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Examining the Contribution of Public Spaces to the Implementation of Inclusive Urban Strategies: A Case Study of eThekweni Municipality

Submitted in fulfilment of the requirements of the degree Master of the Built Environment in Urban and Regional Planning in the Faculty of Engineering and the Built Environment at the Durban University of Technology

Ethics Clearance Number: IREC 202/23

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ABSTRACT

This thesis explores the multifaceted role of public spaces in urban environments, demonstrating that they are not merely physical locations but dynamic social areas where power relations, cultural practices, and everyday experiences converge. Drawing on the theoretical frameworks of David Harvey's "*Spatial Matrix*" and Henri Lefebvre's '*Spatial Triad*', this research emphasises that public spaces are socially produced entities that can both reflect and challenge broader social, economic, and environmental inequalities. Central to this study is the concept of inclusivity, which highlights the potential that well-designed public spaces can generate for urban communities.

Through a city-wide public space strategy rooted in inclusivity and the right to the city, urban planners have a critical role to play in addressing these inequalities and fostering public spaces that are accessible, equitable, and vibrant. This thesis argues that strategic, data-driven planning and continuous community engagement are essential to maximising the dividends that public spaces can provide. Drawing upon research findings obtained through a mixed-methods approach, this study proposes a conceptual model for optimizing the benefits of a Public Space Dividend. The model highlights both the immediate advantages for individuals and communities and the long-term contributions to broader urban development objectives, including social cohesion, economic resilience, environmental sustainability, and enhanced civic engagement.

Future research should continue to explore innovative approaches to public space design that prioritise underrepresented groups and create environments where everyone feels welcome and valued. The findings of this research underscore that the future of urban living hinges on creating inclusive, resilient public spaces that reflect the diverse populations they serve.

DECLARATION

With this, I declare and confirm that: -

- I am the sole author of the written work herein;
- I have compiled the work in my own words, and where other people's work has been used, their work has been acknowledged and referenced as per the University referencing guideline;
- I am aware that the work may be screened electronically for plagiarism and This work has yet to be submitted to any university before.

_____ Date 21 March 2025

Mr Puvendra Akkiah

DEDICATION

I dedicate this thesis to the many individuals who have stood by my side and provided unwavering love, support, and sacrifice throughout this journey.

First and foremost, I thank God for the life I have been blessed with and His endless grace in all areas of my life. Your guidance and blessings have been my source of strength and hope.

My parents, Mr. and Mrs. Akkiah, thank you for your immense sacrifices to provide me with the best opportunities possible. Your unwavering support and belief in me have shaped me into who I am today. It is because of your love, sacrifice, and constant encouragement that I have been able to achieve this milestone.

To My Wife, Sharon and children Sohalia and Someshwar, thank you for consistently ensuring that I keep my eye on the goal and allowing me the space and time to complete the required research.

I am deeply grateful to my supervisors, Dr Godfrey G. Musvoto and Dr Robynne Hannsman, for their guidance, patience, and support throughout this study. I am thankful that we have reached this point together.

Finally, I thank my friends, family, and colleagues who have supported me along the way. Your love, assistance, and encouragement have been invaluable, and I am forever grateful for your presence in my life.

This thesis is a testament to the strength of the community surrounding me, and I share this achievement with all of you.

"A truly successful public space is one where users form an authentic connection with their surroundings, rather than merely an artificial relationship." P.Akkiah, Engelsberg, UN Habitat Public Space Expert Group Meeting, 2018

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ACRONYMS

ANC	African National Congress
BDM	Building Development Management
CBA	Critical Biodiversity Areas
CFU/ml	Colony Forming Units per millilitre
CTSDF	Cape Town Spatial Development Framework
CTUDP	Cape Town's Urban Design Policy
DUT	Durban University of Technology
D'MOSS	Durban Metropolitan Open Space System
E.Coli	Escherichia Coli
GDP	Gross Domestic Product
GIS	Geographic Information Systems
IDP	Integrated Development Plan
IRB	Institutional Review Board
IUDF	Integrated Urban Development Framework
KZ-N	KwaZulu-Natal
LC's	Local Councillors
LAP	Local Area Plan
LTDF	Long-Term Development Framework
LUMS	Land Use Management System
LUPO	Land Use Planning Ordinance
MSA	Municipal Systems Act (No. 32 of 2000)
MSA	Municipal Structures Act (No. 117 of 1998)

MTREF	Medium Term Revenue and Expenditure Framework
NBR	National Building Regulations
NDP	National Development Plan
NEMA	National Environmental Management Act (No. 107 of 1998)
NHRA	National Heritage Resource Act (No. 25 of 1999)
NTA	National Transport Act (No. 5 of 2009)
NO ₂	Nitrogen Oxide
NUA	New Urban Agenda
PGDS	Provincial Growth and Development Strategy
PSDF	Provincial Spatial Development Framework
PUD	Planned Unit Developments
RAG	Road Access Guidelines
RETF	Radical Economic Transformation Framework
SACN	South African Cities Network
SDF	Spatial Development Framework
SDG's	Sustainable Development Goals
SDP	Spatial Development Plan
SMMEs	Small and medium-sized enterprises
StatsSA	Statistics South Africa
UDP	Urban Development Policies
UN	United Nations
UN-Habitat	United Nations Habitat (United Nations Human Settlements Programme)
WC	Ward Councillor

1. CHAPTER ONE: - INTRODUCTION

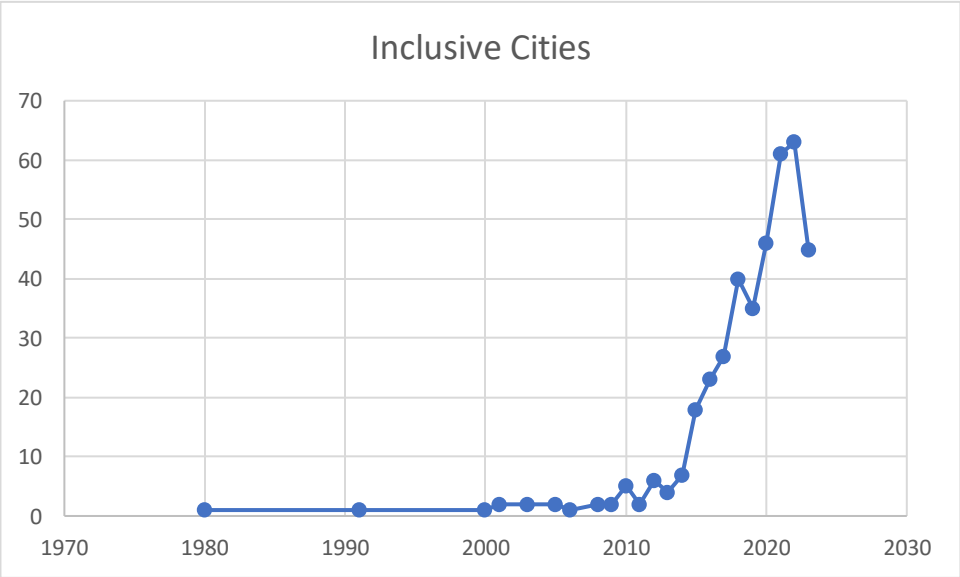
1.1 Introduction and background to the research

The demand for public spaces characterised by safety, accessibility, and inclusivity has gained prominence in an era of rapid urbanisation. As cities evolve, they undergo profound socio-spatial transformations, evidenced by the reconfiguration of public spaces (Landman, 2018). However, municipalities grapple with significant challenges: rising unemployment, stark inequalities, and deepening poverty, as Francis (2019) aptly highlights. At the same time, local governments are invigorated by global sustainability commitments, such as the Paris Climate Change Agreement (2015), the New Urban Agenda (2016), and the ambitious Sustainable Development Goals (SDGs) established in 2015. These frameworks challenge local authorities to promote sustainable development, aiming to create a more prosperous and equitable urban future for all inhabitants (Berringer et al., 2011). Adopting the New Urban Agenda (NUA) under the auspices of UN-Habitat in 2016, along with subsequent discussions at the World Urban Forums in 2018, 2020, and 2022, has provided cities with an unprecedented opportunity. This is a chance to enhance inclusivity, universal access to urban spaces, and the development of supportive infrastructure.

This research evaluates how a well-crafted public space strategy can contribute to building an inclusive city while advancing sustainability objectives. The intrinsic link between sustainability and inclusivity is evident in cities' need to embrace these concepts and foster social equity as core components of sustainable development. According to the South African Cities Network (SACN), an inclusive city guarantees equal access to services, opportunities, and resources for all its residents, regardless of their background, income, or social status. In parallel, the Brundtland Report (1987:43), commissioned by the United Nations (UN), defines a sustainable city as one that *“meets the needs of the present without compromising the ability of future generations to meet their own needs.”*

The concept of inclusive cities has garnered significant attention within global academic circles. Scholars have delved into various dimensions of inclusivity, examining a spectrum of perspectives on inclusive growth. These urban design practices promote inclusiveness, evaluations of urban form inclusivity, and the development of policy frameworks. Such academic efforts have substantially enriched the knowledge and understanding of the subject. Groundbreaking work by Author's such as Lanchovichina and Lundström (2022) has introduced frameworks using mathematical models and quantitative approaches for inclusive urban development. Additionally, researchers like Dempsey et al. (2017) and Gupta and Vegelin (2016) have explored distinct aspects of sustainable urban development, focusing on social cohesion, spatial accessibility, inclusive economic growth, and cultural diversity. In contrast, Bunnell (2019) concentrates on outcomes and impacts from a public policy perspective. A burgeoning area of interest lies in the exploration of inclusion within the realm of smart city development, though this aspect remains outside the scope of the present research.

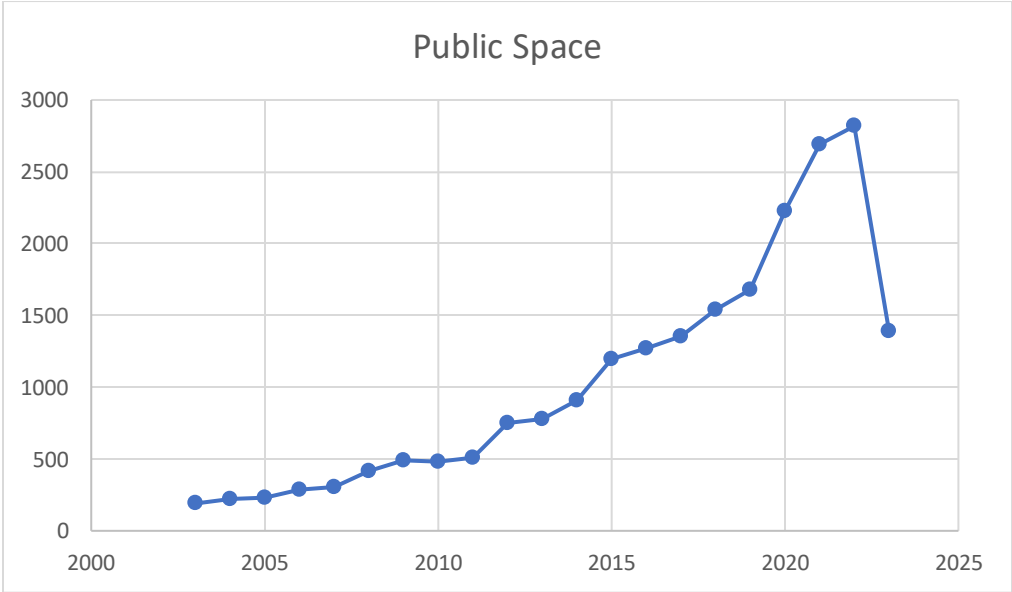
An analysis of keywords and their occurrences on SCOPUS reveals a marked increase in publications related to inclusive cities from 2000 to 2023, as depicted in Graph 1-1 below.



Graph 1-1: Number of articles and reviews from SCOPUS 2000 - 2023 on inclusive cities

Source: SCOPUS, 2024

A plausible explanation for the noticeable surge beginning in 2014 can be linked to the formation of the New Urban Agenda (NUA) and the Sustainable Development Goals (SDGs). These initiatives firmly embedded the concept of inclusive cities within the evolving global development paradigms. Simultaneously, the inclusion of public space considerations within these Global Agendas has gained significant traction, enhancing the potential for cities to achieve both inclusivity and sustainability. A related investigation on SCOPUS, employing "Public Space" as the central keyword, produced the results in Graph 1-2 below.



Graph 1-2: The number of articles and reviews relating to public space research (2000–2023)

Source: SCOPUS, 2024

In South Africa, inclusivity is enshrined as a foundational principle by the National Constitution of the Republic of South Africa Act (No. 108 of 1996). While the Constitution does not explicitly mention "inclusive cities," it sets forth the essential principles and parameters of citizens' rights, as articulated in Section Seven of the Bill of Rights. These rights - such as the right to dignity, equality, and freedom - collectively advocate for a socially inclusive, human-centred foundation for social life. Building upon these

constitutional ideals, the National Development Plan (NDP), adopted in 2011, and the Integrated Urban Development Framework (IUDF) of 2014 serve as critical documents that outline the vision and strategy for advancing inclusiveness in South Africa. Both frameworks draw their guiding philosophy from the inclusivity principles embedded in the Constitution.

Further cementing these ideals, the Spatial Planning and Land Use Management Act (SPLUMA) (No.16 of 2013), along with its subsequent regulations in 2015, weaves inclusive planning into its core, grounded in the principles of Spatial Justice, Spatial Sustainability, Efficiency, Spatial Resilience, and Good Administration. The KwaZulu-Natal Provincial Growth and Development Strategy (KZ-N PGDS), revised in 2016, and the 2021 Draft Spatial Development Framework provide a localised strategy that aligns with the NDP and the IUDF at the provincial level.

Inclusivity, spatial integration, and transformation strategies are actively localised at the local government level. Reddy (2016: 337) emphasises that local government occupies a critical role as the *“embodiment of grassroots governance and democratic representation,”* being the closest tier of governance to the people. It also bears the significant responsibility of ensuring essential service delivery. In this regard, the Integrated Development Plan, mandated by the Municipal Systems Act (MSA) (No. 32 of 2000), emerges as a critical strategy for fostering inclusiveness. Additionally, the Municipal Spatial Development Framework (2024) provides a spatial blueprint for city transformation, further supporting the pursuit of inclusivity in local governance. It is within this complex and layered context that this study examines the role public space can play in the realisation of inclusive cities

1.2 The research problem

Landman (2018) highlights a profound shift in the use, nature, and design of public spaces in South Africa over the past two decades. This research investigates whether the eThekweni Municipality has navigated this transformation through a coherent strategy encompassing policy, strategy, and implementation or whether it has continued to deliver public spaces in a fragmented manner, devoid of a unified strategic vision.

Iqbal (2021) reaffirms that public spaces are increasingly crucial in pursuing a more inclusive city. However, in the South African context, the evolution of public spaces has been fraught with challenges rooted in the legacy of colonial and Apartheid planning systems. Despite the repeal of Apartheid-era legislation and the introduction of progressive planning frameworks like the NDP and the IUDF, alongside the 2021 review of the KwaZulu-Natal PDGS, annual updates to Integrated Development Plans (IDPs), and other related policies, the transition to more inclusive urban environments remains complex. South African cities now possess the necessary frameworks to foster inclusivity and enhance public space provision. Yet, the key challenge lies in transforming the fragmented, sprawling, and inefficient urban landscapes inherited from the apartheid era into more cohesive and inclusive cities. Public space is often crucial in addressing these challenges, as reflected in numerous planning and development policies and initiatives (Madanipour, 2010).

This research thesis seeks to examine the extent to which the eThekweni Metropolitan Municipality has successfully used public space to transform its urban environment into a more inclusive one.

1.3 The purpose of the study

This research seeks to critically examine the strategies and methodologies employed by planners within the eThekweni Municipality, focusing on their efforts to cultivate inclusivity through developing and managing public spaces. The investigation aims to delve into the actions and initiatives undertaken to embed inclusivity within the urban fabric of the municipality, particularly in the realms of public space design, development, implementation, and management. By scrutinising these practices, the study aspires to provide insights and recommendations to enhance inclusiveness in urban planning processes and improve the quality of public spaces within the eThekweni Municipality.

Drawing upon various case studies highlighting public space strategies as crucial mechanisms for achieving inclusive cities, this research identifies potential processes for eThekweni's planners to adopt and implement similar methodologies. The goal is to understand the current practices and explore how these strategies can be refined and

expanded to further the municipality's commitment to creating a more inclusive urban environment.

1.4 The aim of the research study

This research aims to examine the ways and extent to which the planners in eThekweni Municipality use public space to create inclusive cities.

1.5 The objectives of the study

The objectives of the study areas follows.

1. To investigate the form and function of current and past public spaces in eThekweni Municipality;
2. To establish how planners in eThekweni Municipality conceptualise and implement inclusive city practices through public spaces;
3. To identify the challenges faced by planners in creating inclusive public spaces in eThekweni Municipality; and,
4. To recommend strategies that can be implemented to improve the creation of inclusive public spaces in eThekweni Municipality

1.6 Key concepts and themes for this research

The Right to the City, inclusive cities, public spaces, municipal planning, and sustainable development are vital concepts directly related to the research problem. The paragraphs below provide brief definitions and explanations of these concepts related to the research study, which will be further expanded in the literature review in Chapter Two.

1.6.1 Public space

Relph (1976) argues that the concept of place and space functions at multiple levels and scales of understanding, a view supported by Low and Smith (2006). They contend that public spaces manifest in various forms, from streets and plazas to neighbourhoods and cities, and even extending to national governments. Thomas (1991)

further this discourse by interpreting public space as an essential element sustaining the public realm. Carr et al. (2006) offer a succinct definition, describing public space as areas accessible to the public and frequented for individual and group activities. Madanipour (1996) expands on this idea, emphasising that public spaces are free from the control of specific organisations or individuals. Building on this, he characterises public spaces as realms beyond the dominance of individuals or small groups, serving multiple, often overlapping, functional and symbolic purposes.

