

HOW DOES THE PUBLIC BENEFIT FROM  
GREEN SPACES?

By

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*Thesis*

ENVIRONMENTAL STUDIES 593

A 90-point thesis submitted to Victoria University of Wellington,  
as partial fulfilment of requirements for the degree of  
Master of Environmental Studies

School of Geography, Environment and Earth Sciences  
Victoria University of Wellington  
April 2019



# Abstract

Research shows that urban green spaces are a straightforward way for many people to interact with nature. This interaction provides physical and mental health benefits, provides us with a range of ecosystems services, and fosters a unique sense of place. In a central city park we experience shared public space where we navigate social and cultural norms and adjust our behaviour.

This research uses third place as a framework for examining the benefits of shared public space. Ray Oldenburg developed third place to describe the importance of places where informal social interactions occur. Cafes, libraries and pubs all form key social hubs for local communities. This thesis examines the extent to which green spaces in Wellington's central city area provide third place.

This research conducted a survey of the public in three central city parks in Wellington and long interviews with key stakeholders from inside and outside the Wellington City Council (the Council). Results show how the public use and value green spaces and examines the Council's role as the authority of these urban green spaces. As the urban population rises, the availability and quality of green space in the central city will become a challenge for the Council. These research findings can be used to address this challenge.

Design solutions, community engagement, and activation, can reduce barriers to green space, like accessibility. Without these barriers, more people experience the benefits of green spaces and our public parks become places where people relax, socialise, and enjoy their time.

**Key words:** Green space; biophilia; ecosystems services; public space; third place; Oldenburg; Wellington; New Zealand; City council.



# Acknowledgements

The day before I started writing this thesis, I got a call from my parents letting me know that they were safe, but a fire had burnt down half of my family's home. So, to start I would like to thank smoke alarms, and the volunteers at the Morrinsville Fire Service.

In the wake of rescuing items from smoke damage and dealing with insurance payments, my family has been incredibly supportive throughout my time at university. I know many people might claim to have the best family ever, but my family really is. Thank you for everything.

I was truly fortunate to have two talented supervisors. I admire how connected they are to the issues in their fields and how much work they put into the environmental studies programme for their students. Thank you for giving me the space to discuss and shape this thesis with their experience and wisdom. The opportunity to consider third place as a part of the National Science Challenge was fantastic and I am very grateful to Rebecca Kiddle for letting me be a part of a very exciting research project.

I am grateful for every survey response and every interview participant, thank you for your time and your expertise.

It has been a thrill to share a department, floor and offices with fantastic people. To Jerry, Katy, Grace, Emma, Chin, and Elinor, Pascarn and Leo, it's meant a lot being office and office adjacent friends. Thank you for all your time and energy, it's been like getting 15/15 on the dominion post quiz every day.

Finally, I am very thankful and amazed at all of Gareth's support. Thank you, thank you, thank you, I appreciate all the small kind things and the big important things you've done while I worked through this thesis.

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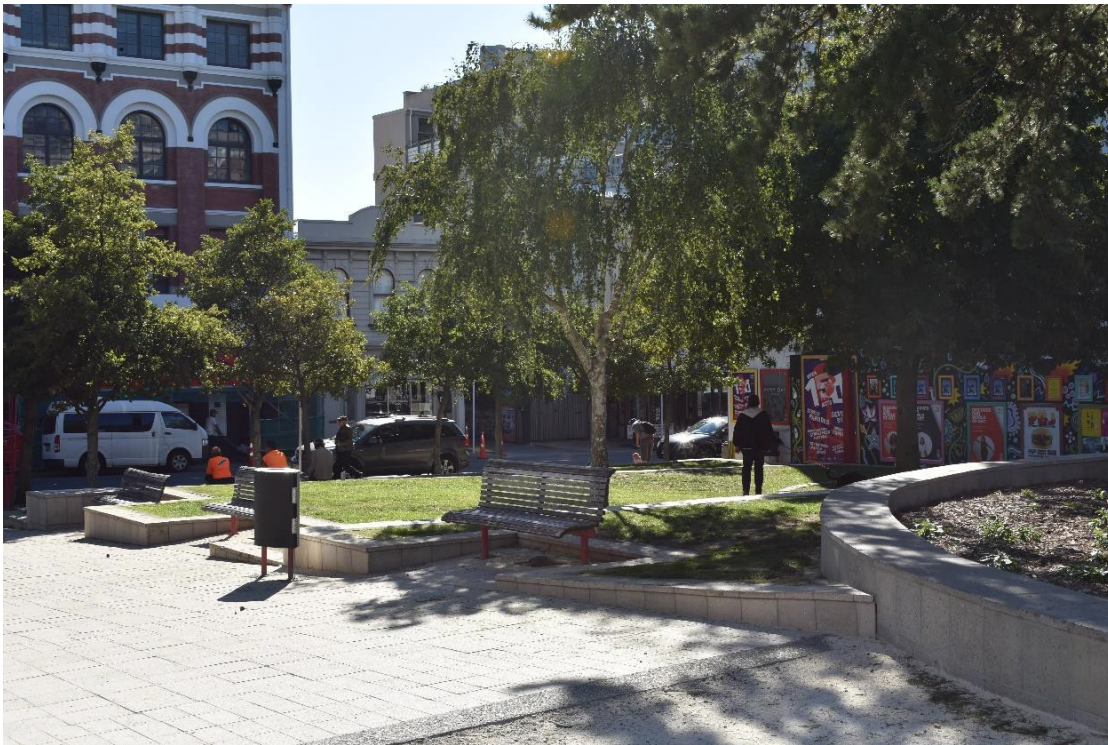


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# Chapter One

## Introduction



*Figure 1: Glover park seating, shade and raised grass area*

We have an innate tendency to relate to natural spaces (Kellert & Wilson, 1993). This tendency, called biophilia, emerges from our evolutionary past. It can be seen in the way that our eyes and brains detect patterns in natural landscapes (Kellert & Wilson, 1993). Biophilia describes our biological relationship with the natural world which draws us to visit zoos, fear snakes when we've never seen one, and want to live near water and greenery (Kellert & Wilson, 1993). Biophilia explains our relationship with nature at a fundamental level but in cities this becomes more complex because physical space in a city is rooted in ownership organised by legal, political, cultural, economic and social patterns and processes (Martin, McCann, & Purcell, 2003).

Increasingly cities are working towards making natural spaces more abundant (Hughes, 2018; Wong, 2018). Wellington has been part of the biophilic cities network since 2013, and the biophilic features of Wellington have been mapped and quantified (Beatley, 2016; Zari, 2017). This mapping revealed that parks and urban green space were the most recognisable and accessible way to enable public access to nature (Zari, 2017).

Green spaces allow us to connect with nature in an everyday way without having to leave the city. These spaces are the result of decisions made by the city Council and designers.

This thesis is significant because it examines those decisions and links them back to the physical environment of the green spaces in Wellington. By working through these links this thesis maps planning stakeholders' decisions, which can then be used to examine pressure points and areas for improvement. This examination raises fundamental questions such as: Why are cities expanding public green spaces at the expense of private spaces?

As Monbiot (2017, p. 1) explains, "the expansion of public wealth creates more space for everyone; the expansion of private wealth reduces it, eventually damaging most people's quality of life." Public wealth includes museums, public transport and green spaces. There is the space and the resources to supply all these public luxuries, but people tend to be driven to acquire private luxuries.

For example, large private gardens in leafy inner-city suburbs infringes on space that could be used for building affordable housing to stop urban sprawl. This thesis examines the benefit of sharing green spaces.

Oldenburg offers third place as a conceptual model for high quality public social space (Oldenburg, 1997). Third place is a setting which offers neutral ground (outside of home and work) for social interactions to occur naturally, which might mean designing a third place for a range of purposes (Oldenburg, 1997). As Monbiot (2017) describes, "rather than chopping the available space into coffin-sized gardens in which a child cannot perform a cartwheel without hitting the fence, the children have room to run around together while the adults have space to garden and talk". For most people shared space like third place is more beneficial than privatised space because it provides spaces that are higher quality than most individuals would own privately.

## ***Thesis Outline***

This thesis studied three parks in Wellington and explores how the public benefits from those spaces being publicly accessible green spaces in the central city.

This research comprises five chapters. Chapter Two provides an overview of the key strands of research this study draws on. It begins with an overview of the definitions of public green spaces from a range of fields, and then determines the most applicable conceptualisation for this research. This includes literature relating to public space and urban theory, emphasising the most relevant, and summarising the central elements to form a conceptual model that clarifies the context for the urban issues in this research. Existing research on value is explored focusing on the most prominent ways that green spaces create and provide benefits in cities. This includes health research, houseprice research, and research on social cohesion and community.

Chapter Three describes the methodological approach of this thesis and how and where the research was conducted. It outlines the research design and the development of the survey and interview questions. The methods used in the thesis include key informant interviews and surveys. Chapter Three highlights how participants were selected. This chapter concludes with a summary of the type of analysis used for the qualitative and quantitative results.

Chapter Four presents the key results of this research. First, the results obtained from the survey conducted in the three central Wellington parks are presented. Second, I examine the findings that emerged from the qualitative interviews.

Chapter Five compares the findings from the literature and the research. The relevance of this thesis for policy is discussed, as well as the limitations of the study and potential for future research. The conclusion in Chapter Six presents these findings and provides some reflection on this study.

# Chapter Two

## Literature Review



*Figure 2: Glover Park seating, shade and raised grass area.*

### **2.1 What is Public Green Space?**

Different studies define public green space differently. This research is concerned with planned spaces and not green streetscapes (such as street trees and pedestrian zones).

This thesis is concerned with both public space and green space literature. Although these concepts often overlap it is useful to first consider them separately. Ecosystems services is then defined and discussed, as an important framework for ensuring that the public benefit of green space is balanced with ecology.



### **2.2.1 Public space**

As Amin (2008) explains, different kinds of public spaces exist at different times, meaning there is no one way to describe public space. Amin asserts that a good descriptor might be “variegated space-times of aggregation” (Amin, 2008, p. 9). This descriptor suggests that what matters with respect to a public space is not the form of the space but the rhythm of the space Amin (2008). Spaces with similar patterns of organisation, usage, vitality, and inclusion have common social features or traits Amin (2008). These social traits form because of a collective trust of safety and allow for efficient interactions and transactions among the users of the space. This collective response to the spaces arises out of spatial practice rather than conscious or ethical choices to act appropriately.

Langegger holds a similar position asserting two phenomena. Firstly, Langegger explains that public spaces are mobility infrastructures, which means that they are spaces that circulate people. As people flow in and out of them throughout the day, use of these spaces’ changes (Langegger, 2017). Secondly, Langegger suggests that when people do things in publicly accessible spaces they publicise their cultural complexes (Langegger, 2017). A cultural complex describes the way that a group has traits in common and shared ideas about a place, which people express through verbal and non-verbal communication (Langegger, 2017).

Langegger adds to the definition of public space by arguing that instead of studying public space, more value can be gained from studying publicly accessible space in the research (Langegger, 2017). The reason for this is that often, public space is either limited to the flow of public goods like recreation or tied into areas that do not have zoning for building. In contrast publicly accessible space represents “localities wherein people feel they have a legitimate right to be” (Langegger, 2017, p. 28). This public accessibility depends on physical accessibility, but also on the collective trust of safety, that Amin believes is vital to public space (Amin, 2008).

Francis, Giles-Corti, Wood, and Knuiman (2012, p. 401) define community as a feeling of “belonging, mattering to one another and to the group, and a shared faith that needs will be met through commitment to be together.” This uses Oldenburg’s idea of third place to inform the definition of good public space (Francis et al., 2012).

According to Oldenburg (1997) a third place possesses a number of characteristics:

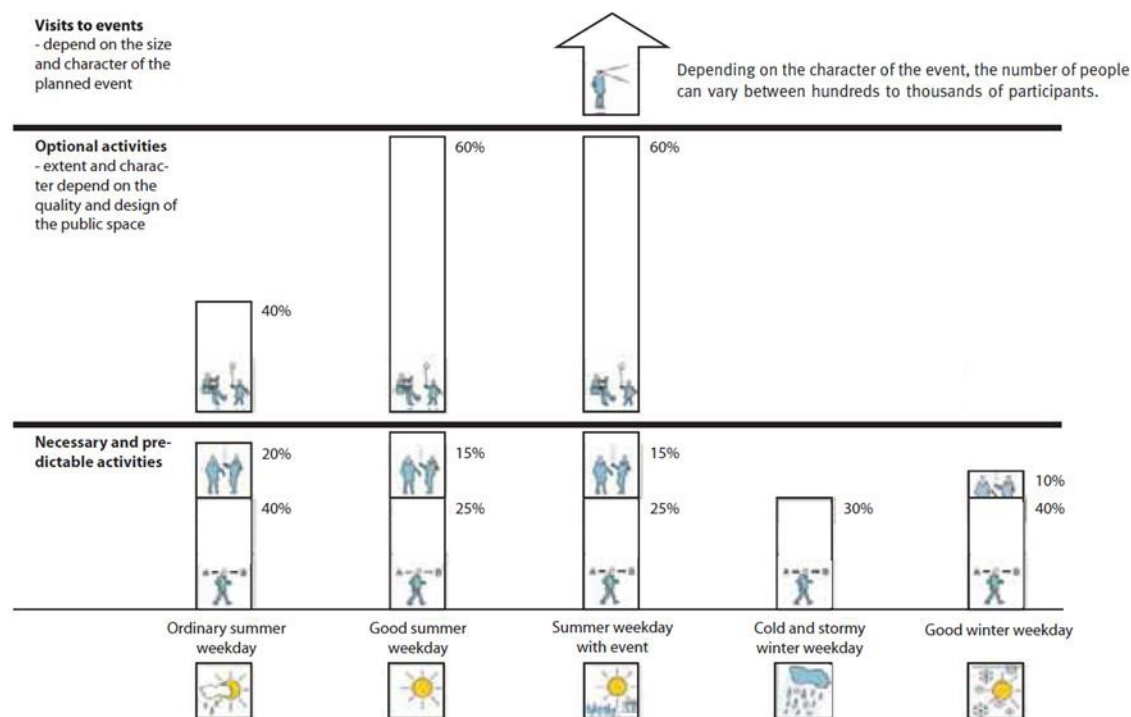
- It offers neutral ground for social interactions to occur naturally, which might mean designing a third place for a range of purposes.
- It is available to the public without exclusion.
- It has conversation as the primary activity.
- It is accessible and accommodating of activities.
- It has a regular clientele, e.g. people who sit or meet friends in a park regularly.
- It is regular and informal looking, but able to have lively moods.

Further research has concluded that third places are likely to have the following physical characteristics: personalisation, permeability, seating, and shelter (Mehta & Bosson, 2010). Francis et al. (2012) focuses the concept of third place on public access. *True* public space is accessible to all people. This means that the spaces are providing freedom of action, freedom of temporary claim, and a sense of public ownership (Francis et al., 2012).

It is important to emphasise that all of these formations of public space still exist within the market, and as Soja (2010) explains, every square inch of space in a market based economy is a commodity. While this might overemphasise the power of the market, the reason Soja gives is that property ownership very rarely exists in a form outside of individuals/families, corporations, or the state/institutions (Soja, 2010). The parks in this research are property of the Wellington City Council even though they are set aside for public use. Publicly accessible space remains bounded by the commodification of property and the authorities that control it. Soja concludes that this understanding of property is essential to understanding the way that unfair geographies occur.

In 2004, an extensive public space study was undertaken by Gehl Architects on behalf of the Wellington City Council (Gehl Architects, 2004). Jan Gehl and Gehl Architects are prominent consultants on public space globally (Gehl, 2011). This study argued that “the key to establishing lively and safe public spaces is pedestrian traffic and pedestrian activities” (Gehl Architects, 2004). A high quality public space—one that

allows people to experience their surroundings in a public space at a slow walking speed and at eye level—encourages more pedestrian traffic and activities (Gehl Architects, 2004). Usefully, this study includes a city life barometer which shows how conditions affect public space use (*Figure 2*).



*Figure 3: The City Life Barometer demonstrating how the number of people using public space can vary. Sourced from Gehl Architects (2004).*

## 2.2.2 Green space

There tends to be two approaches to defining green space according to Koohsari et al. (2015). Urban design research often treats all public green space and public open space together. So, for instance, public open space can be “managed open space, typically green and available and open to all, even if temporarily controlled” (Carmona, 2010). This is a broader definition than the narrow definition used by health researchers (Koohsari et al., 2015). For example, an active living study aimed for planning professionals considers public open space to be “space reserved for the provision of green space and natural



environments, accessible to the general public free of charge” (Koohsari et al., 2015, p. 76767676). The spaces that get excluded from this definition are areas like beaches or other public areas such as squares, and Koohsari et al. (2015) make the argument for active living researchers to adopt a broader approach. In contrast to these definitions, policy is increasingly framing green space into an ecosystems services framework.

### **2.2.3 Ecosystems services**

Urban ecosystems services describe a framework that allows ecologists and planners to analyse the services that different ecosystems in a city provides to the human inhabitants (Gómez-Baggethun et al., 2013). There are three classifications of ecosystems services: Provisioning services provides materials that we consume like food and water, regulating services provide processes like the climate, cultural services provide non-material benefits to people like recreation and aesthetics (Finlayson et al., 2005; Kumar, 2012). These classifications all rely on habitat or supporting services like nutrient cycling and habitats for biodiversity. Cities have pushed most ecosystems services out to the city-fringe, rural areas, or even overseas (Gómez-Baggethun et al., 2013). Food production is a clear example of this, where cities can have green spaces for recreation because that food production happens elsewhere. This creates significant problems for climate change and biodiversity, which in turn challenges the resilience of urban areas.

