a part of something is not something that can change quickly. It is a process that involves movements and actions. (Spaaij, 2015).



Creation of new social networks



Creation of a safe and engaging space



Establishing a sense of belonging Figure 2.14 Diagram of key learnings

Key Theories to Apply into Design Research

The importance of familiarity. Designers should create spaces that force you to interact with your neighbours and that are full of home comforts of all users.

Value of placemaking. Designers create a space that is the foundation or the groundwork of something that the community can continue to build upon.

Establishing a sense of belonging. Creating a space that user's feel as if they have contributed to or can contribute will create a much stronger sense of belonging than something that is purely symbolic.

Precedent Study.

Lions Park

Gladstone, Queensland, Australia





Community Enhancement

Lions Park is a revolutionary park for Australia. It nurtures the well-being of the community and goes beyond designing an easily accessible playground. It takes into consideration the needs of the entire community and creates a holistic play space for all. (Playscape Creations, n.d.).

The design of the playground is inspired by inventions of Leonardo Da Vinci, understanding the cogs of interactions and innovation. The innovative play space incorporates sensory features that can accommodate children and adults with disabilities, including Sensory Processing Disorder, Auditory Processing Disorder, Visual Impairment, Down syndrome, Cerebral Autism, Palsy, Muscular Dystrophy and Spina Bifida. The designer, Playscape Creations, worked closely with local communities to create a space that accommodated for a diverse range of needs. (Playscape Creations, n.d.).

Figures 2.15 and 2.16 Lions Park

Application to Design Research

A range of soft materials (grass, water and rubber chip) and hard materials (concrete, gravel and vegetation) can be used to create a range of experiences.

Include a range of play types (sensory, nature, physical etc) in the design of formal playgrounds to create a more holistic experience.

Figures 2.17 and 2.18 Margaret Mahy Park









Celebration for Future



Topography Exploration

Margaret Mahy Park

Christchurch, New Zealand

The park was established as a Christchurch Rebuild Anchor Project. The playground achieves one of the key five principles that the community wanted to see in the rebuild of Christchurch; play. Inclusivity was a theme that ran right throughout the entire design process of this park, school children were involved in the design concept stage and mana whenua was engaged throughout to ensure iwi values were upheld and represented in the design. The park was given a second name Takaro ā Poi which translates to people being drawn into a place to connect, meet and play. (WSP-Opus Interational Consultants Ltd, n.d.).

One of the most distinctive features of the playground is the narrative that is portrayed throughout all elements of the play space. The play equipment and play zones thread together to create a 130 m 'story arc' which tells stories from local authors such as Margaret Mahy. (WSP-Opus Interational Consultants Ltd, n.d.).

Application to Design Research

Explore topography to create a more diverse and challenging environment.

The design can express a narrative of the surrounding area.

Urban Ludic Design.

The term urban ludic design refers to the inherent playfulness of humankind and how it translates or manifests itself into designs and planning schemes within the urban realm. This theory follows on from the work of Dutch historian Johan Huizinga who suggested that the instinct of play was formative to human nature.

Huizinga was the first historian to unpack the value of play and its relation to human behaviour. He discusses play to be an irrational action and confirms that humans are more just rational being. We have much more likeness to primal beings. (Anchor, 1978, p. 63). This gives the power to play that other design tools cannot offer. Play can link us together in a way that we cannot logically comprehend therefore creating a foundation for communities and community-based design to build from.

He also states that play is an expression of freedom, a voluntary escape from social obligations and physical conditions. To enter into the realm of play it requires a disinterest in everyday life. The seriousness of daily life is the direct opposite of play. (Stevens, 2007, p. 34). Unlike what Huizinga believes, urban ludic design brings play to the forefront of space and encourages all to participate and interact.

The term ludic, which now pertains to the description of play and playfulness stems from the Latin root of ludo (I play). Huizinga defines play down to 6 singular characteristics; that play is voluntary, not real life, disinterested, secluded and creates order. Sociologists Bauman and Robert Caillois follow Huizinga's lead in the discussion of play and distinguish it further to state that 'play is an occasion of pure waste; waste of time, energy, ingenuity, skill and often money'. Like Huizinga, they continue to argue that play should be kept separate to daily life. (Woodyer, 2012, p. 315). Ludic design is about fulfilling curiosity and enhancing a pedestrian experience by providing a playful alternative. Ludic design is commonly only discussed in regards to ludic interfaces and game design. This movement in design was initiated by Bill Gaver, a researcher in interactive design technologies. In his words, he summarises ludic design to be "design (that) focuses on reflection and engagement through the experience of using the designed object". (Mivielle & Gentes, 2014, p. 5). This body of research has been continuously growing, whereas urban ludic design is a field that is yet to be discussed so explicitly.

One of the key figures who has begun discussing ludic design in the urban realm is Quentin Stevens. In his book The Ludic City, he explores the potential of public space and argues that the fundamental function of public space is to support informal social interaction primarily in the form of play. Within this book he defines five different urban spatial structures that inform the way people act, move and encounter each other in public space. These five structures are paths, intersections, boundaries, thresholds and props. (2007, p. 178). The correct design of these spaces can create incidental play opportunities. Playful behaviour is persuaded without the design of the object or space having a directly playful intent. (Donoff & Bridgman, 2017, p. 298).

An approach to urban ludic design is in the form of ludic interventions. Playful installations are added to the footpath to provide a playful pedestrian alternative. These installations can add to the existing play network of a city and create a common voice or vibrant attraction between all playful spaces and support the creation of community networks and cohesion. The addition of these spaces encourages social interaction and adds an element of urban surprise. A study was done by Gabrielle Donoff and Rae Bridgman into a series of urban ludic interventions to develop a typological understanding. They found that whilst playful interventions could add to the overall spirit of a city, it was being disrupted at council level. Commonly regulation put in place made these activities hard to implement. It was also determined that there is a strong connection between environmental design and community health and wellbeing. For playfulness to be included in the design of our urban public spaces there needs to be a change at a municipal level. (2017, pp. 303– 305).

The correct design of public space to include ludic design principles can result in incidental play opportunities. As Stevens' states, the presence of a 'prop' will evoke a sense playfulness in our public space that will allow users to engage in spontaneity and become linked in a way that is beyond our comprehension. The 'props' are an object that sits in the urban realm on a 'stage' designed for social acts. According to Stevens, these actions reveal a relationship between spatial form and bodily action meaning that the use of material, texture and shape in these objects is equally as important as their location and function. (Stevens, 2007, pp. 179–195).



Connected through common narrative



Simple is as effective as extravagant Figure 2.19 Diagram of key learnings

Key Theories to Apply into Design Research

The designer's role in this type of design is fulfilling users' curiosity and providing a playful experience. This means simple is just as effective as extravagant.

The designs should be connected through a common narrative or visual cue. Each designed space should speak to the next but this should not be overly explicit.

Consider texture, material and form in conjunction with location and function.

Precedent Study.

Gap Fillers



Community Mixing



Interactive Display





Strong use of Colour



Christchurch, New Zealand

Following the devastation of the Christchurch Earthquake in 2011 the social enterprise Gap Filler was founded to work with communities, both the public and private sectors, to implement placemaking strategies that have resulted in the creation of spaces that are memorable, fun, participatory, surprising, equitable and sociable. They have created several interactive installations within the rapidly changing urban fabric of Christchurch, that have challenged the public's perception of what these spaces could be and have successfully encouraged intergenerational mixing throughout the community. ("About | Gap Filler," n.d.)

One of the notable installation designs is the Dance-O-Mat. This is a coin-operated laundromat washing machine which powers several speakers that surround the dance floor. The Dance-O-Mat has appeared in three vacant lots across Christchurch since its origin in 2012. The first site was located right next to the red zone and was used for around 600 hours in three months. ("Dance-O-Mat | Gap Filler," n.d.).

The dance floor was used for a variety of different dance types including salsa, flamenco, breakdance, swing, ceroc, belly dancing and children's disco parties. ("Dance-O-Mat | Gap Filler," n.d.).

Another one of the installations designed by Gap Filler is the Super Street Arcade. This installation included an oversized joystick attached to the pavement and a fivemeter wide screen mounted on the opposite building. Pedestrians can use the controller to play several different games created by local developers. Gap Filler made the controller deliberately hard to move to encourage multiplayer interaction. ("Super Street Arcade | Gap Filler," n.d.).

Figures 2.20 and 2.21 Gap Fillers Christchurch
Pulse of the City

Boston, Massachusetts, USA



Playful Acupuncture



Interactive Display



Space Activation



Community Connections



Simple

Figures 2.22 and 2.23 Pulse of the City Boston

Pulse of the city is an interactive installation that was commissioned by the City of Boston in 2013, along with 5 other installations. The designed object is a red plastic heart attached to a singular pillar. The handles of the heart detect the pedestrian's heartbeat and turns it into music that plays out of a speaker in the centre of the heart. The music generated by the heart sets a light-hearted tone amongst the chaos of a city. Pedestrians connect through the notes of the music and instinctively become connected and meet together on the same bodily rhythm. ("Pulse of the City," n.d.).

This installation was designed by George Zisiadis, a designer and artist who specialises in public and interactive art displays. His designs are small and tactical acupunctures of play across a city. He prompts the public to question their existence in space and the potential use of mundane everyday objects.

Application to Design Research

Small tactical design moves can have a massive impact on space activation.

Playfulness must be a tactile experience. It involves a bodily immersion into the action.

Temporary Design in Public Space.

A strategic approach to urban design and public space is through the use of temporality. This approach can be present through many facets of the design itself including; the length of time the design is in place, the materials and spatial qualities or through the transformative potential of the designed space. Temporary design can be used as a way to test ideas or generate action. It can start a conversation that produces long term change. (Franck, 2006, Chapter Tying down loose space).

The concept of temporality is commonly talked about in two different perspectives. One is the temporary use of public space and the other being the design of temporary spaces also commonly discussed as an interim use. The temporary use of public space is down to the flexibility or malleability of an environment. Quentin Stevens discusses this concept in terms of loose space. People are facilitators in creating loose space, and this space is created by their actions. For a site to be loose, the users must recognise the inherent properties of the space themselves and appropriate them individually. As a result footpaths, plazas and courtyards are inherently looser in nature. (Franck, 2006, Chapter Tying down loose space). Stevens addresses the high risk of over-designing these spaces. The fluidity of the space can be easily compromised by the assumptions of the designer in how these spaces will be claimed. (2006, Chapter Tying down loose space). The over prescribed space will have no sense of spontaneity and lose the ability to facilitate the many potential temporary uses.

Temporary spaces create action and assist in developing social knowledge that can result in opportunities for active participation (Haydn & Temel, 2006, p. 71). The concept of tactical urbanism thrives from this social disposition. Short term action and conversation to generate long term change (Lydon, 2015, p. 1). Tactical urbanism at its very essence is the temporary use of public space. It will use tactical design moves and the appropriation of space to envision a new future or solution. Actions or 'tactics' that are taken in the design of these urban spaces follow a low cost and iterative development process and will frequently require the participation of residents (Lydon, 2015, pp. 4–6). The design results are inherently playful in nature and will activate a neighbourhood through experimentation in colour, form and materiality. The temporary character of these spaces create a chance to deviate away from regulation and offers the chance to be experimental. From this, a sense of spontaneity is enabled and those that engage can experience a sense of mental freedom. (Lefaivre, 2007, p. 28).