In a more recent interpretation, Madanipour (2014) conceptualises public spaces as crossroads, where different paths and trajectories converge, sometimes overlapping or colliding. They emphasise that these spaces function as intersections of politics and culture, social and individual territories, and instrumental and expressive concerns. Landman (2020) extends the concept of public space by integrating the notion of inclusivity. He argues that inclusive public spaces enable the accommodation of diverse groups within a community, thereby fostering physical and social inclusion.

In his translation of Henri Lefebvre's *The Production of Space* (1991), Nicholson-Smith provides a foundational perspective on understanding space through physical, mental, and social lenses. He asserts that spaces can be theoretically understood in absolute terms – related to scale, form, and function, It can also be conceptualised in relational terms, reflecting individuals' connections to a place, their experiences within that space, and intangible qualities such as the associated memory.

1.6.2 The Right to the City

Henri Lefebvre, the influential French Marxist philosopher, sociologist, and urban theorist, first introduced the Right to the City concept in his groundbreaking work *Le Droit à la Ville* in 1968. Since then, scholars and activists alike have expanded and deepened this concept, advocating for universal access to urban life and the active participation of all residents in shaping the cities they live in, regardless of their social or economic standing. Lefebvre (1991) argues that the Right to the City serves as a rallying cry and a profound demand, embodying a wide array of aspirations and claims. It represents a revolutionary

political project and ethical principle, advocating for the right to access physical urban spaces and the right to engage in decision-making processes that impact those spaces. Moreover, it encompasses the power to influence urban development's design, governance, and overall direction.

David Harvey, a leading geographer and urban theorist, significantly expanded on the Right to the City concept in 2012. Harvey (2004) emphasises that this right is crucial for creating more just and equitable cities, directly challenging the entrenched power structures that sustain urban inequalities.

The development of the Right to the City has also been enriched by contributions from scholars like Mitchell (2003), who explores how marginalised communities are often excluded from urban spaces. This complex and multifaceted concept remains central to debates on urban justice and equity, highlighting the importance of participatory democracy, social and economic equality, and the empowerment of individuals to shape the cities they inhabit actively.

1.6.3 *Inclusive cities*

In academic discourse, inclusive cities are typically defined as urban environments designed and managed to ensure that all residents, regardless of socioeconomic status, race, ethnicity, gender, or other distinguishing characteristics, have equal access to opportunities and services. The primary objective of inclusive cities is to reduce inequalities and promote social cohesion by prioritising the needs and perspectives of marginalised and vulnerable populations.

Davis et al. (2022) have described an inclusive city, emphasising social inclusion, democratic governance, and environmental sustainability as key requirements. They refine this concept by identifying cities that actively reduce social and economic disparities and strive to enable full civic participation for all residents. The importance of providing essential services within a social justice and equity framework while advocating for initiatives to eradicate discrimination and exclusion is underscored in their research.

1.6.4 Sustainable development

The principle of sustainable development is rooted in the idea of fulfilling the needs of the present without compromising the ability of future generations to meet their own needs. This multifaceted approach goes beyond balancing economic, social, and environmental factors; it requires a comprehensive, long-term perspective recognising the interconnections among various systems and stakeholders.

Lele (1991) describes sustainable development as a holistic and integrated framework that balances human activity's economic, social, and environmental dimensions. He further emphasises the importance of meeting basic human needs while ensuring responsible and ethical use of natural resources. Expanding on this idea, Folke et al. (2016) argue that sustainable development is inherently transformative, aiming to reshape the global economy toward more significant equity, inclusivity, and environmental sustainability. This transformation involves addressing the fundamental causes of social and environmental issues and building resilient systems capable of adapting to future challenges and uncertainties.

In essence, sustainable development is a complex and nuanced concept, underscoring the necessity of a long-term outlook and the delicate balancing of economic, social, and environmental considerations in decision-making and policy formulation.

1.6.5 Municipal planning

The Municipal Systems Act (No. 32 of 2000), as amended, establishes the legal framework that underpins municipal planning in South Africa. Within the sphere of urban governance, municipal planning is a critical function that involves formulating and implementing comprehensive strategies for the use and development of land and essential infrastructure within municipalities. This responsibility predominantly lies with local governments entrusted with providing vital services to their communities. The scope of municipal planning is broad, encompassing activities such as zoning control, land use regulation, and formulating spatial development frameworks.

According to Zakhour et al. (2018), municipal planning essentially governs land development within a municipality. This includes creating Spatial Development Frameworks (SDFs) and Town Planning/Land Use Schemes and identifying key areas like biodiversity hotspots, environmental protection zones, and potential economic development corridors and precincts. These spatial plans are indispensable tools that guide land use planning and regulation by applying development controls (Abrantes et al. 2016).

The Municipal Systems Act (No. 32 of 2000), as amended, highlights that municipal planning involves several crucial tasks, including the identification and assessment of community needs and priorities. It also requires formulating long-term and short-term land use and infrastructure development plans. Municipal planning also necessitates integrating and coordinating these plans with other municipalities and governmental levels. This process is further enriched by active engagement with communities and stakeholders, ensuring their feedback and perspectives are incorporated. Finally, continuous monitoring and evaluation are essential to track progress and ensure the achievement of planning objectives.

1.7 The structure of the research

This dissertation is organised into seven chapters, beginning with an introductory chapter that sets the stage for the research. This initial chapter outlines the core components of the study, including the research problem, aims, and objectives. Chapter Two delves into the relevant literature and theoretical foundations that support and contextualise the study. This chapter presents the theoretical framework alongside planning theories and precedent studies, drawing on local and global perspectives.

Chapter Three focuses on analysing best practices sourced from the Global South, offering insights into successful approaches in similar contexts. Chapter Four then narrows the lens, providing a comprehensive analysis of public spaces within the suburb of La Lucia in the eThekweni Municipality.

Chapter Five presents the research methodology, offering a detailed justification for the chosen research approach. The chapter discusses the underlying research philosophy,

introduces the specific methods employed, and outlines the study's population and sampling size. It also details the data collection techniques and tools used while addressing validity, reliability, and ethical considerations.

In Chapter Six, the dissertation presents a thorough analysis of the findings, drawing on both primary and secondary data sources. Chapter Seven's final chapter synthesises the research by summarising the key findings and offering conclusions. It also proposes directions for future research, highlighting areas that warrant further exploration.

1.8 Conclusion

In her seminal work, Jacobs (1961:125) emotionally describes public spaces as stages for a "*sidewalk ballet*," where individuals from diverse ages, races, and backgrounds come together, engaging in spontaneous acts of community and belonging. This metaphor encapsulates the essence of vibrant urban life spaces where social interaction and civic engagement naturally flourish. Within this context, this research aims to critically examine the extent to which the eThekweni Metropolitan Municipality (EMM) has harnessed the transformative potential of public spaces to foster a more inclusive city. As cities worldwide grapple with urbanisation's challenges, the role of public spaces as catalysts for social cohesion and inclusion cannot be overstated. This study will delve into how the eThekweni Municipality has approached the design, development, and management of public spaces to encourage interaction among various demographic groups, ultimately contributing to a more socially integrated and civically engaged urban environment.

This Chapter has laid the groundwork by outlining the research problem, aims, and objectives and situating the study within the broader theoretical frameworks of urban planning and social inclusion. Moving forward, the research will explore how the principles of inclusivity and accessibility have been implemented within the municipality's urban planning strategies. By investigating the policies, methods, and practical implementations, this thesis highlights the successes and challenges the eThekweni Municipality faces in utilising public space as a tool for urban transformation. Through this exploration, the study will offer critical insights and recommendations on how public

spaces can be more effectively leveraged to promote inclusivity and foster community across diverse populations.

2. CHAPTER TWO: - CONCEPTUAL AND THEORETICAL FRAMEWORK

2.1 Introduction

Drawing on Jacobs' (1961:125) evocative concept of the "*sidewalk ballet*," this chapter establishes the theoretical framework for this research by delving into the conceptualisation of urban spaces as articulated by Lefebvre (1991) and Harvey (1992, 2004). By exploring the interconnected theories proposed by Lefebvre, Harvey, and other key scholars, the chapter seeks to deepen an understanding of the intricate relationship between society, space, and urban planning practices. It focuses on the significance of public spaces. The seminal contributions of Harvey and Lefebvre are central to this discussion, providing a comprehensive perspective on the nature of public space and the concept of the '*Right to the City*'. This chapter critically assesses how these theoretical constructs shape and inform contemporary urban planning practices.

To lay the groundwork for this analysis, the chapter begins by establishing a foundational understanding of the concept of public space and carefully defining its scope and significance. The discussion then examines how theories related to the production of space and the '*Right to the City*'. reveal the complex and multi-faceted impact of public spaces on urban spatial design.

The subsequent sections thoroughly examine David Harvey's works (1992, - 2004), emphasising his interpretation of '*absolute, relative, and relational spaces*'. It is crucial to acknowledge that Harvey's exploration of the production of mental, physical, and social spaces is deeply rooted in the earlier writings of Henri Lefebvre, whose ideas serve as a cornerstone for understanding contemporary urban dynamics.

To gain a comprehensive understanding of the production of public space and the development of inclusive cities, particularly within the context of Durban, the chapter refines and clarifies these key concepts through a literature review. The findings from this review are intended to highlight the intrinsic value that public spaces hold for both

residents and local governments, emphasising their crucial role in fostering the growth of inclusive urban environments.

As this theoretical exploration transitions to an empirical investigation, the stage is set for critically examining how the eThekweni Metropolitan Municipality (EMM) has utilised public spaces as a mechanism for social and spatial change.

2.2 Henri Lefebvre

Henri Lefebvre, the distinguished French philosopher, shaped spatial theory through his exploration of the production of space and the concept of the *'Right to the City'*. His seminal work, *The Production of Space* (1974), originally published as *La Production de l'Espace* in French and later translated into English by Donald Nicholson-Smith in 1991, is widely regarded as fundamental by scholars such as Ghulyan (2019) and Zhang (2006), with Merrifield (2013) who further highlights its critical significance.

In *The Production of Space*, Lefebvre introduces two interrelated theoretical frameworks. The first offers a historical perspective on how space has been produced within European communities, A second presents the *"unitary theory,"* which emphasises the interconnectedness of mental, social, and material spaces. This unitary theory, also known as the *'Spatial Triad'*, has been further explored by scholars such as Ghulyan (2019) and Nkooe (2018), who delve into its three core elements: - *'representational space, the representation of space and spatial practices'*.

Lefebvre's initial framework aims to draw connections between contemporary urban struggles and the historical processes that have shaped space within society. Boer (2015) contends that Lefebvre's classification of urban space reflects a revival of Marxist periodisation, highlighting distinct historical approaches to production. By examining the varied methods of producing urban spaces, Lefebvre reveals specific histories and eras. He provides insights into the spatial characteristics of hunter-gatherer communities, ancient production modes, and the capitalist system. Ghulyan (2019) and Boer (2015) note his conceptualisations of *'absolute space'*, *'historical space'*, and *'abstract space'* offer valuable perspectives on the dynamics of different societal formations.

Rooted in Marxist principles, Lefebvre's historical examination uncovers a deep correlation between spatial design and the prevailing social divisions of labour (Ghulyan, 2019; Boer, 2015). He argues that the dominance of the ruling class is crucial for maintaining the existing spatial order, which perpetuates the struggle between social classes in urban environments and the subjugation of marginalised populations. Like Karl Marx, Lefebvre remains optimistic, asserting that residents can enact transformative changes through their spatial practices and physical demonstrations (Lefebvre, 1991). Such changes could enhance democratic influence over urban space design, prompting a critical analysis of "*the historical development of space and representations, as well as their interconnections with each other, with practical actions, and with ideology*" (Lefebvre, 1991:42). Ghulyan (2019) suggest that this periodisation framework bolsters the effectiveness of Lefebvre's theory in both exploration and analysis.

However, critics like Ghulyan (2019) and Mwathunga (2014) argue that Lefebvre's spatial periodisation framework is grounded in a linear, Euro-centric paradigm, which tends to overlook the development of non-European societies. Lefebvre (1991) expresses dissatisfaction when his theory was detached from its original context and employed merely as a descriptive tool for comparative purposes. To fully comprehend the current spatial order within the broader context of the eThekweni Municipality, Lefebvre's (1991) historical contributions should be integrated into research as an analytical technique rather than a standalone methodology. Researchers can guide their analysis more effectively by leveraging Lefebvre's (1991) insights into actual, abstract, and historical spaces. Lefebvre's (1991) periodisation framework thus serves as a tool for understanding the various material manifestations within a society, its historical trajectory, and specific institutions. Accordingly, this study investigates the history of public spaces within the South African context and utilises Lefebvre's (1991) conceptualisation of spatial timelines as a critical analytical lens.

The second and perhaps most widely recognised conceptual framework in Lefebvre's (1991) writings is the unitary theory, commonly referred to as the '*Spatial Triad*'. This theory, further elaborated by academics such as Ghulyan (2019) and Nkooe (2015), was

developed by Lefebvre (1991) as a means of interpreting the interdependence between mental, social, and material spaces.

Lefebvre's '*Spatial Triad*' theory draws from Hegel and Marx's idealistic and materialist philosophies. According to Eden (2004), Hegel's framework argues that an individual's perception, response, and interaction with spatial situations are rooted in their mind or spirit. Conversely, Marx's philosophy contends that space and human activities are shaped by situations, activities, and intentions rather than merely by subjective mental states. By integrating the ideas of both Hegel and Marx, Lefebvre's '*Spatial Triad*' theory offers a comprehensive framework for understanding the complex interplay between the cognitive, social, and material dimensions of space. It acknowledges the influence of subjective perceptions while recognising the impact of objective factors in shaping spatial experiences and social relations.

Lefebvre's conceptualisation of space acknowledges it is not only a product of mental constructs. It emphasises the reciprocal relationship between these constructs and spatial trends. This perspective underscores space's dynamic and ever-evolving nature, continually shaped by socio-economic forces. Lefebvre effectively connects the production of space with social processes, integrating the foundational principles of idealism and materialism.

The '*Spatial Triad*' identifies three distinct yet interconnected categories of space: '*perceptual space, conceptual space, and symbolic space*'. Lefebvre's rejection of a fragmented view of space in favour of one that recognises the interconnections and overlaps among these categories is deeply rooted in his Marxist perspective. The unitary theory, often referred to as the '*Spatial Triad*', is grounded in Lefebvre's key concepts highlighted in Figure 2-1, of *perceived space, conceived space, and lived space* (Lefebvre, 1991:33-39). These concepts highlight space's intricate and multi-faceted nature, encompassing spatial practices, representations of space, and the subjective, experiential aspects of it. By integrating these dimensions, Lefebvre provides a comprehensive framework for analysing the complexities inherent in the production of public space.

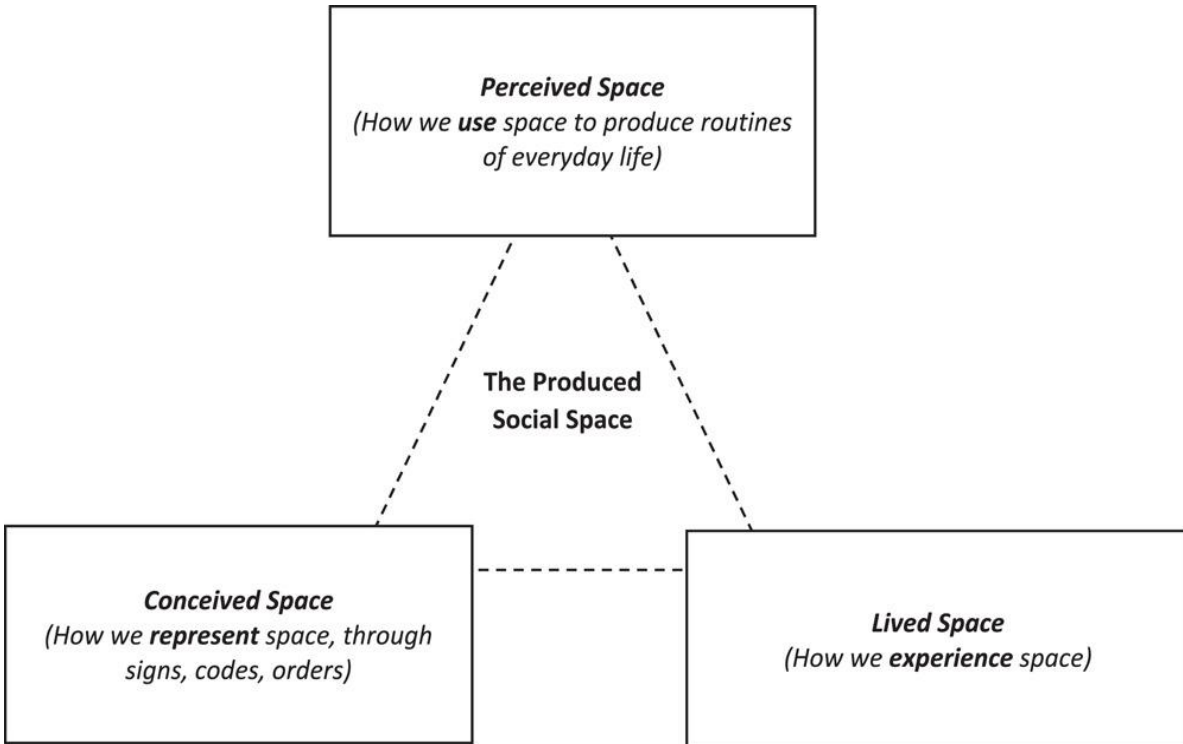


Figure 2-1: Lefebvre’s Unitary Theory (*‘Spatial Triad’*) framework

Source: Strus et al. (2023:3)

2.2.1 Perceived space

Henri Lefebvre’s (1991) concept of *perceived space* refers to the physical environment that individuals encounter and interact with daily. It encompasses the tangible aspects of space—those that can be seen, touched, and experienced directly. Expanding on Lefebvre’s idea, Buseer (2012), emphasises the sensory dimensions of *perceived space*. He highlights how sight, touch, and sound play crucial roles in everyday interactions with these environments. This broader understanding is echoed by Hubbard et al. (2003), who further argues that visible processes and spatial practices are deeply rooted in these ‘*perceived spaces*’.