Thinking about the ecology of cities is an important shift that Gómez-Baggethun et al. (2013) argue will minimise the above problems. The city itself needs to be viewed as an ecosystem because the force of human selection in urban environments effects the behaviours, physiology and morphology of organisms in cities (Grimm et al., 2008). This selective force is why the ecology and the ecosystem impact of green spaces is important.

In New Zealand, ecosystems services in cities have been examined (Meurk, Blaschke, & Simcock, 2013). This study concluded that there is exciting potential in New Zealand to design ecosystems services into urban areas but there are examples of rain gardens and living walls being used successful.

## **2.1 How is Public Green Space a Challenge for Cities?**

### **2.1.1 What land-use trade-offs happen in cities and why?**

Resources and space are finite, which is why quality of life improves as we share public luxuries like parks. For many New Zealanders the good life means living on the city fringe on a quarter acre section, a “half-gallon quarter acre pavlova paradise” (Mitchell, 1934). If every family in New Zealand lived this way though, there would be less mobility, less social cohesion, and more fossil fuels burnt as commutes grew larger (Chapman, 2008). The belief in right to occupy as much physical space as your money can buy, regardless of the restrictions this imposes on others, is foundational to the half-gallon quarter acre pavlova paradise (Monbiot, 2017).

More recently however, the aspiration of many New Zealanders appears to be changing. More people live in cities, and central city living apartment living is gaining broader appeal (Haarhoff, Beattie, & Dupuis, 2016). Cohousing is also increasing in popularity. Denser residential neighbourhoods, including apartments and cohousing are important for the development of parks because these are residential forms that are efficient with space—they take up less overall space than a single storey home with a private garden. This provides the opportunity to rely less on a car for transport.

Good urban design can generate economic development, technological innovation and creativity. This is a unique feature of proximity, and so is not typically available in rural environments (Bell, 2003). Jacobs (2016) discusses this generative force in *The Economy of Cities*. This impact is clear in the notion of Jacobs’ Externalities, a measure of knowledge diversity within a local economy, developed by Glaeser, Kallal, Scheinkman, and Shleifer (1992). This diversity is developed through accessible public spaces which bring people together.

### **2.1.2 Green space inequities**

Some groups of people face barriers to accessing public green spaces. Midland Park in Wellington for example has grassed areas that are raised, so are inaccessible to those who have a wheelchair. Another barrier is that Midland Park is in the centre of the city where there is traffic and less available parking, so without a public transport system available to

easily travel to Midland Park or without living nearby people face the barrier of transport to Midland Park. These barriers mean that people have unequal opportunities to use green spaces. Spatial justice is the investigation of the unequal distribution of access to space and how this should be challenged. The spatial injustices that occur in relation to public urban green space warrant attention because these spaces are highly valuable to cities.

Geographically uneven development contributes to individual and social inequalities, which lead to social and spatial injustice. It is common for these injustices to create accessibility issues which section 2.2 below discusses.

Rigolon (2016) reviews a selection of studies on access to parks and finds that inequities are significant. This review covered park proximity, park size, and park quality. It found that proximity to green space is often not the biggest issue, but size and quality were found to be strikingly unequal (Rigolon, 2016). Spaces within communities of lower socio-economic status were also found to have fewer and less diverse amenities, lower levels of maintenance, and lower safety than parks in more affluent and whiter neighbourhoods (Rigolon, 2016).

Whitburn (2014) explores the links between wellbeing and urban vegetation in 20 Wellington neighbourhoods. A key recommendation that emerged from this study was the continued greening of low deprivation neighbourhoods in Wellington (Whitburn, 2014). This study found that those living in the neighbourhoods with the least amount of vegetation also had the highest level of economic deprivation (Whitburn, 2014). The results from this study found a similar trend in measures of mental health. The diversity of plants was also found to correlate with neighbourhood wealth (Whitburn, 2014). Neighbourhoods with older and wealthier people had more plants generally, but also more mature trees (Whitburn, 2014). Vegetation close to people's homes had the greatest impact on these statistics, which suggests that small-scale green spaces can be the most effective (Whitburn, 2014).

Roberts-Gregory and Hawthorne (2016) examine how unequal green space access fits into the wider legacies of exclusionary politics, again repeating the finding that "parks are not culturally, socially, or economically neutral" (Roberts-Gregory & Hawthorne,

2016). These concepts are important because space can exist and benefit some people over others. People do not experience the benefit of green space equally and there are often barriers to access and use. This means that the foundation for this research, is a recognition of the uneven geographies of power and privilege surrounding space. The barriers to public green space change depending on the location and the context. For example, the availability of green space is not a concern for most New Zealand cities and towns (Meurk et al., 2013).

That everyone should have the same ability to access green spaces does not mean everyone wants to use green spaces. People have different levels of nature relatedness— this means we all experience the benefits of the natural world differently (Nisbet, Zelenski, & Murphy, 2008). This can be measured using the Nature Relatedness scale (Nisbet et al., 2008). A range of studies have been done to show that Nature Relatedness is able to predict a number of wellbeing indicators. Zelenski and Nisbet (2014) found that it was a significant predictor of happiness even after controlling for subjective connections. Importantly this study found that a cycle can be developed where if people “spend more time enjoying and connecting with nature, their motivation to protect it might again increase, ultimately supporting a cycle with benefits for people and the environment” (Zelenski & Nisbet, 2014, p. 18). This demonstrates how green space inequities can be self-perpetuating as more available green space encourages more connection with nature, and vice versa.

Therefore, access is an important factor in how benefits of green spaces are realised. It has been shown that those people who have the lowest levels of access to green space (either because their neighbourhood has low green space availability, or their mobility is low) experience the highest benefits from green space (Whitburn, 2014).

### **2.1.3 Meaningful attachment and green space**

Lack of access to space also limits the opportunity to build a sense of place. Cresswell (2014) writes that ‘place’ can be commonly defined as spaces which people have made meaningful and to which they are attached in one way or another. Place matters as a concept that explains how people experience meaning and materiality in parks. The meaning we ascribe to green spaces forms through the media, politics and our understanding of nature. The material fabric of a park forms out of society. As Cresswell (2014, p. 47)

explains “the community gardens (of the lower east side of New York) are not ‘natural’ but have been put there by the tireless efforts of local residents”. People experience benefits from a sense of place because this attachment incentivises use.

Americans in the 1980s were increasingly reluctant to interact in social areas that Oldenburg calls third places—places other than the workplace and home. Oldenburg argues that this resulted in social malaise and a lack of meaning (Oldenburg, 1997). These public settings are publicly accessible and appropriated by inhabitants of a neighbourhood. The dominant activity that occurs in these places is quotidian, a taken for granted part of a social existence. They are important and ordinary, social areas.

### ***2.3 How Has Benefit Been Measured in The Literature?***

The value of green space in individual terms is subjective, changeable, and location specific. What the value of green space is to an individual is a matter for them. Despite this, green spaces are valuable to cities. The process of ascribing value to green space within an urban governmental system is political. This political nature of the process reflects the different perspectives and measures used to value green spaces. Most of the studies available are empirical. However, it is worth highlighting the ways in which green spaces have been ascribed value beyond empirical studies.

#### **Empirical valuations**

##### **2.3.1 Economic valuations**

In accounting terms, green space can often be unrated land on a local government’s balance sheet. This suggests that on one level green spaces represent unproductive uses for urban land where there is high competition from transport, commercial, and other uses.

But the assumption of lack of productivity is wrong: public green space typically offers high amenity which has an economic value to a city. Total Economic Value (TEV) is a framework for measuring the value of a natural resource and has been used in the European ‘Valuing Attractive Landscapes in the Urban Economy’ project (Vandermeulen, Verspecht, Vermeire, Van Huylenbroeck, & Gellynck, 2011).

The aim of this project was to “establish where to target green infrastructure investments in cities and regions to deliver the greatest economic benefits while ensuring that high quality green infrastructure is protected and integral to the urban fabric” (Vandermeulen et al., 2011, p. 200). Using commuting and cycling samples, this study found that green infrastructure in the region around Bruges had a value of €5.6 million (9.8 million NZD) assuming a discount rate of 3% (Vandermeulen et al., 2011). This analysis relies on hedonic pricing, which is a mechanism often used to value natural resources. Hedonic pricing considers both implicit characteristics of a good as well as external factors that affect its value. These factors can be disentangled and understood to either raise or lower the overall price (Rosen, 1974).

Economic valuation is commonly used in ecosystems services. There are many methods that have developed to calculate the economic costs associated with losing ecological infrastructure (Gómez-Baggethun et al., 2013). These avoided costs methods are useful for demonstrating the services that we often do not experience materially. In Barcelona Chaparro and Terradas (2009) calculated the value of urban forests for air purification reaching €1,115,908. Hedonic pricing is also commonly used for valuing ecosystems services. A review of hedonic pricing studies has found that they are most often used in relation to open space, vegetation, and wetlands (Kroll & Cray, 2010).

Liebelt, Bartke, and Schwarz (2018) used hedonic pricing to determine the value added by urban green space to residential housing values. This study found that the shape and the size of green space had a small positive effect on rented flats in particular (Liebelt et al., 2018). This study also found that a 100m increase in proximity to a green space increased the price of flats by 14 €/m<sup>2</sup> (Liebelt et al., 2018). These findings reflect those of Kong, Yin, and Nakagoshi (2007) which found that housing properties with a higher percentage of green spaces around them have higher values. Czembrowski, Łaszkiewicz, and Kronenberg (2016) investigates the nuances of using hedonic pricing for urban green spaces. A message from this study is that different types of green spaces have different impacts on property pricing. For instance, Anderson and West (2006) found that neighbourhood parks and golf courses have a positive impact, but cemeteries have a negative impact on surrounding house prices.

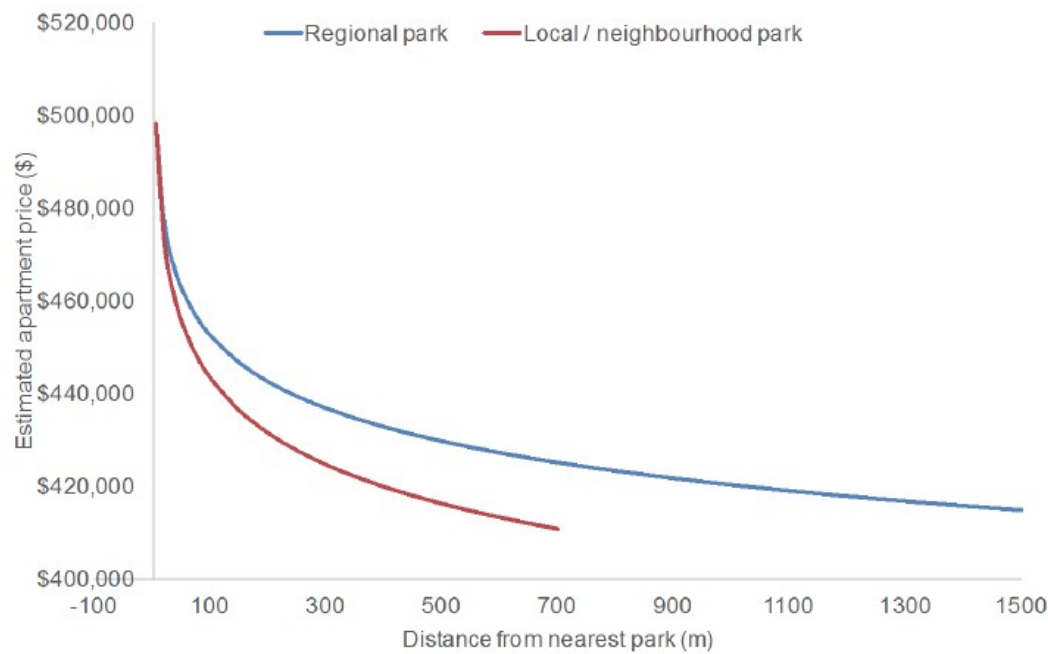
Spatial context plays a significant role in pricing and in the value of the space more broadly. Pricing models reflect the value that people attach to amenities and aesthetic features like neighbourhood density. Anderson and West (2006) show that neighbourhood density levels affect the value of green space. In neighbourhoods twice as dense as the average, the amenity value of proximity to a neighbourhood park was three times higher than average. Therefore, the central city area in Wellington is an appropriate site to study, because this is where Wellington's population is most densely concentrated. This density will mean that green space value is likely to be higher and easier to discern.

The final key finding from Anderson and West (2006) is that there is a link between wealth and amenity value. In neighbourhoods that are twice as wealthy as average, the amenity value of a neighbourhood park is more than four times the average (Anderson & West, 2006).

Using pricing as a valuation tool can be persuasive for policy makers in that it can provide unambiguous evidence for the value of green spaces in cities. However, pricing studies are not determinative, and include a range of variables and issues of comparability. In 2016, Auckland Council commissioned a technical report, seeking answers to three questions:

1. Does proximity to parks have a positive effect on sale prices for residential properties?
2. Does the impact of proximity to parks vary by park size or park type – e.g. is there evidence that regional parks have different effects than smaller local parks?
3. Does the impact of proximity to parks vary between different types of dwellings, e.g. are apartment prices more affected than standalone house prices?

They reported that, using hedonic pricing, proximity to a park had a positive impact on the sale price for apartments but not stand-alone houses (Nunns, Allpress, & Balderston, 2016). The figure below demonstrates this pricing effect (Nunns et al., 2016).



*Figure 4: Estimated apartment sale prices as a function of distance from the nearest regional or local/neighbourhood park*

Auckland has a high level of park availability, with the report finding that over 95% of property sales were within 500 metres of a local or neighbourhood park, and 75% were within one kilometre of the nearest regional park. (Nunns et al., 2016). This report predicts that the value of parks in relation to property prices is likely to rise, as apartments make up an increasing share of new developments. In an appendix, the report includes a meta-analysis of recent international studies in this area, which is useful for informing this literature review. (Nunns et al., 2016) There is a pattern of proximity to green spaces having a positive impact on house prices across these studies. (Nunns et al., 2016) While this study was undertaken in Auckland, it importantly applies the international literature to a New Zealand context. This suggests that in central Wellington, it is also highly likely that proximity to parks has a positive impact on the property prices of apartments.

The Wellington Central City Apartment Dwellers Survey from March 2009 found that the most common type of private open space associated with 41% of apartments was small balconies and 67% of responses did not have access to shared open space. In addition to this, 46% of respondents use public open space regularly. This survey demonstrates that apartment dwellers in Wellington have a higher use of public open space than non-



apartment dwellers. We can infer that usage of public open space implies that apartment dwellers value public open space as a substitute for a garden, or that they value open space more than those who do have a garden.

### **2.3.2 Public health**

Research on health benefits is an important justification for green spaces. Amongst all the ways that green spaces benefit the public, health benefits can be the most wide-ranging. The main barriers are availability and access to green space. Green spaces affect physical and mental health in a variety of ways.

The literature is still exploring the relationship between health and green space, but it trends towards a positive relationship. As public open spaces are important built environment settings which are able to provide space for a variety of physical activities like walking and playing sports, often these studies are in the field of active living (Koohsari et al., 2015). There is also a wide range of literature focused on mental health. There appear to be three main impacts: physical exercise impacts, stress reduction impacts, and social benefits. These categories emerged from the Vitamin 'G' research program. This program was designed to verify the relationship between green space in residential areas and health using empirical methods (Groenewegen, van den Berg, Maas, Verheij, & de Vries, 2012). This study found that quantity as well as quality of green spaces in residential areas was positively related to health.

On physical health, the study showed that people are more likely to undertake physical activities like walking and cycling in environments that are aesthetically appealing. Moreover, the percentage of green space inside one and three kilometre radii can have a significant relation to perceived general health, suggesting that there could be a mood improvement effect from green space (Maas, Verheij, Groenewegen, de Vries, & Spreeuwenberg 2012). In New Zealand, a study on cross-sectional health data concluded that neighbourhood green space was linked to higher levels of physical activity, but was unable to conclude that green space had either a positive or a negative impact on weight or cardiovascular health (Richardson, Pearce, Mitchell, & Kingham, 2013). This study did conclude that there was a positive impact on mental health and stress levels. This study is important for this research as it is the first study in this area

in New Zealand.

A study conducted in Wellington measured neighbourhood vegetation levels against mental health scores (Whitburn, 2014). This found that more people with the highest mental health scores lived in neighbourhoods with the highest levels of vegetation, and that the reverse was also true (Whitburn, 2014). This study concluded that neighbourhoods with approximately 135m<sup>2</sup> or more of vegetation could contribute to a significant gain in mental health (Whitburn, 2014). This is significantly more than the vegetation available per person in the central city area (Blaschke et al., 2018).

For Māori, the role of whenua and the impacts of land alienation and environmental degradation on health is shown by Butcher and Breheny (2016). They analyse the effect of what they call place attachment on Māori aging and conclude that keen sense of identity grew through a connection with resources that granted security and nourishment (Butcher & Breheny, 2016). Just as the literature shows that lack of access to green space can result in poor health, the impacts of colonisation also cause poor health, and in New Zealand land was a central part of colonisation (Penehira, Smith, Green, & Aspin, 2011). The way that space is politically organised gives colonisation a material form (Said, 2000). Soja discusses colonial geography, commending Said for the depth of his analysis. The colonising spaces of social control include practically every place used in everyday life. (Soja, 2010).