The interim use of space refers to a time when there is a gap in the utilisation, which for a short period can be used for another purpose. The newfound interim use of this space is not typically for economic gain but more to suggest another method of appropriating the space. (Haydn & Temel, 2006, p. 11). Play streets or free street play is a strategy that follows this method of interim use of space. Play streets is a global movement that began in the early 1900s, where street were designated as play streets and would temporarily close access to cars to provide children the opportunity to play freely outside. Since the 1970s street play and play, streets has declined. This is largely due to the increasing levels of traffic. Play has been confined to occur solely in the confines of designated play facilities. (Wheway, 2015, p. 273). This has prompted communities across the globe to reinstate the 'grassroots movement' of play streets. Play streets have significant positive effects on the health and wellbeing of communities, as well as encouraging intercultural mixing and supporting community cohesion. Play streets encourage residents to leave the perimeter of their private property and socialise with those that live closest. This can create stronger bonds of familiarity and in turn safer neighbourhoods. ("How we can help-London Play," n.d.).

The strategy of play streets is an interim use of public space. Whilst it is used to provide an opportunity for the community to mix socially, it can also be used as a tactic to prompt a change in the way play is envisioned on the street edge.

Temporary public space design can be explored through a variety of strategies or facets. The temporality of these spaces provides a platform to make a statement for long term change through experimental methods. Most of these methods have an inherently playful essence and prompt social interaction between communities in new ways.



Over designed spaces lose efficiency



Support network growth Figure 2.24 Diagram of key learnings

Key Theories to Apply into Design Research

Avoid over designing temporary public spaces. They lose the fluidity and flexibility that is required for mixed-use.

The design of temporary spaces can be a low cost and iterative process. This process should be involved with the affected community. This will result in a cohesive space and activated neighbourhood.

These spaces should support network growth and aid in the process of familiarity.

Precedent Study.

"This is not a vacant lot"

Estonoesunsolar



Playful Acupuncture



Public Space Network





Community Connections

Figure 2.25 - 2.30 Strategic interventions across empty lots in Zaragoza, Spain

Zaragoza, Spain

This project began as an experimental 'urban acupuncture' project in Saragossa, Spain. The program was introduced in the city to counteract the effects of urban deterioration and social fragmentation. Amidst the economic crisis and significant demographic changes, several vacant lots emerged. The city council, along with architect Patrizia di Monte, turned these vacant lots into a network of usable public space. Since 2009, 33 sites across the city covering more than 42,000 square meters into urban gardens, simple green spaces, playgrounds and street bowling (petanca). (Mackenzie, 2015). The strategy that was applied to these lots was designed to be timely and provide a short term fix to the urban problems. Many residents were hired throughout the site clearing phase and design construction phase. (Casanova, 2014, pp. 76–83).

Throughout the process, there was a strong emphasis on citizen participation and community involvement. The plans for each site emerged from a series of meetings with community agencies, community organisations, architects and neighbourhood groups. The design plans were based on the specific social and spatial needs of the surrounding area. (Mackenzie, 2015).



Local Employment

Bond Street

Wellington, New Zealand

Bond Street was developed as part of the Wellington City Laneways Project. This project followed small scale pedestrian connections within large city blocks. The laneways provide short and more attractive routes for pedestrians. In the summer and early autumn of 2015 Bond Street was temporarily transformed. Added to the street were tow seating areas and artificial lawn, a shipping container and the road was painted with a bright red pattern. Following the success of the temporary design and further consultation with residents, a more permanent design was implemented in May 2016. A transportable community garden and new seating replaced the original design and the paint was given a refresh. ("Bond Street refresh and community garden," n.d.).

Figure 2.31, 2.32 and 2.33 Bond Street Wellington







Community Connections Consultation



\$\$\$

Strong use of Colour

Low Cost

Application to Design Research

Create a contrast to the existing environment.

Successful projects come from the backing of communities. Ensure they are engaged throughout all processes.

Reflection.

The literature and precedent review combined provide to be a useful tool in developing a theoretical understanding of how these topics can be put into practice as the precedents demonstrated the practical application of key learnings. Throughout the process of the literature review there became a clear overlap between the three topics and two key theorists who had applicable research in all three topics; these theorists were Johan Huizinga and Quentin Stevens. They both discuss the ability play has to form a social network and challenge the way public space is currently used. However, they only discuss how informal play and incidental play opportunities are presented in public space. Neither of them talks about the role of the formal playground in social interaction, perhaps because of the semi-private nature of many formal playgrounds or because they are often age segregated and inherently do not provide social mixing opportunities.

Key learnings that were found throughout this phase of the research; Play and other forms of social interaction in public space creates a sense of familiarity. This familiarity is with both the physical environment but also with the residents or locals. When places are more pleasant the public will spend more time on the streets and in turn play a more active role in their community.

Public space can easily be over-designed and this can lose the fluidity, flexibility and potential of a site. Small tactical changes that create a joyful experience with form and material can be just as effective as large scale and costly changes. The cheap nature of these small tactical changes allows for the space to change more frequently.

Most effective playful changes and appropriation of space come from the agency of the user. An effective design will come from placemaking techniques that are put in place by the designer but acted upon by the user.

The creation of successful loose urban space and playful pedestrian alternatives (ludic design) will aid in the manifestation of all types of play in public space. Formal play has already been normalised itself in the public realm. Whilst, this play is still kept to the confines of the playground it is still present in our everyday lives. Incidental and informal play have not been given the same agency. As they both centre on the fulfilment of curiosity and a pedestrian alternative they require a carefully designed and flexible urban space.

The next step after this stage of the research was to define a site that would offer the ideal testing ground for understanding how play and playful experiences in public space can be used as a design tool for encouraging social interaction. The site selected for this research needed to be an area that was socially deprived and showing evidence of social fragmentation.

Three Setting the scene.

Chapter Introduction.

This chapter continues on from the theoretical framework and provides a brief summary of the conditions of Wellington's public space and play network, and why the selection of the site was important to the discourse of research. The beginning of this chapter unpacks the physical spatial conditions that shape the community of Newtown and Berhampore and what has contributed to the higher level of social fragmentation within these suburbs.

Social Facilities Wellington City.

This map explores the existing social facilities in Wellington City to understand the current social and public network across the city.



Social Deprivation in Wellington.



Figure 3.2 Social Deprivation Scale

A deprivation index created by profile id ranks the suburbs in Wellington. This ranking is based off access to internet, income, benefits, employment, qualifications, home ownership, family structure, living situations and access to a car. ("Deprivation index | Wellington City | profile.id," n.d.).

Wellington Ethnicities



Figure 3.3 Ethnic spread in Wellington City. Data retrieved from Wellington City. (n.d.). Retrieved September 18, 2019, from https://profile.idnz.co.nz/ wellington/ethnic-group.



Figure 3.4 Age spread in Wellington City. Data retrieved from Wellington City. (2019, September 18). Retrieved from https://profile.idnz.co.nz/wellington/ five-year-age-groups.

- Community and Recreation centres
- Playground
- Vegetable Markets
- ★ Libraries
- Swimming Pools
- Parks
- Sports Grounds
- School Sports Grounds

Opposite Page Figure 3.1 Social Facilities in Wellington City

Findings

- High level of wealth and deprivation in Wellington City
- Suburbs of highest deprivation are Newtown, Berhampore, Strathmore and Te Aro
- Most social facilities are located in the suburbs on the fringe of the inner city
- Wide spread of neighbourhood scale playgrounds across entire region

39

Playable Space in Wellington City.

This map explores the existing play network in Wellington City, separated by the informal play network and the formal play network.



Currently in the Wellington network there are;

- 107 formal playgrounds
 4207 hectares of open space (including Wellington Town belt, the outer green belt and coastal reserves)
- 250 hectares of neighbourhood parks
- 43 sports grounds
- 330 km of walking tracks.

The vision of the new play network in Wellington;

- Additional 6 playgrounds
- 23 basketball courts
- Residents are within 600 meters of a neighbourhood playground
- 800 meters of a 'destination' playground

Recreational Reserves

Sports Fields

Schools





Short list of Suburbs for Research.





Findings

- Existing social facilities to use as case studies
- Considered to be socially deprived
- Strong existing site character
- Dense suburb

Kilbirnie



Strathmore



Newtown and Berhampo

Newtown and Berhampore are located just south of Wellington nestled between the inner and outer green belts. The suburbs act as the gateway to the city providing access along Adelaide Road, Riddiford Street and Constable Street to suburbs such as Island Bay, Kilbirnie and the South Coast. Both suburbs are originally working-class suburbs. In recent times they have both followed gentrification trends making them the ideal place for young professionals, students and immigrants. Over 45% of the population is between the ages of 18-34 and 50% of the population are overseas arrivals. The rapid growth of these suburbs has led to the quick densification of each neighbourhood and has resulted in an overall loss of character and suburb identity. However, streets within both suburbs have managed to retain a sense of creativity and personal expression. ("Population, dwellings & ethnicity | Newtown | profile.id," n.d.), ("About the profile areas | Berhampore | profile.id," n.d.).

Earlier drawings of site character; Berhampore



Adelaide Road



Figure 3.8 Early drawings of Berhampore character

Justification for Site Selection.

Educational, Social and Community Facilities.

This map explores the existing social facilities in Newtown and Berhampore and the spread of ages.





ITT

F

D

E

-



Figure 3.12 Montage of community facilities



Findings

One of the defining characteristics of Newtown and Berhampore is the vast range of ages that coexists within the suburb. •

- 6 schools
- 2 high schools Wellington College and Wellington East Girls
- 1 intermediate
- **3** primary schools (2 in Newtown and 1 in Berhampore).
- 6 preschools/ kindergartens.
- 3 retirement homes

Opposite page Figure 3.11 Map of educational, social and community facilities



Justification for Site Selection.

Housing Types.

This map explores how people in Newtown and Berhampore live and tries to understand the need for public space





Centennial Flats, located on Adelaide Road in Berhampore, was one of the first models of social housing flats designed under the labour government's social housing scheme in 1938. ("Density done well," 2016).



Figure 3.16 Montage of apartment blocks



Figure 3.17 Montage of stand alone dwellings

Opposite page Figure 3.14 Map of housing types in both suburbs

400m



Findings

- Densified quickly •
- Most common housing type is stand alone dwelling
- 40% of high density dwellings are owned by Housing New • Zealand and the Wellington City Council
- Quality public space is in high demand •

Justification for Site Selection.

manne

Ë.

......

......

Jannanananan

mini

mummunin

2

• 9000

Playable Space.

This map explores the existing playable space in both suburbs. It looks at both hard and soft scapes.



50

























Figure 3.19 Photos of surfaces and site conditions

Opposite page Figure 3.18 Exploration of surfaces and site conditions



Findings

- Hardscape is car parks and kerbs
- Schools are playable areas
- Schools can only be used at certain times of the year
- Kerb widths are so varied some are playable

Reflection.

The investigation into Newtown and Berhampore revealed several challenges that originate from the spatial conditions of these suburbs. The most prominent spatial challenge is the lack of social space within the internal urban fabric of both suburbs. Community and public spaces have formed around the outer reaches of the suburbs within the inner and outer green belts. The rapid densification of Newtown and Berhampore was one of the many driving factors in this trend. The need for quality outdoor space is also much higher than many other Wellington suburbs due to the high proportion of residents living in medium to high-density dwellings.

Moving forward the next step was to develop a typological analysis of the case studies that were outlined in this chapter. This typological analysis will start to understand the physical and social conditions that were present in these sites. This study would be supplemented by the findings from the observational study, surveying and mapping. The surveying and discussions proved to be the most effective method of gathering data, these conversations provided an insider's perspective of the positives and negatives of each site.

Four Developing a play tool kit.

Chapter Introduction.