Lefebvre (1991) highlights that '*perceived space*' comprises the societal environments people are familiar with and navigate routinely. He suggests that space serves as the structural framework for everyday activities, anchoring social practices within a physical context. Merrifield (2013) underscores the importance of '*perceived space*' in fostering social cohesion. It is a vital link between the various domains of work, play, and leisure.

According to Lefebvre (1991:38), perceived spaces are constantly in "*physical, cognitive, and social transformation.*" These constant changes are significant because they contribute to the evolution of democratic practices in urban spaces (Baker & Blaagaard, 2016). Lefebvre advocates for directly observing societal activities to better understand these spatial dynamics. By analysing geographical space, one can discern the spatial practices that define society, whether directly experienced or conceptualised.

The influence of *perceived space* on human activities primarily stems from its physical structure and organisation. In urban planning, '*perceived space*' refers to the tangible and visible elements of the physical environment. This includes roads, buildings, public spaces, and other urban structures. Zhang (2006) notes that '*perceived space*' also includes geometric forms, which is evident in architectural designs. The architectural layout, physical form, and elements within and surrounding public spaces make '*perceived space*' particularly noticeable.

2.2.2 Conceived space

Lefebvre's (1991:38) concept of '*conceived space*' delves into the cognitive and abstract dimensions that inform the norms and principles governing spatial planning. This type of space is brought to life through technical drawings, designs, and plans crafted by urban planners, architects, and other built environment professionals endowed with the legal authority and expertise to shape physical environments (Tang et al., 2010). '*Conceived space*' is pivotal in creating urban landscapes. It is influenced by governmental bodies and conveyed through architectural plans, blueprints, maps, and policies that seek to organise and control societal structures. Soja (1996), highlights that '*conceived space*' is closely tied to the perpetuation of political, ideological, and utopian visions shaped by professionals and political figures. The spatial practices within these places can either

align with or challenge existing ideologies. The use of mechanisms like surveillance, strategic planning, policy development, zoning regulations, and by-laws, is often designed to uphold normative ideals of what urban space should be (Ghulyan, 2019; Lefebvre, 1991; Zhang, 2006).

'*Conceived spaces*' are often associated with reductionist approaches in modernist spatial practices, observes Purcell (2002). The dominant urban planning paradigms of the 20th Century frequently prioritised technical rationality over socio-cultural considerations. Scholars such as Harvey (1992) and Healey (1996), identify instances where societal norms were contested within this context. The concept of '*conceived space*' is also closely linked to Lefebvre's notion of '*abstract space*', which embodies the dominance of capitalist spatial organisation. This prioritisation of exchange value over use value leads to uniformity and standardisation in urban spaces. Leary (2015) argues that '*abstract space*' reflects the advancement of capitalism facilitated by the state's manipulation of '*conceived space*'. Merrifield (1999) suggests that '*conceived spaces*' are shaped by the homogenising effects of finance, services, and capital, which diminish the richness of lived experiences. Efforts to impose societal uniformity are often met with conscious and sub-conscious resistance through everyday spatial practices, creating what Lefebvre calls "*differential space*". Leary (2015) further contends that developing inclusive public spaces shifts the focus from exchange value to use value, thereby asserting a right to public spaces.

Lefebvre (1991) asserts that '*conceived spaces*' are arenas for political practices. Their function is to exert control over individuals within those spaces. This use highlights their political and hegemonic nature, particularly in shaping public spaces in urban areas. Nkooe (2015) expands on this idea, arguing that the political dimension of '*conceived space*' confers significant power and authority within communities which are influenced by the state or government's conflicting political positions and technical expertise. The state can exert control over urban planners and other built environment professionals, directing their work to depict specific areas and shape societal and spatial customs according to its objectives. This dynamic is especially relevant in the South African context, where the Apartheid regime profoundly shaped perceived urban spaces. Scott (2003) asserts that Apartheid had a distinct approach to spatial organisation, using its

power to establish regulations that served ideological objectives based on race and separation. Lefebvre (1991) and Nkooe (2015) argue that '*conceived space*' is not neutral or passive. It is actively used to enforce regulatory control and domination of spaces, sometimes through extreme measures such as exclusion.

2.2.3 Lived space

The concept of '*lived space*' extends Lefebvre's theoretical framework by incorporating the fundamental human aspect of spatial experience (Lefebvre, 1991; Watkins, 2005). While perceived and '*conceived spaces*' contain prescriptive, capitalistic, and political elements that can lead to societal dehumanisation, Lefebvre (1991) argues that the inclusion of '*lived space*' aims to reintroduce the human element. This gives individuals autonomy in shaping their spatial environments and cultivating unique urban lifestyles. As conceptualised by Lefebvre (1991), '*lived space*' emerges from the tangible representation of '*perceived space*'. It is associated with the ideologies, powers, and normative standards of '*conceived space*'. Unlike physical and mental space, which often uphold the status quo, '*lived space*' exhibits adaptability, encompassing both perceived and '*conceived space*' without being solely equated to either.

Leary (2013) suggests that '*lived spaces*' involve intricate symbolism. There are emotional or historical links to specific locations. In contemporary contexts, spaces can evoke emotions related to belonging, sacredness, liberty, autonomy, and existential presence. According to Sözer (2016:18), '*lived space*' is significant in facilitating individual self-realisation, encompassing a range of human experiences, and includes emotions, sentiments, hopes, and ambitions.

In urban planning, lived experience pertains to the collective perceptions and experiences of communities residing within diverse neighbourhoods characterised by various urban structures, road networks, regulatory statutes, and construction standards. Concerns may include dissatisfaction with existing infrastructure, desires for autonomous governance, perceptions of safety or vulnerability due to an influx of new inhabitants, and hierarchical dynamics linked to property ownership. Like the previous two spatial concepts, '*lived space*' encompasses endogenous and exogenous factors that shape

individuals' experiences, including cultural influences, socialisation processes, racial dynamics, socio-economic class, and personal identity.

Lefebvre (1991) advocates elevating '*lived space*' from peripheral to central positions in spatial analysis. He argues that the contextual understanding of the concept should be fundamental in creating spaces that are encountered, appropriated, and experienced by society. '*Lived spaces*' encompass narratives, memories, and daily experiences that inform the conceptualisation of space and influence perception. However, as per Lefebvre (1991), the prevailing urban planning paradigm often emphasises '*conceived space*' over '*lived*' and '*perceived spaces*.' This preference perpetuates ongoing prejudices and reinforces dominance, regulation, and hegemony within society, as Merrifield (2000) noted.

Neglecting the significance of '*lived space*' can lead to the creation of spaces where residents and users are not actively involved in shaping and influencing space production or engaging in various forms of ownership, argues Purcell (2002). This results in a decline in society's active participation in urban space. It fosters a sense of displacement, disenfranchisement, and alienation. Ng et al. (2010), underscores the detrimental effects on societal identity and disruption to routine activities. Thus, incorporating space within societal contexts goes beyond physical actions, encompassing a multi-faceted interaction among the interrelated elements of '*perceived*', '*conceived*,' and '*lived spaces*', which exist concurrently and overlap. The exploration and understanding of urban spaces centred around human activities necessitate continuous reconfiguring in tandem.

2.3 David Harvey and the '*Spatial Matrix*'

David Harvey's (2004) theoretical framework, known as the '*Spatial Matrix*', is deeply rooted in the intellectual legacies of Henri Lefebvre and Karl Marx. Harvey has significantly contributed to political-economic thought and urban studies, by closely aligning with Marx's ideas on "*use value, exchange value, and value*". Building on Lefebvre's perspectives, Harvey conceptualises space as a complex matrix of '*absolute*', '*relative*', and '*relational*' dimensions. He advocates for a dynamic understanding of space, by emphasising its multi-faceted strength, vitality, and significance. These

characteristics are often underestimated - a view supported by Pugalys and Giddings (2011). Lefebvre and Harvey perceive space as "*alive and active*" thereby recognising its inherent power and vitality.

Expanding his ideas in 2004, Harvey contends that space encompasses a rich tapestry of encounters, memories, values, activities, and interactions. To comprehensively examine urban space, urban transformation, justice, and socio-economic processes, Harvey (2004) underscores the necessity of considering these elements. He further argues that space is a battleground where individuals with differing interests engage in conflict. Contrary to the notion that space is inherently, '*absolute, relative, or relational*', Harvey (1992) argues that its characteristics are contingent upon specific conditions and human practices. Moreover, he suggests that space cannot be confined to being merely '*perceived*', '*conceived*', or '*lived*'. Rather, it possesses the potential to embody any combination of these dimensions.

2.3.1 Absolute space

Harvey (2004:2) defines '*absolute space*' as a "static and unchanging entity serving as a physical framework for organising and documenting various societal events. This spatial environment assumes a regulatory function, establishing pathways, norms, and modes of interaction within its boundaries. Sheppard (2008) extends this opinion that conceptually, '*absolute space*' can be envisioned through cadastral mapping, utilising geometric, mathematical, and standardised measurement techniques. In parallel with Lefebvre's notions of '*perceived space*', '*absolute space*' encompasses materiality and tangible entities comprehensible through sensory faculties. Belkind (2007) and Whaley (2018) assert that quantifying and mapping space within a three-dimensional grid system are considered crucial elements of absolute space. Their interpretation includes buildings for public use, road infrastructure, public squares, and other components of the built environment.

Harvey (2004) argues that city administrators and urban planners exert control over '*absolute space*' by managing its physical configuration and design components.

According to Lefebvre (1991), these controls represent dominant influences in urban environments. They enable planners to regulate and mitigate ambiguities and inconsistencies. For example, poorly designed public spaces with inadequate seating and insufficient lighting may deter prolonged use or limit engagement during certain times. Thus, the management of actions and behaviours within a given space can be regulated, exemplifying the exertion of control by those with the authority to shape public areas deliberately.

'*Absolute space*' plays a pivotal role in society as a mechanism for domination, order, and control from geographic locations to the allocation of human settlements. Middlemann (2020) argues that the power exerted by '*absolute space*' often faces active challenges and opposition from society, a view supported by Nkooe (2015). Mitchell (2003) acknowledges the significant impact of the concept highlighting its authority derived from its visible existence. However, he contends that the conceptualisation of space inevitably arises from society's active interaction with it. Similarly, Middlemann (2020) suggests that regulated urban spaces foster a passive encounter with the spatial surroundings. Nevertheless, societies retain the ability to alter space through spatial practices that challenge existing norms and construct alternative interpretations rooted in subjective perceptions. The spatial practices of society pose a formidable challenge to the authority of '*absolute space*', revealing the contradictory and contested nature of this power dynamic.

2.3.2 *Relative space*

Harvey's concept of '*relative space*' is intricately intertwined with Einstein's theories. Harvey (2004) asserts that the choice of a spatial framework depends on the object of relativisation and the entity responsible for it, emphasising the ontological relationship of space. Einstein argued that all measurements are contingent upon the observer's reference points, highlighting the observer's role in determining '*absolute space*'. Thus, understanding all measurements necessitates acknowledging the critical role of the observer's framework, and underscores the importance of '*relative space*' (Perrault, 2012). This observation implies that achieving a completely accurate representation of

the Earth's surface through a scaled map is unattainable due to the influence of one's location relative to measurement.

Harvey (2004) suggests that '*relative space*' pertains to the spatial domain shaped by the mobility of individuals, financial transactions, capital flows, resource allocation, technological advancements, and asset distribution within the capitalist system. This is a view supported by Castells (1996). Understanding the complexity of urban public spaces requires an examination of social hierarchies and the dynamic interplay between economic resources, workforce dynamics, technological advancements, and spatial arrangements. The perception of space is influenced by various viewpoints, leading to a diverse array of urban public spaces. Individuals with unique resources occupy different geographic locations within the city. Consequently, within urban planning, the notion of '*relative space*' necessitates the examination of various regulations, statutes, and structures governing socio-spatial phenomena. Neglecting this plurality undermines the significance of these regulations and structures.

Drawing from Harvey (2006), comparisons among different spatial frameworks offer insights into political decision-making. For instance, one demographic group's allocation of spatial resources may marginalise another. When considering individuals' lived experiences, this displacement can evoke feelings of subjugation and discontent within the marginalised group while fostering a sense of security and stability within the privileged group. Individuals with different frames of reference may interpret a shared spatial environment in divergent ways, prompting critical inquiries into the nature of democracy. Democracy is inherently attuned to the perspectives of the majority. However, it may unintentionally marginalise minority viewpoints, posing challenges in urban areas with heterogeneous populations. This necessitates inclusive public space regulations, designs, and structures that account for inherent subjectivity.

The concept of '*relative space*' raises fundamental questions about whether normative principles endorsed by urban designers and planners can effectively realise democratic ideals. This observation highlights the inherent subjectivity surrounding the interpretation of individual freedom, which can lead to the oppression of others depending on perspectives. Furthermore, '*relative space*' emphasises that actions or strategies initially

perceived as effective can have unforeseen repercussions for various parties, fulfilling different objectives. This underscores the notion that efforts toward homogenisation, often justified by conceptualised space, tend to result in differential space, necessitating further homogenisation. Consequently, pursuing utopia becomes increasingly challenging as this recursive process continues.

The co-existence of the informal sector in public places can serve as a source of survival for one demographic while being negatively perceived by another segment of society. The evaluation of activities in the informal sector may vary depending on the observer's standpoint. A disparity can arise between planners' knowledge and normative perspective because it is influenced by professional ideologies, and that of space users, and shaped by personal experiences and context. Thus, the phenomenon of relativity is subjectively perceived and exerts a discernible impact on the formation of participatory and democratic public spaces. This raises thought-provoking and controversial questions regarding the actual value of social conventions, reigniting longstanding philosophical debates about whose standards and principles are supported and the underlying justifications for such support (Bicchieri, 2006, 2016).

In this context, the norms planners embrace often stem from their professional education, philosophical perspectives, or the dominant majority stance exemplified by politicians within local government councils.

2.3.3 Relational spaces

The concept of '*relational space*' is commonly attributed to Leibniz (Mutabdzija, 2024), who argues for the inseparability of space and time. Therefore, it becomes imperative to understand the interconnection between time and space rather than examining space in isolation (Harvey, 2004). Harvey (2004:4) introduces the concept of "*relational space*," encompassing abstract components such as experiences, memories, sentiments, and fantasies. In a space-time context, '*relational space*' suggests that individuals' collective memories—particularly concerning '*relative* and '*absolute space*' - cannot be adequately conveyed through maps and illustrations (representing *absolute space*) or by applying

circulation laws (representing *relative space*). As Harvey (2006) illustrates social relationships and interactions influence these memories.

The construction of '*relational space*' depends on specific social processes and interactions that have evolved and vary across societies and historical eras. Dos Santos (2014) provides an illustrative case wherein the '*Spatial Matrix*' is examined, emphasising the significance of '*relational space*' as an abstract domain encompassing emotions, recollections, and interpretations profoundly shaped by the dynamic interplay with '*absolute*' and '*relative space*'.

Within the framework of societal routines and spatial behaviours, diverse components are assimilated, giving rise to symbols, needs, experiences, and desires from encounters with limited resources or even fantasies. Like '*relative space*', '*absolute space*' establishes boundaries at the physical and conceptual level, whereas the subjective and conscious nature of '*relational space*' challenges these established boundaries. The capacity of society to come together and organise itself is evident in its ability to articulate its needs and desires to urban planners, designers, and other built environment authorities responsible for creating physical spaces that foster social connections. Throughout history, societies have demonstrated the ability to collectively organise themselves to oppose and challenge the limitations imposed by either absolute or relative spatial boundaries. Acts of resistance have often led to revolutions and profound societal transformations across various domains.

2.4 Areas of convergence between Lefebvre and Harvey's conceptual frameworks

In exploring spatial theory, Henri Lefebvre's '*Spatial Triad*' and David Harvey's '*Spatial Matrix*' provide a complementary framework for understanding the multifaceted nature of space. Lefebvre's triadic model of '*perceived*', '*conceived*', and '*lived spaces*' emphasises that space is not merely a physical entity. It is a socially constructed phenomenon shaped by human experience and interpretation. This framework is reflected in Harvey's '*Spatial Matrix*', which delineates three aspects of space namely

'absolute', *'relative'*, and *'relational'*. Each of Harvey's space elements corresponds closely with Lefebvre's triad.

The first component, *'absolute space'*, aligns with Lefebvre's concept of *'perceived space'*. It refers to the tangible, physical attributes of space that exist independently of social or economic influences. This conception of space is rooted in its physicality, emphasising geometrical and topographical features that individuals directly experience in their environment. Such physical dimensions are foundational, often shaped by the natural landscape or the built environment and represent the *"real"* space as perceived by its inhabitants.

The second component, *'relative space'*, correlates with Lefebvre's *'conceived space'*. Here, Harvey underscores the idea that space is socially produced and moulded by socio-economic and political forces. This space is ideologically constructed by urban planners, architects, and policymakers, who impose frameworks that reflect broader socio-economic contexts and power structures. As conceived space, it is a space of abstraction and projection, where the planning and control mechanisms are wielded by institutions and entities that influence its development and usage.