### **2.3.3 Climate Change**

In literature on climate change, green infrastructure is more of the focus than green spaces or public spaces. Across the literature, it is clear that green infrastructure has the potential as a strategy for reducing urban air temperatures (Bowler, Buyung-Ali, Knight, & Pullin, 2010). On parks specifically, it has been shown that larger sized parks are either more likely to be cooler or that the cooling effect was greater (Bowler et al., 2010). This analysis did show though that the cooling effect from parks extends to the area surrounding them (Bowler et al., 2010). This means that properties surrounding parks benefit from the cooling effects more than other properties. The cooling effect of green infrastructure is valuable now, but also valuable in the future, as the climate warms and urban systems become unliveable. The key message from this literature is that the strategic implementation of urban green infrastructure can help achieve temperature reductions in urban areas while delivering

diverse additional benefits such as pollution reduction and biodiversity habitat (Norton et al., 2015). Climate regulation is an important part of the ecosystem's services framework.



*Figure 5: Modelling of 2 metres of sea level rise in Wellington with Frank Kitts (yellow) and Midland Park (green) (Wellington City Council, 2013).*

It is also important to consider what green and public spaces will be lost if climate emissions are not severely reduced and sea-level rise occurs in our cities. Frank Kitts

Park on the waterfront is vulnerable to any sea-level rise, Midland Park becomes vulnerable towards 2 metres of sea-level rise, but Glover Park (not shown on map).

## **Non-empirical forms of valuation**

### **2.3.4 Place attachment has value**

Urban green spaces have value for plants and animal species; they are habitats and part of an ecosystem that would exist without human interference. This value is important to consider given the rising influence of ecosystem services in policymaking and the rise of more than human thinking in geography. The value of urban green spaces in economic and health terms is obviously anthropocentric. The green spaces that have been created in Wellington's central city are spaces that have been designed for people purposefully.

Ecosystems services accounts for the socio-cultural values of ecosystems. This includes the spiritual value and sense of place which Gómez-Baggethun et al. (2013, p. 240) categorise as the “emotional and affective bonds between people and ecological sites.”

The assertion of the agency of place and the natural world is often a contemporary indigenous activist cause (Larsen & Johnson, 2016). An important lingering concern, though, is that even when geographic scholarship incorporates indigenous ideas about place, it still reflects Western views and political interests in a metaphorical hall of mirrors (Howitt & Suchet-Pearson, 2002; Murton, 2012).

An example is the maunga in Tāmaki Makaurau/Auckland. These are volcanic cones, which are mostly preserved as parks. Tensions arose in the Waitangi Tribunal settlement process over three maunga, which resulted in the formation of Tūpuna Maunga o Tāmaki Makaurau Authority, a statutory authority to co-govern the 14 maunga of Auckland. This example demonstrates the way in which green spaces can be a part of Māori cultural landscape and how colonisation undermines this identity. An example from Wellington, of the way that symbolism of New Zealand's colonisation is present in green spaces is the Queen Victoria Statute in the green space that runs along Cambridge terrace. The way that statutes symbolise power has gained attention recently in the United States as Confederate statutes are being removed following protests. Penehira et al. (2011) contextualise the idea of mauri in the Mana Kaitiakitanga framework, which is a framework developed in 1997 to

provide an overview of Māori principles of wellbeing. An element of this wellbeing is Hau whenua, which “refers to the relationship between people and the land. If the people and the land are well, and the relationship between them active and well, this contributes positively to hau ora” (Penehira et al., 2011, p. 180).

Coombes illustrates the link between this relationship, of people and land, and environmental justice, using Otara as a case study (Coombes, 2013). He argues that “cultural inquiry into how urban Māori occupy a space of misrecognition is required to understand how the social production of environmental injustices in Otara is connected to broader processes of identity formation” (Coombes, 2013, p. 335). The space of misrecognition that urban Māori occupy, is an excellent way of framing the way in which value to Māori can be difficult to conceptualise, because of the ways in which the state interacts predominantly with iwi groups on issue of land. This quote also summarises the broader approach of this research; the aim being to inquire into the ways in which the social production of environmental injustices in Wellington Green spaces links to a broader process of value formation.

### **2.3.5 Civic benefits**

Local and central government needs to be concerned with ensuring that green spaces are publicly accessible for the following reasons. First, it affects them financially. When these everyday spaces are not used, a government is losing money because health benefits go to individuals who can access these spaces (Richardson et al., 2013). Well-designed public spaces tend to attract more users and those users use the space for a wider range of activities (Gehl, 2011). Another key to the quality of social interactions in a public space was the quality of the space provided. These physical environmental/design factors affect the use of public space and policy influences this. This means that local government has agency to create publicly accessible spaces. It also benefits local governments financially.

Often there is commercial activity that occurs around these public green spaces which benefits from the increased foot traffic from more users (Gehl, 2011). Joye, Willems,

Brengman, and Wolf (2010) studied urban retail environments and the impacts of increased greenery on consumer experiences. This study found that a greener retail environment influenced senses of helpfulness and friendliness towards customers. Better commercial activity in a city, while not the direct responsibility of local government, brings the benefits of rates. Then there is the concern that local government should have for the way that public spaces can contribute to civic culture. There are links between urban public space, civic culture and political formation (Amin, 2008). According to Carr (1993) when a space is well designed and well managed, we are given the opportunity to see people who are different, respond in the same ways to the setting and this creates a temporary bond (Carr, 1993). Amin challenges the singularity of these spaces and sees these spaces as separate from civic spaces arguing that the sites of civic and political formation are plural and distributed (Amin, 2008). Which is true, civic culture can be formed everywhere but this does exclude public spaces from having a role in civic culture. Francis et al. (2012) challenge this notion in their discussion on the role of public space on the formation of community.

### **2.3.6 Social Benefits**

Like Oldenburg, Kaźmierczak (2013) argues that our neighbourhood social ties are weakening. According to this study, this a result of common values shifting because loss of anchor industries have increased the distance between home and work (Kaźmierczak, 2013). Cars allow us to have friendships that are further away than our direct neighbourhood, and electronic communication has reduced face-to-face interactions (Kaźmierczak, 2013).

With those concerns in mind, this study selected three inner-city neighbourhoods in Salford, Trafford and Manchester. It examined the frequency of visits to these parks and the quality and quantity of social ties in each neighbourhood (Kaźmierczak, 2013). Two kinds of social ties were measured: the number of good friends in the neighbourhood area, and the number of acquaintances (Kaźmierczak, 2013). The study found that “knowing people in the area also contributes to the interactions in local parks, which suggests that

parks can not only play a role as places where ties are initially developed, but also where they are reaffirmed” (Kaźmierczak, 2013, p. 42). People were more likely to visit parks they considered aesthetically appealing, and people spent longer in larger parks, which is consistent with Ravenscroft and Markwell (2000). This study builds on earlier studies that have made similar conclusions about the links between local green spaces and neighbourhood social ties (Kuo, Sullivan, Coley, & Brunson, 1998; Maas, Van Dillen, Verheij, & Groenewegen, 2009; Sullivan, Kuo, & Depooter, 2004). These studies also show that the quality of the green space (or a lack of the accessibility barriers discussed below) is important for whether it is used to reinforce social ties.

## **2.4 *Barriers to Green Space Benefits***

If the benefits from green space rely on people being present in them, or close to them, then availability, accessibility and usability will determine whether a green space will deliver benefits to the public. The literature demonstrates that there are a range of barriers but the two discussed the most often are physical access and safety fears.

### **2.4.2 *Safety fears***

Jane Jacobs (1993) argues that more eyes on the street helps to make neighbourhoods safer. This mirrors the defensible space theory that suggests that a neighbourhood’s physical features can influence the strength of the feeling of community and rates of crime (Kuo, 2003). This theory has advanced the claim that well-designed spaces have the potential to lower crime rates. The question of designing public spaces to decrease crime has led to the development of guidelines suggesting that good lighting, good view corridors, and minimal shrub density near circulation routes all contribute to safer park design (Forsyth, Musacchio, & Fitzgerald, 2005). The way that the fear of crime develops has interesting implications for accessibility in this research. Fanghanel (2015) outlines the link between exclusionary ideas of class, race, and gender and the understanding of fear and safety that young women have in public space. This work begins by outlining the ways that fear in public space is constructed. (Fanghanel, 2015) Safety and safe places are tied to privilege and the neo-liberal idea of self. This fear is that the neo-liberal self could be polluted by the impurities of ‘an other’, and that might

result in loss of privilege (Fanghanel, 2015). This means that safety-keeping practices turn into moral obligations, and this excludes people further. This moral obligation, governs the self but Fanghanel (2015) uses a Foucauldian framework, based on research from Lee (2007) to examine why this self-governance has the power to organise the social life of a public space. According to Foucault, a *dispositif* produces knowledge about public space (see Ploeger (2008) for more background on Foucault and the city). This means that a *dispositif* orients specific behaviours in a public space, which produces a collective knowledge, and a way of being a subject in that space. This creates the social trust that Amin (2008) deduces is vital to the collective culture of a public space. One part of this whole dynamic operates around safety and crime. Fanghanel (2015) concludes that the *dispositif* works to order and control public space through the cultivation of self-governance and subjectification. This analysis shows why public spaces are at risk of being associated with crime, and how that affects their use.

Separate from community, hedonic pricing literatures makes it clear that crime rates disrupt how valuable proximity to green space is for property values. This unfolds in two ways: Firstly, Anderson & West (2006) illustrate that high levels of green spaces on a local and neighbourhood park scale can have a buffering effect against the negative effects of crime. Then, in their hedonic pricing study of Baltimore, Troy and Grove found that price increased caused by proximity to a park only occurred where rates of robbery and sexual assault were below a certain threshold (Troy & Grove, 2008). In areas with crime rates above that threshold, proximity to a park had a negative effect on the hedonic pricing of property (Troy & Grove, 2008). These two studies show that the relationship between green space and crime is complex, but broadly, where a green space is associated with a risk of crime, this association has a flow-on effect on the neighbourhood, and property prices. This becomes a policy issue because not only the crimes themselves are a policy issue, but also lower property valuations mean lower rates for a local government.



### 2.4.2 Physical usability

Being able to visit a neighbourhood park requires it to be designed for different mobility needs.



*Figure 6: Glover Park: raised grassed areas and paving present usability challenges.*

In New Zealand, a disability has a broad definition and encompasses an impairment that may have a long-term (over 6 months) restricting effect on a person's ability to carry out day-to-day activities. People with disabilities report low levels of physical activity and limited mobility is often the cause of this (Perry et al., 2018). Features in parks and playgrounds in the Greater Wellington region were assessed. The evaluation tool developed was PARC. This tool consists of two parts, accessible routes and facilities and amenities (Perry et al., 2018). An example of accessible routes is the curbing- the height of curbs is a barrier for wheelchair accessibility and the recommended curb height is a maximum of 4cm. Overall this study demonstrated that there were issues in several key areas around the design, environment, and safety. These issues have the potential to create barriers for those with disabilities to

participate. Another driver for increased attention to the usability of green spaces is that as the population ages- mobility issues centred on old age could be a barrier to access (Nyman, Ballinger, Phillips, & Newton, 2013). Literature shows that a fall can threaten a person's confidence and physical health (Nyman et al., 2013).

## **2.5 The Risks of Bad Policy**

First and obviously, when there is bad policy there is the risk that no benefits of good policy occur. Improving access to public green spaces is not a simple fix. Many other studies have connected a sense of order or disorder and people's perception. The most prominent of these theories is the broken windows theory (Kelling & Wilson, 1982) This theory found that in areas where there was vacant property, that often led to disrepair because vacant property means there is no maintenance happening. This study found that these 'broken windows' led to higher levels of crime taking place. The policy response to this, was not to work to limit vacant property or repair damage, but to police neighbourhoods with broken windows more strictly. This approach in policy led to more stringent policing of low level crimes which has had clear racist implications.

Similar to this is the challenge of making cities just green enough (Wolch, Byrne, & Newell, 2014). Parks are maintained and revitalised to fit specific images of what a safe, vibrant park looks like. It is mown lawns and neat planting. Sampson and Raudenbush (2004) do an excellent job explaining the way that the disorder, that drives theories like the broken windows theory, is a social construct. They found that as the concentration of minority groups and poverty increases, residents of all races perceive heightened disorder even after we account for an extensive array of personal characteristics and independently observed neighbourhood conditions (Wolch et al., 2014). This heightened perception of disorder means that even if parks are well maintained, people will still avoid them, if they perceive area to be more diverse or poorer. Similarly, revitalisation of parks can lead to a neighbourhood gentrifying, which is a theme in environmental justice literature (Wolch et al., 2014). Revitalisation here describes a process of taking industrial or low-income areas and retrofitting greenery. A prominent example of this effect is the New York High Line. The High Line acts as an example for other cities and Wolch et al. (2014) discuss how cities in China have been enthusiastic adopters of this urban design practice. Similarly, we

know that public space gentrifies before and as residential gentrification occurs. (Langegger, 2017) This argument is that in order to feel at home in one's neighbourhood, a person cannot just live in a private house, and the feeling of belonging to a publicly accessible space is what reinforces or erodes a community. (Langegger, 2017)

Gentrification, is a process of appropriating space by asserting and producing a different feeling of belonging than existed before Langegger (2017). The example of dog walking is used, and this represents policy that a local government has a significant regulatory power over. This process changes neighbourhoods, and creates an environmental justice issue because, as Wolch et al. (2014) allude to, those with acute lack of access do not receive the benefit of the revitalisation. Bad policy can emerge from good intentions to improve green space, but without community engagement and a focus on third place this can lead to bad outcomes.

## ***2.5 The Gap in The Research***

Internationally there is a growing body of literature recognising the benefits of green space. This literature clarifies that a relationship with the natural world is important for our physical health and our mental health. Poorly designed green space that people are afraid to visit or cannot physically use does not provide these benefits. We need natural open space to survive. Urban parks can provide a vital locality where every day experiences are shared and negotiated with a variety of people and that is why they are important (Peters, Elands, & Buijs, 2010). However, there is clearly a research gap on green space literature in the New Zealand context. This research seeks to fill a gap that exists by examining green spaces in a highly dense urban area in New Zealand. The literature review also highlights the lack of research that considers the benefits of green spaces as community spaces or third places. We want to live in networked and relational cities (Martin, 2011). We want to know our neighbours and enjoy third place. Peters et al. (2010) found that green spaces are important because they provide space for social interactions. When looking at the methods used in other green space studies it becomes clear that the role of green spaces as social space has not been studied. How the public benefits from urban green spaces is the gap in this

research will address.

## **2.6 Research questions**

The literature makes it clear that publicly accessible green spaces are important for cities. This thesis explores how the public experiences the benefits of those spaces. This thesis will also explore the future challenges of providing green spaces that are third places in central Wellington as the population increases and per capita availability decreases, and the barriers that prevent people from using green spaces. With the literature discussed in this chapter in mind, this aim has been broken down into four research questions to be answered. These are:

1. What are the benefits of green spaces?
2. How does local government manage the public benefit of central city green space?
3. What are the barriers to public benefit of these spaces?

The purpose of the first question is to understand the benefits as perceived by the public. This provides data to compare against the literature to assess how people experience green spaces in central Wellington and whether those experiences reflect the benefits that the literature has described. The second research question concerns the role of the local government in delivering beneficial green spaces. The purpose of this question is to determine how the Wellington City Council considers green spaces in decision making and how they value their green spaces. The third research question builds on this by documenting the barriers that prevent people from experiencing the benefit of green spaces. This links to the research question two because the role of the Wellington City Council is to work to decrease these barriers because that is their obligation to rate payers, and because it benefits the City Council too.

# Chapter Three

## Research Design and Methodology

The literature demonstrates that the value of public urban green space is dynamic and multi-level. In order to dive deeper on the question of how a city values public urban green space, it is important to make the effort to ask the public. This is supported by Thomas and Znaniecki (1918)'s account of Polish immigrants. They argue that studying formal organisations in the abstract will never allow us to fully understand social institutions. Instead, it is necessary to analyse the personal experiences of a group and follow the influence that the social institution has on their lives (Chase, 2008). This chapter will step through the methodological frameworks and methods that this thesis will use to investigate public green space.

### ***3.1 Conceptual Framework***

There are several ways that the methodology ties into this conceptual framing. Firstly, foundational to the methods is the differential in power between the public and decision makers (the institution). This is the focus of spatial justice (Soja, 2010). Third place links to spatial justice, because the protections that spatial justice provides to people, allows for third places to flourish. People cannot easily relax and socialise if they feel marginalised by the shape of their urban spaces. In Atlanta, Georgia, a study found that the difference was shaped by the deep racial divisions of the American south, with historic and institutional racism leading to highly unjust zoning tendencies (Roberts-Gregory & Hawthorne, 2016). The researchers in this study thought about green spaces as barriers between neighbourhoods: nature reserves and parks separate out the different neighbourhoods in Atlanta, dividing populations and exacerbating structural resource and power inequalities. These levels of inequality certainly exist in New Zealand, although tend not to be as extreme as in the south of the USA. The way that public green spaces exacerbate and make visible structural inequalities is why green spaces and the practices that surround them need examining. Harm can occur if we ignore the inequity of public green spaces.