This chapter follows the construction of a design framework based on a typological understanding of existing play spaces in Newtown and Berhampore. The design framework outlines a series of design criteria and an approach that can be applied to the design of play and playful spaces. In this chapter, it is demonstrated how a comparative study and site specific analysis can be used to compare existing sites and extract site-specific and typological knowledge that can then be generated into a design tool kit.

Initially a singular comparative study was done of 8 play spaces in Newtown and Berhampore, however, as the research evolved it became apparent that the initial tool kit was only able to be applied to both formal and informal play spaces, whereas a different criterion was needed for designing incidental play opportunities. This is likely due to the nature of incidental play. As a result, a second comparative study was conducted. This study surveyed spaces in Wellington that afforded playful activity.

Formal and Informal Play Tool Kit.

Case Study; Playground Locations.



Figure 4.1 Location of formal and informal case studies

200m

0

Outer Ring



Mt Cook Street

Internal



community Centre

Constable Street

Outlier



Farnham Street



Hanson street



Newtown Park

Residential



Jeypore street



Carrora Park

Within the play network of Newtown and Berhampore, there are 12 playgrounds, 4 of which are located in Berhampore and the remaining 8 are in Newtown. The 8 case studies were chosen based on their accessibility to the public. Four of the playgrounds were excluded from the study as they were located within small housing complexes and, whilst they are maintained by the Wellington City Council and are public space, they felt more private and unwelcoming for outside visitors.

Newtown

- Mt Cook Playground
- Hanson Street Playground
- Constable Street Playground
- The Newtown Community Centre
 Playground
- Carrara Park
- Newtown Park

Berhampore

- Jeypore Street Playground
- Farnham Street Playground

The parks can be divided into 3 distinct categories. Farnham Street Playground does not fit in one of these categories.

Playground Type; Outer Ring

These 3 parks sit in the outer ring of the suburbs, within the outer and inner green belts of Wellington. These parks consist of a little more space and are located within close proximity to sports fields or recreational facilities.

Mt Cook Playground



- Formal and informal play space
- For ages between 5 and 10
- Near community businesses and sports facilities
- Connection to Mt Cook and Newtown
- Large flexible lawn





Formal and informal play space For ages between 5 and

- 10 Located near houses and sports fields
- Part of outer green belt park network
- . Large uneven lawn

Newtown Park Playground



- Formal play space
- For ages between 5 and 10
- Located back end of Newtown
- Connected to the zoo and regional sports facility
Playground Type; Internal

These playgrounds sit within the town centre of Newtown, they are located next to busy roads, commercial buildings and community facilities. There are no parks of this description in Berhampore.

Constable Street Playground



Formal play space For ages between 5 and 8

Located near housing complex and community facilities such as library Fenced in and well used

Community Centre Playground



- Formal and informal play space
- For ages between 5 and 10
- Located near housing complex and community
- facilities
- Colourful playground design

Figure 4.6 Context map Constable Street Figure 4.7 Context map Community Centre

Opposite page

Figure 4.3 Context map Mt Cook

Figure 4.4 Context map Hanson Street

Figure 4.5 Context map Newtown Park

Playground Type; Residential

Another category that the playground falls under is residential. Carrara Park and Jeypore Street Playground are located within quiet suburban streets.

Carrara Park Playground



- Formal and informal play space
- For ages between 5 and 16
- Well used community space
- Surrounding by a variety of housing types
- Large flexible lawn
- Community garden

Jeypore Street Playground



- Formal play space
- For ages between 1 and 6
- Well used community space
- Used by all ages but not at the same time
- Very small
- Recently redesigned

Playground Type; Outlier

Farnham Park Playground



- Formal and informal play space
- For ages between 5 and 12
- Sits outside of Newtown and Berhampore
- Connection to Liardet Street sports field
 - Large flexible lawn

Figure 4.10 Context map Farnham Street

Opposite page Figure 4.8 Context map Carrara Park Figure 4.9 Context map Jeypore Street

Case Study Method.



Figure 4.11 Case study method diagram



The intent of the eight case studies that were highlighted in Newtown and Berhampore were to develop an understanding of how play currently manifests itself in a New Zealand context.

These eight case studies would be used to gather both site specific knowledge and typological patterns that are consistent across playgrounds currently. Each case study has its own spatial features and use patterns. Techniques such as mapping, observational studies and user surveys were used to develop an understanding of all these conditions.

Observational Study.

The intent of the observational study was to understand how the playgrounds in Newtown and Berhampore are currently used and to determine who used these sites.

The method for this observational study is based off the work of Studio Ludo, a firm based in Philadelphia that focuses on the design, research and advocacy of better play for children. Studio Ludo conducted a study of 16 different playgrounds across the London area, observing them for 3 months between the hours of 8 am and 7 pm 7 days a week. (Studio Ludo, 2017).

The observational study in Newtown and Berhampore was conducted between April and May. The playarounds were visited on week days and weekends, at 3 separate times of the day. These times were between 8-10am, 12-2pm and 4-6pm. (One trip was made after 6pm but as the sun had already set the playgrounds were not in use by anyone). Also included in the observation study were visits to the playgrounds during the autumn school holidays which included Easter holidays and ANZAC day. It was important to look at the playarounds at this time as Studio Ludo had mentioned in their own findings that school holidays were the peak of activity. (Studioludo, 2017).

Findings

- School holidays and public holidays were the busiest (only 2 playgrounds had no attendees)
- Peak attendance on ANZAC day was between 12-2pm
- Constable Street had the highest number of attendees
- Cararra Playground was used as a thoroughfare as well as a destination
- Mt Cook was used as a thoroughfare more than a destination
- Streets surrounding Constable Street and the Community Centre were the most active
- Weekends were more popular than weekdays (Sunday being more than Saturday)
- Playgrounds near sports fields (Hanson Street and Farnham) had no detectable pattern of use
- Jeypore was used in short bursts throughout the day
- Constable Street, Carrara and Jeypore Street had the highest numbers of active supervisiors wathcing kids



Figure 4.12 Obeservation of user movements around site

Surveys of Play Space Users.

The intent of the user surveys was to understand who was visitng these spaces and develop a personable understanding of each site.

This survey was based off a quality assessment tool kit published by Play Scotland in 2008. (Cole-Hamilton & Crawford, 2011). Play Scotland is a registered charity in the UK that focuses on delivering Article 31 of the UN convention on the Rights of the Child, which states "That every child has the right to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts" (Unicef, n.d.). The organisation has put together a series of guidelines and tool kits that can be used to asses and improve local play spaces and create more opportunities for quality play. In this tool kit, a survey was provided that asked questions about frequency of play, time spent at the park, motivations for visitng the park, and positive and negatives of the facilities provided. Added to this survey were demographic questions asking about age, ethnicity and where they reside.

Findings

- Those who attended Jeypore Street were the most willing to answer questions
- Constable Street had the most attendees, it was liked for the full fence and the proximity to the town centre
- Most of those who attended Newtown Park were not from Wellington (Attached to Wellington Zoo)
- Community Centre Playground had an unfunctional design, but the colours of the playground were appealing to those who walked or drove past
- Farnham Street had no attendees willing to answer questions
- Mt Cook Playground was only used during weekends





Farnham Street



Jeypore Street



15 -

Community Centre



Constable Street





Comparative Study.





Quantitative Comparative Study Results.

	Newtown Park	Carrara Park	Community Centr	Constable Street	Hanson Street	Mt Cook Park	Jeypore Street	Famham Street		Newtown Park	Carrara Park	Community Cent	Constable Street	Hanson Street	Mt Cook Park	Jeypore Street	Farnham Street	
ACCESSIBILITY	+	-		-	-	-	-	-	DCATION	-								REGULARIT
Close to Public Transport	•		•	•	•	•			easant		-	-		-		-	-	First time
Path in good shape		•	•	•	•	•			gnage	-	-	-	-	-	-	-	-	Once a month
Parking	•	•	•	•	•	•	•	•	arby Green Open Space	-	•	_		-	-		-	Every couple of
Road crossings	•	•	•	•	•		•		Vandalism		•	•	•	•		•	•	Weekly
Access for disabled		•	•	•		•	•		stance from road (>20)	•	•						•	Everyday
Multiple access points		٠	•	•	•	٠	•	•				•	•					Yes - Newtown
FEATURES									ractions/ Commercial Eacilities		-	-	-	-	•			No
Dies		-		-	-	-	-	-	a de Geld		-							TIME SPENT
Bins	-	•	•	•		•		•	ionts nela	-	-				-		-	Under 30 mins
Lighting		•		•			•		mmunity Buildings	-	_	-	-	-				Around an hour
Adult Seating	•	•	•	•	•	•		•	nall			•	•			•		2 Hours or more
Bike Racks				•					oderate	•				•				COMPANY
Tables					•	•			r0a		•				•		•	Singular Friend
Toilets				•					.8.		-							Group of Friend
Water fountain				•														Family
ENVIRONMENTAL									EOPLE	-								Alone
Trees	•	•	•	•	•	•	•	•	by (0-4)									TRANSPOR
Short grass	•	•	•		•	•		•	ild (5-12)			٠	٠	٠	٠		•	Walk
Long grass		٠							uth (13-24)									Drive
Sun/shade/shelter		٠	•	•	۲	٠	•	•	ult (25-64)					•	٠		•	Bike/ Scooter/ S
Undulating ground			•		٠				lerly (65+)		•							DAY OF THE
Rocks						•			e locally		•	•	•	•	•			Monday
No noise/traffic pollution	•	•			•		•	•	ENDER									Tuesday
VEGETATION	-	-			-		-	-	ult - Male Dominated					٠				Wednesday
Large Trees	•			•		٠	•		ult - Female Dominated			٠	٠					Thursday
Small Trees		٠	•		•			•	ult - Mixed		٠				٠	٠	•	Friday
Shrub Planting		٠		•					uth		•							Saturday
Vegetation Fence	•	٠						٠	ildren - Male Dominated									Sunday
Natural Features	-					•			ildren - Female Dominated		•							Public Holidays
SURFACE MATERIAL	-								ild - Mixed		-	•	•	•	•		•	School Holiday
Grass	•	•	•		•	•		•	ME OF DAY			_				_	_	
Asphalt	•	•	•	•		•			rly Morning			٠	٠			٠	•	
Rubber Tiles			•		٠	٠	٠	٠	d Morning		•	٠	•	•	•	•	•	
Rubber Chip			٠						nch	۲	٠	٠	٠	٠	٠	•	•	
Bark					•				ernoon	•	•	•	•	•	•	•	•	
Astro Turf									ening		•	•	•					
SAFETY	-	-	-				-	-	ght			-	•					
Safe Equipment	•	•	•				•	•	SE OF THE SPACE	-			-					
Broken Equipment	•	•							ay .	•			•					
Proximity to Busy Road			•			٠			cial Gathering									
Passive Surveillance		٠	٠	•	•		٠		ormal Sport		•	•			•			
Shade									one/ Resting		•	•		•				
Slipperiness		•				•	•	•	mmunity Gardening		•							
	-	-							wing Through	-	-	-						

	Newtown Park	Carrara Park	Community Centre	Constable Street	Hanson Street	Mt Cook Park	Jeypore Street	Farnham Street	
	•		•	•	•				
	•	•		•	•	•		•	
		•		٠	•	•			
		٠		٠			٠		
moore		•	•		•		•	•	
pore	•	-	•	•	•	•	-	•	
	-		-	-	-	-		-	
	•	•	٠	•	٠	•	•	٠	
		•	•	•		•	•	٠	
				•					
			-	-	-	-		-	
				•					
			-	_	_	-	-	_	
		_							
		•	٠	•	•	٠	٠	•	
			٠	•				•	
		٠	٠	٠		٠	٠	٠	
<			-				-		
			-	-			-		
		-	-	-			-		
	•	-	-	-			-		
		•	•	•	-		•		
		•		•	•		•		
		•	•	•	•	•	•	•	
	•	•	•	•	•	•	•	•	
	•	•	•	•			•	•	
			•						

		Newtown Park	Carrara Park	Community Centre	Constable Street	Hanson Street	Mt Cook Park	Jeypore Street	Famham Street
>	TYPES OF PLAY								
a	Physical		•	•			•		•
_	Fixed Equipment	٠	٠	٠	٠	٠	٠	٠	•
Q	Creative		٠	٠	٠		٠		
	Social		•	•			•		•
	Nature		•	•	•				•
	Sensory								
	Daring/ Risk	•	•						
	EQUIPMENT							-	
	Swing			٠		٠	٠		
	Infant Swing	•	•	•		•	•	•	•
	Rocktopus	•							
	See Saw	•							•
	Round a bout	•							
	Spinning Disk	•							
	Spinning Cup	•							
	Spinning Stand	•							
	Slide	•	•	•	•	•	•	•	•
	Monkey Bars		•		•		•		
	Abseil Wall		•		•	•	•	•	
	Rock Wall		•		•	•			
	Rope Net Wall		•				•		•
	Abacus		•						•
	Metal Rail Slide		•						
	Swing Bridge		•						•
	Rocker		-	•					
	Basketball hoop								
	Fireman's Pole			_					
	Static Bridge				-	-			
	Balance Beam	-			-				
	Tunnel					-			
	Elving Fox				-				
	Fighting Pox								

The comparative study was broken down into 3 main categories Space, People and Play. To determine which playgrounds were most successful a point was assigned to each colourful dot.