Finally, Harvey's *'relational space'* resonates with Lefebvre's *'lived space.'* This aspect of space highlights its fluid and experiential nature. It focuses on the interconnections and interdependencies between various spaces and the human interactions that shape them. Lived space is infused with meaning through individual and collective experiences, memories, and social interactions. Both Lefebvre and Harvey acknowledge this dynamic quality, where space is not static but continuously transformed through the interactions and lived experiences of its inhabitants. This concept suggests a constantly evolving space shaped by the dialectical relationships between individuals and their environment.

In synthesizing Lefebvre's and Harvey's theories, a holistic understanding of space as a complex and layered construct that is simultaneously physical, socially produced, and lived can be gained. Their frameworks provide a comprehensive lens through which to

analyse urban spaces. It reveals how physical structures, ideological imprints, and human experiences intersect to shape the spaces where people live.

As illustrated in Figure 2-2, the intersection of these frameworks reveals the deep interconnections between Lefebvre's (1991) exploration of spatial practices, representations, and spaces of representation and Harvey's analysis of space creation through the interplay of 'absolute', 'relative', and 'relational spaces.' Together, these perspectives provide a comprehensive lens through which to examine space's societal and physical dimensions, highlighting the complex processes by which space is conceived, contested, and ultimately transformed within any given society. This convergence underscores space's dynamic and multifaceted nature as both a product of and a contributor to the socio-political and economic forces at play.

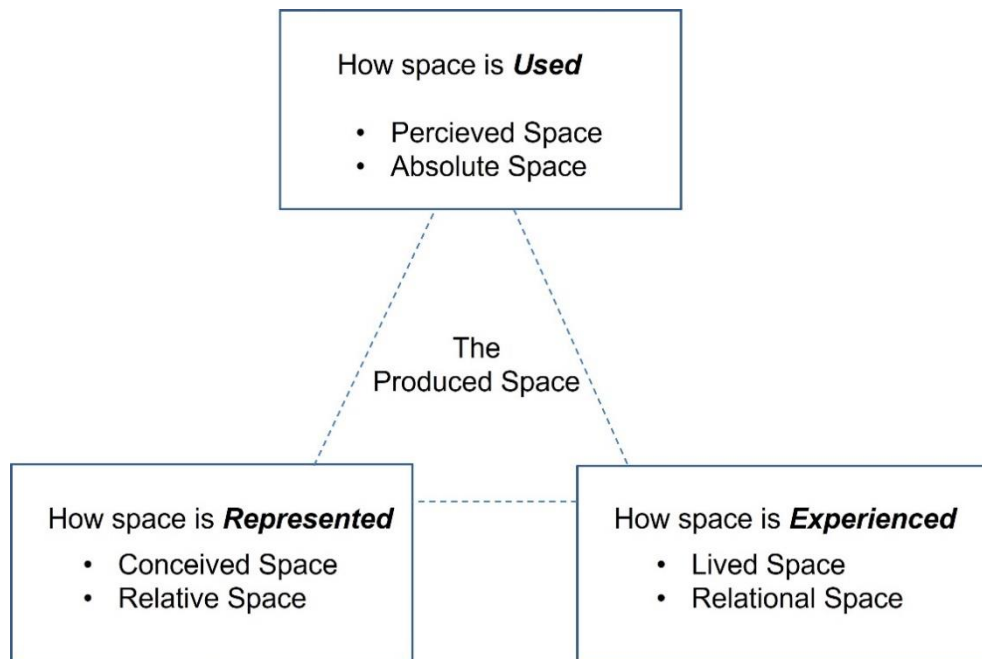


Figure 2-2: The Convergence of Lefebvre 'Spatial Triad' and Harvey 'Spatial Matrix'.

Source: Author's own adapted from Strus et al. (2023:10)

2.5 Areas of divergence between Lefebvre and Harvey's conceptual frameworks

Lefebvre's '*Spatial Triad*' and Harvey's '*Spatial Matrix*' are two conceptual frameworks that have garnered significant attention within the public space field. While both frameworks offer valuable insights into the complexities of spatial organisation, they are also divergent on a few matters, such as theoretical orientations, analytical approaches, and implications for urban theory and practice. Table 2-1 below identifies the divergence between the two conceptual frameworks.

Table 2-1: Areas of divergence between Lefebvre and Harvey conceptual frameworks

AREA OF DIVERGENCE	LEFEBVRE'S ' <i>SPATIAL TRIAD</i> '	HARVEY'S ' <i>SPATIAL MATRIX</i> '
THEORETICAL FOUNDATION	Views space as a social product intricately linked to the production of social relations. Lefebvre conceptualises space as something created and constantly reshaped by human interactions, cultural practices, and societal norms.	Emphasises the role of capitalism and uneven development in shaping spatial organisation within contemporary societies. Harvey conceptualises space as a dynamic, relational entity fundamentally shaped by economic, political, and cultural forces, particularly those associated with capitalist accumulation.
TREATMENT OF POWER RELATIONS	It considers space a product of social relations, deeply intertwined with power dynamics. For Lefebvre, space is produced through the interaction of <i>perceived</i> , <i>conceived</i> , and <i>lived spaces</i> , each reflecting distinct power structures and social hierarchies.	It focuses on the role of capitalism and class struggle in forming space. Harvey argues that space manifests uneven development, driven by the imperatives of capitalist accumulation and class relations, highlighting how these dynamics perpetuate spatial inequalities.
ROLE OF INDIVIDUALS	Emphasises the agency of individuals and social groups in the production and transformation of space. Lefebvre argues that everyday practices, acts of resistance, and counter-hegemonic actions can challenge dominant	Prioritises structural forces in shaping space, particularly those related to capitalist accumulation. While Harvey acknowledges the potential for individual and collective agency, he often views it as constrained within the overarching logic of capitalism. This divergence

AREA OF DIVERGENCE	LEFEBVRE'S 'SPATIAL TRIAD'	HARVEY'S 'SPATIAL MATRIX'
	spatial ideologies and give rise to alternative spatial forms.	reflects differing ontological and epistemological assumptions about the nature of social change and the potential for transformative action within space.
URBAN PLANNING AND POLICY	The focus on the multiplicity of spatial practices and the agency of individuals suggests the need for inclusive and participatory planning approaches. Lefebvre advocates for urban planning that recognises diverse voices and the contestation of space, emphasising the importance of grassroots involvement in spatial decision-making.	Emphasises the importance of addressing structural inequalities through redistributive policies and regulatory interventions. Harvey's analysis highlights the necessity of confronting capitalist dynamics in urban planning, suggesting that policymakers should focus on mitigating the effects of uneven development to promote more equitable urban outcomes.
EPISTEMOLOGICAL ORIENTATION	It adopts a Marxist perspective, viewing space as a socially produced entity shaped by historical and material conditions. Lefebvre's approach is rooted in dialectical materialism, focusing on how space reflects and reproduces social relations.	While also drawing from Marxist geography, Harvey incorporates elements of post-structuralism and postmodernism. His approach underscores the centrality of capitalism in shaping urban space but also recognises the multiplicity and contingency of spatial processes, highlighting the fluidity and complexity of spatial dynamics.
ANALYTIC FRAMEWORK	Lefebvre's methodology involves uncovering the dialectical relationships between <i>perceived</i> , <i>conceived</i> , and <i>lived spaces</i> , revealing the power dynamics embedded within urban environments. His analysis is deeply concerned with how space is both a product and a tool of social control.	He offers a more fluid and relational approach to spatial analysis. Harvey emphasises concepts such as time-space compression and the uneven development of capitalist urbanisation. His methodology involves mapping the spatial-temporal dynamics of capital accumulation, bringing to light the inherent contradictions and conflicts within capitalist urbanisation processes.

Source: Author's Own, 2024

A comparative analysis of Lefebvre's '*Spatial Triad*' and Harvey's '*Spatial Matrix*' reveals significant methodological divergences with implications for urban theory, spatial analysis, and urban planning. While both frameworks offer valuable insights into the complexities of urban space, their methodological disparities reflect broader debates within urban studies concerning agency, structure, and social change. By critically engaging with these methodological differences, cities can advance more nuanced understandings of urban processes and develop more effective strategies for addressing contemporary urban challenges.

2.6 Gaps in the theoretical frameworks of Lefebvre and Harvey

In advancing the discourse on urban studies and spatial theory, it is imperative to critically engage with the theoretical frameworks of Henri Lefebvre's '*Spatial Triad*' and David Harvey's '*Spatial Matrix*'. While these frameworks are undeniably foundational, they exhibit limitations that warrant further scrutiny to enhance our understanding of contemporary urban spaces.

2.6.1 *An overemphasis on structural determinism*

One significant critique of Lefebvre's '*Spatial Triad*' lies in its potential overemphasis on structural determinism. Lefebvre's framework predominantly views the production of space through the lens of societal structures and class relations. The approach overshadows the agency of individuals and smaller social groups. This critique aligns with Merrifield (2013), who argues that Lefebvre's framework tends to marginalise the agency of smaller, more fluid social groups in shaping space, and urban informality. In cities where informal processes such as informal settlement, street vending, or unregulated development proliferate, space is often produced outside formal design and urban planning. These spontaneous, organic ways of informal practices transform cities

and challenge the deterministic lens of Lefebvre's triad. Rather than solely reflecting top-down societal structures or class relations, such spaces emerge from individuals' and communities' lived experiences, needs, and interactions. In this way, informality focuses on a more dynamic and participatory production of space that Lefebvre's model may underrepresent.

AlSayyad and Roy (2004) explore the significance of informality in urban development. They note that informal processes are not peripheral but integral to the production of space in many global cities. This suggests that while Lefebvre's triad remains a valuable tool for analysing spatial production, it may benefit from a more nuanced understanding of how formal and informal actors shape space. The informal production of space through unregulated means highlights the tension between dominant power structures and the everyday practices of individuals and communities.

Similarly, Harvey's '*Spatial Matrix*', with its emphasis on the role of capitalism in shaping space, can be critiqued for adopting a deterministic stance. His focus on capitalist accumulation and class struggle in the spatial organisation of society may inadvertently downplay the role of individual agency and the local variations that contribute to it. While both Lefebvre and Harvey provide invaluable insights into the macro-level processes that govern spatial production, their frameworks may benefit from a more balanced consideration of the interplay between various stakeholders. Incorporating informal processes into the critique of Lefebvre's and Harvey's frameworks enriches our understanding of space as not only produced by structures of power but also actively redefined by the very people who inhabit and use it. This interplay between structure and agency in informal urbanism offers a more holistic view of spatial production and transformation.

2.6.2 *Insufficient attention to Non-Western contexts*

Lefebvre's '*Spatial Triad*', developed within the context of European cities, often needs to account for the specificities of non-Western urban environments. The socio-cultural dynamics that influence the production and experience of space in cities outside the Western context are frequently overlooked, limiting the triad's applicability in diverse

global settings. This Euro-centric bias is similarly evident in Harvey's '*Spatial Matrix*', which operates mainly within a Western-centric paradigm despite its global critique of capitalism. The spatial dynamics of cities in the Global South, where different historical and cultural forces are at play, are insufficiently addressed within these frameworks (Robinson, 2002).

2.6.3 A limited engagement with digital and virtual spaces

While not considered in this research, neither Harvey nor Lefebvre consider digital and virtual spaces increasingly integral to urban life. However, Lefebvre's work demonstrates limitations in its applicability. The triad's focus on physical spaces and their social production does not fully accommodate the complexities introduced by digital environments, which have become critical arenas for social interaction and spatial experience. Harvey's '*Spatial Matrix*', while acknowledging the role of technology in shaping space, also falls short of fully engaging with the implications of digital spaces and the internet on spatial relations (Graham & Marvin, 2001). Both frameworks would benefit from an expanded analysis incorporating the virtual dimensions of space, which are now essential to understanding contemporary urban life.

2.6.4 Ambiguity in conceptual categories

Soja (1996) critiques Lefebvre's '*Spatial Triad*' concerning its conceptual categories' ambiguity. The boundaries between '*perceived*', '*conceived*', and '*lived spaces*' are often unclear, leading to overlaps that complicate empirical research. This lack of distinctness makes operationalising the triad in practical studies challenging. Harvey's '*Spatial Matrix*' also faces similar criticisms, particularly in how it categorises – '*absolute*', '*relative*', and '*relational spaces*' and their interconnectedness. The conceptual ambiguity in both frameworks may hinder their effectiveness as analytical tools in urban studies.

2.6.5 Underestimation of temporal dynamics

Massey (1994) argues that Lefebvre's framework prioritises spatial dimensions over temporal dynamics, potentially neglecting the crucial role that time plays in the production of space. The temporal aspects of how spaces evolve, transform, and are contested over time are not deeply explored. This absence limits the framework's ability to account for the fluidity and dynamism of urban environments. Although Harvey incorporates the concept of time-space compression into his analysis, his framework does not fully engage with the broader temporal dynamics that influence spatial production. This is particularly evident in slow, structural changes versus rapid, capitalist-driven transformations.

2.6.6 The neglect of everyday spatial practices

Although Lefebvre introduces the concept of '*lived space*' to account for the everyday experiences of individuals, critics argue that the triad needs to sufficiently explore the mundane, everyday practices that produce and transform space, especially in marginalised communities. This gap is significant, as everyday spatial practices play a crucial role in shaping the lived reality of urban spaces. Harvey's '*Spatial Matrix*' focuses on macro-level processes, and similarly overlooks micro-level practices, which are essential for a comprehensive understanding of how space is experienced and contested daily (de Certeau, 1984).

While Lefebvre's '*Spatial Triad*' and Harvey's '*Spatial Matrix*' offer powerful frameworks for analysing the production of space, they have limitations. The critiques outlined above range from an overemphasis on structural determinism and limited engagement with non-Western contexts to the underestimation of temporal dynamics and neglect of everyday practices. They underscore the need for a more nuanced and comprehensive approach to urban studies. Future research should aim to refine these frameworks by integrating emerging perspectives that address their gaps. This would enhance the current understanding of the complexities inherent in contemporary urban life. Scholars can develop more robust tools for analysing and shaping the spatial realities of diverse urban environments.

2.7 The legislative framework regarding apartheid planning before 1994.

Building on the understanding of how space is produced, as articulated by Harvey (2004) and Lefebvre (1991), it is crucial to recognise the unique context in which space was produced in South Africa. Its form has been heavily influenced by Apartheid legislation. This research segment delves into the complex dynamics of politics, socio-economic factors, and legal mechanisms that intricately shaped South African cities segregated urban landscapes. By examining relevant legislation and literature, this exploration sheds light on these factors' profound impact on the spatial structure of South African urban environments.

The stark disparities in spatial allocation and resource access across South African cities are the legacy of a long history of racial exclusion and spatial injustice. This section's objective is to interpret the nuanced interplay of political, economic, legal, and social forces that have shaped the contemporary South African urban environment. The research specifically aims to trace the historical origins of fragmented and racially segregated settlements, focusing on the colonial and Apartheid eras.

Adopting an interdisciplinary approach, this study combines historical inquiry with geographic analysis. The analysis is grounded in primary materials, including laws and policies from the colonial and Apartheid eras. It is further reinforced by academic literature. Akkiah (2022) proposes structuring a historical analysis into three distinct periods that align with the study's chronological focus: 1652–1910, 1910–1948, and 1948–1990. The content of each period is outlined in more detail below.

2.7.1 Residential segregation and Its Colonial roots (1652–1910)

This section examines the colonial period, highlighting how mechanisms for controlling space allocation led to residential segregation in early South African settlements. It explores how colonial practices, such as land distribution and the creation of racially segregated neighbourhoods, laid the groundwork for enduring spatial disparities.

2.7.2 Post-Union and Pre-Apartheid Period: Entrenching statutory mechanisms to promote segregation (1910–1948)

The second segment focuses on the period from the Union of South Africa founded in 1910 to the rise of nationalism and the onset of Apartheid in 1948. During these years, legal processes specifically targeted the majority Black population, justifying and perpetuating geographic segregation, political repression, and socio-economic marginalisation.

2.7.3 The control of space and the apartheid state (1948–1990)

The final part examines the Apartheid era, from 1948 to 1990, during which the South African government intensified its efforts to consolidate control over space. This section explores how the geographical reorganisation of metropolitan regions served the interests of the White minority, perpetuating marginalisation and exclusion.

The conclusion synthesises these historical insights, offering a perspective on the elements engendered by spatial inequality and marginalisation in South African cities. It underscores the importance of understanding the historical roots of spatial inequality to pave the way for significant progress toward creating a more inclusive urban environment, particularly in terms of public space.

2.8 Pre-colonial land patterns in South Africa

Before the colonisation of southern Africa, strategically positioned settlements emerged as vital agricultural and economic hubs along significant trade routes argue Huffman (1992). These settlements, recognisable by their highly fortified stone wall structures, served as focal points for spatial organisation and primary habitation, including administrative centres and residences for senior officials. Huffman's observations reveal the existence of political hierarchies and sophisticated social structures within these settlements. While most residents dwelled within enclosed areas, influential families occasionally resided outside these developed regions. These strategically located African settlements exhibited intricate political, economic, legal, and social relations at

their peak, contributing to their organised and functional living environments (Laburn-Peart (2002).

In the mid-seventeenth century, a series of pivotal events significantly impacted settlement configurations and methods of sustaining livelihoods in southern Africa. Eldredge (1992) argues that prolonged ethnic conflicts, severe droughts, and widespread famine led to extensive forced population displacement. Additionally, the rise of colonialism and the establishment of early European communities further intensified the displacement of African populations by restricting their access to fertile land and livestock. This situation fostered a demand for enslaved labour and facilitated the trade of valuable resources. Maylam (1990) introduces an additional perspective, asserting that spatial segregation was a salient element in the historical trajectory of spatial development patterns in South African cities, with its roots firmly embedded in the colonial period.