## **3.2 Methodological Framework**

### **3.2.1 Using a case study to provide scope for the research**

Case studies involve the investigation of a contemporary phenomenon in depth and in its real-life context, where the boundaries between the phenomenon and context are not clear (Yin, 2014). Case studies can be multi-site or single site (Yin, 2014). This study takes place in central Wellington, so is single-site, because each of the three parks are a part of the network of green spaces in central Wellington.. This follows Jane Jacobs' approach in *The Death and Life of Great American Cities* (Jacobs, 1993) The reason for using a case study in this research is because, as Martin (2011) describes, a city requires a certain level of material rootedness, reflecting that the real-life context is important. Case studies can serve the function of testing a theory, or generating a theory (Baxter, 2010). Yin (2014) is a strong proponent of the former, where theoretical propositions are made before entering the field whereas a grounded theory approach would use a qualitative case study to generate a theory. As Baxter (2010) explains, there are risks to both approaches, and a middle ground is more realistic. This middle ground is cyclical and sees the researcher initially deductively forming either a formal theory or a loose set of ideas, and then gathering information in the real world, which is then used to generate new concepts to inductively explain what has been observed (Baxter, 2010). This research adopts that middle ground.

Case studies are particularly well suited for testing existing theories, like the spatial injustice of green space and why or why not particular theoretical concepts apply or do not apply in Wellington. The specific approach of this case study is explanatory, which is a way of structuring the inquiry to make patterns and relationships clear (Yin, 2014). This means that the methods are selected and designed to gather a range of perspectives to build an explanation of the control and value of green spaces.

The central city area is the focus of the research, with locations for the public survey in Lambton Quay, the Waterfront, and in Te Aro. Parks in Wellington serve a large, and condensed population. In the central city they are more often compact spaces themselves. The central city area provides us with details about the benefit people experience in green spaces because it has fewer green spaces for people to share. This

area is compact, and the hills and harbour create distinctive geographical boundaries. This means that land in the central city area has a limited space, and a growing population, making it a dynamic location to base this study. Most of the land here was reclaimed from the harbour with 155 hectares added through reclamations from the harbour (Council, n.d).

Blaschke et al. (2018) measured the availability of public green space in three census area units in the Central city and calculated the per capita availability with current and projected populations. This shows that availability of green space will decrease (Blaschke et al., 2018).

*Table 1: Per capita availability of green space in three central Wellington census area units (Blaschke et al., 2018)*

CAU	Population (2013)	GS availability total (ha)	Per capita availability (m <sup>2</sup> )
Central City Area	17,076	34.64	20
Thorndon	4,125	17.27	41
Lambton	5,622	12.45	22
Willis St-Cambridge Terrace	7,329	6.10	8

*Table 2: Projected Per capita availability in 2043 using high population projection from Statistics New Zealand and assuming no green space change (Blaschke et al., 2018).*

CAU	Population projection (2043)	Per capita availability (m <sup>2</sup> )
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Central City Area	33,450	10
Thorndon	6400	26
Lambton	11150	11
Willis St-Cambridge Terrace	15900	3

### **3.3 Research Design**

#### **3.3.1 Convergent Mixed Methods**

Within the case study approach, mixed methods are common. The process of implementing mixed methods in a case study has been emerging in research, as it allows broad research to happen, within a scope (Guetterman & Fetters, 2018). Mixed methods allow a researcher to collect, analyse and then integrate both quantitative and qualitative data (Ivankova, Creswell, & Stick, 2006). Often case studies will involve the collection of both qualitative and quantitative data, depending on the case chosen but, as Guetterman and Fetters (2018) argue, mixed methods in the context of a case study is increasingly used for the ability to reveal broad trends, statistical relationship and generalisable inferences. The value added by merging the approaches is that it becomes easier to achieve a more complete case understanding. (Guetterman & Fetters, 2018).

Mixed methods research design is best suited to this research, given the scope and type of data collected. The purpose of convergent design is to draw results of quantitative and qualitative data analysis together (Creswell, 2018). This data needs to offer different but complementary ways of illuminating the same topic (Morse, 1991). Through comparing different methods of data collection, a more complete understanding of an issue emerges, validating (or otherwise) one finding against another (Creswell, 2018). There are four stages; first qualitative and quantitative data must be collected (stage 1); then this data is analysed separately (stage 2).



For this research the questionnaire data is analysed using descriptive statistics, and the interviews are thematically coded. Then two sets of results are merged (stage 3). There are several strategies for merging the sets of results. The most useful strategy for this research is to identify content areas that are represented in both datasets and synthesise the discussion in a table (Creswell, 2018). The final stage is to interpret the merged results (stage 4). Using convergent design with these stages allows research to be conducted over a limited period of time, while still allowing the researcher to compare and contrast findings (Creswell & Plano Clark, 2018).

As noted, the decision was made in this study to collect data using both a questionnaire and interviews. Sources were independent – the public users of green spaces in Wellington (for the questionnaire) and professionals who worked in a range of institutional fields involving Wellington green spaces, for the interviews. This decision was made to ensure that the two datasets are representative of different perspectives, and the methods have been selected based on their suitability for the source in question. Different strategies for collecting each sample, and sample sizes, were required. This allows the separate sources to be independently rigorous and stand up on their own which Creswell and Plano Clark (2018) recommends if the intention is to produce corroborated and valid conclusions about a topic.

### **3.4 Quantitative Method**

#### **3.4.1 Purpose of Questionnaire**

There is a tradition of describing the city as a laboratory (Ocejo, 2012). This tradition has led to many researchers undertaking research in the city that they live in. This approach establishes spaces of everyday activities as sites of research. A famous example is Whyte's study of small urban spaces (Whyte, 1980). This imagines urban and everyday spaces as a field setting, to be explored in the same way as other field settings. Through sampling in an everyday setting, the views of the public can be well represented in the data. Selecting three central city parks in this study fitted with seeing the parks as field settings, allowing the distribution of the questionnaire in the parks, as opposed to distributing it online or by mail. This method of distribution avoided the limitation of respondents needing a level of

computer literacy and the limitations of mail surveys, such as low response rates. As I was present, I was able to answer questions from respondents. This allowed for 75 responses across the three parks. A copy of the questionnaire is in Appendix C.

### **3.4.2 Questionnaire Design**

Across a month in three central Wellington parks I undertook the fieldwork of asking people the questionnaire. This depended on the weather, I choose only fine or sunny days in spring (between 16<sup>th</sup> October and 16<sup>th</sup> November). People are less likely to go to a green space or spend a long amount of time in a green space when it is raining. Rain would have also complicated the data gathering logistically. This means that the questionnaire is representative of the public using green spaces on moderate to fine days in spring. It was important to collect the questionnaire in spring instead of summer, because across October and November, the weather in Wellington is more changeable, but those who are working are more likely to use the parks, and students are at school and university. This means that spring is more representative of the rest of the year than summer, when people tend to take more time off work, and there are fewer students in the city.

Convenience sampling meant that the participants selected represented those who use the park. The criterion for this was simply that the participants were in the green space at the time the questionnaire was conducted and that they agreed to participate. I approached individual people and people in groups with the questionnaire on a tablet and asked if they wanted to take part. The questionnaire was face to face, but self-administered, which helps to prevent people from filtering their answers because of a sense of social pressure (McGuirk & O'Neill, 2016). Parks are social spaces, so groups of participants were common. Where people were in groups, they took turns to answer the questionnaire. 30 of the respondents to this survey were in groups when they answered the survey while the remaining 45 respondents were individuals. No group was bigger than three people, and most groups were two people. Individuals were easier for me to approach, so the size of the group is not indicative of whether more people use the park alone or with other people in a group.

### **3.4.3 Who Were the Respondents?**

The questionnaire did not gather in depth demographic information about respondents. This was to keep the questionnaire short which research on questionnaires recommends (McGuirk & O'Neill, 2016). Demographic information from Statistics New Zealand in these three census areas can add useful background details.

The population projections for this area are important for this research. These three areas have small populations, 9% of Wellington city's population (Statistics New Zealand, 2013). This is predicted to grow from 17,076 people in 2013 to 33,450 people in 2043 with growth occurring mostly in Willis Street- Cambridge Terrace with a projection of 15,900 people in this area. Question one asked whether respondents lived in the central city. This was to determine whether people were more likely to visit these parks if they lived locally. Overall 73 out of 75 responded to this question. Across the three parks, 45% of respondents did live in central wellington, and 55% did not. In Glover Park, 56% of respondents lived in the central city, and 44% did not; in Frank Kitts Park, 43% of people lived in the central city and 57% did not; and in Midland Park 36% of people lived in the central city and 64% did not. A Pearson Chi-Squared test demonstrate that there is no statistical significance between living in central Wellington and how often people use green spaces.

		Do you live in Wellington central city?		Total
		Yes	No	
How often do you visit this park?	Daily	8	5	13
	2-3 times a week	9	15	24
	Once a week	5	13	18
	Monthly	4	2	6
	Not often	7	5	12
	Total	33	40	73

		Do you live in Wellington central city?
How often do you visit this park?	Chi Square	6.13*
	Degrees of Freedom	4
	p-value	0.19

*Table 3: Chi-Squared test demonstrating the significance of living in the central city*

#### **3.4.4 Questions**

In questionnaire design, it is useful to think about distinct question types McGuirk and O'Neill (2016). These are attribute questions, which established the respondent's characteristics like age. Then there are behaviour questions aiming at discovering what people do. Attitude questions, which express people's judgements and then questions about beliefs, which establish what people think is true, false, or preferred. The wording and structure of a question determines which type of question is being asked (McGuirk & O'Neill, 2016). The questionnaire used a range of question structuring to gather qualitative and quantitative data. These questions sought to gather information about the way in which people use and value public green spaces. These questions can be viewed in Appendix C. The first question aimed to measure whether people lived near these spaces, asking a simple yes or no to "Do you live in Wellington's central city?" Two multi-choice questions asked about use: Question two asked how often do you visit this park and question three asked what do you use the park for? There were prompts for this question, and respondents were able to select 'other', where they could input their own selection. Question four asked about when people use these parks throughout the day. This was determined by ranking three categories: morning (7am-noon), afternoon (noon-5pm), and evening (5pm onwards). The decision to include only three selections here was to keep the question simple (ease of analysis) and because this question aimed to measure broad time-of-day preference. Question five asked respondents to name three things that they like about the park. Question five opened the investigation of value by asking respondents to describe what they value about the park. Questions six and seven dug more deeply into value. Question six asked respondents to list up to three things that could improve the park, while question seven asked them to name their favourite green space.

#### **3.4.4 Limitations**

The limitations of this method were primarily that it encourages the assumption that it

is representative of the way that the public uses and values these spaces. Questionnaires are commonly presumed to be a sample of a broader population and this questionnaire was designed with that purpose (McGuirk & O'Neill, 2016). This is the strength of the method, but this requires comprehensive processes on which to base the sampling. Because in this case the sampling was of use of a space, groups who cannot access the space were not a part of the sample. Those excluded could have useful comments to make about green spaces but recruiting these respondents would have taken considerable time. Instead, sections of the longer interviews give a perspective on those who want to access green spaces but face physical or social barriers to doing so. This means that the questionnaire is representative of the public who use green space, not the public more broadly.

Another limitation arises because the response gathering took a lot longer than initial plans. It was dependent on the weather. It also became clear that the interviews were more energy intensive which slowed down the process. It required a significant amount assertiveness or confidence than the interviews. The interviews felt much more comfortable because it was clear that they were happening with like-minded people, whereas the risk of talking to the public created more anxiety.

### **3.5 *Qualitative Method***

#### **3.5.1 Purpose of Interviews**

The everyday nature of green spaces is shaped by those who can access them. In contrast to this, though, the City Council is the institution which decides on the features, maintenance and administration of these spaces. This means that the capacity to make these spaces more accessible, and equitable in terms of access, lies with the public *and* decision makers in the City Council. Semi-structured interviews gathered insight and explanation from those who are involved in these decisions, from those working within formal institutions and those working outside of them. The aim was to balance participants with institutional insights with participants who had more grass roots organising experiences. This intended to gather a range of opinions, which might be positive about or critical of the Council. Semi-structured interviews were chosen as the method for this because they

are best suited for allowing response and clarification (Irvine, Drew, & Sainsbury, 2013).

### **3.5.2 Interview Design**

The survey questions provided reference points for the interviews. Every participant received the same two questions: why are public green spaces important in Wellington and if you had the ability to design a new green space, what would you prioritise? The aim of these questions was to test the links between value in theory, focusing on value for the public; and value in practice. This also meant that comparison between responses is more possible. This provided an opening segment to the interview. Using opening segments is discussed by Galletta and Cross (2013) as a positive technique to create a rapport with the participant and to set a purpose and direction for the interview.

Through asking why the participant thought that green spaces are important to Wellington, they could introduce their experience and their value of green space, as well as their interpretation of the public value of green space. Importantly, it also yielded contextual details about them, which could be touched on later as follow-up questions were asked (Galletta & Cross, 2013). This was particularly important as these interviews were one- off with people whom I did not know before the interview. So, while I had researched their background, it was important to get the participant to explain their views for themselves, freeing me as the researcher from making assumptions about their positions on green spaces.

Then the interviews moved to a middle segment, which as Galletta and Cross (2013) explain, was structured to add more specificity and to explore the nuances and complexity of the participants' experiences. Participants often had interests in intersecting urban problems, so this allowed for those interests to emerge, but this middle segment primarily focused on key themes around green spaces as third places, accessibility, trade-offs, and density, depending on the participants' interests.

The end segment; asking all the participants to describe what they would prioritise if they found themselves in charge of designing a new park in Wellington central. This was a prompt for participants to reflect on the issues and value that they had been

explaining and critically commenting on and think about them practically. It meant thinking about the issues in terms of physical space. This linked the interviews back to the literature on spatial capital (Soja, 2010), as well as the concept of spatial justice (Soja, 2010).

### 3.5.3 Interview participant guide

*Table 4: Description of interview participants*

Council officer	Wellington City Council, City design and place planning
Council officer	Wellington City Council, Senior urban designer
Council officer	Wellington City Council, urban ecologist
Independent expert (academic)	Victoria University of Wellington, School of Architecture and Design, Senior lecturer
Independent expert (academic)	University of Otago, Health Sciences School
Independent expert (NGO officer)	Generation Zero co-ordinator, Former environmental planner
Independent expert (consultant)	Women in urbanism co-ordinator and Open Streets consultant



## Chapter Four

### How Does the Public Benefit from Green Space?



*Figure 8: Map of Wellington City Central Area with studied green spaces highlighted.*

This chapter will present the findings from the public survey and the interviews described in the methodology chapter above. These findings will answer the research questions. Each research question is featured here and broken down to better present the findings.

## 4.1 What Are the Benefits of Green Spaces?

### 4.1.1 Different Parks Were Used at Different Times of Day

Participants were asked to rank their main time of use as ‘Morning (7am-noon)’, ‘Afternoon (Noon-5pm)’ and ‘Evening (5pm – onwards)’ by ‘Most often (1)’, ‘Often (2)’ and ‘Least often (3)’. The results from the three parks combined demonstrate that the afternoon followed by the morning were the most popular times to visit. The results are shown in Table 5 below.

*Table 5: Percentages that respondents ranked the time of day that they visited three parks.*

Time of day	Ranking and percentage		
	Most Often (1)	Often (2)	Least Often (3)
Morning (7am-Noon)	34%	37%	29%
Afternoon (Noon-5pm)	43%	45%	12%
Evening (5pm-on-wards)	29%	17%	59%

This contrast suggests that people are likely to visit least often in the evening, whereas the results are close for the morning and afternoon. Overall, afternoon visits had the edge; respondents were likely to visit most often in the afternoon, as it was ranked Most often and Often the most. These patterns are represented visually in figure 9.

The results differ by park. In Glover Park (see Figure 10) the evening was ranked the most often visited time by 57% of respondents, the afternoon was ranked often by 62% of respondents and the morning was ranked least often by 55%. By contrast, for Midland Park (see Figure 10) the evening was ranked least often visited by 87% of respondents, and in Frank Kitts Park (see Figure 10) the evening was ranked least often by 65% of respondents. Glover Park, unlike Midland Park and Frank Kitts Park, was more popular in the evening than the afternoon or morning. The difference between Frank Kitts Park and Midland Park Parks is also interesting. Midland Park respondents were more distinctive in their ranking, whereas the responses from Frank Kitts Park and Glover Park were closer. An example of this is that for Frank Kitts Park, morning, afternoon and evening were all ranked at 2 (or often) by 33% of

respondents similar to the pattern described above for Glover Park (see Figure 8).

This suggests that there are clear preferences for the time of day most and least often visited (see Figure 9). The most common selection was in Midland Park where evening was the least often visited time. Frank Kitts Park in the evening was also not selected by any respondent for most often visited time and was selected as least often visited by 65% of respondents. These results show clearly that the evening is a less popular time to visit Frank Kitts Park or Midland Park.