Scores

- Newtown Park 52
- Carrara Park 70
- Community Centre 68
- Constable Street 63
- Hanson Street 50
- Mt Cook Park 50
- Jeypore Street 46

• Farnham Street 59

The scores received by each playground were unsurprising and pointed correctly towards which play spaces were most and least successful. However, what the comparative study failed to take into account was a desire from the community. Jeypore scored the lowest out of all the playgrounds yet most people in the Berhampore community praise the play space for its convenience. It scored low based on the size of the playground and the lack of visual play diversity yet this did not deter users from attending the play space.

Categor

Categor

Categor

Visualising Tendencies.

The initial comparative study was a sweeping overview of what each playground provided and who visited the playground. However, this method of comparison failed to understand the on-the-ground tendencies and what similar patterns were repeated across the different playgrounds that could then be extracted and developed into a set of design principles. This sort of data could only be gathered from a visual understanding of each space. As a result, a visual representation of each of the subcategories was created to understand the specific design tactics that had been used.

The following pages expand on the visual patterns and typologies that were turned into visual cues. Each study continued to develop a strong foundation of knowledge.



Figure 4.16 Diagram of visualising tendencies process

SPACE // Close Context Features



Figure 4.17 Patterns of entrance types

Findings

There are three main entrance types and fencing types across the playgrounds.

- 0.5-meter high wooden fence. (Not closed with a gate but the two ends of the fence overlap)
- Closed in and gated. (Height between 1 meter and 1.5 meters)
- No fence or no official entrance. (Further back from the road)









Figure 4.18 Diagrams of entrance types



House Lights

SPACE // Close Context Features



Observation seating type There is little sociability with this seating type

as the size of it is just large enough to fit two people comfortably or three people that are familiar with each other. Internally social seating arrangement This seating type allows the users to face each other and encourages interaction between the two.

Figure 4.22 Seating types



Figure 4.23 Patterns of crossing types

Findings

(1)



Three Crossing Types;

- Heavy traffic and light assisted or zebra crossing (1)
- Moderate to heavy traffic and no assisted crossing (2)
- Light traffic and no assisted crossing

 (3)



Figure 4.24 Photos of crossing types

SPACE // Close Context Features



Figure 4.25 Patterns of surveillance types

Findings

Four Surveillance Types;

- Active roads and facing residential building
- Quiet roads and facing residential buildings
- Residential surroundings with back to park.
- Zero passive surveillance



Figure 4.26 Photos of playground surroundings



Findings

Four Vegetation Types;

- Shade tree and decoration tree combination
- Barrier and shade trees combination
- Barrier and decoration tree
- Shade trees only



SPACE // Wide Context Features

Newtown Park





Community Centre



Hanson Street



Figure 4.27 Maps of playground context



Jeypore Street



Constable Street





Farnham Street



Findings

Majority of the play spaces were surrounded by community or commercial facilities (not designed as destinations more as spaces to supplement the existing activity)

Commonly located near medium to highdensity dwellings (relationship with a natural feature)

PLAY



Figure 4.28 Layout of playground equipment

Findings

The play spaces show a wide variety of different play types, however, each park only supported around 3 types of play apart from Carrara which supported all types of play excluding sensory play. The fixed play equipment is laid out in three main patterns. The first patter is separate age zones; the play spaces are divided by age or level of difficulty. The second type is the separation of movement zones. In each section of playable space, there is a focus on a different movement type. The final pattern is the concentrated play space. Whilst the site is generally quite big the fixed playable space is concentrated to one area of the site



Figure 4.29 Location of creative play

Community Centre

Physical Play Space Newtown Park Carrara Park





Social Play Space

Newtown Park	Carrara Park	Community Centre
Constable Street	Hanson Street	Mt Cook Park
Jeypore Street	Farnham Street	

Findings

Types of play that are often included in play spaces include;

- Physical ٠
- Creative
- Social ٠
- Sensory ٠
 - Nature Proprioception
- Vestibular
- •
- Fixed equipment

However it is quite rare that all types of play will be included in play spaces. Typically physical, creative and social play are included.

Figure 4.31 Location of social play

PEOPLE

Age of Users

























Time of Day

Newtown Park











8 pm -

8 am —

10 AM -

12 рм

4 PM

8 pm —

Farnham Street

Jeypore Street

Mt Cook Park

Hanson Street

8 am -

10 AM —

Community Centre



Constable Street



Figure 4.33 Intensity of use across the day

Findings

The spread of people that visited all of the eight-play spaces was relatively broad. The number of users across the day and who visited the playground was strongly dependent on its location. The internal playgrounds and ones situated on main roads were visited much more frequently than the playgrounds located within the inner and outer town belt, apart from Newtown Park. This was due to its proximity to the Zoo. Constable Street and the Community Centre Playground were used all week long and at all times of the day. Jeypore Street, Newtown Park and Carrara Park were used all week long but only at certain times of the day. The final three parks Mt Cook Park, Hanson Street and Farnham Street were typically only used on weekends and holidays.



Age Appropriate Spaces Newfown Park Carrara Park Image: Constrable Street Hanson Street Image: Constrable Street Hanson Street Image: Constrable Street Farnham Street Image: Constrable Street Image: Constrable Street Image: Constrable Street Farnham Street Image: Constrable Street

Figure 4.35 Spaces designed for particular age groups

Transport to Play Space

Newtown Park	Carrara Park	Community Centre	
Constable Street	Hanson Street	Mt Cook Park	
			Car Public Transport Walk Transportation to the play spaces depended on the location of the
Jeypore Street	Farnham Street		site and the visitor type. Spaces that were located near inter- regional facilities such as sports fields and the zoo typically had people driving or biking to the park whereas spaces that sat within the suburban streets typically had visitors that travelled there by car or bike, this meant that the need for car parking was not so vital.

Figure 4.36 Methods of transportation to site

Observations and Similarities.



Figure 4.37 Diagram of tool kit creation





Figure 4.38 Photo of process

These visual tendencies were placed upon a singular board so they could be observed more holistically. Each playground was placed in it's own individual down column. The across columns were for each specific category such as accessibility, features, demographics and play equipment layout.

The down columns provided a synthesised site knowledge, a rounded assessment on the quality of the play space and who was using it. Whereas the across columns provided synthesised typology knowledge, a synopsis of successful patterns and the foundation to create a set of design principles.

From this, a series of 29 design potentials were established and divided into 4 main categories.

The first 8 are specific to finding a desirable location, one that assists the existing urban fabric and support existing infrastructure. The remaining 21 are a set of design ideas; the 3 categories are environmental/ vegetation, spatial features/ amenities and play types/ zones.

This tool kit has been designed to provide an overview of considerations that should be taken into account when designing a play space. The scale of the space will determine which principles are more critical than others.

Formal and Informal Play Tool Kit.

Space/Context/Barriers



Figure 4.39 Initial tool kit diagrams

Environmental/Vegetation



Tall canopy planting should be complimented by under story growth and variations of plant density



Vegetation collections around the play spaces should be used to improve visual amenity



Include natural features in the design of play spaces including water, rocks, grass for sensory play



Play spaces should have adequate lighting, including a variation between street, flood and surrounding lighting





Planted vegetation can be used as barriers or placed in tight clusters for shade and points of respite



Play spaces should support community networking and growth

Formal and Informal Play Tool Kit.

Spatial Features/Amenities



Figure 4.41 Initial tool kit diagrams

Play Types/Zones



Modern play spaces require a fluid connection between play objects to avoid isolated singular play



Age play zones within a close proximity support the younger visits in feeling comfortable to play freely



Each zone in a play space should offer a different movement and play type – such as physical play, fixed equipment, social play and creative play



Play and movement zones should vary intensity to facilitate to a range of users



Large play spaces with more space can cater to a wider range of demographics whereas smaller spaces can cater to a singular demographic



Play structures should offer variability of movement to improve fine gross motor skills



Social infrastructure should include spaces that can double as performative spaces

Formal and Informal Tool Kit.

The 29 design potentials and considerations that were created from the visual tendencies were broad and did not alert to the size of the park or the scale. As explained in Ballarat City's play strategy the scales of playgrounds were important to recognise in the design as this determined what should be included within the design. As a conclusion, these 29 design potential were simplified further into this series of principles. (City of Ballarat, 2017).

Selecting a Location





Regional Scale

Design Considerations



The use of **tall canopy** planting can double as **amenity** and **shade**. Ensure to compliment with **under-story planting** for **learning** and **play** opportunities.



Ensure that the play space is **well lit** from a **range of light source**. Also avoid **hidden corners** and **dead spaces** with vegetation and play equipment.




Figure 4.43 Formal and informal tool kit

Incidental Play Tool Kit.





incidental play or a playful experience. 12 of the site were selected to be examined further. These sites were chosen because they fit within four main categories. These categories were public art, social infrastructure, natural feature or public feature.

Within the Wellington network, several areas support and encourage

generate incidental play.

Comparative Study.





Quantitative Comparative Study Results.



Figure 4.47 Comparative study table of initial results



Like the initial comparative study this study was broken down into the categories space, people and play, however also included in this study was form. The space category assessed features such as accessibility, location, space enhancement and size. The people section assessed demographics, interaction potential and intended use. The play section assessed movement types and play types. Finally, the form section assessed object form, material and texture. Each incidental play type was given a single colour dot when this feature was present.

Like the first comparative study, this method provided only a broad overview of what made an object incidentally playful and failed to allow for any concrete conclusions to be drawn or any understanding of patterns and tendencies between the spaces. As the method of turning each category into a visual representation had been successful in providing a set of design principles, the same method was done for this comparative study.

Visualising Tendencies.

SPACE // Wide Context Features



Figure 4.48 Maps of play site context



Oriental Beach



Manners and Dixon Street



Pukeahu Memorial Park

Findings

One notable feature of these tendencies is that most of the incidental play experiences were located within the central city and three of the sites are located in one space – Pukeahu Park. One pattern that emerged between these play spaces is that they are all located within proximity to commercial or public facilities.