2.8.1 Residential segregation and its colonial roots (1652–1910)

Van Wyk (2012) states that the arrival of the Dutch in the Cape in 1652 marked the establishment of a land governance system and spatial configuration within emerging colonial settlements. Its role was primarily for land registration, administration and agriculture. The initial methodologies for land-use administration were influenced by the concept of '*res nullius*'¹ for territories populated by indigenous communities, notes Badenhorst, Pienaar & Mostert (2006). Following the British annexation of the Cape in 1795, the Roman-Dutch legal framework, including specific British administrative protocols, was implemented. Van Wyk (2012) further contends that early colonial communities exhibited trends of land-use segregation, leading to diminished property valuations and slow development. These factors did not prompt authorities to formalise planning or regulatory measures.

Kirk (1991) argues that within the subsequent two decades, the influx of African labourers seeking employment compelled municipal authorities in 1855 to establish the Native Strangers' Location adjacent to the original settlements in the Eastern Cape. In the colony

¹ The legal term *terra nullius* means "*things belonging to no one*" and allowed the rationale for the annexation of land held under traditional or communal title.

of Natal, a system of Native Reserve was established under the administration of Theophilus Shepstone. This early colonial strategy employed urban governance and spatial regulation mechanisms to entrench a fragmented and segregated residential planning system. The enforced displacement of African communities to the Native Strangers' Location² stands as one of the initial instances of authorised forced removals within a South African urban setting. Over time, the geographical proximity of the Native Strangers' Location to the urban core of Port Elizabeth began to impede the development of zones designated for European settlement. This prompted a growing inclination within the White population to advocate for the relocation of Black settlements.

In 1883, the Port Elizabeth municipal authority introduced legislation granting them the power to displace the Native Strangers' Location and relocate its inhabitants. Strauss (2019) underscores that this legislative approach was influenced by the Native Administration Act (No. 3 of 1879) within the Cape Colony and the Native Locations, Lands and Commonages Act (No. 40 of 1879), which sought to extend more significant control over Africans residing in urban areas. By 1901, the outbreak of the bubonic plague catalysed Health Departments to forcibly resettle residents of the Native Strangers' Location to peripheral urban locations, reinforcing the broader municipal intent of promoting residential and racial separation.

2.8.2 Post-Union and Pre-Apartheid period (1910–1948)

The Union of South Africa was established in 1910 through the amalgamation of four British colonies: Natal, Cape Colony, Transvaal, and Orange Free State. From 1910 to 1948, the Union government implemented legal measures to assert spatial control across various domains, including land use, spatial planning, human settlements, and governance. These measures entrenched practices of exclusion and socio-economic marginalisation of Black communities. It laid the groundwork for the Apartheid regimes' spatially segregated urban development and supporting legal framework.

² The Strangers location is called "Emaxambeni" in isiXhosa and was located near Port Elizabeth town centre. It was declared as separate municipality in 1877.

The Native (Black) Land Act No. 27 of 1913)and the Black Administration Act (No. 38 of 1927) were pivotal in manifesting the ideology of white supremacy, and thereby mitigating the perceived threat posed by the 'Swart Gevaar' or "Black Danger." These legislative measures prohibited property acquisition or leasing by Africans beyond designated reservations. Effectively they were relegated to the status of labour tenants or squatters. The Black Administration Act (No. 38 of 1927) further facilitated the displacement and relocation of marginalised communities and the management of land ownership within designated reserves.

2.8.3 The control of space and the apartheid state (1948–1990)

With the National Party's rise to power in 1948, the Apartheid state intensified spatially inequitable and racially prejudiced legislative policies inherited from British and Union administrations. From 1948 to 1990, various legal instruments enforced spatial segregation based on race within urban regions. Strauss (2019) highlights key racial-based legal instruments, including the Population Registration Act (No. 30 of 1950), the Group Areas Act (No. 41 of 1950), and the Separate Amenities Act (No. 49 of 1953).

These legal statutes perpetuated spatial injustice in South African towns and cities, by regulating the settlement of Black urban populations. For instance, the Group Areas Act (No. 41 of 1950) prohibited the use or habitation of urban territory by individuals of different racial backgrounds, establishing a system of spatial segregation. Similarly, the Prevention of Illegal Squatting Act (No. 52 of 1951) granted the government the power to forcibly displace urban residents of colour to designated resettlement camps.

During the late-Apartheid era, urban townships became significant sites of resistance against the prevailing political order, leading to mounting anxiety within the governing regime. This period was marked by the further consolidation of Apartheid spatial planning, with legislation such as the Physical Planning Act (No. 88 of 1967) guiding the implementation of spatial segregation in South Africa's urban regions.

These legislative and policy actions, spanning from colonial times through the Apartheid era, played a crucial role in shaping the spatial inequalities and marginalisation that

persist in South African cities today. Understanding these historical roots is imperative for addressing the legacy of spatial injustice and fostering a more inclusive urban environment, particularly in public spaces.

2.9 Apartheid legislation and the production of space using Lefebvre '*Spatial Triad*' and Harvey's '*Spatial Matrix*'

In examining the spatial dimensions of Apartheid through the lens of Henri Lefebvre's '*Spatial Triad*' and David Harvey's '*Spatial Matrix*', a nuanced understanding of how Apartheid's spatial policies manipulated '*perceived*', '*conceived*', and '*lived spaces*.' This manipulation reflects the intricate ways in which the nationalist government institutionalised racial segregation within South Africa's urban landscape, embedding it into the very fabric of space itself.

Firstly, Harvey's notion of '*absolute space*', corresponding to Lefebvre's '*perceived space*', provides insight into how segregationist laws physically partitioned spaces. The legal framework, and use of the Group Areas Act of 1950, used '*perceived space*' as a tool for enforcing racial divisions by establishing strict physical boundaries between racial groups. This legislation designated specific areas for each racial group, creating rigid, hierarchical spatial divisions. The physicality of this perceived space was reinforced by infrastructure and policing measures designed to sustain the visible and tangible separation between racial communities. In addition, large buffer areas of green space contributed to the physical and geographic distance between different communities. Through these mechanisms, the regime entrenched the perception of racial superiority and inferiority, reflecting Apartheid's racial ideology in the spatial design itself.

Moving to Harvey's concept of '*relative space*', which aligns with Lefebvre's '*conceived space*', the Apartheid government strategically designed urban spaces to reflect and perpetuate its ideology. This '*conceived space*' was not merely a physical or geographic entity but rather a socially produced space shaped by discriminatory policies and planning. The Bantu Authorities Act (No. 68 of 1951) established tribal reserves, strategically carving out spatial zones that reinforced racial segregation. Apartheid

planners meticulously crafted urban landscapes through zoning regulations and housing policies that reflected and deepened these divides. In this way, '*conceived space*' became a tangible expression of the regime's ideology. It was manifested through the regulated, structured spatial organisation of urban areas that delineated unequal access to land and resources for different racial groups.

Finally, Harvey's '*relational space*', aligning with Lefebvre's '*lived space*', captures the experiential and resistant dimensions of space under Apartheid. Despite the state's stringent spatial controls, marginalised communities utilised '*lived space*' as a medium for resistance and adaptation. Informal settlements emerged as vibrant spaces of defiance, where communities forged narratives of solidarity and resilience in the face of restrictive policies. The resilience of these communities challenged the conceived and perceived dimensions of the government's spatial strategy. They demonstrated that, despite the state's attempts to impose rigid racial boundaries, lived experiences and human agency continuously redefined and reshaped these spaces. For example, the Separate Amenities Act (No. 49 of 1953) sought to reinforce racial segregation by controlling access to public amenities. Yet, it could not entirely suppress the creation of spaces where marginalised groups could assert their agency and form cohesive, resilient communities.

In this interplay of '*perceived*', '*conceived*', and '*lived spaces*', Apartheid's spatial structure extended beyond mere geographic segregation to become a pervasive social and political instrument. By embedding racial hierarchy into the spatial fabric of South African cities, the regime constructed a segregated reality that profoundly influenced daily life. Yet, within these structured confines, individuals and communities actively reshaped and redefined their spaces, revealing the inherent tension between imposed structures and lived experiences.

Lefebvre's framework underscores the power dynamics inherent in the spatial development of the urban fabric. Apartheid's legal framework wielded immense power by shaping perceptions. Furthermore, the administration employed legal mechanisms to propagate hegemonic ideologies, control discourse, and shape spatial consciousness.

The legal framework was integral in enforcing dominance, as evidenced by the far-reaching consequences on daily life.

2.10 Conclusion

The racial-based legal framework of South Africa was instrumental in crafting segregated spaces that vividly reflected the regime's discriminatory ideology. By applying Lefebvre's '*Spatial Triad*' framework, Table 2-2 highlights the complex interplay between '*perceived*', '*conceived*' and '*lived spaces*' in shaping the spatial realities of Apartheid. Legal constructs manifested in the built environment not only disrupted social cohesion but also entrenched racial inequalities that have left enduring scars on the urban landscape. However, within this tightly controlled legal framework, '*lived space*' emerged as a potent arena of resistance, demonstrating the capacity of marginalised communities to adapt and challenge the oppressive spatial order imposed upon them.

Understanding the intricate connections between legal mechanisms and spatial dynamics is crucial for comprehending the profound and lasting impact of Apartheid on South Africa's spatial transformation. This research underscores the importance of recognising how these historical forces continue to shape existing spatial disparities, urging urban planners to reflect critically on the enduring legacy of former segregation policies. The imperative for inclusive urban planning and social transformation is a response to past injustices. It is a necessary approach to foster equitable and vibrant public spaces today.

Lefebvre and Harvey offer compelling frameworks for understanding how space is produced, which remain pivotal for urban planners aiming to develop inclusive public spaces. Their theories provide valuable insights into the forces that shape urban environments, highlighting the significance of space as both a product and a tool of social power. While this chapter has outlined the key elements of public space production, it also reveals how the enactment and implementation of apartheid legislation led to the creation of sterile, exclusionary public spaces that starkly contrast with the inclusive, dynamic spaces envisioned in Lefebvre's framework.

As the study progresses, it becomes evident that addressing the spatial legacies of Apartheid requires more than acknowledging past injustices. It demands a deliberate and sustained effort to reimagine and redesign urban spaces in ways that promote social equity, inclusivity, and resilience. The lessons drawn from Lefebvre and Harvey's theories are relevant and essential for guiding contemporary urban planning practices that seek to transcend the divisive spatial legacies of the past and build a more just and inclusive urban future.

3. CHAPTER THREE – PRECEDENT STUDIES

3.1 Introduction

Building upon the conclusions drawn in the previous chapter, where the profound impact of apartheid-era legal frameworks on spatial justice and public space production in South Africa, were unpacked Chapter Three shifts its focus to a broader perspective. This chapter delves into the development of public spaces nationally and internationally, offering an understanding of how different cities have approached this critical aspect of urban planning.

The creation of public spaces within the South African context starkly contrasts the experiences of other international cities, primarily due to the historical influence of spatially divisive legislation. The precedent studies will shed light on how public spaces can serve as powerful catalysts for spatial justice and transformation in South African cities. These insights are particularly crucial as cities worldwide increasingly prioritise the public space agenda, highlighting the need for converging local and international strategies.

This research component analyses existing public space policies at both international and local levels, recognising the need for diverse approaches tailored to varying physical and political circumstances. The framework for developing public space policies depends on factors such as the pace of urbanisation, levels of consolidation, and the challenges of inadequate planning or the degree of urban decline that a city might face. By comparing and analysing different strategies, this chapter examines their scale, scope, governance, and orientation. It examines whether stakeholder-led or government-led approaches are predominant in the examples.

The first case study focuses on Mexico City, exploring its approach to public space production through a comprehensive planning strategy. The study shifts to Christchurch in New Zealand, examining how urban areas have navigated public space development. The chapter concludes with an analysis of Cape Town's open space policy, providing a

lens through which the effectiveness and adaptability of these strategies within the South African context can be assessed.

Through these case studies, this dissertation aims to contribute valuable insights into the diverse strategies and frameworks employed globally for public space development. The lessons learned from these international examples will be critically evaluated for their applicability and adaptation to the unique challenges and opportunities within the South African context. They will further an understanding of how to foster inclusive, equitable, and resilient public spaces in cities historically shaped by spatial injustice.

3.2 Mexico City

This research section examines Mexico City's *Plan Verde* , a comprehensive urban development initiative launched in 2007. With a focus on sustainable urban development and its impact on public spaces, this case study aims to dissect the plan's objectives, implementation strategies, and outcomes while scrutinising the challenges encountered during its execution. By drawing on existing literature and empirical data, the analysis sheds light on the successes and limitations of the Plan Verde , thereby contributing to a deeper understanding of sustainable urban development within the unique context of Mexico City.

3.2.1 Context

Mexico is a federal republic and is comprised of thirty-one provinces and one federal district which is Mexico City. The governance structure operates at three levels: central, provincial, and local, with each jurisdiction independently electing its Governor and Congress. Provinces are further divided into municipalities, each governed by autonomously elected mayors. The Mexican Constitution, adopted in 1917, delineates the distribution of authority across the Presidency, Congress, and the Courts.

Mexico City, distinct in its status as a federal district rather than a municipality, possesses its legislative assembly and is divided into 16 administrative regions, each with varying degrees of political autonomy (See Map 3-1 on the next page). Administrative power is

predominantly concentrated at the federal district level. As of 2020, Mexico City's population was estimated at 9,209,944, with 52.2% women and 47.8% men (Data Mexico, 2023). Current estimates put the urban population at 22.51 million. The city's Gross Domestic Product (GDP) in the same year reached \$142.85 billion, contributing 15.8% to the national GDP, which stood at 15.3% by 2022.



Map 3-1: A Locality Map for Mexico City

Source: <https://www.google.com/maps/place/Mexico+City,+CDMX,+Mexico/>, (accessed 18th November 2024)

The city's significant economic and demographic variations have led to unequal distribution of public goods and services, compounded by pressing environmental challenges. Key concerns include air pollution, the overuse of local catchment areas, solid waste management, and an overreliance on private transportation. Addressing these issues requires coordinated efforts across various administrative entities. In response, the city shifted its urban policy in 2007, emphasising sustainable development through implementing *Plan Verde*.

Murray & Kremer (2016) notes that Mexico City encompasses approximately 10.8% of public open spaces, totalling 7,049 hectares. In 1998, the per capita green space for residents in Mexico City was a mere two square meters, significantly below the World Health Organization's recommended standard of nine to sixteen square meters. Madero and Morris's (2015) critique of the *Plan Verde* highlight the challenges related to the unequal distribution and access to public spaces, particularly in the north, west, and south, where resident concentrations are highest. The plan also addressed the poor quality of public spaces, often associated with urban issues such as delinquency, substance addiction, and the degradation of environmental goods and services, including water sustainability challenges. Contributing factors to the neglect and deterioration of public spaces include inadequate resources for maintenance, the absence of a long-term planning vision, insufficient financing models, poorly articulated public space strategies, and a lack of social integration programs.

3.2.2 Public space approaches

In *Plan Verde*, was launched in 2007. Miles (2015) outlined that Mexico City embarked on a pivotal 15-year initiative to address pressing environmental, social, and economic challenges. This comprehensive strategy underscored a commitment to sustainable urban transformation through targeted interventions. The strategy reflects principles that are aligned with Lefebvre's and Harvey's theories on the production of space. By seeking to integrate green infrastructure, promote sustainable transportation, and enhance public spaces, *Plan Verde* is a case study of how urban plans can reshape the city's relationship with its environment while addressing social inclusivity.

A core aspect of the plan is its focus on environmental sustainability. Molina (2004) notes, that air pollution and the urban heat island effect have posed significant threats to Mexico City's habitability. Through initiatives to expand green spaces, reduce greenhouse gas emissions, and conserve natural resources, *Plan Verde* aimed to mitigate environmental degradation and reframe the city as a resilient, liveable ecosystem. For example, tree planting programs and creating parks were integral to this strategy, challenging traditional boundaries between urbanity and nature. This approach was not merely aesthetic but

invited a reimagining of how nature could be interwoven into the urban fabric to combat rising temperatures and promote biodiversity.

Transportation and mobility are other significant areas of focus within the plan. Mexico City has long struggled with traffic congestion and air pollution, consequences of its expansive urban sprawl. By promoting alternative transportation methods such as the Metrobus and Ecobici (the city's bike-sharing program), the plan sought to reduce dependency on private vehicles, encouraging a shift towards sustainable urban mobility. This shift underscores a broader ideological commitment to sustainable urbanism as public transportation options reshape how citizens access and experience the city. Such efforts highlight how mobility influences the rhythm of urban life, affecting not only the physical movement in the town but also social interactions and the utilisation of public spaces.

Urban greening initiatives within *Plan Verde* further align with global urban sustainability trends, which envision cities as ecological systems. Practical interventions such as green roofs, vertical gardens, and the rehabilitation of public spaces were implemented to combat the urban heat island effect while symbolising a commitment to sustainability. These initiatives extend beyond technical fixes. They require ongoing community engagement and participatory approaches to ensure their success. As Lefebvre and Harvey emphasise, urban spaces are not static. They evolve through the dynamic interaction between people and their environment. Consequently, *Plan Verde* aimed to foster a sense of ownership among residents, emphasising that sustainable urban greening relies on community involvement and stewardship.

In response to a need for climate resilience, Mexico City's plan demonstrated foresight by incorporating strategies for flood management, disaster preparedness, and resilient infrastructure. This emphasis underscores the complexities of sustainable urban governance. As the plan illustrates, resilience is not merely a technical outcome but a continuous adaptation process. Effective implementation requires coordination across agencies and a commitment to long-term planning, which integrates resilience into broader urban development frameworks. This approach reflects an understanding that

resilience must adapt to socio-political shifts and be embedded within the governance structures that shape the city (Satterthwaite, 2013).