Percentages that respondents ranked the time of day they visited all three parks (combined)

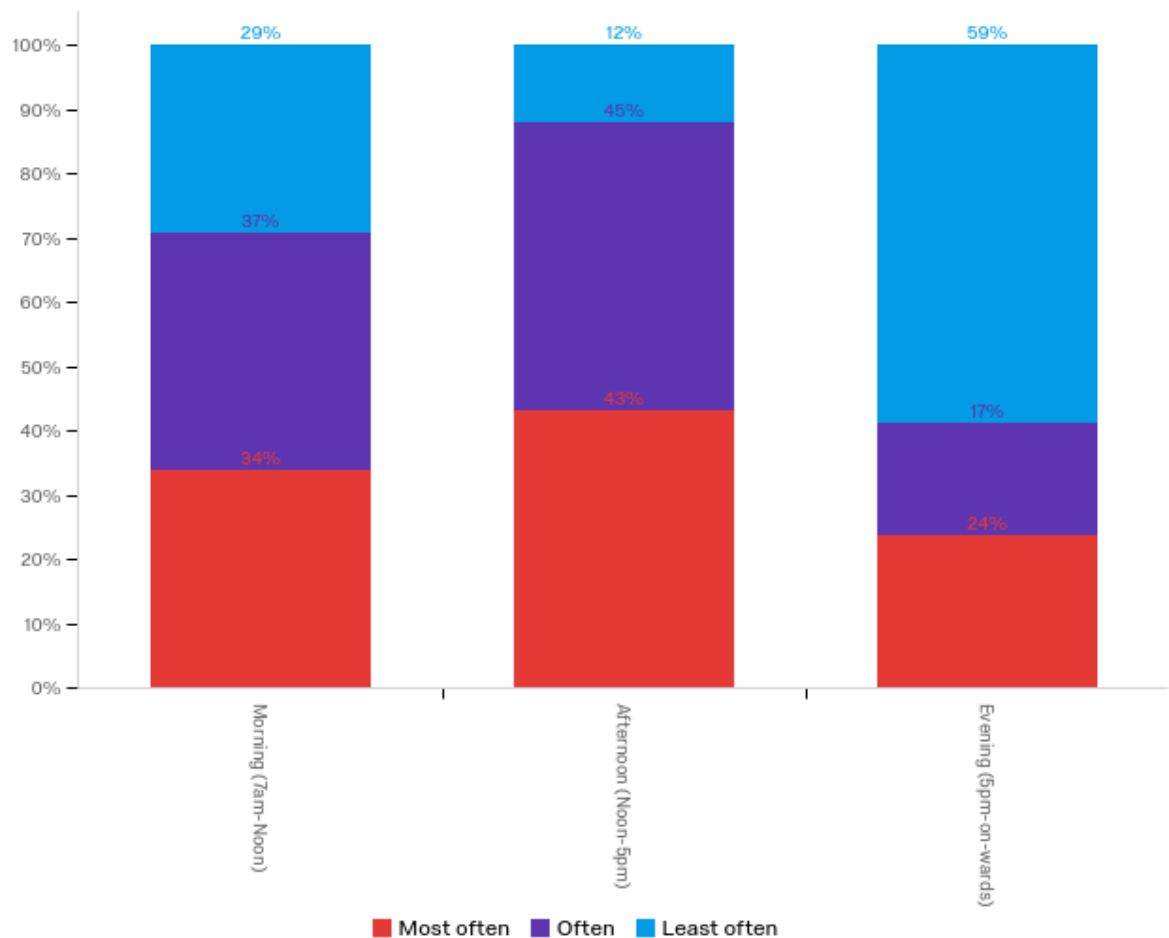
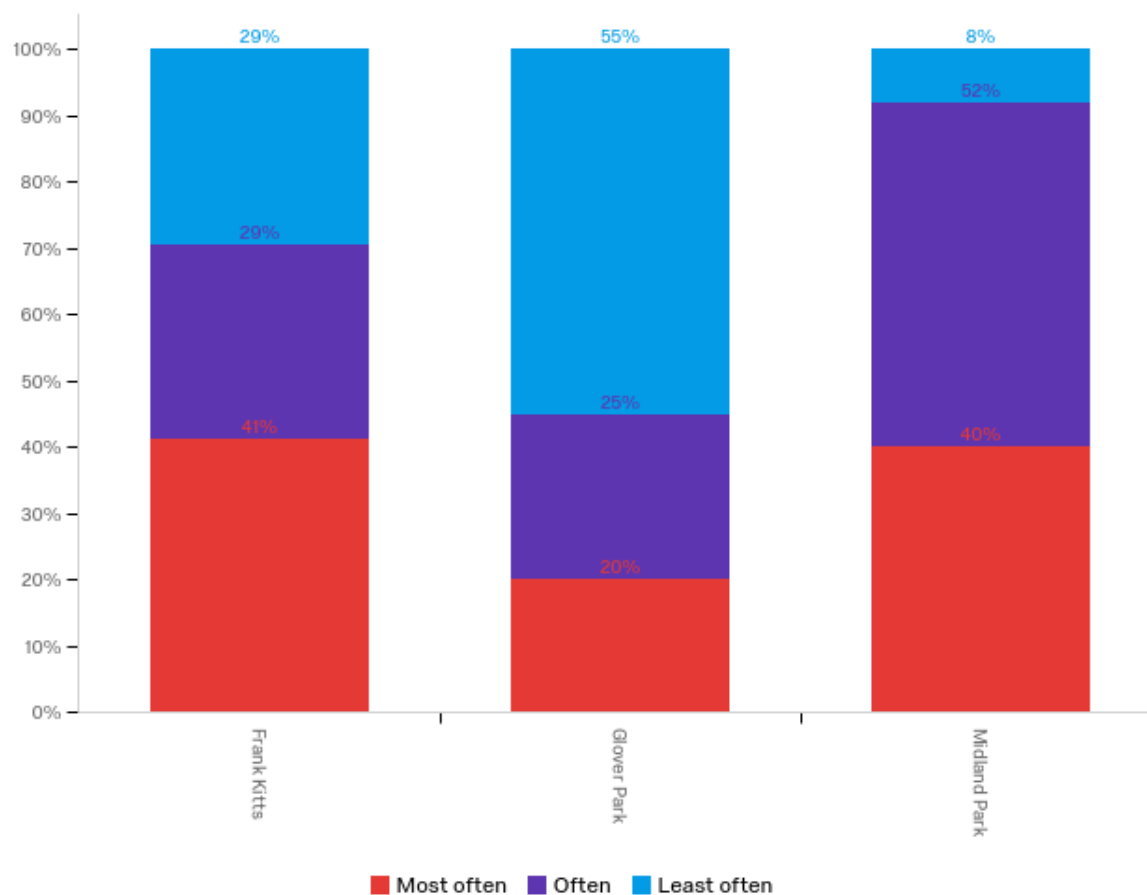


Figure 9: Results from question 5 survey questionnaire of all three green spaces combined.

Percentages that respondents ranked the Morning (7am-Noon) as a time that they visited each park



*Figure 10: Results to question 5 of the survey questionnaires ranking the morning, broken down to display each green space.*

Percentage that respondents ranked the Afternoon (Noon-5pm) as a time that they visited each park

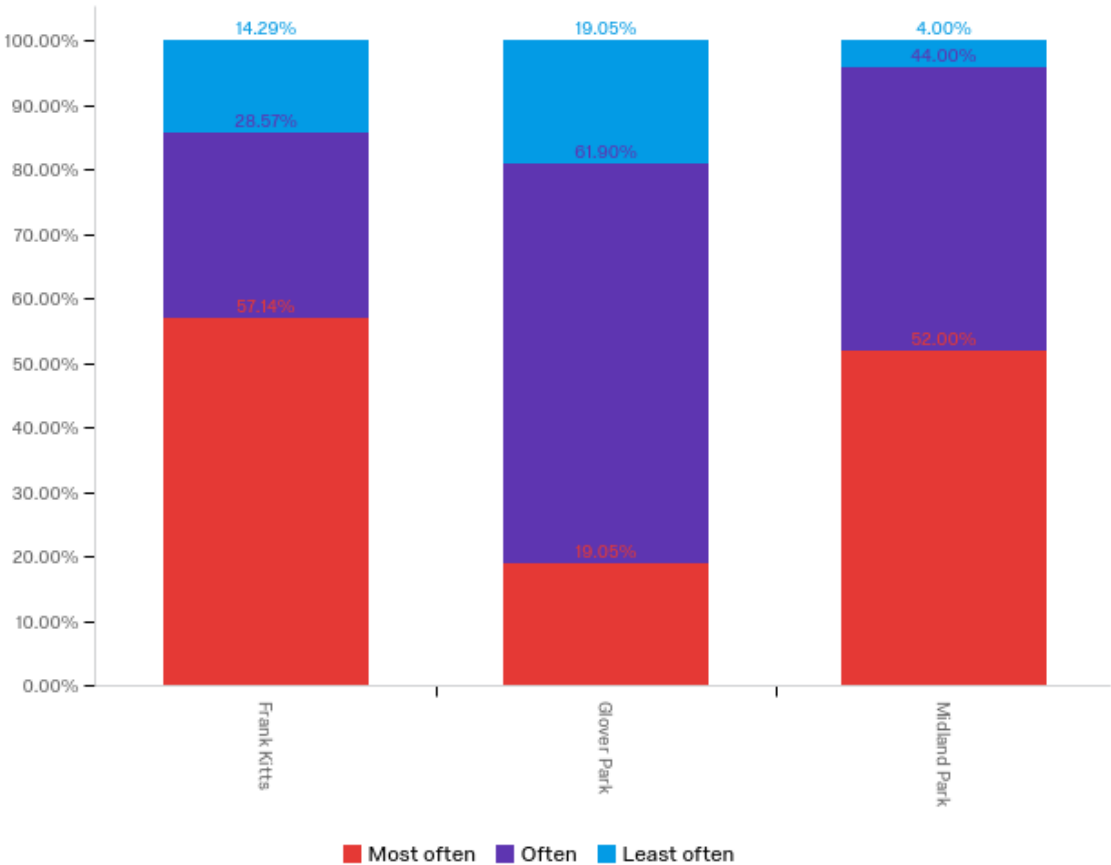
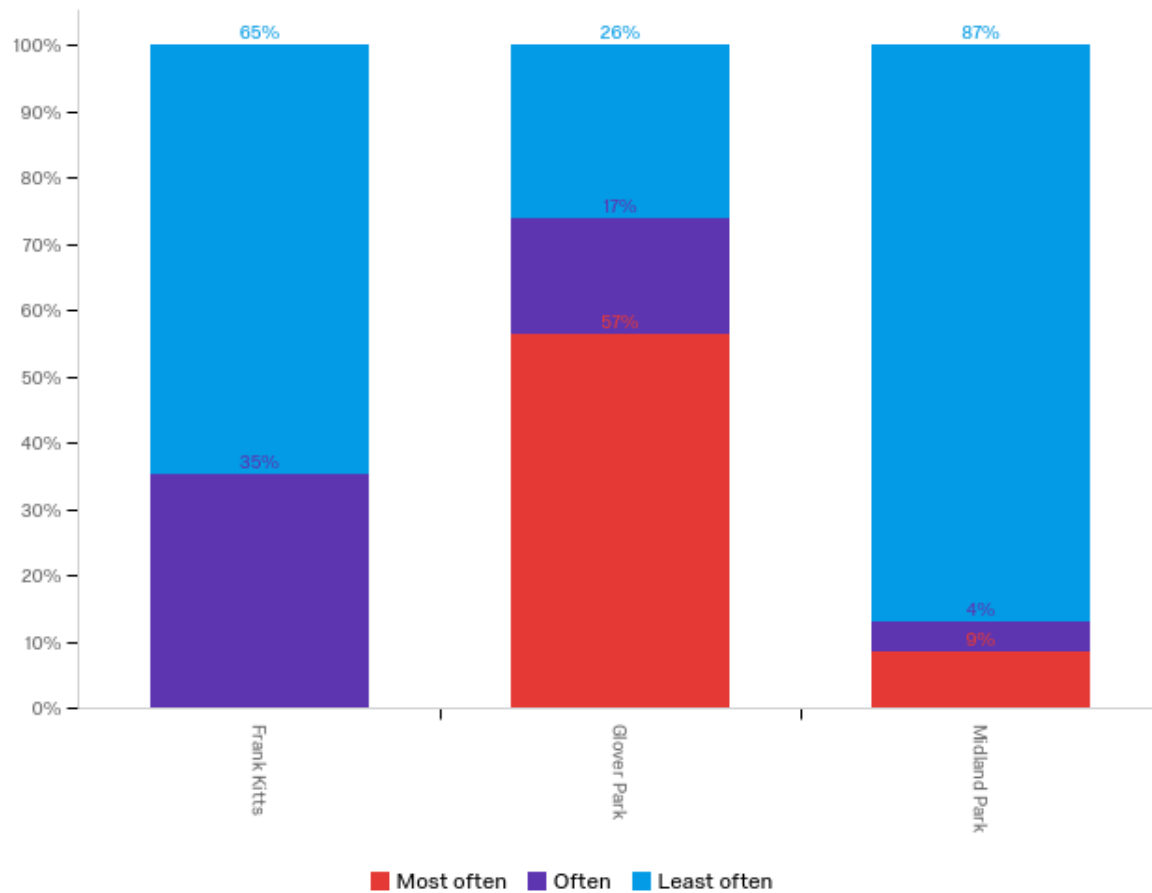


Figure 11: Results to question 5 of the survey questionnaires ranking the afternoon, broken down to display each green space.

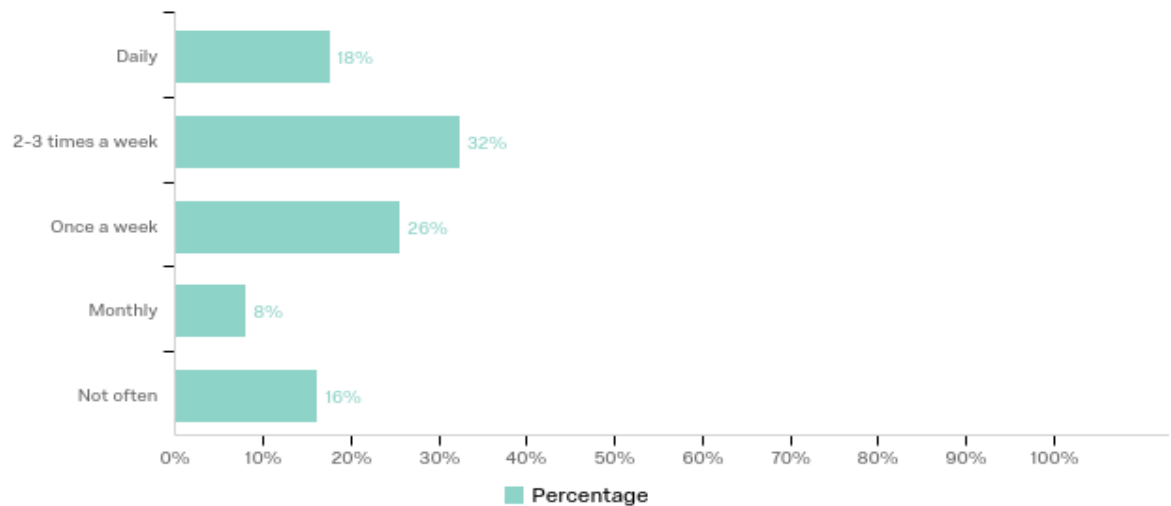
Percentage that respondents ranked the Evening (5pm-on-wards) as a time that they visited each park



*Figure 12: Results to question 5 of the survey questionnaires ranking the evening, broken down to display each green space.*

#### 4.1.2 Parks Are Visited 2-3 Times A Week

Percentage of responses showing how often respondents visited any of the three parks



*Figure 13: Results from question 4 of the survey questionnaire from all parks combined.*

Frequency of park use was also measured with respondents being asked ‘How often do you visit this park?’ The responses to this are demonstrated in Figure 13 and Figure 14, and in Table 6.

*Table 6: Percentages of responses in order of most selected to least selected*

How often do you visit this park?	Percentage of responses
2-3 times a week	32%
Once a week	26%
Daily	18%
Not often	16%
Monthly	8%

This suggests a clear pattern of habitual use. This pattern is reinforced once the data

is considered at a weekly level. When ‘daily’, ‘2-3 times a week’, and ‘once a week together’ are added together, 83% of respondents visited Frank Kitts Park, 83% visited Midland Park and 64% visited Glover Park weekly or more. These figures suggest regular visits are common. In Glover Park the highest rated response was ‘Not often’ (28%) followed by 2-3 times a week (24%). ‘Daily’ and ‘once a week’ were selected by 20% of Glover Park respondents. This suggests that while Glover Park does have regular users, it is also a place where people come less habitually. This may reflect the surrounding area of Cuba Street which is a busy hospitality area with lots of alternative third places like cafes to visit. In Midland Park and Frank Kitts Park, it was most common for people to visit ‘2-3 times a week’ and least common for ‘monthly’ visits to occur.