Visualising Tendencies.

SPACE // Close Context Features

complicated.



Figure 4.50 Diagrams of object heights







Findings

A common feature between most of the play spaces is the way that the use of these objects animates the space and enhances the atmosphere. The second most common feature is the way users can re-imagine the space and will imagine these spaces as something new and whimsical. Material and form is the main driver of these space enhancements.

Visualising Tendencies.

PLAY



Figure 4.52 Movement types related to objects



Findings

The objects that were the most successful in terms of providing a wide range of movement types and play opportunities were the isthmus jumping blocks and the sphere bollards. Both of these objects are around 0.5 meters in height and are simple in terms of texture and form.

PEOPLE



Figure 4.53 Demographic of people visiting each site

Findings

The users of these incidental play sites vary greatly depending on their location. As most of these locations are in the city it is not clear whether the users are locals, regional or international visitors. In terms of age, the most common age group that participates in play with these objects is children, particularly between the ages of five and eight. The least common age group to play on these objects is elderly and this is mainly to do with mobility. However, the more static objects that don't require climbing are used by all ages readily.

Visualising Tendencies.

FORM // Colour and Material Scope





_____ ►_____ ►_____ ►_____ ►_____ ►_____ ►_____ ►_____ ►_____ Brush



Findings

Most of the colours that are used in these incidental play spaces are natural tones, they tend to fit comfortably within their surroundings. The ones that stand out the most are the bucket fountain and boat sheds. These two objects use the primary colour and the level of colour is quite vibrant.

Incidental Play Tool Kit.

Concluded from this comparative study was 6 design principles that could then be applied to public space design and objects that can encourage incidental play. Whilst it is not entirely possible to design incidental play as it involves many uncontrollable factors, these design principles provide a base that can be built upon and experimented with.



The incidental play involves an interaction with another material. The material must be either smooth or have a particularly unique texture.



The object must be able to be climbed. Height about 3 meters can be played on but will not appeal to everyone.



The playful object must be for everyone. Able to be used an appreciated by all abilities and ages. The use of the object does not need to be explicitly play.



Incidental play space is entirely dependent on its location and is affected by the use of the surrounding context.



The object should spark play that can happen alone or as a group. This should not affect or change the experience significantly.



The playful experience is inclusive of physical movement, particularly the action of climbing.

Figure 4.55 Incidental play tool kit

Reflection.

The development of this typological base created a foundation that could be applied to the design of both formal and informal play spaces. The development of this method was clear and followed strong guidance from previously designed processes. It drew upon architectural firms design assessments as well as policy and strategy that has been written at a municipal level.

Key learnings that were found throughout this phase of the research;

The initial approach of the comparative study followed a very systematic process and when filling in the table it became evident that this method would provide a very generic overview of each case study but not provide any exact details of what each feature was and how it was used. The decision to turn these into visual cues was a natural progression and began to provide a true representation of how these spaces are spatially. However, what was unsuccessful with both of these methods is how they both failed to provide an on-the-ground feel. The nature of mapping from plan view means that some of the qualities and detail is lost in the representation technique. To get a deeper understanding these patterns possibly need to be explored both through plan view, section, photos and even small 3D models.

The design principles that were extracted from both ends of the comparative study were represented using mainly words and a small explanatory diagram. The initial 29 principles were relatively generic and when the diagrams were being produced it became evident that there were many similarities. As a result, these 29 principles were combined and reduced down to 12 (3 for selecting a location and 9 for design considerations). One of the main limitations that surrounded this section of the study was the representation technique. The diagrams and text are possibly not as clear as they should be for a set of design principles. One way to improve this could be to present these concepts in 3D drawing so the user can see how these can be applied more directly.

The next step following the development of this process was to see how this could be applied to a site and perhaps to a range of play opportunities. Determined from the comparative study and initial site analysis it was clear that Newtown had a wide range of play spaces already, as well as public spaces that were comfortably used by the community whereas Berhampore had very little in both respects. The play spaces Berhampore had were semi-private, attached to apartment buildings or were exceedingly small. From this, it was decided to continue the research in Berhampore alone. The next phases of this research will explore how a range of play opportunities added to the urban fabric of Berhampore will change the social conditions.

Five Site refinement & context analysis.

Chapter Introduction.

This chapter follows a preliminary design analysis process and the narrowing down of a site on which to test the design tool kit. During this stage of the research, there was a change in scope. The initial approach was to design a singular play space that incorporated all form of formal play as well as informal and incidental play. However, due to site restrictions, the final phasing was adjusted which in turn changed the scope of the research. This change in scope also required a new look at precedent studies and literature.

Whilst studying and analysing the current play network in both Newtown and Berhampore it became apparent that Berhampore lacked any adequate play spaces within the centre of the suburb that also could be used as flexible public space. From this, it was decided to continue exploring this research in Berhampore.

Berhampore.

Berhampore is a forgotten suburb, it is often referred to being just a part of Newtown, or a suburb you that you pass through. This neglect is present in the lack of public space and the lack of commercial presence. There is little flexible public space within the centre of Berhampore for causal social mixing. Currently, the available open space is located within a variety of different housing complex courtyards, either of the two schools and the surrounding the sports fields which are on the outer reaches of the suburb, subconsciously separated by topography. Whilst these spaces are considered to be public space there is a subconscious sense of ownership to the immediate surrounding dwellings, particularly with the housing complex open space. Residents of Berhampore and visitors to the area are hesitant to cross the threshold as it is not clear what is public and private. There is a need for open space within the public realm that is universally accessible and welcoming.

- Berhampore is a diverse community
- Large migrant community
- Refugee community
- Evidence of social fragmentation between all ethnic groups
- Over 50% of the dwellings in Berhampore are medium to high density
- 40% of these houses are owned by Housing New Zealand.



Figure 5.2 Housing types in Berhampore profile.id. (n.d.). Dwelling types - Berhampore. Retrieved from https://profile.idnz.co.nz/ wellington/dwellings?WebID=110.

Opposite page Figure 5.3 Context map of Berhampore





Tool Kit Application.

To select sites to apply and test the play design framework further site analysis was required. The areas that were needed to be unpacked further were dictated by the first section of the tool kit. This section was space, context and barriers portion that outlined the necessities required to choose the right play space location. The original guidelines were compressed and combined to create a more precise set of design principles.



Synthesised Findings of Tool kit - Location

Figure 5.4 Finding a location principles from tool kit

Site Selection Method.

Tool kit application + design principles ____

Strategy for site understanding –

→ BERHAMPORE

Pedestrian Network



N 0 100m

Findings

- Many people in Berhampore used short cuts to navigate the suburb and reach the main road
- Residents chose roads to walk based on the efficiency or the pleasantry of the walking experience
- Southwest side had the most roads that were not pedestrian-friendly

Figure 5.5 Pedestrian network in Berhampore



The pedestrian network

where to people move through why do they choose to walk there where can they not go

The public realm

what spaces welcome the public where does social interaction currently occur



Site Selection Method.





Site disruptions & interruptions to pedestrian flow

where are areas of high traffic volume spaces that are not open to the public and divided by fences crossing variability and driveways

Findings

- Lack of assisted crossings
- Most of the roads have a low volume of traffic
- Most crossings are raised walkways
- Can limit the possibility of spontaneous social interaction occurring the footpath



Figure 5.7 Pedestrian disruption in Berhampore

Site Selection Method.





Street visibility and site lines around neighbourhood

where is topography is able to be navigated what are the existing view plains

Findings

- Berhampore is spilt across three topographic planes; upper hill, lower valley and gradual slope. The variation in topography created natural barriers
- The most distinctive barrier was the shift along Adelaide Road, closer to Macalister Park (steep rise slope that separates the end of Newtown with the beginning of Berhampore)



Site Selection Method.

Combined with the spatial analysis of Berhampore it was important to supplement this with community engagement. A second round of surveying was done around two key streets, Herald Street and Stanley Street. This surveying intended to understand why people enjoyed Berhampore, what they wanted to see more of and what they thought of the existing public space and play network in Berhampore.

Concluded from this study it was clear that Berhampore had an active community and enjoyed a welcoming atmosphere. However, they made it clear that the current conditions of the public space and existing play spaces were not appealing or a true reflection of Berhampore's nature.

The second secon

No large scale public land

Strong pedestrian corridors North to South and East to West

3

4

2.

Spilt across three topographic plane Upper hill, lower valley, gradual slope

Active core



Figure 5.10 Conclusions from site analysis

Opposite page Figure 5.9 Character montage of Berhampore

Community Workshop.



After talking to several key stakeholders in the community including; the residents association and teachers at Berhampore School it was decided that an event or workshop would be most appropriate to generate design ideas. This workshop would also provide the opportunity to test play tactics that could then be implemented into a public space. A public workshop was hosted at the community centre in Berhampore. The workshop ran for just over one hour on a Saturday afternoon. Around 16 people attended the event, to secure attendees the event was posted on Facebook and distributed through the resident's association mailing list.


Playful Activities.

Object Play

Opinion Forum





Creative Play





Several interactive and playful activities were planned to be done at the workshop. Several posters were placed on the wall to gather public opinions. The original intent was to run creative play activities one at a time, however, due to the different timings of arrival and the needs of the children all activities ran simultaneously. The creative play activities were aimed at children but allowed for the involvement of all ages, initially, all were hesitant to begin each activity but as time progressed the attendees became more involved.

Public Opinion.





Design Approach.



Figure 5.14 New design approach based on analysis conclusions



Social Inclusion in Public Space

Urban Ludic Design Temporary Public Space Design

> The initial approach for this research was to apply the design tool kit to a singular play space. Within this play space, all three play types would be considered and demonstrated and it would be a test of the design tool kit. However, based on the findings in the second round on-site analysis it was clear that there needed to be a change in strategy.

Topics

The new approach would continue to look at Berhampore as the case study for the research. However rather than testing the success of a singular design, several different spaces would be designed and tested. These spaces would all be centred on one of the three play types; formal, informal and incidental play.

The change in strategy provided the opportunity to research the idea of play more holistically and further into the design of both informal and incidental play opportunities as it had become quite centred around the design of formal play spaces. This change also provided the chance to explore a temporary element to play space design and the design of playful encounters.



Formal Play Site Selection.

Following this, several existing play spaces were highlighted across Berhampore and compared against one another to decide which space should be redesigned using the tool kit.

To aid the process of comparing site against one another, they were spilt into four typologies. Each typology was determined by its location. These each had their own opportunities and limitations.





Externally Public



Private



Site Typologies.



Internally Public

This play space type is located within the centre of Berhampore and in a public space that all residents and visitors feel as if they can access whenever they like. This type is located close to many residential dwellings and is frequently accessed by residents who will travel there on foot.



Externally Public

This type is located on the outer reaches of Berhampore and is a public space that all residents feel as if they can access it whenever they like. However, due to it being on the outskirts it is not used so frequently by residents and is often more popular for visitors to the area.



Semi Private

This play space type is located within the centre of Berhampore but is surrounded by a social housing complex. Whilst space is public land a subconscious territory and threshold is surrounding the space that does not welcome all residents and visitors of the suburb.



Private

This play space type is attached to a facility or business and is set only to be used by those who live there or attend the business. The primary school and intermediate play spaces fall into this category however due to physical spatial conditions of each school residents and visitors feel comfortable using the facilities.

Findings

The most suited space to test the design intervention would be the 'internally public' play space as it had the strongest exisiting user network. This type of space also was the most welcoming to all residents of Berhampore. In Berhampore there was only one 'internally public' play space, Jeypore Street. This playground was one of the original eight case studies.