Institutionally, *Plan Verde* operated within Mexico City's unique governance structure as a federal district with expanded powers, as illustrated in Figure 3-1. The plan's success depended on aligning with existing policies and regulations, which required navigating complex legal frameworks governing land use, environmental management, and public space (Banister, 2008). This institutional alignment facilitated implementation and ensured that objectives were grounded in legally enforceable policies, thus enhancing their long-term viability. It underscores how urban plans are shaped by, and help shape, the broader political and institutional contexts within which they operate.

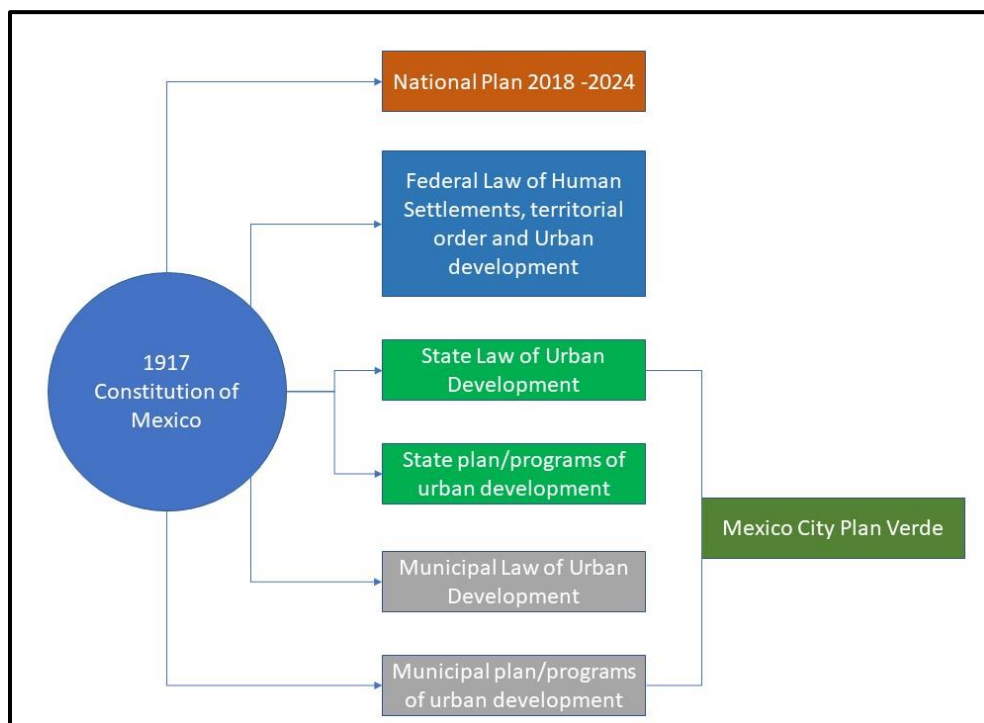


Figure 3-1: Mexico's National Planning Framework

Source: Author's Own, 2024

Public engagement was another central component of *Plan Verde*. Rather than imposing a top-down approach, the plan sought to involve residents through educational outreach,

fostering a collective sense of responsibility and environmental stewardship. This approach resonates with Arnstein's (1969) ladder of citizen participation, emphasising that genuine engagement is essential for effective urban planning. The plan worked toward fostering a participatory planning culture by equipping communities with the knowledge and tools to participate in decision-making.

The plan also emphasised the need for regional cooperation, recognising that water management, air quality, and transportation transcend municipal boundaries. This regional approach reflects the interconnected nature of urban and peri-urban areas, necessitating collaborative responses across jurisdictions (Calthorpe & Fulton, 2001). It promoted a more holistic approach to urban sustainability by fostering synergies with adjacent municipalities, underscoring the need for local specificity within a regional framework.

Transparency and accountability were critical to *Plan Verde's* implementation, emphasising maintaining public trust through responsible resource management. As Bovens et al. (2008) suggest, transparency is essential for building community confidence in urban planning processes. The plan's commitment to accountability reflects a broader trend in urban governance, where citizens increasingly demand visible and inclusive decision-making processes.

Monitoring and evaluation were also fundamental aspects of the plan. A framework has been established to assess progress through measurable indicators. This ongoing assessment reflects an understanding within urban planning that flexibility and adaptability are key to success. Thus, it was designed not as a fixed blueprint but as an evolving framework capable of responding to Mexico City's shifting needs. This adaptive approach resonates with Lefebvre's notion that space and, by extension, urban plans must respond to lived experiences. At the same time, Harvey's framework reinforces the idea that space is produced and reproduced through economic, social, and political forces.

Finally, *Plan Verde* highlighted Mexico City's role within the global urban sustainability movement, aligning its goals with international frameworks like the United Nations Sustainable Development Goals (SDGs). By engaging with global best practices, Mexico

City positioned itself as a leader in sustainable urban planning, whilst drawing from and contributing to global discourses on urban resilience and sustainability (Akkiah, 2022).

Through this case study, this research will explore how the diverse strategies within *Plan Verde* contribute to transforming public spaces, with a specific focus on lessons applicable to South African cities. It will examine how Mexico City's approach to sustainability, social inclusivity, and public space management offers insights for developing equitable and sustainable urban planning practices that resonate with the complexities of contemporary urban environments.

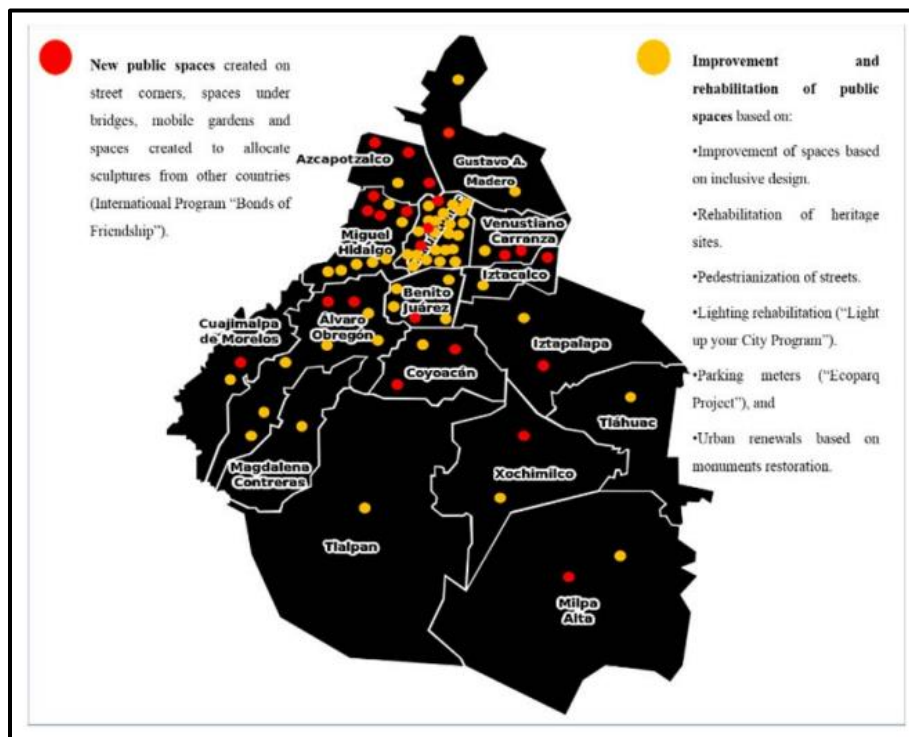
3.3.3 The implementation and successes of Plan Verde

In an ideal urban landscape, cities would exemplify thoughtful planning that carefully integrates public spaces into the urban fabric, catering to diverse resident needs and adapting to dynamic urban life (Lynch, 1960; Gehl, 2011). In such cities, public spaces are not afterthoughts but are purposefully designed for accessibility, inclusivity, and adaptability. However, for many cities, including Mexico City, the rapid pace of urbanisation and its associated pressures have caused a significant divergence from this ideal. During the late twentieth century, Mexico City's accelerated growth often relegated public spaces to the periphery of urban planning agendas. Unlike earlier urban design principles, where public spaces were central to civic life and social interaction (Carr et al., 1992; Mumford, 1961), these areas became residual zones, frequently neglected and overshadowed by urban expansion and densification priorities.

This neglect reduced public spaces to "*forgotten corners*," where their potential for communal gathering and civic engagement remained largely untapped. Urban densification, particularly in central zones, often sacrifices public spaces for infrastructure development, pushing them into peripheral functions with limited social value. Recognising this marginalisation, Mexico City's government launched *Plan Verde* which included a series of interventions developed in collaboration with entities like the Ministry of Urban Development and Housing (SEDUVI) and the Public Space Authority. These initiatives which were introduced between 2000 and 2014, sought to rehabilitate and

reclaim public spaces as vibrant, socially inclusive urban areas (Gehl, 2013; Madanipour, 2010).

Plan Verde encompassed a range of projects, including park rehabilitation, public monument installations, green parking solutions, and improved urban lighting. Maps 3-2 and Figure 3-2 visually represent the spatial distribution of these interventions across Mexico City. Red markers indicate newly established public spaces, while yellow markers denote enhancements to existing spaces, underscoring a comprehensive approach to reestablishing these areas as integral components of urban life.



Map 3-2: Public space interventions 2000 – 2014

Source: Moreno, 2015

Boroughs	Number of Projects	Types of projects
Álvaro Obregón	8	• Public Monuments restoration.
Azcapotzalco	4	• “Bolsillo” Parks (Pocket, small). It is a
Benito Juárez	5	Program of the Federal District, in charge of
Cuajimalpa	2	the Public Space Authority (AEP). It offers
Coyoacán	3	the inhabitants places of social interaction,
Cuauhtémoc	25	identity and economic activity in response to
Gustavo A. Madero	3	the local demands of the inhabitants.
Iztacalco	2	• Improvement of spaces with inclusive
Iztapalapa	2	design.
La Magdalena Contreras	1	• “Light up your City” Program.
Miguel Hidalgo	11	• “Ecoparq” (Parking meters program).
Milpa Alta	2	• “Bonds of Friendship” (Renewal projects
Tláhuac	1	based on the exchange of artistic expressions
Tlalpan	1	from other countries).
Venustiano Carranza	3	• Rehabilitation of heritage sites.
Xochimilco	2	• Under bridges projects.
		• Pedestrianization and semi-
		pedestrianization of streets.
		• Mobile Parks (itinerant green areas).

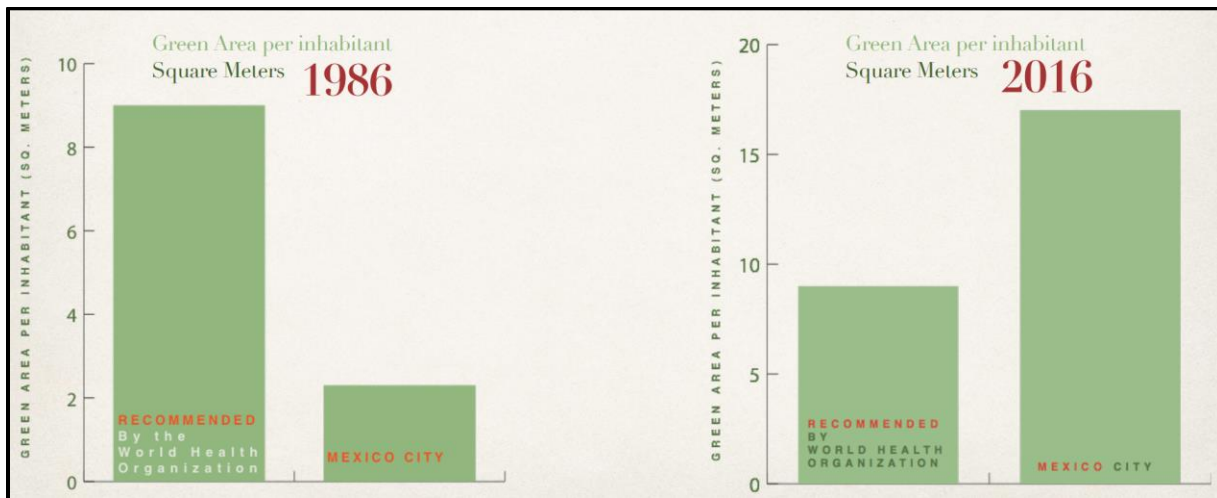
Figure 3-2: Public space intervention programs by Boroughs 2000 - 2014

Source: Moreno 2015

According to Moreno (2015), notable initiatives like the “*pocket public parks*” and “*under-bridge projects*” succeeded in providing citizens with secure and accessible public spaces. These efforts encouraged alternative mobility options and recreational activities and fostered social and family interactions. However, Moreno (2015) critiques these spaces for failing to deliver essential attributes such as optimal location and accessibility, highlighting a persistent need for improvements in inclusivity.

The under-bridge spaces offer a unique case study. Neglected initially, these areas were reconfigured where 50% were transformed into public spaces, 30% became commercial zones, and 20% were adapted into controlled parking facilities. Despite the positive transformation, Moreno (2015) notes that many spaces have been privatised, creating a tension between public utility and private interests. Murray and Kremer (2016) echo this observation, explaining that commercial parking revenues fund the revitalisation of these spaces but inadvertently reduce the overall availability of public space. This underscores a complex dynamic between public and private interests, where land use blends offer robustness, yet privatisation dilutes the public nature of these areas.

Despite these challenges, Plan Verde led to a significant increase in green space availability. Murray and Kremer (2016) show that green space per capita in Mexico City rose from just over two square meters per person in 1986 to over fifteen square meters by 2016. These improvements, however, still need to catch up to World Health Organization recommendations, as illustrated in Graph 3-1 on the next page.



Graph 3-1: A comparison of the growth in green areas 1986 – 2016

Source Murray and Kremer, (2016)

Beyond parks and public spaces, the initiative spearheaded other greening initiatives. The city introduced green roofs as an environmental strategy. By 2015, more than 35,000 square meters of green roofing had been installed, mainly on public buildings. This effort was part of a broader push to reclaim urban spaces for green infrastructure. Notable projects included the conversion of major thoroughfares, such as Avenida Chapultepec, into pedestrian-friendly urban corridors (See Plate 3-1 on the next page). Culturally significant green sculptures were also installed throughout the city as symbols of environmental commitment, highlighting green infrastructure’s potential to reduce pollution.

Furthermore, the city has considered “daylighting” hidden streams, transforming them into green corridors that would weave through the urban landscape. In 2016, Mexico City initiated an afforestation project with a budget of 50 million pesos, aiming to plant 3,500

trees, which is expected to sequester around 66,500 tons of carbon. This was part of a more significant announcement by the Secretariat of the Environment, pledging the planting of 18 million trees across Mexico City and its surrounding areas to address elevated pollution levels. While ambitious, this initiative lacked a detailed timeline or execution plan, underscoring the challenges in operationalising such extensive greening efforts.



Plate 3-1: Avenida Chapultepec in Mexico City

Source: <https://programadestinosmexico.com/que-ver/destinos-mexico/paseo-de-chapultepec-guadalajara.html>, accessed 18th November 2024

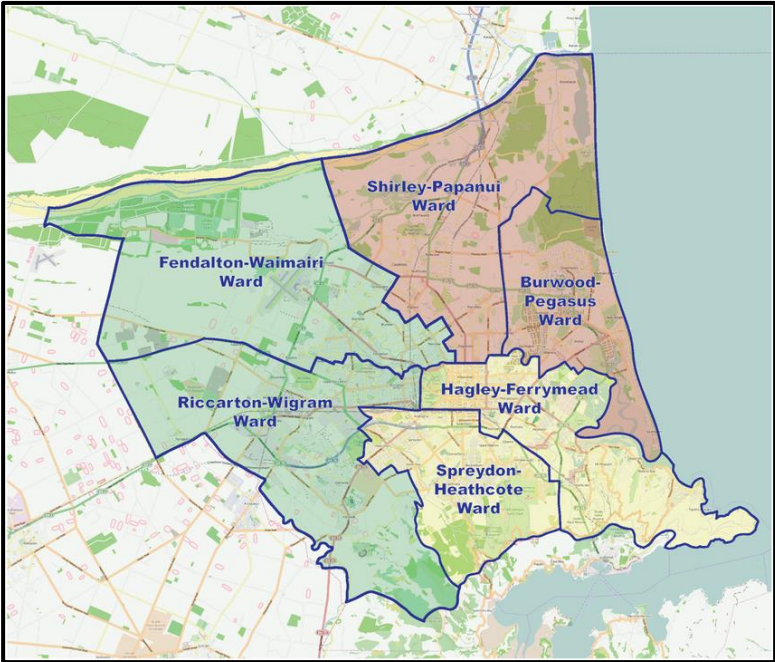
The experiences of Mexico City's *Plan Verde* provide valuable insights into the complexities of integrating public spaces into the urban landscape, emphasising balancing accessibility, inclusivity, and sustainability. This research will draw on these

lessons to inform urban planning practices in other rapidly growing cities and consider their applicability to South Africa, where similar challenges of urbanisation and public space marginalisation are present. By analysing *Plan Verde*'s strategies and outcomes, this study aims to contribute to the broader discourse on how public spaces can foster equitable and sustainable urban environments amidst rapid urban growth.

3.3 Christchurch (New Zealand)

3.3.1 Context

Christchurch, the largest and most populous city on New Zealand's South Island, had an estimated population of 389,300 as of June 2022 (Christchurch City Council 2023) (See Map 3-3 below). Current population estimates are 408,000 with a 0.74% increase in the last year. Spanning an area of 148,000 hectares (Christchurch City Council 2023), Christchurch's economic landscape has been significantly influenced by the early establishment of the University of Canterbury and other educational institutions. They have fostered synergistic collaborations with local businesses. This environment has given rise to thriving technology-based industries within the city.