Percentage of responses showing how often respondents visited each park

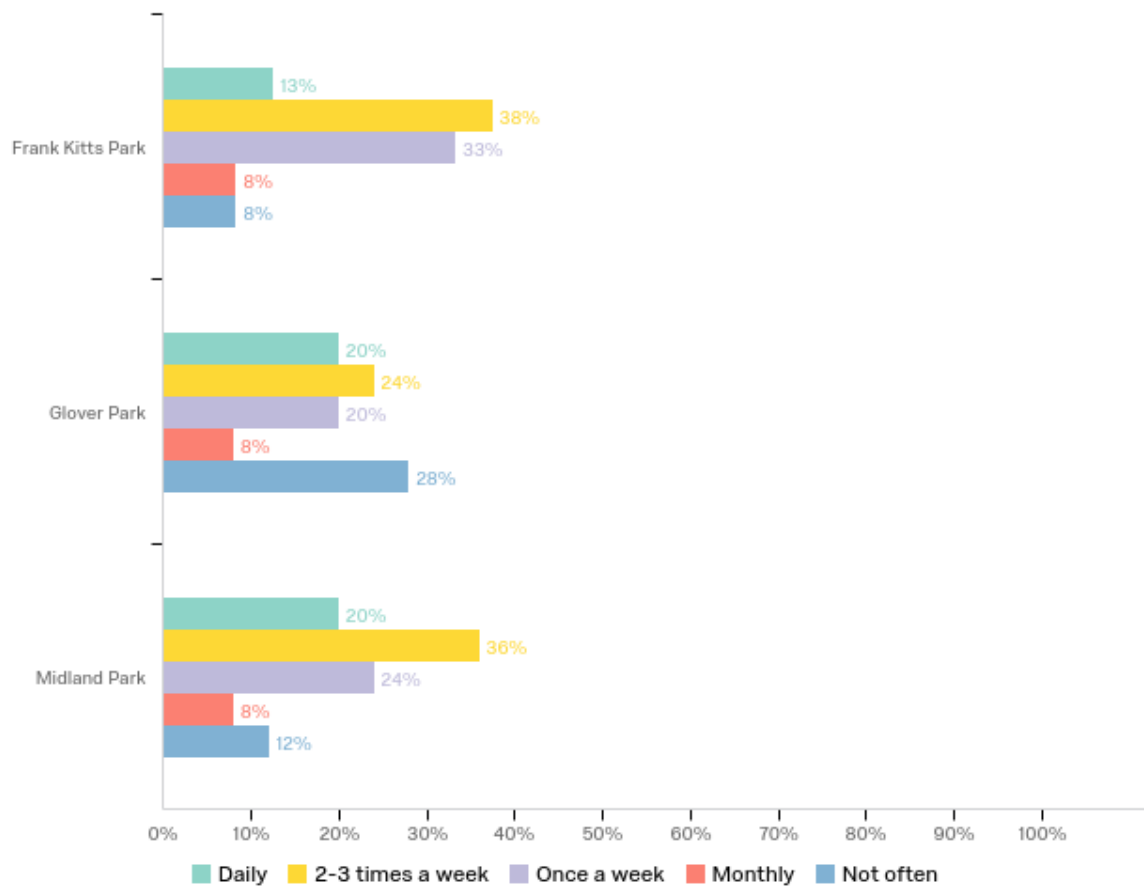


Figure 14: Results from question 4 of the survey questionnaire broken into each park.



#### **4.1.3 People Use Parks for A Range of Activities**

Why people come to the parks was tested in question six of the survey questionnaire. This asked respondents to select from a list of prompts:

- 'I exercise here'
- 'I sit here and eat'
- 'I walk through on my on my way to somewhere else'
- 'I come to meet friends here'
- 'I like to enjoy nature here'
- 'I bring my pet here'
- 'other'

Across the three parks, the response 'I walk through on my way to somewhere else' was the most frequent 25% (see figure 13). However, looking at the parks individually presents interesting results. In Glover Park, no-one used the park for exercise, whereas 10% of respondents in Frank Kitts Park exercised there (see figure 13). Similarly, no-one brought their pets to Frank Kitts Park, but 5% brought them to Midland Park and 7% brought them to Glover Park. Those who brought pets to Glover Park were bringing them in the evening, to the bar. Of all the options, this was the least selected with only 4% taking all three parks together. This reflects that in Wellington there are fewer pets in the central city, and the bylaw that only allows dogs to be off their leashes in designated dog exercise areas. In these designated areas, it's likely that a high number of responses would include bringing dogs, because that is the central purpose of those spaces, but this study does not include any designated dog exercise areas.

Frank Kitts Park and Midland Park were also more popular than Glover Park for eating. This was selected by 31% of respondents in Frank Kitts Park and 24% in Midland Park, but only 12% in Glover Park (see figure 13). Eating was the most selected option in Midland Park, and this reflects the way in which workers from nearby parts of the central city area use the park to eat their lunch. Walking through and meeting friends were each selected by 22% of the participants in Midland Park (see figure 13).

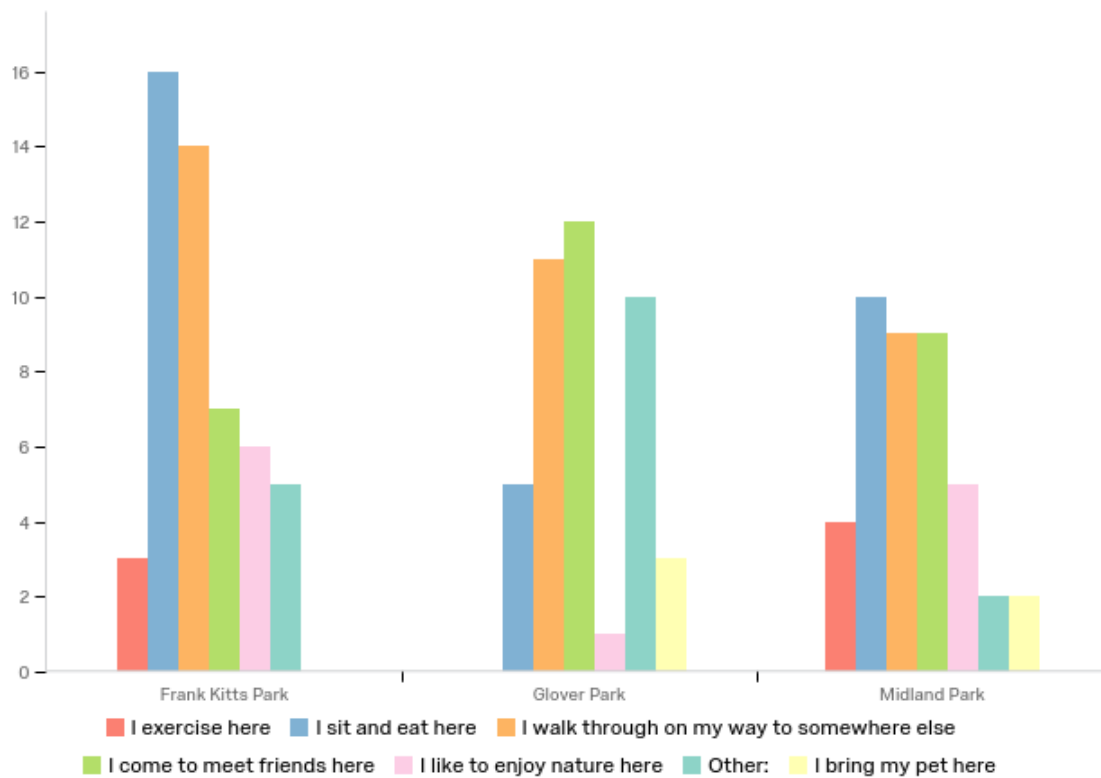
Enjoying nature appears to be secondary to the other activities. This could be because

socialising is likely to be dominant in urban parks, and perhaps because it is less active or purposeful, so less on the top of people's minds. Midland Park and Frank Kitts Park yielded 12% answering that they enjoy nature in the park, but this answer was selected by 2% of respondents in Glover Park. The detail added to responses to other are listed in Table 7 below.

*Table 7: Results from question six describing more detail on what 'other' activities people do in these parks*

Frank Kitts	Glover Park	Midland Park
Kids playground	Drinks at the bar	Waiting for someone
Bring kids here	Great evening sun	Walk home through here
Play with grandchildren	Listen to music	
My exercise class meets here	Work nearby	
Pokémon go	Lunch	
	Drinks at rogue	
	Sit on bean bags	
	Work nearby	
	Drinks	
	Wait for friends	

### Choice count of what people use each park for



*Figure 15: Results from question six of the survey questionnaire broken down for each park.*

#### **4.1.4 The Benefits of Green Space as Third Places are isolated to specific groups**

The open questions give us more insight into these results. Question 5 asked people what do you like about this park? What is interesting in the answers to this question is that respondents thought about how they value this park. All responses related to how people use these parks, which suggests that the value of green spaces is linked to use. Common themes from this question were that the parks were good places to wait for, find and meet up with friends, places for eating, safe and entertaining for children, and places to relax. This reinforces the findings from question 3. In this question, the theme of third place emerges in the responses. People liked that there were ‘other people eating’ and that there was ‘a lot of people’ with someone even responding that they ‘feel more connected’ when they come to the park.

The responses on how people value public green spaces were gathered from questions

5 and 6 of the survey and the long interviews. In the interviews key stakeholders described why parks were valuable to central Wellington relating to their specific field and experience. One questionnaire response to question 5 (what do you like about this park?) easily summarised the themes relating to value: space, people, relax.

#### **4.1.5 Open Space Is A Valuable Feature**

The physical space of the parks was important to the public, with many responses to the survey question referred whether there was a lot of space or not enough space. 14 responses were positive about the space or size of the parks, and one response was negative about the size of the parks.

The parks studied are different sizes, but from the responses it confirms that the way that people experience space is subjective and contextual. The subjectivity can be demonstrated through the way respondents chose to describe space. Across all three parks size was a positive response seven times, and space was a positive response seven times. Respondents were also positive about the amount of grass twice and the openness of the spaces were mentioned twice. Respondents also liked that in the parks it was easy to meet or find friends, which suggests that it was a positive attribute that the parks were open and not too large. These responses were given across the three parks, but only twice for Midland Park, which is smaller and seems to get busier than the other parks. A pattern also emerged where responses that were gathered in Frank Kitts Park all describe space, whereas the results in Glover Park describe size. In Frank Kitts Park, the variety of space was described positively.

In the long interviews, the value of the physical space was highlighted. Council Officer (Senior Urban Designer) thought that public green spaces are important in Wellington because of the topography and the intensification of space. She makes the point that often residents do not have big back yards so green spaces provide for recreation needs as well as for meeting people. Council Officer (Senior Urban Designer) discussed the important ecosystem services that green spaces provide, detailing Wellington's storm water network as an example. Density, or lack of physical space was also described by Council Officer (City design and place planning) as a reason that green spaces are critical.

The issue around available space appears to be one that the Wellington City Council is

thinking about, and when asked specifically about density Council Officer (City design and place planning) makes the point that currently “we don’t have spaces that are necessarily within the central area that would be really great for families or the diversity that are going to increase or change over time” This comment reflects the quality of green spaces. Green spaces in the central city area have not traditionally been designed for children or families.

#### **4.1.6 We Enjoy Sharing Parks with Others**

‘Other people’ was both a positive and a negative feature of each park. Some responses enjoy how busy the spaces were and that they could use them for people watching. ‘Other people’ was listed as a positive feature nine times with phrases like ‘good for people watching’, ‘other people eating’ and ‘lots of happy kids and people.’ The lack of other people was listed as a positive feature twice ‘not too busy’ and ‘less crowded than most areas’. There were also two responses that thought the parks were too noisy, and two responses that wanted bigger grassed areas.

Conversely though, responses of additional features that would draw more people to the parks were common. These responses ranged from ‘more stuff to do’, ‘community gardens’, ‘more events’ and the addition of places to buy coffee and ice cream. Finally, one response was that there were not enough people sometimes. This demonstrates that there is a balance of people. The public wants things to do, but they do not like spaces that are too busy. Overall the results from the questionnaire show that green spaces are important bumping places for the kinds of social interactions that Oldenburg argues for. These points were made in every interview. People need spaces for socialising. This was listed in addition to all the ecosystem benefits in almost all the interviews.

#### **4.17 Green Spaces Are Relaxing Ecosystems**

There are two ways that green spaces provide people with the opportunity to relax. Firstly, the literature review shows that natural spaces relax us. The responses that include a mention of natural space were positive about it. Respondents wanted more grass, and more native trees. In Frank Kitts Park, which is along the waterfront, the

ocean and the breeze were viewed positively, with respondents enjoying the views of the harbour. This reflects literature on blue spaces. One response wanted a water feature added to Glover Park, and another wanted a pool added to Frank Kitts Park.

In contrast to how relaxing respondents found the natural space, traffic and traffic noise was listed as a criticism. Where traffic noise was listed, it was often accompanied with the dangers of traffic mentioned. A common response was that the public wanted “more parks like this” which suggests that there is support for urban greening projects in a broad sense.

Secondly, these spaces are relaxing because they are either non-commercial or areas with fewer commercial activities in them. While these spaces do have commercial activity surrounding them, and in the case of Glover Park within, they are designed for sitting and taking a break without needing to pay (unlike a café or bar). This makes the price of entry free. This makes parks similar third places to libraries, in that they are free to use, so often places for homeless people. In the responses to the questionnaire, homelessness was not mentioned as being an issue in these parks, although several responses were concerned with the safety of the park, especially at night. These responses were predominantly from Glover Park and Frank Kitts Park.

Ecosystems services emerged as a framework for thinking about what a good quality green space is. Independent Academic (Architecture and Design) made the argument that people are part of ecosystems and so it is a bad idea to put biological ecological priorities up against human wellbeing when they are fundamentally the same thing. This point repeats Independent Academic (Architecture and Design) earlier point on why green spaces are important:

*“Because we need ecosystem services. We need ecosystems to survive as a species on the planet. It's not just nice to have plants and trees around birds and stuff. We actually fundamentally need those things.”* Ecosystem services and aesthetic value can happen together and as Independent Academic (Architecture and Design) explains “the ecosystem services stuff, they can fundamentally happen in a way which doesn't affect the aesthetics. So, it's not an either or. It's a both and.” Also the Council does not need the public on board to do more work on ecosystem services, “Yeah, I mean it helps if the public are on board

and they understand, and they care, and they push for things, but not having that doesn't mean that Council can't start doing it and doing it anyway" This statement summarises the idea that there are instances where the Council should consult, and instances where the technical detail means that public consultation does not serve a productive purpose.

Rain gardens were the most prominent example of ecosystems services design that emerged from the interviews. The current financial model was discussed as the biggest barrier to fully realising ecosystems services with Independent Academic (Architecture and Design) explaining "the reason why a lot of designers can't do this kind of work really is because of financial constraints." Legislation that protected elements of ecosystem services would be the most effective way to stop ecosystems services from being cut out of designs. Independent Academic (Architecture and Design) also explained how the developer model creates barriers to sustainable buildings "for example, putting in a solar water heater might have a payback of five years or something. A developer still has no incentive to do that because they are paying for it upfront." This perspective was reflected by Council employee (Senior Urban Designer) who also made the point that often the budget acts as a bottom line that ring fences how ambitious Council projects can be.

## ***4.2 How Does Local Government Manage the Public Benefit of Central City Green Space?***

### **4.2.1 Engagement with the public**

Engaging with the public was an important theme that emerged from the interviews. This comes from the principles that make up the social contract and democratic governments, and the practicalities of avoiding public complaints. We know that the public is likely to complain from the Council Officer's (Urban Ecologist) description of how responsive the Council is when there is feedback from the public. She compared the differences in feedback between suburbs. This difference often fell on socio-economic lines, with the Council Officer (Senior Urban Designer) revealing that often the Council will get phone calls about something looking messy from residents

of more affluent suburbs. While this potentially added to inequality, the Council Officer (Senior Urban Designer) also explained that wealthier suburbs tended to have more established green spaces as well because leafier suburbs, more established suburbs tending to have higher house prices. Where there are newer developments happening further from the city centre, there tends to be cheaper housing, which is more at risk of having inadequate green space availability. This discussion reflects the study done in Wellington that suggested that there was a link between socio-economic indexes and green space (Blaschke, Chapman, & Randal, 2017).

The Council Officer (Senior Urban Designer) went on to explain that an important mechanism that the Council does have for dealing with different areas and different needs throughout the city is through the 140 community groups. She also presented an example of the Council working with the local community to encourage more use of a green space. This involved a piece of work in Central Park in Wellington, which is a town belt park with a lot of native bush, steep tracks, and a children's playground. Across the road is a social housing community. This community has a high number of new migrants who the Council consulted with about renovating the park and changed the design of the park based on that feedback.

The public engagement process was also important to the Council Officer (Urban Ecologist). When asked what values they would prioritise if they could build any sort of green space, his answer was clear that it depended on public engagement "so you look at where it is, look at who's around, who's going to use it, what are they going to use it for." Council Officer (Urban Ecologist) also emphasised the need to have collaborative conversations across disciplines to ensure that ecologists and maintenance people are involved at the beginning which saves work on any revisions later. He also highlighted that engagement with the public does not finish once the design has been realised, because landscapes have much longer lifespans than buildings.

In contrast, public engagement was limited by older practices. The NGO Officer felt that to give feedback is an issue. "Some of them can be quite technical. I think the process itself is exclusionary, not deliberately. I just think by that it's a very old process. You know, they need to adapt." Independent consultant's response reflected this "The hindrance is



information, how people get information. So, you know like not everyone goes to read the paper every day and find out that this is the thing that's happening are available.” This was further emphasised by the Independent Academic (Health) who explained that, while the Council was doing some positive work to consult with people with disabilities, there were instances where they were marginalised by the engagement models “the additional burden of insisting that they followed the same communication pathways as everybody else means that that person gets marginalised”, So, while public engagement is successful in some areas, there are gaps.

### ***4.3 What Are the Barriers to Public Benefit of These Spaces?***

Overall the survey, as well as the responses from interview participants, show that the public have very split and contradictory views about ‘good’ green space. Therefore, multifunctionality serves an important purpose. Decision makers and designers are not able to make everyone happy. With that in mind, the aim of this question was to discover the major themes that separate the public and local government.

#### **4.3.1 How satisfied is the public with these green spaces?**

No one surveyed was extremely unsatisfied with the green spaces. This was an option provided but was not selected so is not represented in the figure below. These results suggest that Midland Park is the most mixed on whether people are satisfied, with only 52% of responses choosing either extremely or somewhat satisfied. In Glover Park 68% of responses were satisfied and in Frank Kitts Park 89% of responses were satisfied.

Percentage of responses showing rates of satisfaction with each park.