Figure 5.16 Diagrams of site typologies

Informal and Incidental Play Site Selection.

The same method was used to determine the sites of both the informal play space and the incidental play space. Five typologies were established from these sites. Like the formal site selection process these sites were spilt into five typologies based on their location. The typologies were also compared against one another to determine the most appropriate place to test each play type.

The informal and incidental sites were chosen from the same selection process as both of these play types can occur anywhere. The sites that were highlighted across Berhampore were part of the public realm.

Empty lots

Quiet street corner

Sociable cul de sac



High exposure

Attached to a public facility

FARNHAM STREET PAR

MACAL

LIARDERT STREET PARK



Site Typologies.



High Exposure

These sites are located within the centre or active core of Berhampore. They are located on main arterial roadways and footpaths, these roads in Berhampore are Adelaide Road, Luxford Street and Rintoul Street.

- Minimal room for design ٠
- Surrounded by high volumes of traffic
- Potential to obstruct pedestrian movement
- Safety at the forefront



Sociable Cul de Sac

These sites are located at the end of a dead-end street, whilst these spaces do not have the traditional traits of a cul de sac (dwellings arranged in a circular form) they have a similar atmosphere.

- High level of passive surveillance
- Presence of pre-existing community
- Minimal car circulation
- Large capacity for design



Quiet Street Corner

These sites are located away from the main arterial roadways and footpaths, this results in less frequent foot traffic and less surveillance from passing cars.

- •
- Large capacity for design
- Wide streetscapes more room for design
- Will not obstruct pedestrian movement
- Quiet



Attached to a Public Facility

These sites are attached to the few public facilities within in Berhampore, including schools and sports fields. There is no pattern for the location of these sites, it is dependent on the type of public facility.

- Large capacity for design potential
- Existing user typologies
- Little to no surveillance
- Varied use time



Empty Lots

These sites share very few common traits and features. There is no pattern as to where these sites are located however they do tend to be away from the main activity centre of the suburb.

- Far back from road edge and footpath
- Large capacity for design
- Pre-existing site structures

Findings

The most suited place to test informal play was the 'sociable cul de sac'. This was mainly due to the influence of the existing community and the larger capacity for design. As informal play can sometime require a reasonable amount of space the cul de sac was optimal.

The most suited place for incidental play was the 'high exposure' site. This was because of the nature of incidental play. As discovered in the literature on urban ludic design, which is very similar to incidental play, this type of play requires the active use of the pedestrian network and more potential users. In this case incidental play will be used as a pedestrian alternative

Reflection.

This initial stage of preliminary design began looking at how the typological framework and site-specific knowledge can be used in conjunction to create a strong design foundation. Through completing this process it became evident that typological knowledge cannot stand on its own and must be grounded through site and site application. This became most apparent when the tool kit location guide failed to provide a space in Berhampore that was adequate. This caused the final trajectory of the research to shift which in turn provided new opportunities to broaden the scope of play and explore new possibilities.

Key learnings that were found throughout this phase of the research;

In this stage the site typologies were defined purely by location. These separate typologies had their own opportunities and limitations, therefore would require different design tactics. As the spatial conditions varied greatly across these sites different design approaches would be required. This would also require a different method of application of the tool kit.

Location was ultimately important to the use of a new play space. The location of the new site would only be used to its full potential if it was placed in an active and accessible area.

Community and public facilities were big draws when selecting a site for a new play space. Housing complexes were not. The territories that are created around this dwelling type does not encourage the level of social interaction and mixing that is desired.

Moving forward, the aim was to develop three separate designs across three different sites, each focused on one of the three play types. Jeypore Street Playground would be redesigned using the formal play tool kit. Stanley Street Community Garden would be the testing area for informal play opportunities, and the corner of Luxford Street and Adelaide Road would be the site for testing incidental play.

Six Designing for Play.

Chapter Introduction.

This chapter follows the design phases from concept design, through design testing to developed design of three separate sites. These processes use the knowledge that was gained from the typological framework and apply it to one of three designed play types. The intent of this phase of the research was to both test the tool kit but also demonstrate how different types of play can be manifested into a suburb.



Formal Play.

The first subchapter will move through the design phases of the formal play site. This investigation aimed to explore how the knowledge gained from the tool kit could be applied to the design of a formal space to be more inclusive and provide a wider range of play opportunities. The site that was selected for this purpose was Jeypore Street. In the formal site selection map, 17 playspaces were highlighted and from these 17, Jeypore Street Playground was the only space that was located within the centre of Berhampore and was entirely public. This playground has also previously been analysed in the development of the comparative study meaning that the level of site understanding was at a much higher level, to begin with. During this design investigation, several different concepts were tested against the tool kit and how they encouraged social interaction between users but did not lose the existing qualities of the space.





Informal Play.

The second subchapter moves through the design phases of an informal play site. This investigation also explores the knowledge that was gained from the development of the tool kit. However, it was testing to see how this could be applied to the design of public space, where play was not the sole focus, yet encouraged. The site that was selected for this purpose was Stanley Street, specifically Stan's edible garden between Stanley Street and Palm Grove. This site was initially selected from the informal and incidental play site selection map as it was a social able cul de sac that was in proximity to the school and the short cut was a wellused path. The presence of the community garden meant that an existing social group was already using the site and any addition to the site would only encourage more use and social mixing. The design tests that were conducted through this design process explored how the management of environmental pressures could be combined with playful encounters.



Incidental Play.

The third subchapter details the design phases of an alteration to public space to afford playful behaviour. This investigation uses the knowledge that was gained from the incidental play tool kit. The initial tool kit did not provide a clear design path or present design opportunities to create a space that is not inherently playful but can afford such actions. As a result, the second tool kit was created based on existing incidental play sites across Wellington City. The site selected for this design was the corner of Adelaide Road and Luxford Street. This site was identified in the informal and incidental play site selection map as a high exposure site. This was important as the volume of potential users was much greater and therefore had the most potential of being successful. This site was also located near a bus stop. As initially discovered in the preliminary research bus stops were places where most spontaneous interaction occurred in Berhampore. This chapter follows a series of concept iterations and design tests that explore object form and material to evoke playful experiences.

6.1 Designing for Formal Play.

Site Analysis.

Key Plan

Jeypore Street Playground is a neighbourhood scale park. This playground was the smallest of the eight selected case studies and achieved the lowest rating on the comparative study rankings. This was due to the park being one single material, no range of topography, one bench was provided, and a singular play type was catered for that was targeted to a singular age bracket. However, this park is readily used by the community of Berhampore. It is used throughout all seasons and all weekdays.







Community Impression.

In the Wellington City Council Play Spaces Policy that was updated in 2015, it spoke of the changes that would be happening to the existing play network. One of the decisions was to scrap several playgrounds included in this list was Jeypore Street. Upon much negative feedback and council petition from locals, the playground was saved. In November 2018 the council sought feedback for the new design and in June the following year, the playground was upgraded. The play equipment was updated and the ground material was changed.

Whilst the community was thankful for the upgrade they believed that the new play space does not live up to the potential of the space and there were many physical flaws in the design of the climbing structure.





Figure 6.1.4 Photos of design change

Figure 6.1.5 Petition to preserve playground Van der Aa, W. (2014). Preserve Jeypore Street playground in Berhampore as a children's playground. Retrieved from https://www.change.org/p/councillorspreserve-jeypore-street-playground-in-berhampore-asa-children-s-playground.

Site Opportunities.

0





The existing design does not take full advantage of the site and creates many dead areas

The fence confines all socialising and action within the interior of the park

The additions to the park need to be strategic and have multiple purposes.

Design Massing.

The aim of the design massing was to start spacing out areas of the playground and test the sketch concepts in a more spatial way. The design massing technique provides the opportunity to test the ratio of each potential activity.



Sketch Concepts.



Figure 6.1.9 Sketches of concepts

Design Massing.





The design massing then led to the development of some key design tactics. These design tactics were also informed by the tool kit. These design tactics were then used when moving forward into the concept phase.
Sketch Concepts.





Key Design Tactics;

- Extend the boundaries of the site, there is wasted space that has been cut out of the park to cater for a large tree. This space can be absorbed into the space of design.
- Social infrastructure and topography that is added to the site must be multifunctional to maximise space.
- The fence creates a distinctive threshold that should be adjusted based on the way it is facing. This fence should be developed to create a relationship between the internal and external spaces.

Initial Concepts.





Design Testing; Fence.



Fence height exploration



Existing fence height is optimal for all ages





3D Exploration







1.5 m Optimal for adults Children feel enclosed



Pointless height 0.5 m

Figure 6.1.21 Fence height exploration





Contrast of short fence with tall fence

Figure 6.1.22 Clay model

Findings

The optimal height for the fence is 1.5 meters. However this does not need to be continued throughout the entire fence design. It can be varied based on the side of the fence and what the close context is

Design Testing; Fence.

Material Thickness



Material Qualities



The mix between a natural material and planting creates a harmonious dynamic



Polished wood

Painted wood Colour creates a fun playful environment



Figure 6.1.24 Material texture exploration

Fence post spacing













Figure 6.1.25 Spacing exploration



Findings



Closed fence creates a strong barrier. Creates a harsh block shadow



Dotted fence creates a soft barrier. Vegetation and fence shadows mix to create dappled pattern





Dotted fence mixes with plants. Internal mixes with the external

Design Testing; Seating.

Seat height exploration



Figure 6.1.26 Seat height exploration



Figure 6.1.27 Seat type

Design Testing; Seating.

Fence and seat integration



The mixing of seating with the fence creates an interesting dynamic between the interior and exterior of the play space. The prompts conversation between those attending the park and those moving past the site.

Figure 6.1.28 Clay model test

Fence height with seat exploration



Figure 6.1.29 Fence height test

Design Testing; Fixed Equipment.

Play Structure Placement



Findings



1 meter Restrictive space





More space for more people





There is enough space for more than one structure





connect swing set for more playable space



67

Set in ground play structures such as trampoline





Over filled play space. Not enough room to move





Better transistions between each object

Design Testing; Topography.

Topographic Form Exploration





Mixing materials

















Mixing materials







Figure 6.1.31 Clay model test

Rhino Model



Figure 6.1.32 Digital model test

Design Testing; Topography.

Fence height experimentation



This fence height is too short with topography added

Figure 6.1.33 Fence and topography test



Findings

This fence height balances with topography when the topography is at 1 meter and the fence is 1.5 meter. Figure 6.1.34 Fence and topography test

Developed Concepts.

Findings that were concluded from design testing identified aspects that were imperative to the design of effective formal play spaces were;

Freedom to use surfaces and objects in any way that pleases

Space for different groups of users

Flexible spaces and the use of the external space to include more ages

Low maintenance plants that were harm-free and offered an interesting tactile experience





Final Design.





Section A-A Figure 6.1.38 Internal long site section



Section B-B Figure 6.1.39 External long site section



The overall design of Jeypore Street utilises the available space more efficiently. One of the main tactics that were applied to the design of this space was multifunctionality. To provide several design principles outlined in the tool kit each addition to the park had to serve more than one purpose.

- Extension of the northeast corner to level out the fence
- Change in topography at the northern end
- Larger play structure
- Dynamic fencing

Figure 6.1.40 Rendered Image

Detailed Zoom.



0



Figure 6.1.42 Rendered Image

The change in topography at the northern end of the play space allows for a variation in the play environment for the users. It also adds more seating options to the play space.



Section A-A Figure 6.1.43 Cross section of raised end

Planting Plan.