Map 3-3: A map of Christchurch showing wards

Source: https://www.researchgate.net/figure/Map-of-the-Christchurch-region-showing-different-wards-and-the-different-damaged-grouped_fig2_276474159, accessed 18th November 2024

According to the Christchurch City Council's Open Space Strategy (McMillian 2010), the current provision of public parks in Christchurch is approximately 1.1 hectares per 1,000 residents for neighbourhood parks, 3.5 hectares per 1,000 residents for sports parks, and about 18 hectares per 1,000 residents for regional parks. However, with the city experiencing incremental population growth of just under 1 per cent annually (Christchurch City Council 2023), ensuring an adequate supply of parks and public open spaces remains a significant challenge for municipal authorities.

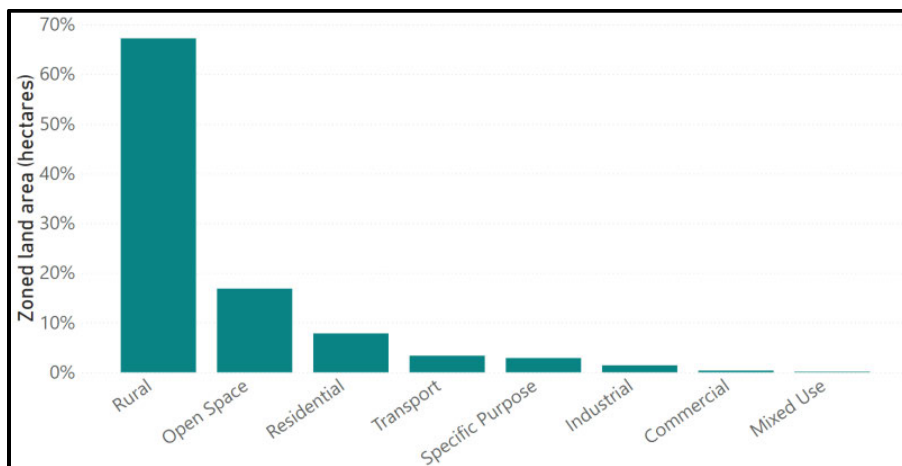
The earthquakes of 2010 and 2011 profoundly impacted Christchurch, initiating a long and complex recovery and reconstruction process. The Four Avenues district, the central commercial hub of Christchurch, suffered extensive damage during these earthquakes, leading to significant employment losses. In response to these challenges, the Christchurch City Council embarked on a visionary course by formulating the Christchurch Public Open Space Strategy, which outlines the city's open space goals from 2010 to 2040.

The Banks Peninsula, located immediately to the south of Christchurch, holds a significant historical role in the events leading up to the signing of the Treaty of Waitangi between the British Crown and Māori chiefs. This region has historically been a site of contention. In 2003, a proposal was made to the Local Government Commission advocating for incorporating the Banks Peninsula District into Christchurch City's administrative domain. The primary objectives were to enhance area management and strengthen municipal resources. This annexation significantly reshaped the local governance structure and increased the proportion of open green spaces within Christchurch's administrative boundaries.

3.3.2 Public space approach

The Public Open Space Strategy (2010) offers Christchurch a 30-year roadmap for developing and stewarding open spaces, aligning closely with the city's Urban

Development Strategy (2016). This strategic vision emphasises sustainable growth and environmental preservation, reinforcing Christchurch’s proactive approach to managing urban expansion while safeguarding green spaces. The City Council (2010) reports that 18% the city’s zoned land parcels are designated explicitly for open spaces (See Graph 3-2 below). This zoning approach underscores the city’s commitment to maintaining ecological balance, enhancing social well-being, and ensuring that green spaces are integral to Christchurch’s urban fabric for future generations.



Graph 3-2: Land use zoning in Christchurch

Source: Christchurch City Council, 2010

The Public Open Space Strategy articulates a well-defined vision for guiding Christchurch’s Municipal Council and stakeholders in developing and managing public open spaces. It balances the competing demands of urban growth, environmental sustainability, and community well-being by setting clear goals, objectives, and priorities. Central to the strategy is a focus on accessibility, inclusivity, and multifunctionality, aligning with Lefebvre’s concept of ‘*lived space*’, where public spaces serve as dynamic platforms for social life and personal meaning, shaped by everyday interactions and relationships.

Key objectives include fostering environmental resilience through creating and maintaining open spaces that support local ecosystems, reflecting the interconnectedness between urban and natural environments. This aligns with Harvey’s

perspective on spatial production, which considers how broader ecological and economic forces influence space. The strategy's focus on resilience addresses the need to adapt urban spaces to shifting environmental conditions, while its conservation efforts aim to preserve Christchurch's cultural heritage and historical continuity.

The strategy emphasises the cultural significance of public spaces, viewing them as functional amenities and vessels for local history, identity, and memory. Preserving culturally significant sites aligns with Lefebvre's conceived space, where planners embed cultural meaning and identity into the urban landscape. By safeguarding heritage landmarks, Christchurch's open spaces reinforce the symbolic power of place, fostering a sense of belonging and shared memory among residents. This approach strengthens the character and identity of the Christchurch District, by ensuring that public spaces contribute to the city's unique essence as the "*Garden City*" while respecting the cultural landscapes of Akaroa, Lyttelton, and smaller settlements.

The strategy strongly emphasises community involvement, partnerships, and public awareness. It promotes collaborative land management and acquisition approaches, partnering with organisations like Ngāi Tahu, community groups, and individuals. By encouraging public awareness of open space opportunities, the strategy fosters a shared commitment to preservation and sustainability, ensuring that public spaces remain accessible and valued community assets. This collaborative approach aligns with Harvey's '*Spatial Matrix*', which acknowledges how public spaces reflect and shape social processes. Here, community engagement becomes central to the long-term success of Christchurch's open space initiatives.

Sustainability is at the heart of the strategy's open space provision and management goals. Through development contributions, funding mechanisms, and acquisition strategies, the strategy prioritises the development of parks, waterways, and street amenities that align with the city's open space needs. It advocates for sustainable management practices, including waste reduction, minimisation of environmental impacts, and initiatives to reduce greenhouse gas emissions. To support this, the

strategy calls for monitoring programs that help maintain and enhance open spaces, ensuring they meet community needs and environmental goals over time.

The Christchurch City Council has consistently allocated funding to support open spaces, as detailed in Table 3-1, which shows budget allocations over recent years. Over the past five years, the Council has allocated approximately 6.8% of its total budget to Parks, Heritage, and the Coastal Environment, highlighting the strategic priority placed on public spaces. These financial commitments underscore Christchurch’s dedication to fostering a sustainable and accessible open space network that enriches urban life.

Table 3-1: Christchurch budgetary allocations 2019 – 2023

FINANCIAL YEAR	TOTAL BUDGET IN NZ\$ BILLION	PARKS, HERITAGE AND COASTAL ENVIRONMENT	RECREATION AND SPORTS	LIBRARIES	MUSEUMS
2019-20	1.06	6%	0	0	0
2020-21	1.14	7%	12%	4%	2%
2021-22	1.22	6%	8%	4%	2%
2022-23	1.27	7%	5%	4%	2%
2023-24	1.54	8%	5%	4%	2%

Source: Christchurch City Council Annual Plan 2019-20 until 2023-24

Christchurch’s Public Open Space Strategy offers a coordinated approach that aligns public open space development with broader urban planning goals. McMillian (2010) notes that in 2009 Christchurch boasted approximately 942 parks of various typologies. This number has since increased significantly, reaching around 1,200 parks by 2023 (Christchurch City Council, 2023). By integrating community needs, environmental resilience, and cultural heritage into a cohesive urban strategy, Christchurch sets a high standard for sustainable urban planning. However, its lack of an explicit monitoring and evaluation framework critiques the strategy. Unlike Mexico City’s *Plan Verde*, which established an independent oversight committee, Christchurch’s strategy does not explicitly outline accountability mechanisms, raising questions about the transparency and effectiveness of its long-term implementation.

The Public Open Space Strategy is a comprehensive blueprint for Christchurch, balancing diverse imperatives such as quality of life, environmental preservation, and cultural heritage. By incorporating community engagement, sustainability, and adaptive management into its open space planning, the strategy underscores the essential role of public spaces in the city’s future. Figure 3-3 shows that the strategy is integrated within a broader governance framework that supports Christchurch’s vision of a healthy environment, positioning it as a model for cities seeking to promote urban resilience and inclusivity.

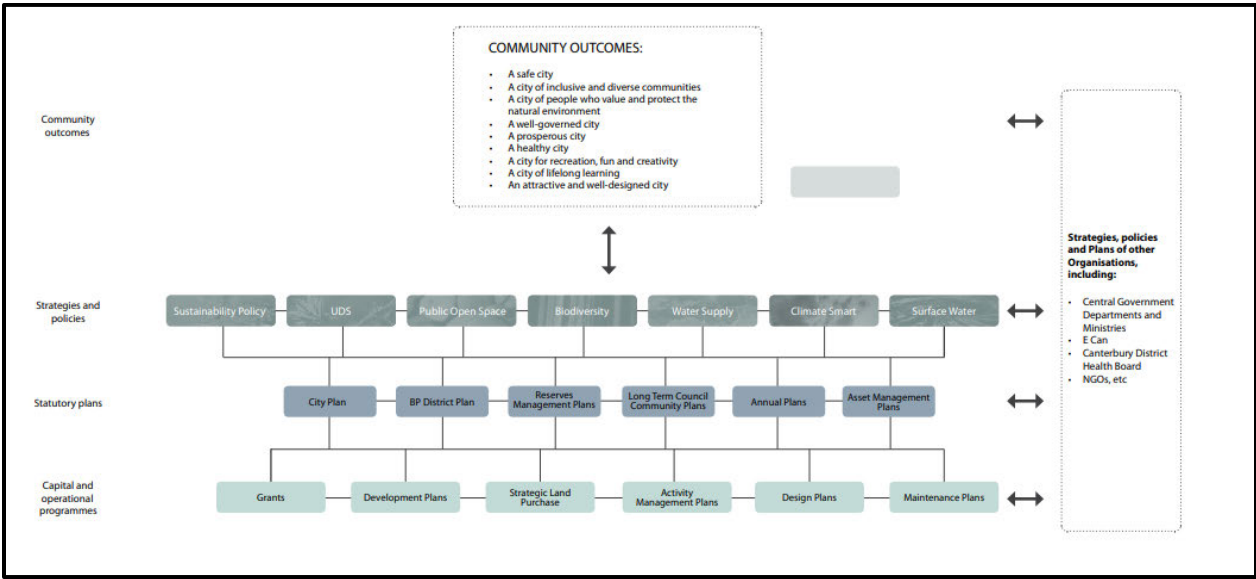


Figure 3-3: Christchurch City Council’s Strategy, Policy and Planning Framework for key healthy environments

Source: Christchurch City Council’s Strategy

Through this strategic approach, the city reaffirms its commitment to creating interconnected, accessible, and sustainable open spaces that reflect the city’s unique identity and promote health, recreation, and community well-being. The strategy’s holistic vision ensures that Christchurch’s public spaces remain vibrant, multi-functional, and integral to the city’s urban landscape, serving as essential assets for future generations.

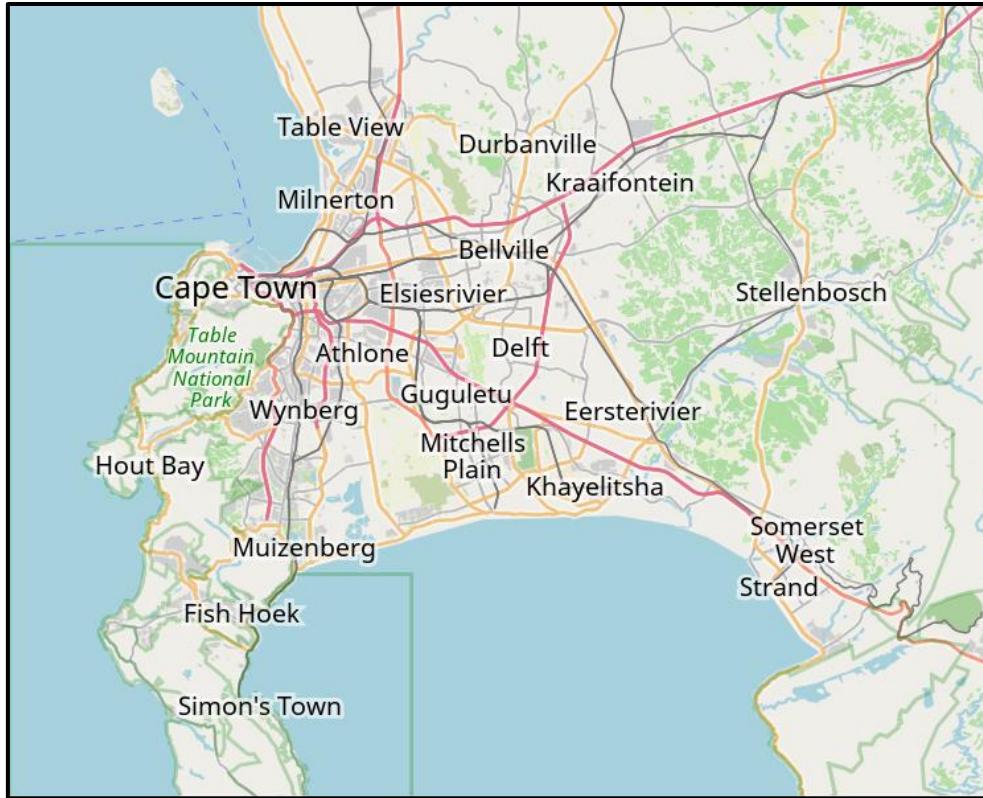
3.4 Cape Town

3.4.1 Context

The Metropolitan Municipality of Cape Town, located on the southwestern coast of South Africa, is renowned for its vibrant diversity, breathtaking natural landscapes, rich cultural heritage, and significant economic influence. As of 2023, Cape Town's metro area boasts a population of approximately 4,890,000 residents and covers an area of around 2,455 square kilometres (Macro Trends 2023). In the Western Cape province, Cape Town is the only Category A metropolitan municipality in this region (See Map 3-4) .

Cape Town is uniquely characterised by an extensive seaboard stretching over 294 kilometres, with the Atlantic Ocean forming its southern and western boundaries. The city shares borders with several neighbouring district municipalities, including the West Coast District to the north, the Cape Winelands District to the northeast, and the Overberg District Municipality to the southeast.

As South Africa's second-largest economic hub and the nation's second most populous city, Cape Town follows closely behind Johannesburg in these regards. Beyond its economic importance, the city also serves as the seat of the National Parliament, making it the country's legislative capital. Additionally, Cape Town houses the Western Cape Provincial Government, further underscoring its multifaceted role in national governance.



Map 3-4: A locality map for Cape Town Metropolitan City, South Africa

Source: https://en.m.wikipedia.org/wiki/File:OpenStreetMap_Cape_Town_small.svg, (accessed 18th November 2024)

3.4.2 Public space approach

The Cape Town Spatial Development Framework (CTSDF) and its Urban Design Policy exemplify the city's commitment to transformative urban design to promote sustainable development and address historic spatial inequalities. This policy framework aligns with international best practices in urban planning (Todes, 2012; Watson, 2014), It is a critical instrument in Cape Town's long-term development trajectory. The policy addresses the legacy of Apartheid-era segregation by fostering inclusivity and equitable access to urban resources (Harrison, Todes, & Watson, 2008).

The Cape Town Urban Design Policy is rooted in a vision to create a more inclusive, resilient, and aesthetically appealing urban landscape. The policy operates within a

structured governance hierarchy, ensuring alignment with Cape Town’s broader strategic objectives, as Figure 3-7 illustrates. This hierarchical integration is similar to approaches in other global cities, where urban design policies are crucial to implementing comprehensive urban frameworks (Healey, 2007).

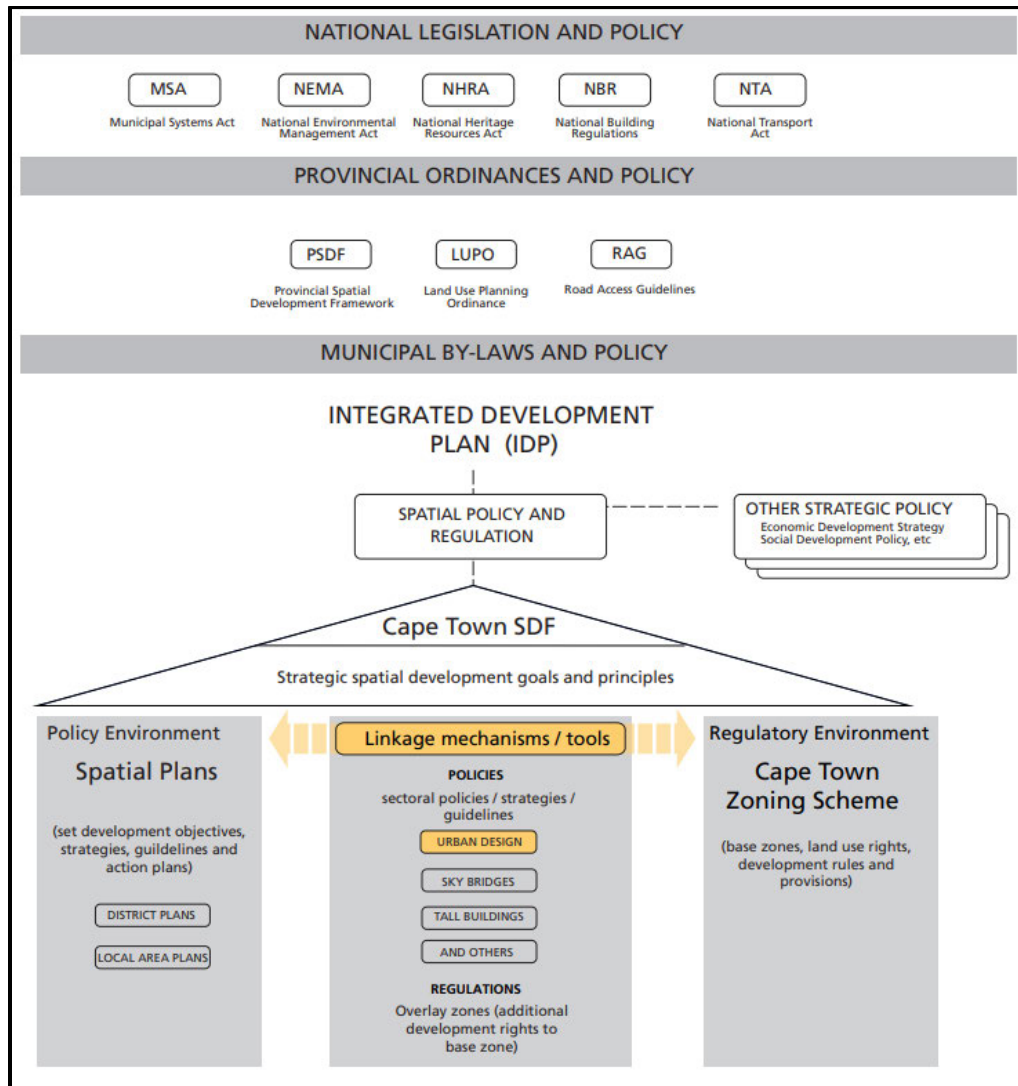


Figure 3-4: The location of Urban Design Policy in the planning hierarchy

Source: Urban Design Policy, 2013

A central focus of the Urban Design Policy is addressing the legacy of spatial segregation by promoting inclusivity in urban spaces. This aligns with Lefebvre’s concept of ‘living

space', which emphasises the role of public spaces in fostering social interactions and community building. The policy's commitment to making public spaces safe and accessible directly challenges historical inequities by creating environments where social equity is prioritised. In Harvey's terms, this approach addresses spatial justice by ensuring all residents can access urban resources equitably (Harvey, 1973).