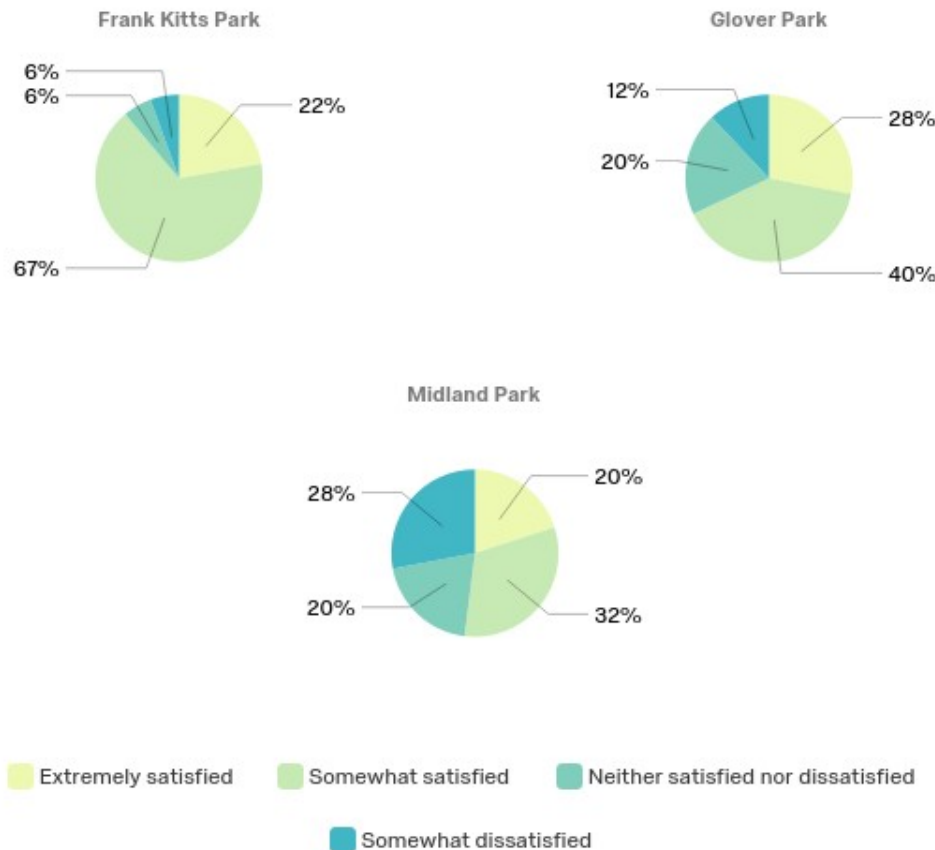


Figure 16: Responses to question 3 of the survey questionnaire showing satisfaction rates

#### 4.3.2 Access and usability

Access and usability were a key issue that emerged from the interview with Independent Academic (Health) but also emerged throughout the interviews. The responses on access and usability tended to be across a spectrum, with the difficulties faced by able bodied people, parents and elderly people, and then those with disability. Independent Academic (Health) explained that those with a disability constitutes 25% of the population, according to the last disability survey. This includes those with temporary disabilities, which is an important consideration as New Zealand's population ages. Independent Academic (Health)

also made an important point that “not all disabilities are physically obvious. There are lots of disabilities which are not easily seen. So, you know... anxiety can be a crippling disability.” This recognises that barriers to access to a green space might go beyond a more binary definition of access.

There is also a difference between accessibility and usability. Independent Academic (Health) explains that they found that for planners or health practitioners, accessibility primarily means the distance to a park rather than the physical accessibility of how able a person is to use the park. Accessibility means whether a person get to the park, whereas usability is about whether a person can for example, navigate their wheelchair along the path with ease. Independent Academic (Health) stepped through the literature on the links between green spaces and positive well-being outcomes, which have been analysed in the literature review in this thesis. They went on to highlight the psychological benefits: “a lot of literature says that if you're just sitting in a green space, you may not get physical health benefits, but you get significantly improved psychological health.” For everyone, it is critical to access those health and well-being benefits.

When asked about what could be changed, it became clear that legislation was lacking according to Independent Academic (Health): “we lag behind many countries, Europe, Australia, America, and I think that's partly to do with legislation.” Even in Auckland, Independent Academic (Health) explained, universal design was incorporated into their rules, whereas it was not in Wellington. An example of universal design is a drinking fountain designed with different heights to cater to different users. The reason that putting universal design into legislation is important is that it is likely to be the most effective way to make sure there is a universal standard across the city (and between cities). Independent Academic (Health) also explains that often what stops people from going to the park cannot be isolated to just the park but could be caused by everything from housing to inaccessible transport networks. This point was important because it highlights the way in which green spaces exist within a city, rather than as islands.

It emerged that the cultural complex of having head phones in, in public was common

throughout the parks. Headphones made it difficult for me to approach people because I imagined that if someone had headphones on, they would not like to be bothered. Headphones act as a signal in this way. This theme emerged in a different way in the interviews, with the Independent Expert (consultant) explaining that:

“in this new day and age, we tend to connect online a lot. We are very digitally connected but that doesn't have a meaningful connection for a lot of people and so we're missing or we've migrated to this new way of connecting, but we've forgotten this old way, so public spaces bring us together in a very physical and emotional and meaningful way to me as an urban issues activists.”

Both these points demonstrate that public spaces are not homogenous and can be used in a spectrum of public to private ways depending on the individual.

#### **4.3.2 What would the public change?**

Conversely the responses from question six show that people want more variety and choice on how they use these spaces. This question asked respondents to list up to three things that the Council could do to make this park better. A lot of the responses to this question were for more events to happen in these spaces, as well as improved safety and accessibility features. Ice cream, coffee shops, and gardens were also prominent in the responses. More native plants, trees and more shade were also featured as prominent responses.

These results show that, as well as for social activities these parks are also valued for their everyday uses like waiting, eating, and as thoroughfares. They also demonstrate that while these spaces are used as people's third places, the public also want the Council to improve the features of this park to improve the capacity to use these spaces as third places as well as natural areas.

Different uses also depend on the context that the park is in. So, for instance, responses showed that people are more likely to go to Midland Park for breaks from work because there are large offices around Midland Park. This context is important because these spaces need to be considered as a network. Taking a system thinking approach is particularly

relevant to the ways in which green spaces are used as pedestrian thoroughfares, and cycleways. The programming of these spaces has a strong impact on how they are used, with the playground in Frank Kitts Park and the bar in Glover Park drawing people to the parks for activities. These results show how people use public green spaces in Wellington, and that green spaces are used as third places in Wellington central, when there is nice weather.

#### **4.4 Results Summary**

The data collected using the survey and the questionnaire is wide-ranging and provides a considerable depth about what the challenges are for central Wellington green spaces. The key messages that came from the survey are of a public that is generally happy with the green spaces, but want more greenery throughout the city, with more activities and more events available. At one level this is a predictable result in that space is scarce, for parks or other facilities, in any central city. But the results are particularly interesting given that the central city population is predicted to increase fast over time. As density of housing increases, local facilities can become critical for quality of life.

The survey also showed that the public use these spaces for several reasons, and in a range of ways. It also showed that there are distinct patterns of use which vary by place. This reflects the idea that cultural norms are specified in public spaces, as discussed in the literature review. The interviews clearly show what the issues are in more detail than the public survey. This suggests that there is a difference between the public's perception and the work that the key informants were engaged in.

The following chapter summarises and discusses the results of this chapter. The next chapter will also discuss limitations of this research in greater depth and offer recommendations for future research and policy.

# Chapter Five

## Discussion

### **5.1 *What Can Be Learnt?***

#### **5.1.1 Using green space**

This research adds to the body of work which has begun to recognise that there are multiple ways to interact with a green space, which is why green spaces need to be designed for multiple uses. The questionnaire data demonstrates that patterns of behavior can be mapped within a specific green space though, which provides answers for how people benefit from that green space. The benefit of city wide green space was answered by respondents subjective valuations (what they liked) in the questionnaire.

There are three main types of interaction that we have with green spaces (Keniger, Gaston, Irvine, & Fuller, 2013):

- a) indirect, involving detached and largely visual green space engagement such as appreciating a view from a window or photos, paintings and film footage;
- b) incidental, in which a person is physically present within the green space but only as a by-product of another activity, such as cycling through a park while commuting to work; and
- c) intentional, where the primary aim is to directly experience the green space such as gardening, hiking, having a picnic, or wildlife watching.

Keniger et al. (2013) believe this scale is an important distinguisher of people's intentions. However, the simplicity of this scale has been challenged by Bell, Phoenix, Lovell, and Wheeler (2014) who argue that people can be intentional about incidental use. For example, someone might intentionally decide to take a longer route while commuting to work because it passes through a green space.

#### **5.1.2 Multiple interactions**

The survey in this study demonstrates that there are multiple interactions that happen in Wellington green spaces. This is important because, as discussed in the following paragraph on the cultural complexes in these parks, these different interactions act as different community rituals.

Bell et al. (2014) argue that the claim that Pākehā have a strong attachment to nature underpins social inclusion and exclusion. Lovelock, Lovelock, Jellum, and Thompson (2011) found that the image of Pākehā relating to the environment and engaging with environmental protection was exaggerated. They also found that there was a difference between the moderate rates of participation in outdoor activities for New Zealand as a whole and ethnic minorities, particularly Chinese (Lovelock et al., 2011). The experience of exclusion is not drawn along immigrant/settler lines but white/non-white lines (Lovelock et al., 2011). It is important to acknowledge the relationships between green spaces and how immigrants can feel alienated from them. This research showed that Wellington exists within that context and green spaces here are influenced by it. Wellington's town belt has been preserved to have the same character as a national or regional park, with a lot of dense bush and scrub accompanied by walking or mountain biking tracks.

There is obviously limited usefulness in comparing the town belt and the central city green spaces. However, when the subject of green space arises the town belt takes up prominent space in the conversation. In this study, one Council Officer who I interviewed explained their approach to new immigrants and green spaces. They conducted a survey of new immigrants living in a Wellington City Council housing complex next to the town belt. This revealed that those living in the housing complex found the neighbouring park unsafe. This park, and much of the town belt, is not open space and is designed in a way to reflect New Zealand native bush, with narrow tracks and layers of vegetation. For the new immigrants in the survey, this represented a landscape that felt dangerous, but would be familiar and welcome to a certain class of New Zealander who visits regional and national parks regularly. This effort from the Council Officer and their team prompted a redesign of the entranceway to the park, with consultation from the survey participants, to make it look more open and inviting.

This example shows that the Wellington City Council's work consulting and adjusting its public spaces can be effective where the changes that need to be made to the green space are affordable and manageable. There is room for improvement—the Council needs to clarify its capacity and its role in promoting social inclusion in green spaces.

The difficulty is that promoting social inclusion should not mean expecting non-white immigrants to assimilate and give up their cultural understandings of nature. While there are positive impacts of green spaces on measures of health and community, the Nature Relatedness scale shows that we experience the benefits of nature differently (Nisbet et al., 2008). These differences are important to consider. Some people do not want to go to a park, because recognising multiple kinds of interactions with nature is important. The Wellington City Council's role is to provide the opportunity for everyone to visit green spaces by ensuring access and usability.

### **5.1.3 The value of open space**

A key finding is that the public feel the compactness of Wellington's city centre and that there is not a significant amount of space, let alone green space available. The compact nature of central city area is obvious from any map, but the fact that some people physically feel that compactness is important too. The risks of not managing green space within the challenges of a city centre, could encourage people living there to move to the suburbs. These risks are reflected in the responses from the Wellington City Council's survey of apartment dwellers which found that lack of outdoor space was the second most disliked characteristic of apartment living (City Planning, 2009).

In this study, the survey tells us that the key way that people experience open green space is through their senses. The survey shows that participants described a sense of wellbeing from being in an open space. These kinds of sensory comments were most prominent in Frank Kitts Park, which is larger and has views to the waterfront and feels less hemmed in by buildings. These comments were less present in responses in Midland Park or Glover Park. This finding links to research conducted in Wellington which has shown that water is a more therapeutic landscape than green space (Nutsford, Pearson, Kingham, & Reitsma, 2016). This openness cannot be delivered in the same way in the other two parks, because of



the surrounding buildings. The lesson is that the city could provide better connections of various public spaces to the waterfront and more greenery among the concrete of the waterfront, would be a strategy to deliver quality, publicly accessible space to central Wellington. This was called for in a report that Gehl architects wrote for the Wellington City Council.

This physical space is complicated by the fact that proximity is also important, with many public questionnaire participants commenting on the value of each green space being so close to their work. This suggests that smaller green spaces that are spread through the central city would also be well used.

Ecosystems services emerges as a framework that pushes for deeper thinking about these spatial concerns. When Independent Academic (Architecture and Design) said that we need ecosystems to survive as a species on the planet it provided an opportunity to think about how there are necessary services that green spaces provide, they're not just nice to have. We need green spaces, and this requires a whole system thinking about green spaces. A key practical part of ecosystems services is that not all green spaces will look like green grassed parks. For example, some spaces that are currently underused parks could be reverted to other landscapes like fruit trees, to promote food security, or native planting to encourage urban biodiversity. This considers the context and specialisation of the land. Ultimately the Council appears to be aware of this approach, but there are some successes in Wellington, like the Waitangi Park rain garden design. This demonstrates potential, but unless connected to a network of ecosystems services the impact of individual pockets is limited.

## ***5.2 What Are the Cultural Complexes That Emerge?***

It is clear from the results that the public predominantly use each space for the same purposes. There is a collective practice of eating lunch in Midland Park and meeting friends after work in Glover Park. This happens for practical reasons but also because as Edensor (2010) suggests there is a shared temporal reference point and shared spatial habit. These habits clarify cultural practices. This suggests that the idea of

cultural complexes that emerged in the literature review is operating in these spaces (Langegger, 2017). These cultural complexes influence our actions in public spaces, as well as what we imagine an ideal city should look like.

Rituals in public space help to provide “a communal way of seeing the world in consistent terms” (Edensor, 2010, p. 8). However, these habits can have the effect of excluding people on top of the spatial exclusions of location and design. People feel excluded from using these public green spaces in a multitude of ways. In contrast, those who are included tend to feel more comfortable because the cultural practices happening belong to them and represent their world view. The emergence of cultural complexes is relevant to the discussion of third place because it demonstrates that place is social. This is why place supports a sense of community ownership which according to Langegger (2017) is the justification for efforts of spatial control. He goes on to explain that “ideas of place are essentially normative; they frame what should and should not occur in specific localities” (Langegger, 2017, p. 32).

What is interesting about this way of imagining place is where cultural complexes cross and conflict occurs. We encounter diverse cultural complexes most often in publicly accessible spaces. This is the reason why parks are good candidates for third places on paper, but what emerges from this research is that the publicly accessible nature of parks needs to be continuously maintained and worked on. Cultural complexes can and should be positively shaped by whoever has power over that space, which in most cases is the territorial authority that Langegger’s (2017) study is concerned with.

It is not static or certain that a park will provide benefits that people can access. A good example of this is the responses from the questionnaire about what people wanted the Council to improve about the parks including that people felt unsafe in them at night. This feeling of safety is not fixed, so an event taking place at night in the park might make people feel safer, whereas an attack in the park would make people feel unsafe. How safe a park feels to the public is something that can change, so there is room to improve that status quo. This is reflected in health research. Bell et al. (2014) argue that often the wellbeing benefits of green spaces are stated without any acknowledgement of changing circumstances throughout someone’s life. Furthermore, Bell et al. (2014) argue that efforts

have been made to cut through to how person-specific factors might influence green space use. Despite this, we still know very little about the “more subtle and perhaps shifting values and identity orientations that affect individual interest and agency in interacting with such spaces, and whether individuals associate these interactions with feelings of wellbeing or otherwise” (Bell et al., 2014, p. 288).

### **5.3 Are Green Spaces Third Places in Central Wellington?**

The question remains whether publicly accessible green spaces third places? In answering this it is worthwhile going back to Oldenburg and analysing what he identified as threats to the loss of third places. When you start from this point, it becomes clear that a tension begins to emerge between those who use parks as places to relax and enjoy nature, and those who want a place to informally socialise. For many, informal socialisation could be seen as an interruption of their personal time enjoying the green space.

In *The Great Good Place*, Oldenburg argues that the loss of third place has led people to seek informal socialisation at work (Oldenburg, 1997). This increased informal socialisation at work has a multiplying effect, because it means that people are less likely to socialise in public space. Many go to the library for a quiet escape from other people. This pattern means that those who are not in formal work, like retirees, are excluded from informal socialisation because it is occurring in places that they cannot access. This has a compounding effect on loneliness. Oldenburg talks about the rituals of public etiquette being replaced by “strategies designed to avoid contact with people in public, devices intended to preserve the individual circle of privacy against any stranger who might violate it” (Oldenburg, 1997, p. 13). He goes on to claim that the result of this lack of informal public life is the cause of the diminishing of the cosmopolitan promise of our cities (Oldenburg, 1997). But this has an uneven effect. Those who socialise at work might avoid contact with other people at the park, which creates an atmosphere that is not social.

There is a tension between the park as an informal social place and as a place for relaxation. This tension was not apparent in all the parks in this study. While it was

clearly demonstrated in Midland Park, which is more popular with office workers, the children's playground in Frank Kitts Park acts as a place for informal gathering of parents watching their children. This demonstrates that these green spaces have multiple and changing purposes, only one of which is as a third place. The literature shows us that there is value in multipurpose and flexible spaces because they can provide benefits to a wider range of people than other third places like bars. As explained in the interviews by the Independent Expert (Consultant), green spaces connect people physically and emotionally if people want to be connected. Socialisation informally creates communities that are better connected and more resilient.

Research has proven that there is a measurable link between people's perceptions that third places are accessible in their community and their perceived quality of life (Jeffres, Bracken, Jian, & Casey, 2009). Another study found that opportunities to visit nearby public spaces improved neighbourhood satisfaction (Kearney, 2006). People feel better when there are third places, but specific factors influence whether a park is a third place.