0

Planting

/

۱ ۱

1

1

1



The stratergy used in the planting design continued on the overall trend of multifunctionality. They were used to both offer a sensory experience and can withstand the active play of children. The plants that were used had a range of tactile and playful qualities.



Section A-A Figure 6.1.45 Planter box combination



Section B-B Figure 6.1.46 Seat and ramp planting combination

6.2 Designing for Informal Play.

Site Analysis.

Key Plan



Stan's edible garden is a community garden located between Stanley Street and Palm Grove. The community garden is used by a small number of locals and is not particularly well known. Those that live on Stanley Street all use the walkway as a short cut to get to the main road and bus stop but there is no clear indicator on either street that welcomes people down the path. The pathway is well maintained and also connects to Macalister Park. The community occupies most of the northeast corner of the site, this is where the land is flattest and receives the most amount of sun.





Eastern Entrance Figure 6.2.2 Photos of entrance





Western Entrance

Site Issues

The topography of the site is not user-friendly. The site slopes quickly down from Stanley Street to Palm Grove and also has quite a large drop close to the fence. There is also quite a large slope on the northern end of the site leading up to Macalister Park. This slope casts most of the site in shadow for the entire day.

Drainage has not been considered already on site and the relatively steep slopes exacerbate the issue. The water runs horizontally along the path and pools along the fence edge. Due to the site being so overgrown currently, it is not overly obvious the extent of the issue along the fence edge.

There are a few street lights that are positioned along the path however these do not provide enough light flood to make the site well lit, this combined with the lack of passive surveillance make the site not a friendly place after dark.



Path Journey





Figure 6.2.4 Existing site slopes

Site Opportunities.



Design Opportunities



Design Massing.



Additional Planting

Initial Concepts.

- Place formal play objects around the site in an informal manner
- Experimentation with simple structural objects and planting
- Provide a range of materials that contrast the existing spatial conditions





Figure 6.2.9 Retaining wall and seat

Figure 6.2.10 bench seating



The initial approach to this site was overly ambitious in what could fit on site or work with the existing topography. The design began with only focusing on the centre of the site surrounding the community garden, the intent was to mix structural elements with typically play equipment to create a playful landscape. After a second visit to the site it became clear that the room for design was much less than initially intended. This visit was also at dusk and what was made evident was the lack of lighting surrounding the site making it unpleasant and unsafe to walk through at night. The western and eastern entrances were also particularly uninviting.

Design Testing.

The second round of designs created spaces that were much more simplified in design moves. However many of design moves needed to be extracted and tested singularly then placed in site again afterwards.

Areas that needed to be tested further; Seating Lighting Water management techniques

Seating Development



Figure 6.2.14 Seating development

Seating arrangement in site



Figure 6.2.15 Seating placement

Design Testing.

Lighting Exploration



Singular height

Singular height and spaced out

Shorter







Random groupings

Experimenting with groupings



















206


Water Management.

The site showed evidence of drainage issues on each visit. This design test to was to discover the most appropriate drainage solution. The decision to create a rain garden provided the chance to explore the playful qualities of planting, water and lighting.



Site Water Movement and Water Pooling Areas

Evidence of Drainage Issues







Figure 6.2.19 water run off and pooling

Watershed From Site and Exisiting Drains



Rain Garden Size Test

Catchment area WQV size of rain gaiden One 1410 m2 X 0.44 X 0.20 41.67 x (128.8) x (0.6) 128.8 m3 30 x (0.15 to .6)x 1 Catchment area $= 142m^{2}$ two WQV S56m2 × 0.44 × 0.20 41.67 x (48)x (06) 30x (015+0.6)x1 48 m3 $= 53 \text{ m}^2$

Figure 6.2.21 equation for rain garden size

Water Management; Rain Garden.

Scale Model Testing







Findings









Figure 6.2.22 Clay model testing



Figure 6.2.23 Clay model testing with poles

Findings that were concluded from design testing identified aspects that were imperative to the design of effective informal play spaces were;

Don't over design and over-prescribe. Flexible spaces able to be built upon by the community if they wish Small pockets of activity Low maintenance plants that can interact with the built objects Multi-purpose spaces, when something is intended for one purpose often it can encourage and incentivise new forms of social interaction

Developed Concepts.

Key Design Tactics;

- Water management will play a crucial role in the design of this site particularly how play can be combined with these practical solutions
- Address the current lighting situation and provide a fun alternative that uses existing features. Lighting can also create a playful experience
- Create a connection between both ends of the park to draw people in and along the path.





Final Design.





The overall design of Stanley Street creates a playful and interactive experience that will encourage the residents of Berhampore to use the walkway more frequently and spark new interaction opportunities for those who use the community garden. This design does not explicitly use the design principles from the tool kit but uses them as guidance. Rain garden and interactive seating at the end of Stanley Street Interactive seating and light installation

Figure 6.2.32 Final design wide context



0 2m

Figure 6.2.33 interactive rain garden



Section B-B





Figure 6.2.35 long site section







Section A-A Figure 6.2.38 bench and lighting relationship



Figure 6.2.39 Night time perspective





Section A-A Figure 6.2.40 Long site section





Figure 6.2.42 Night time perspective



6.3 Designing for Incidental Play.

Site Analysis.

Key Plan



Figure 6.3.2 Transport movement

Active Corner - main bus route and heavy foot traffic





Strong relationship between bar and bus stop





Wide and under utilised area





Amenity planting around level changes



Figure 6.3.3 Existing site conditions



Cordyline australis

Olea europaea

Sophora tetraptera

Hebe var. Libertia

peregrinans

Site Opportunities.

Initial Site Observations



Design Opportunities



Key Design Tactics;

- Utilise the undefined space that connects to the gathering area. Create an alternative for those who are waiting around or walking past
- Interfere with pedestrian flows and provoke users to wrap through the designed space – creates more interaction potential and forces uncertainty
- Contrast to the existing environment this can be through new rhythms of site, colour, object or material.

Conceptual Iterations.

Hand drawn ideation



Figure 6.3.6 Concept sketches

Testing in scale model







Figure 6.3.7 photos of models

The initial designs were too over-designed. The effort to encourage play was too much that it overpowered the site and lost the potential spontaneity of uncertainty. Moving forward the designs needed to be simplified and played on the existing site conditions.

Areas that were tested further; Site potentials – re visit at site analysis (existing conditions) Object form Object height

Site Opportunites.



Figure 6.3.8 Site opportunities

60 læteral change ment potential unused space florship ween streep intensi always 100

Pedestrian Movements.

The addition to the urban fabric of this site will alter pedestrian movements. This experiment looked effects of objects within the space









Figure 6.3.9 Interruptions to pedestrian flows

Design Testing.

This test looked at the physical effects of geometry within the space and how the will be appropriated.

Solid Geometry



- Able to be climbed •
- Contrast to surrounding •
- Irregular to site features •
- Rigid form •
- Able to be sat on

Hollow Geometry

- Able to be climbed •
- Can be inhabited
- Rolled on •
- Tranversable .
- Able to be sat on

Hard to climb

Able to be sat on

Rolled on

•

•

• •

Sphereical Geometry



Vertical Geometry



Involves a more bodily experience

Not multi-purpose - purely decorative

- Not able to be climbed on •
- Disruptive to movement Visual distraction
- Playful arrangement

Horizontal Geometry





- Able to be climbed on
- Disruptive to movement •
- Level change
- Playful arrangement ٠ •
- Tactile experience

Figure 6.3.10 Interaction with object form

Bus Stop Interactions.



Shelter





Figure 6.3.11 Interaction with bus stop

Design Testing.

Seating arrangement around bus stop















Figure 6.3.12 Clay model test

Final Design.



Playful seating arrangement

0 2m



The overall design of this corner plays on the existing material on-site and exploits its qualities to create a new site rhythm. This design also takes advantage of the position of the bus stop and the number of users. The grouping of blocks allows for the user to take control of the site without physically rearranging the space.

- Extended planting bed with tactile and edible plants
- Interactive seating

Opposite page Figure 6.3.13 Rendered final design



Section A-A Figure 6.3.14 Stairs and block interaction section



Figure 6.3.15 Rendered Image



Figure 6.3.16 Zoomed view of planter



Section B-B Figure 6.3.17 Bus stop section



Figure 6.3.18 Rendered Image

Planting Plan.







Figure 6.3.21 Rock garden planting section
Seven Closing discussion.

Conclusion.

In conclusion, the concept of play has been greatly neglected in the design of our public spaces and urban environment. It has been restricted to the bounds of the playground for the sole purpose of kids to 'burn off some energy'. Yet this impractical and un-functional action has the transformative power to bring communities together and create polycentric spaces. As discovered through the discourse of this research, the infusion of play in urban spaces and the extension of the 'typical' playground has the potential to create a dynamic and sociable environments that promote more spontaneity and meaningful interactions between inhabitants.

This research aimed to understand the concept of play and how it is currently manifested in the urban environment. It developed a typological framework and understanding that could then be applied to the design of new urban spaces in a multicultural context, particularly ones where the availability of quality public space is restricted.

Wellington provided a great case study for this research as it already has a profound play network, that had been recently addressed in new policy by the Wellington City Council. The added existing site knowledge and understanding of existing synergies provided a better foundation to begin the research and develop the scope.

This research began with a multi-disciplinary literature and precedent review that provided the theoretical foundation in which tactical design methods could be developed. The approach to the research combined typical landscape design processes with a methodical typological exploration to generate a series of three design tests, to answer the research question, research aims and objectives.

Key Research Steps;

Case study development

The analysis and exploration of case studies across all three scales of design provided a strong typological foundation for the progression of the research. As the case studies were located in the Wellington region they were able to be examined more closely and provided a rich contextual basis.

Comparative study

The comparative study was a successful tool in the way that it provided a systematic process to compare the spatial and environmental features of each case study that was identified. It broke the features of these play sites into defined categories such as accessibility, environmental, materiality and play types. The intent was to extract typologies from these categories, however, upon conclusion of this step, it became apparent that the approach was too generic and failed to provide insight to any patterns or tendencies that occurred across the sites. The table that was formed purely identified the presence of these features and did not allow for site-specificity.

Visual typologies and patterns

The visualisation of these typologies and patterns provided a more rigorous and spatial understanding of the features in each play site. From these patterns a set of principles were extracted These principles provided a design framework that could then be applied to the design of a play space.

Strategic design implementation

The design of three separate play sites, each encompassing one of the three types of play allowed for a more diligent and thorough exploration of each play type. The designs presented in conclusion of this step were still at a concept level. Whilst aspects of the design had been tested, it is not clear whether these designs would be successful in meeting their purpose. This test would need to be done physically.

Limitations.

There were several challenges that were discovered through the course of this research. One of the leading limitations was the task of engaging the community. The initial idea was to work closely with the community of Newtown and Berhampore to develop a site-specific response to play space design. The community would also be able to provide instant feedback on the designs tests and assess whether the design environment would achieve the desired result. Several tactics were used to attempt to engage the public, including street surveys, contacting key stakeholders and the council. It was evident there was interest in the topic of the research but there was a lack of willingness to engage further than answering a few questions. Towards the end of the research, there was an outreach of support from Berhampore school teachers and this aided in the final design tests.

Another limitation to the research initially was the lack of available space for development in both Newtown and Berhampore. This led to a change in scope and overall objectives. However, upon reflection, this shift strengthened the depth of the research and allowed all forms of play to be explored and provided the opportunity to test thinking across a multitude of sites. The research became an interesting experimentation between form and material, plus integrating with existing natural and social systems

Reflection.

Upon completing this research there are several areas that could have been improved or developed further. One is the development of case studies. This piece of research looked at specific formal and incidental play sites across the Wellington region, it would've been interesting to develop an international understanding of how these types of play sites worked in a different cultural context. Precedents were looked at from both New Zealand and overseas but the use of these precedents was not as useful or influential as the case studies. The addition of this investigation would have created a stronger foundation of knowledge to design with.

A second area that could be addressed further is the engagement with key stakeholders. Continued and richer engagement with the locals of Berhampore would have been valuable to the design testing process. The workshop that was held was successful in gauging an understanding of what the residents in Berhampore want but the model of workshop that was used was restrictive and the data gathered would not be able to be applied to another suburb.

Overall the general public readily engages with the concept of play. It is something they are very familiar with and share their opinion on. But it is still ingrained within the public perception that play is confined to the playground and they struggle to understand how it translates outside of those walls.

This thesis challenges the programme that is often used at the helm of urban space design, and places play at the forefront. It builds upon the work of Quentin Stevens and encourages designers to create a looseness in the design of these spaces. It recognises that there is still the absence of adult play in the public realm, which is integral to the creation of dynamic and sociable environments. Further pursuit of this research could stimulate a shift in public perception and create more profound social networks.

References.

Abbott-Chapman, J., & Robertson, M. (2001). Youth, Leisure and Home: Space, Place and Identity. Loisir et Société / Society and Leisure, 24(2), 485–506. https://doi. org/10.7202/000192ar

About | Gap Filler. (n.d.). Retrieved October 7, 2019, from https://gapfiller.org.nz/about/ About the profile areas | Berhampore | profile.id. (n.d.). Retrieved October 8, 2019, from https://profile.idnz.co.nz/wellington/about?WebID=110

Anchor, R. (1978). History and Play: Johan Huizinga and His Critics. History and Theory, 17(1), 63–93. https://doi.org/10.2307/2504901

Bond Street refresh and community garden. (n.d.). Retrieved October 22, 2019, from Wellington City Council website: http://wellington.govt.nz/your-council/projects/laneways-projects/ bond-street

Casanova, H. (2014). Public space acupuncture: Strategies and interventions for activating city life. New York: Actar Publishers.

City of Ballarat. (2017). Play Space Stratergy.

Cole-Hamilton, I., & Crawford, J. (2011, November 12). Getting it Right for Play: The Power of Play: An evidence base. Play Scotland.

Cortis, N. (2009). Social Inclusion and Sport: Culturally diverse women's perspectives. Australian Journal of Social Issues, 44(1), 91–106. https://doi.org/10.1002/j.1839-4655.2009.tb00132.x

Dance-O-Mat | Gap Filler. (n.d.). Retrieved October 7, 2019, from https://gapfiller.org.nz/ project/dance-o-mat/

Density done well: Wellington's visionary Centennial flats -. (2016, August 25). Retrieved October 8, 2019, from https://www.homestolove.co.nz/real-homes/home-tours/densi-ty-done-well-centennial-flats

Deprivation index | Wellington City | profile.id. (n.d.). Retrieved October 8, 2019, from https://profile.idnz.co.nz/wellington/deprivation-index

Donoff, G., & Bridgman, R. (2017). The playful city: Constructing a typology for urban design interventions. International Journal of Play, 6(3), 294–307. https://doi.org/10.1080/21594937.2 017.1382995

Franck, K. A. (2006). Loose space: Possibility and diversity in urban life. New York: Routledge.

Gehl, J. (2011). Life between buildings: Using public space. Washington, DC: Island Press.

Hamilton, C., & Mulligan, J. (n.d.). Expert feature: Playgrounds! In Afternoons with Jesse Mulligan.

References.

Haydn, F., & Temel, R. (2006). Temporary urban spaces: Concepts for the use of city spaces. Basel: Birkhäuser.

How we can help—London Play. (n.d.). Retrieved October 22, 2019, from https://www.londonplay.org.uk/content/30772/our_work/recent_work/play_streets/how_we_can_help

Huizinga, J. (1955). Homo ludens; a study of the play-element in culture (First Beacon paperback edition.). Boston: Beacon Press.

Jacobs, J. (1961). The death and life of great American cities / Jane Jacobs. New York: Vintage Books.

Lefaivre, L. (2007). Ground-up city: Play as a design tool / Liane Lefaivre, Döll ; [translation from the Dutch, George Hall]. Rotterdam: 010 Publishers.

Lind, R. (2016). Public space - a meeting place? : Understanding the spatial prerequisites for spontaneous interaction, and the importance of such for a socially integrated society.

Low, S., Taplin, D., & Scheld, S. (2009). Rethinking Urban Parks: Public Space and Cultural Diversity. University of Texas Press.

Lydon, M. (2015). Tactical Urbanism (1st ed. 2015.). Washington, DC: Island Press/Center for Resource Economics.

Mackenzie, A. (2015, May 27). Estonoesunsolar: Finding Opportunity in Emptiness in Zaragoza, Spain. Retrieved October 22, 2019, from https://www.pps.org/article/not-empty-plot-find-ing-opportunity-emptiness-historical-city-zaragoza-2

Marlowe, J., & Elliott, S. (2014). Global trends and refugee settlement in New Zealand. Kōtuitui: New Zealand Journal of Social Sciences Online, 9(2), 43–49. https://doi.org/10.1080/117708 3X.2014.953186

Mivielle, C., & Gentes, A. (2014). What is ludic about ludic design ? Playscape Creations. (n.d.). Lions Park, Gladstone: Playscape Creations [Business]. Retrieved September 27, 2019, from Playscape Creations website: https://www.playscapecreations.com. au/lions-park-gladstone/

Population, dwellings & ethnicity | Newtown | profile.id. (n.d.). Retrieved October 8, 2019, from https://profile.idnz.co.nz/wellington/population?WebID=330

Pulse of the City. (n.d.). Retrieved October 7, 2019, from George Zisiadis website: http://www. georgezisiadis.com/pulse-of-the-city

Sampson, R., & Gifford, S. M. (2010). Place-making, settlement and well-being: The therapeutic landscapes of recently arrived youth with refugee backgrounds. Health and Place, 16(1), 116–131. https://doi.org/10.1016/j.healthplace.2009.09.004

Spaaij, R. (2015). Refugee youth, belonging and community sport. Leisure Studies, 34(3), 303–318. https://doi.org/10.1080/02614367.2014.893006

Stevens, Q. (2007). The ludic city: Exploring the potential of public spaces. London ; Routledge.

Studioludo. (2017, December). LONDON STUDY OF PLAYGROUNDS.

Super Street Arcade | Gap Filler. (n.d.). Retrieved October 7, 2019, from https://gapfiller.org. nz/project/superstreetarcade/

Sutton-Smith, B. (1981a). An era of change in play. In The New Zealand Playground, 1840-1950. A History of Children's Play (pp. 201–231). Retrieved from https://www.jstor.org/stable/j. ctv4s7hq3.18

Sutton-Smith, B. (1981b). The control of children in the home, 1950–1980. In The New Zealand Playground, 1840-1950. A History of Children's Play (pp. 283–298). Retrieved from https://www.jstor.org/stable/j.ctv4s7hq3.23

Unicef. (n.d.). The 42 rights of a child. Retrieved November 5, 2019, from Unicef.org.nz website: https://www.unicef.org.nz/child-rights

Wellington City Council. (2017, April). Wellington Play Spaces Policy.

Wheway, R. (2015). Opportunities for free play. International Journal of Play, 4(3), 270–274. https://doi.org/10.1080/21594937.2015.1106048

Woodyer, T. (2012). Ludic geographies: Not merely child's play. Geography Compass, 6(6), 313–326. https://doi.org/10.1111/j.1749-8198.2012.00477.x

WSP-Opus International Consultants Ltd. (n.d.). Margaret Mahy Family Playground | NZ Institute of Landscape Architects. Retrieved September 27, 2019, from https://nzila.co.nz/ showcase/margaret-mahy-family-playground

Figures.

Figure 2.2 String games Jerusalem, Whanganui River, 1920s McDonald, J. (n.d.). String games, Jerusalem, 1921. photograph, Whanganui.

Figure 2.3 Ball games

Sparrow Industrial Pictures Ltd. (n.d.). Children playing four square, 1959. photograph.

Figure 2.4 Public playground in the 1920s

Charles Smith, Sydney. (n.d.). Public playground at Newtown, 1920s. photograph, Wellington.

Figure 2.5 Tower Street Playground in Hornby, Christchurch in 1952

Morris, K. (n.d.). On the slide at the Tower Street Playground, Hornby. photograph, Christchurch.

Figure 2.6 Mount Maunganui Primary playground tower and tennis courts from the 1980s

Mount Primary playground tower and tennis courts c 1980s 13-1333. (n.d.). photograph, Mt Maunganui.

Figure 2.7 Central Park, Brooklyn, Wellington

City Wrigglers. (n.d.). Brooklyn Central Park. photograph.

Figure 2.8 Botanical Gardens Christchurch in 2006

Kete Christchurch. (n.d.). Childrens Playground, Botanic Gardens. photograph, Christchurch.

Figure 2.9 Cashmere, Christchurch 2007

Kete Christchurch. (n.d.). Cashmere Valley Reserve Playground, November 2007. photograph, Christchurch.

Figure 2.10 Margaret Mahy Park, Christchurch.

Opus International Consultants. (n.d.). Margaret Mahy Park. photograph.

Figure 2.11 Matairangi Nature Trail Mt Victoria

BritMumInNZ. (n.d.). Looking for hidden flies, seeking them out just like a Kapokapowai / dragonfly. photograph, Wellington.

Figures 2.15 and 2.16 Lions Park

Playscape Creations. (n.d.). Lions Park, Gladstone. photograph.

Figures 2.17 and 2.18 Margaret Mahy Park

Opus International Consultants. (n.d.). Margaret Mahy Park. photograph.

Figures 2.20 Gap Fillers Christchurch

Gap Fillers. (n.d.). Super Street Arcade December 2016 – Current. photograph, Christchurch.

2.21 Gap Fillers Christchurch

Cretney, R. (n.d.). Navigating Hope Through Crisis – Disaster and a Politics of Possibility. photograph, Christchurch.

Figures 2.22 and 2.23 Pulse of the City Boston

George Zisiadis. (n.d.). Pulse of the City. photograph, Boston.

Figure 2.25 - 2.30 Strategic interventions across empty lots in Zaragoza, Spain

Grávalos & Di Monte Architects. (n.d.). Estonoesunsolar. photograph, Zaragosa.

Figure 2.31, 2.32 and 2.33 Bond Street Wellington

Kim, J. (n.d.). Bond Street refresh and community garden. photograph, Wellington.

Figure 3.3 Ethnic spread in Wellington City.

Data retrieved from Wellington City. (n.d.). Retrieved September 18, 2019, from https://profile.idnz.co.nz/wellington/ethnic-group.

Figure 3.4 Age spread in Wellington City.

Data retrieved from Wellington City. (2019, September 18). Retrieved from https://profile.idnz.co.nz/wellington/five-year-age-groups.

Figure 5.1 Ethnicities in Berhampore

profile.id. (n.d.). Ethnic groups - Berhampore. Retrieved from https://profile.idnz.co.nz/wellington/ethnic-group?WebID=110.

Figure 5.2 Housing types in Berhampore

profile.id. (n.d.). Dwelling types - Berhampore. Retrieved from https://profile.idnz.co.nz/wellington/dwellings?WebID=110.

Figure 6.1.5 Petition to preserve playground

Van der Aa, W. (2014). Preserve Jeypore Street playground in Berhampore as a children's playground. Retrieved from https://www.change.org/p/councillors-preserve-jeypore-street-playground-in-berhampore-as-a-children-s-playground.