This idea was explored further in Bell et al (2014). This research challenges an important assumption that is often made in green space health research; that where people have green space nearby, they will use it and enhance their experience wellbeing. A study from New Zealand has gone further and found that while engagement with a local green space can promote a certain amount of individual wellbeing, but this comes at the expense of others (Bell et al., 2014).

What if the way in which we socialise in public has changed? Another argument is that what is recognised as socialising has changed since *the Great Good Place* was published. This means that socialising that is less active has value too. In the interviews green spaces were described as valuable "bumping" spaces, and in the survey, people watching was often described as a reason for using the park. This more passive way of socialising presents an interesting challenge to Oldenburg's idea of what informal socialisation looks like. People watching was mentioned often as a reason that people enjoyed using the central city parks.

A crucial point made by Oldenburg is that his idea of third place tends to be outside commercial transactions. He writes that “the development of an informal public life depends people finding and enjoying one another outside the cash nexus” (Oldenburg, 1997, p. 13). As explained in the results, the public find comfort in green spaces because there is not an explicit cost to be a legitimate patron of them, like a café or bar. There can be a cost for social exclusion if a person is breaking cultural norms, and there is a cost associated with fines from the territorial authorities’ rules.

## **5.4 Further Research**

Bell et al. (2014) step through the gaps in the health-green space research that become evident from this study. They argue that while we are moving towards a better understanding of green-space and wellbeing, we still know relatively little about the more subtle and perhaps shifting values and identity orientations that affect individual interest and agency in interacting with such spaces. More research needs to be undertaken to refine the relationship between wellbeing and those values.

Helpfully, Bell et al. (2014) make four recommendations that emerge from their review to help to illuminate why parks are able to infiltrate people’s everyday routines:

- focus research questions on individual agency and connectedness to nature,
- increase funding for investigations in real time,
- shift focus towards the links between wellbeing and relational agency and wellbeing priorities shared with significant others, and
- undertake more studies focusing on the everyday lives and priorities of people.

Popular media has reflected that parks can have multiple and diverse meanings to people at different stages of life. “Nobody can say what a park means to all its users. Nobody knows what conversations are provoked as we stroll along, what agonies soothed or problems thought through” writes Clark (2018) in an essay in *the Guardian*.

Further research needs to also be done on how to encourage a quicker uptake of ecosystems services in existing green spaces. For example, it would be invaluable to have a strategy for encouraging city Councils to retrofit ecosystems services into their

existing spaces. The difficulty with this, and an area that this thesis did not address is the lack of capacity that territorial authorities have in New Zealand. Wellington City Council is one of the better resourced of New Zealand's city councils, so their resource capacity was less of a concern for this research. However, given that even in Wellington the public has a wide range of concerns about green space, a council with less capacity is certainly put in a more difficult position. Councils must balance a lot of land use demands, which is why the benefits and savings that can be made from good ecosystems services and consultation with users need to be emphasised and demanded. These areas of further research would benefit the Wellington City Council, as well as providing a strong case study for other cities globally.

# Chapter Six

## Conclusion

### **6.1 *A Wellington Study***

This thesis argues that public urban green space in New Zealand warrants as much national attention as our national and regional parks. Throughout the gathering of data, it was reinforced that these urban green spaces provide significant benefits for wellbeing, social cohesion, and well-designed urban form. The neighbourhood parks where we eat our lunch and watch our children play on swings have a more consistent impact on us than the bush which we only occasionally visit. Making this enquiry is important because how we understand the relationships between humans and nature is more about how we understand each other and how we mediate everyday life with each other through space.

In New Zealand, our scale has been a consistent barrier to considering the city park as being connected to the national park. We have a national population that is smaller than that of many cities overseas, and an image of ourselves as a rural, colonial pavlova paradise. Parks are public institutions that we've inherited.

Green spaces and the liveability of cities is a concern for wealthier cities like Wellington. Marcotullio investigates how global urbanisation has diverged among different cities in Asia (Marcotullio, 2003). They found that low-income cities are often dealing with critical environmental problems associated with rapid growth, like waste and water supply issues. Meanwhile high-income cities were locally concerned with maintaining a high quality of life for wealthier residents but contributed to regional or global issues like climate change or waterway pollution (Marcotullio, 2003). Public green spaces can improve the quality of human life and ensure that cities maintain a more compact spatial form. This means that green spaces in Wellington are one part of creating a more carbon efficient cities as emissions reduce.

The Town Belt is what the city promotes as its most important natural space. This

means that a sense of space, and connection with nature is imagined as separate from the central city. Through the interviews it became clear that this strategy was shifting and the green spaces in the central city area were being reconsidered for their capacity to provide ecosystem services. Changing dominant narratives about physical space can be difficult and it is disappointing to see the recommendations from Gehl Architects not fully implemented (Gehl Architects, 2004). In order to see a significant shift in the way that green spaces are designed or managed, the public need to be more engaged and informed about the potential ways that green spaces can benefit them.

## **6.2 *Ecosystem Services***

In some ways, awareness of ecosystem services pushes green space design further. We traditionally think about ecosystems in human terms. Expanding this to consider how we individually and collectively connect and contribute to the ecosystem reminds us that we are reliant on and a part of it. This up-ends the hidden subtext that the manicured grass and trees of traditional parks are a legitimate extension of a human dominance of nature.

The difficulty with ecosystem services is that although they challenge the notions of our relationship with nature, they are also often considered too difficult or impractical to include in design. There can be a push-back against what is seen as more complicated.

This gap between principles and practice needs to be closed. Scale may be the force that drives this. Where you have more people using a smaller area, like the rapid population increases that are predicted to occur in Wellington, there are more localised environmental impacts. These impacts can be mitigated with smart ecosystem services interventions. The ecosystem services framework is not about protecting ecosystems for their own sakes; the concept remains a human-centred one and retains critical aspects such as amenity (for humans), which is critical in densely built cities.

## **6.3 *These Green Spaces Can Be Better Third Places***

Groups of people remain unserved by some green spaces in Wellington. How people use space cannot be separated from how people hold power. This is seen through the enforcement of cultural complexes or what is permissible and what is not permissible in



the space. In the spaces studied, activities like big groups or cooking and behaviours like loud noises, dancing were not seen. These spaces are reserved for quieter, everyday activities.

These cultural complexes however appear to be malleable, once the evening began in Glover Park the groups there became louder and larger, because it shifted from a shady space to read a book or eat some lunch, to a space that was coded as being much more social. There was a similar effect in Midland Park, which after 5pm tended to become louder and more overtly social as people who finish work appear to use the bars surrounding the park in a more relaxed way. The fact that the same park can have different rhythm for what is permissible behaviour presents an interesting challenge for the concept of third place.

A third place has a physical space, but it also has a time. This means that green spaces can be imagined as being the setting for multiple third places, the children's playground, the coffee cart, and the beanbags connected to a bar at the edge of a park all represent moments where informal socialisation with diverse types of people will occur. This rhythm has been well documented by scholars like Lefebvre who wrote a long treatise with his wife, Catherine Regulier called *Attempts at Rhythm analysis of Mediterranean Cities* (Elden, 2004; Meyer, 2008). More attention needs to be given to the rhythm of public spaces including green spaces, because as Oldenburg explains, the concept of third place relies on a habitual sharing of good times, which is absolutely linked to sharing an everyday rhythm and regularly visiting the same park at the same time. Habit requires a predominantly consistent rhythm. This is an area that could be more deeply considered in the future of green space, what rhythm is this space being designed for, and how can we use those different rhythms to allow for a multifunctional third place. This research demonstrates Oldenburg's third place is useful for presenting the social benefits of green spaces (Oldenburg, 1997).

## **6.4 Environmental Gentrification**

A key consideration about third place is how gentrification and exclusion work against diverse communities. These forces build a form of community where people feel comforted by homogeneity. In these settings there is no concern about having to know the cultural complexes, because your culture is dominant in the space. A third place is comfortable because you can relate to the people who also use that space and gentrification means that people avoid being confronted by difference. In parks this looks like hostile anti-homeless features or strict enforcement of by-laws. On green space activists in Sydney, Leonie Sandercock observed that environmentalists care about the urban environment and are concerned about protecting it, but they are concerned with protecting it for themselves (Sandercock, 1974).

Inequalities can exist within individual parks, but this research has also shown that it needs to be consider how inequality exists between neighbourhoods. As Langegger (2017) argues, the gentrification of public space is often an early indicator that the neighbourhood is beginning to gentrify.

The research on neighbourhood deprivation levels and green spaces is clear (Blaschke et al., 2018; Whitburn, 2014). Low socioeconomic and ethnic minority people have access to fewer hectares of parks, fewer hectares of parks per person, and access to parks with lower quality, maintenance, and safety than more privileged people. This pattern has been confirmed as an international trend, through review of 49 empirical studies in developed countries (Rigolon, 2016). The literature shows that quality and quantity of green space positively impact wellbeing. This means that landscapes with high environmental health impacts like factories, around which the cheapest housing is located, need a high quality and high availability of green space available.

Further research has demonstrated that gentrification follows the revitalisation of spaces and where green spaces are redesigned and reactivated, house prices increase (Wolch et al., 2014). Once you start thinking about green space and the ways that our cities parks are valued and used, it becomes clear that a we need rigorous local public debate

## **6.5 *How Does the Public Benefit from Green Spaces?***

The political nature of urban green space complicates the benefit that the public experience. When we can get to them and access the natural space within them, parks provide us with wellbeing and community. Access is a spatial justice issue that city administrators need to be constantly advancing. This wellbeing is a larger function as their role as providers of ecosystems services. Councils are committed to work on the design and maintenance of these spaces because they recognise their duty to provide natural spaces, and their duty to manage ecosystems services. Councils also recognise the limitations of their role and their resources. But this balance is fragile, and problems can be amplified quickly through density and population increases, climate change induced extreme weather, and the increasing pressure on cities to compete for liveability.

In Wellington, central city parks are becoming more contested spaces. This is occurring as gentrification and cultural complexes lead to greater rates of social exclusion. Social exclusion is compounded as the green space availability per capita is decreases. This research has found that the public feel unsafe in parks, has difficulty accessing them, and do not always feel comfortable sharing them with other people. With the rapidly increasing central city population and transport links bringing more people into Wellington there will need to be public spaces for more people. The pressure put on parks does not just influence our individual experience but degrades the ecosystems services within those parks. This effects how the public benefit from green spaces.

This study also found that the Council can reduce the barriers to access, through design solutions, community engagement, and activation. Doing so allows our public parks become places where more people benefit from these green spaces. Third place, places where we can come together and socialise outside of our homes or work, emerge where there are excellent quality parks. This provides public wealth and improves quality of life. In cities we benefit from our relationship with the natural world. However, this relies on sharing space with each other and the Council facilitating these spaces for us.

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# Appendices

## *Appendix A: Information sheet for interviews*



### **How and how much does a city value the green spaces within a city centre?**

#### **INFORMATION SHEET FOR INTERVIEW PARTICIPANTS**

You are invited to take part in this research. Please read this information before deciding whether or not to take part. If you decide to participate, thank you. If you decide not to participate, thank you for considering this request.

#### **Who am I?**

My name is Elaine Gyde and I am a Masters student in Environmental studies at Victoria University of Wellington. This research project is work towards my thesis.

#### **What is the aim of the project?**

This project hopes to gauge how and how much Wellington values green spaces in the central city. These interviews hope to respond to and examine a public questionnaire which I have undertaken.

This research has been approved by the Victoria University of Wellington Human Ethics Committee #0000026312.

#### **How can you help?**

You have been invited to participate because you have experience working with public urban green space and have a unique perspective. If you agree to take part, I will interview you on the subject how green spaces are valued and the planning of urban green space in Wellington. The interview will take approximately 30-40 minutes, including questions on how you think the public use, and enjoy Wellington public green space, and where this could change or improve. I will audio record the interview with your permission and write it up later. You can choose to not answer any question or stop the interview at any time, without giving a reason. You can withdraw from the study by contacting me at any time before February 1<sup>st</sup> 2019. If you withdraw, the information you provided will be destroyed or returned to you.

#### **What will happen to the information you give?**

The research is not confidential, and you will be named in the final report.

Only my supervisors and I will read the notes or transcript of the interview. The interview transcripts, summaries and any recordings will be kept securely and destroyed on 1st October 2019.

**What will the project produce?**

The information from my research will be used in my Master's thesis and academic publications and conferences.

**If you accept this invitation, what are your rights as a research participant?**

You do not have to accept this invitation if you do not want to. If you do decide to participate, you have the right to:

- choose not to answer any question;
- ask that the recorder to be turned off at any time during the interview;
- a copy of the interview transcript, which can be made available to review by emailing me before February 1<sup>st</sup> 2019;
- withdraw from the study before February 1<sup>st</sup> 2019;
- ask any questions about the study at any time;
- receive a brief summary of the results of the study by emailing gydeelai@myvuw.ac.nz;

**If you have any questions or problems, who can you contact?**

If you have any questions, either now or in the future, please feel free to contact either:

**Student:**

Name: Elaine Gyde  
University email address:  
gydeelai@myvuw.ac.nz

**Supervisors:**

Name: Ralph Chapman	Name: Rebecca Kiddle
Role: Associate Professor	Role: Senior Lecturer
School: School of Geography, Environment and Earth studies	School: School of Geography, Environment and Earth studies
Phone: 04 4636153	Phone: 04 4636119
Ralph.chapman@vuw.ac.nz	Rebecca.kiddle@vuw.ac.nz

**Human Ethics Committee information**

If you have any concerns about the ethical conduct of the research you may contact the Victoria University HEC Convenor: Dr Judith Loveridge. Email [hec@vuw.ac.nz](mailto:hec@vuw.ac.nz) or telephone +64-4-463 6028.

## Appendix B: Information Sheet for the Survey Questionnaire

### How and how much does a city value the green spaces within a city centre?

#### INFORMATION SHEET FOR QUESTIONNAIRE PARTICIPANTS

You are invited to take part in this research. Please read this information before deciding whether or not to take part. If you decide to participate, thank you. If you decide not to participate, thank you for considering this request.

#### Who am I?

My name is Elaine Gyde and I am a Masters student in Environmental studies at Victoria University of Wellington. This research project is work towards my thesis.

#### What is the aim of the project?

This project hopes to gauge how and how much the public in Wellington values green spaces in the central city. This research has been approved by the Victoria University of Wellington Human Ethics Committee #0000026312.

#### How can you help?

You have been invited to participate because you are a member of the public who is using an urban green space. If you agree to take part, you will be given a short questionnaire to fill out about how you use this green space.

You can choose to not answer any question or stop the questionnaire at any time, without giving a reason.

#### What will happen to the information you give?

This research is confidential. This means that only I will be aware of your identity, but will not be collecting your name or any other identifiable information. By answering it, you are giving consent for us to use your responses in this research. Your answers will remain completely unidentifiable. Once you submit the survey, it will be impossible to retract your answer. Please do not include any personal identifiable information in your responses.

#### What will the project produce?

The information from my research will be used in Master's thesis and academic publications and conferences.

#### If you have any questions or problems, who can you contact?

If you have any questions, either now or in the future, please feel free to contact either:

Supervisors:		
<b>Student:</b> Name: Elaine Gyde University email address: gydeelai@myvuw.ac.nz	Name: Ralph Chapman Role: Associate Professor School: School of Geography, Environment and Earth studies Phone: 04 4636153 Ralph.chapman@vuw.ac.nz	Name: Rebecca Kiddle Role: Senior Lecturer School: School of Geography, Environment and Earth studies Phone: 04 4636119 Rebecca.kiddle@vuw.ac.nz

#### Human Ethics Committee information

If you have any concerns about the ethical conduct of the research you may contact the Victoria University HEC Convenor: Dr Judith Loveridge. Email [hec@vuw.ac.nz](mailto:hec@vuw.ac.nz) or telephone +64-4-463 6028.



## ***Appendix C: Survey Questionnaire***

**The purpose of this question is to general get some initial information about you**

Q1 Do you live in Wellington central city?

▼ Yes ... No

Q2 What is your favourite green space or park in the central city?

Q3 Generally, how satisfied are you with the provision of public green spaces in Wellington central city?

- ☐ Extremely satisfied
- ☐ Somewhat satisfied
- ☐ Neither satisfied nor dissatisfied
- ☐ Somewhat dissatisfied
- ☐ Extremely dissatisfied

**The purpose of the following questions is to create a snapshot of how the public uses this park**

Q4 How often do you visit this park?

- ☐ Daily
- ☐ 2-3 times a week
- ☐ Once a week
- ☐ Monthly
- ☐ Not often

Q5 what times of the day do you this park? Please rank the times of the day 1= most often 3= least often (if you never visit at a certain time please leave blank)

\_\_\_\_\_Morning (7am-Noon)

\_\_\_\_\_Afternoon (Noon-5pm)

\_\_\_\_\_Evening (5pm-on-wards)

Q6 What do you use this park for? (select all the relevant options)

☐

I exercise here

☐

I sit and eat here

☐

I walk through on my way to somewhere else

☐

I come to meet friends here

☐

I like to enjoy nature here

☐

I bring my pet here

☐

Other: \_\_\_\_\_

**The purpose of the following questions is to hear your opinions about this park**

Q7 What do you like about this park? List up to three things

☐ 1. \_\_\_\_\_

☐ 2. \_\_\_\_\_

☐ 3. \_\_\_\_\_

Q8 How could the Wellington City Council make this park better? List up to three things

☐ 1. \_\_\_\_\_

☐ 2. \_\_\_\_\_

☐ 3. \_\_\_\_\_