The policy also emphasises the economic potential of urban design. Cape Town seeks to integrate economic vibrancy into its urban fabric by incorporating spaces that support entrepreneurship and job creation. This reflects Lefebvre's notion of '*perceived space*', where economic activities unfold in public spaces, as well as Harvey's '*Spatial Matrix*', which highlights the role of capitalist dynamics in shaping urban space (Harvey, 2006). The policy's principles prioritise spaces that are not only inclusive but also economically productive, supporting a vision of Cape Town as both socially equitable and economically robust.

The Urban Design Policy also reflects a deep commitment to environmental sustainability, integrating ecological considerations into urban planning. This focus aligns with Lefebvre's '*conceived space*', where planners and policymakers shape the urban environment, emphasising sustainability, climate resilience, and green infrastructure. By embedding ecological sustainability within the design and management of public spaces, Cape Town's policy aligns with Harvey's critique of capitalist urbanisation, which often overlooks long-term environmental impacts (Harvey, 1996).

The policy's emphasis on aesthetic enhancement and cultural preservation underscores the importance of creating visually appealing and culturally significant public spaces. By preserving historical landmarks and integrating them into contemporary urban design, the policy supports Lefebvre's '*lived space*' concept, where public spaces embody collective memory and cultural identity. Harvey's perspective further highlights the importance of resisting commodification, as maintaining cultural heritage helps protect the symbolic meanings embedded within Cape Town's urban landscape (Harvey, 1996). This approach reflects a broader effort to enhance the city's identity while fostering a sense of place and pride among residents.

Ensuring efficient connectivity and accessibility is a critical component of the urban design policy. The development of transportation networks and pedestrian pathways seeks to reduce spatial barriers, creating a more integrated and accessible city. This aligns with perceived space, where physical movement through urban spaces shapes daily experiences. Moreover, the policy addresses Harvey’s concerns regarding spatial inequality, as accessibility is often unevenly distributed, reflecting broader imbalances in urban infrastructure provision (Harvey, 1973).

In response to rapid social, environmental, and economic changes, the Urban Design Policy embeds principles of resilience and adaptability into Cape Town’s urban design framework. Lefebvre’s ‘*conceived space*’ dimension captures this foresight, ensuring urban plans are equipped to address future challenges. The concept of ‘*lived space*’ is reflected in the adaptability of these environments to evolving community needs. The policy’s focus on resilience aligns with Harvey’s view of space as a dynamic and changing entity, continuously shaped by socio-economic and environmental forces (Harvey, 1996).

The urban design policy is operationalised through specific design principles, as Table 3-2 summarises. These principles emphasise efficient land use, community facility concentration, and public realm enhancement. They ensure that developments contribute positively to Cape Town’s structural integrity, fostering cohesion and accessibility within neighbourhoods. Each principle underscores Cape Town’s commitment to creating functional and adaptable spaces, promoting a more inclusive and sustainable urban environment.

Table 3-2: A summary of Urban Design Policy

URBAN DESIGN GOAL	URBAN DESIGN PRINCIPLES
Ensure urban development contributes to a cohesive urban structure	Clarity of Urban Structure, Strategic Community Facilities, Utility Service Considerations

URBAN DESIGN GOAL	URBAN DESIGN PRINCIPLES
Enhance public realm and open space quality.	Purposeful Open Space Planning, Strategic Positioning of Public Spaces, Robust Design of Public Spaces
Promote safety and security.	Optimised Visual Connections, Risk and Vulnerability Mitigation
Enhance connectivity and accessibility.	Enhanced Spatial Connectivity, Non-Motorized Transport Planning, Barrier Mitigation
Promote development intensity, diversity, and adaptability.	Sustainable Neighbourhood Planning, Efficient Site Utilisation, Shared Use of Open Spaces
Ensure positive interfaces in the public realm.	Respectful Orientation, Street-Centric Building Placement, Active Public-Private Interface
Respond to informality	Proactive Response to Informality, Economic Activity Support
Protect the natural environment through sustainable design.	Environmental Resource Protection, Continuity of Open Space Network
Reflect heritage and unique identity.	Preservation of Natural Features, Respect for Cultural Landscape

Source: Cape Town Urban Design Policy 2013

The Cape Town Urban Design Policy is a comprehensive framework for sustainable urban design, addressing the multifaceted dimensions of urban space through the lenses of Lefebvre’s *‘Spatial Triad’* and Harvey’s *‘Spatial Matrix’*. Cape Town’s approach serves as a model for cities seeking to navigate the complex forces shaping public spaces by fostering inclusivity, supporting economic vibrancy, promoting cultural preservation, and emphasising sustainability. The policy aligns with global frameworks for urban development, ensuring Cape Town’s public spaces remain accessible, resilient, and meaningful for all residents. Through a structured, principles-based approach, the policy addresses Cape Town’s historical and contemporary challenges and envisions a future

where urban spaces enhance the quality of life and contribute to a more just, vibrant, and sustainable city.

3.4.3 Implementation of the Urban Design Policy

Adopting Cape Town's Urban Design Policy in 2013 marked a pivotal step in shaping the city's development processes, with the policy immediately applying to all new projects outside those already in progress. This policy is a crucial regulatory tool embedded in the city's broader planning framework, underscoring Cape Town's commitment to inclusivity, sustainability, and urban resilience. Through the dual theoretical lenses of Henri Lefebvre and David Harvey, the policy offers insights into how Cape Town's urban planning framework navigates the power dynamics, socio-economic forces, and institutional structures that shape urban environments.

Cape Town's Urban Design Policy supports Lefebvre's concept of '*conceived space*', as it was institutionalised to guide the city's application approval processes. Municipal officials evaluate proposals against the policy's principles, ensuring that urban design objectives of inclusivity, sustainability, and connectivity are consistently upheld. By placing responsibility on developers to align with these objectives, the policy operates as a form of spatial governance, transforming Cape Town's physical and symbolic landscapes. Integrating the policy into municipal systems reflects how conceived space is shaped by legal and institutional frameworks that influence urban development.

From a practical perspective, the policy's requirement for applicants to submit a detailed design statement ensures that abstract urban design principles are translated into concrete frameworks. These statements include a developmental vision, contextual analysis, and an urban design framework, helping align individual projects with Cape Town's broader spatial vision. This structured approach requires developers to consider the broader urban context and socio-economic forces influencing their projects, underscoring Lefebvre's notion that conceived space must engage with the complex realities of the physical environment and social dynamics (Lefebvre, 1991).

David Harvey provides a lens through which to examine the power dynamics in Cape Town's Urban Design Policy. He posits that urban spaces are produced within a matrix of power, capital, and social relations, often reflecting the interests of political and economic elites (Harvey, 1973). The policy's framework, which requires developers to adhere to specific design principles, illustrates the municipality's role in shaping urban spaces through a structured regulatory process. An emphasis on early engagement with applicants, such as pre-submission consultations, reflects a desire to streamline approvals, minimise risks, and ensure that design principles are adhered to. This alignment between regulatory oversight and economic interests reveals the tension between capital investment goals and the municipality's commitment to enhancing Cape Town's urban fabric. The policy can be seen as a negotiation tool that balances economic and social objectives. Comprehensive design statements are required to align development projects with the city's urban objectives while addressing broader social needs. This process underscores the constant interplay between developers, municipal authorities, and the community, highlighting the negotiation between profit-driven interests and the regulatory demands of sustainable urban development (Harvey, 2006).

A critical aspect of the Urban Design Policy is its emphasis on accountability. Even if developers forgo pre-submission consultations, they remain responsible for ensuring their projects meet the policy's objectives which aligns with Harvey's critique of power in urban planning, where accountability mechanisms are imposed to align developments with social and environmental goals despite potential economic pressures (Harvey, 1996). To facilitate adherence, the City of Cape Town developed an integration framework, which guides applicants through the development process and reinforces the policy's principles within daily planning activities (See Figure 3-5 below). This framework serves as a tool within conceived space, ensuring that urban design principles are operationalised consistently across the city.

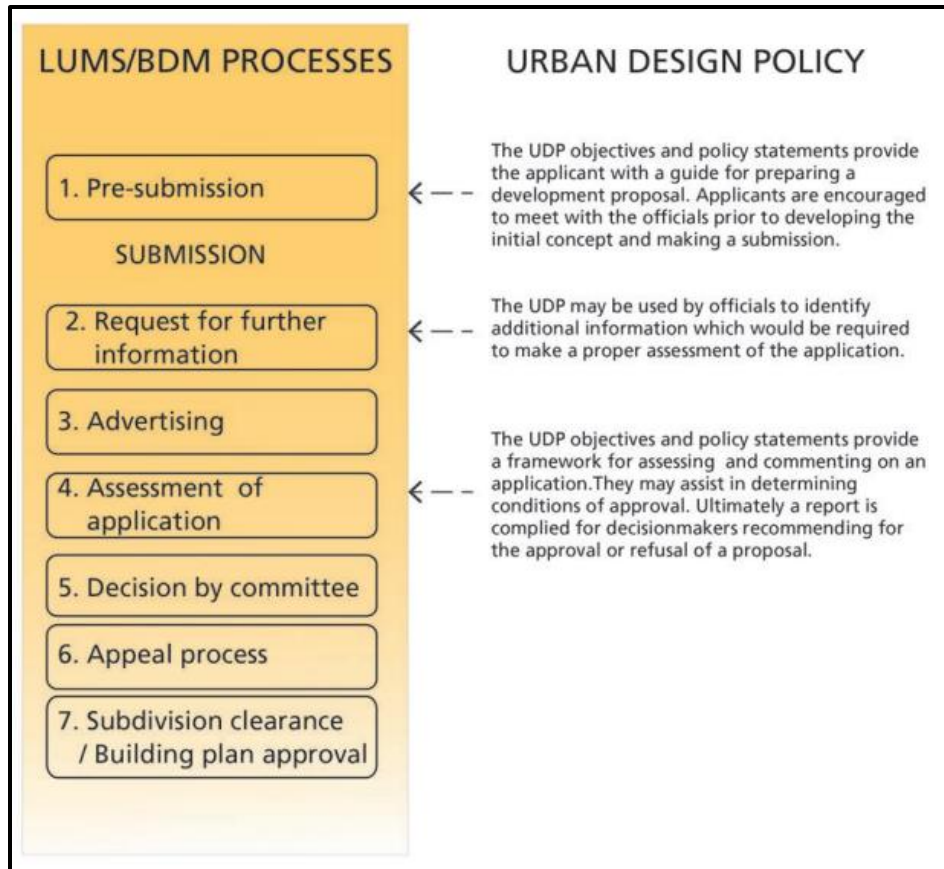
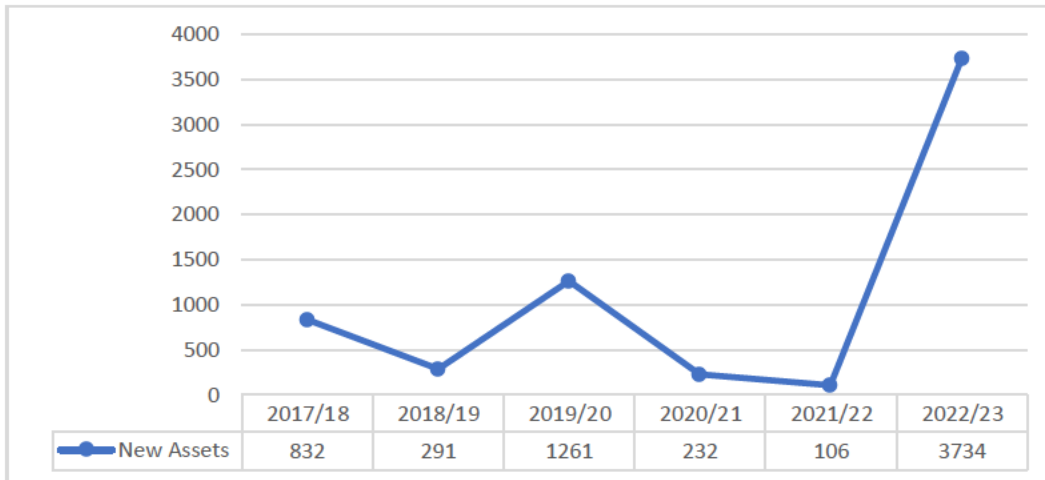


Figure 3-5: The integration of Urban Design Policy and land use management applications

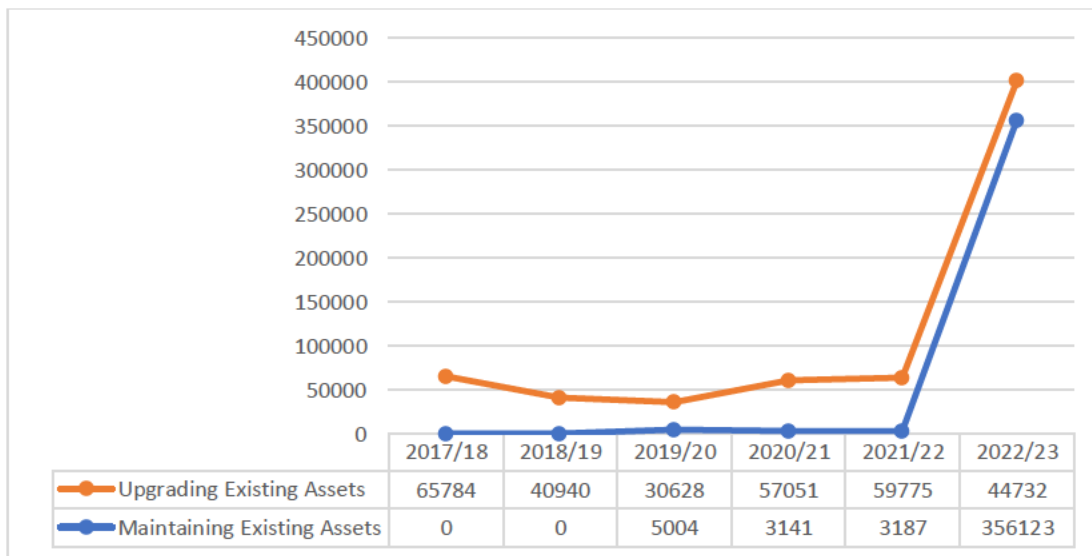
Source: Cape Town Urban Design Policy 2013

Analysing the City of Cape Town’s financial commitment to public open space over the 2021/22 and 2022/23 fiscal years offers valuable insights into resource allocation. The data reveals significant investments in new public space assets and the maintenance of existing spaces, as depicted in Graphs 3-3 and 3-4 on the next page. Over six years, the city allocated an average of R1,076,000 annually toward maintaining public open spaces. In contrast, capital expenditures on new assets averaged R 367,455,000, demonstrating a robust commitment to enhancing the urban environment.



Graph 3-3: The audited expenditure on new public space assets in R'000

Source: The City of Cape Town Annual Budget 2021/22 and 2022/23



Graph 3-4: The audited expenditure on maintenance and upgrade of public open spaces in R'000

Source: The City of Cape Town Annual Budget 2021/22 and 2022/23

The expenditure analysis reveals a ratio of 1:62 for newly created assets compared to existing asset maintenance, with a 1:49 ratio for new asset development to upgrades.

This data underscores the city's significant focus on preserving and enhancing its urban spaces, reflecting a balanced approach to new development and ongoing maintenance. When viewed through Lefebvre's '*Spatial Triad*', this financial commitment emphasises Cape Town's holistic approach to managing urban spaces, prioritising growth and sustainability.

3.5 Areas of similarities between the case studies

The Urban Design Framework of Cape Town, *Plan Verde* in Mexico City, and the Christchurch Public Open Space Strategy exemplify distinct yet strategically aligned urban planning initiatives. Each planning strategy is tailored to address the unique challenges and enhance the quality of life within their respective cities. Although these frameworks are shaped by their distinct geographic, social, and environmental contexts, they share fundamental principles emphasising sustainable urban development, inclusivity, and resilience.

3.5.1 Geographic context

The geographic contexts of Cape Town, Mexico City, and Christchurch have significantly shaped their urban design strategies. Cape Town, located on South Africa's southwestern coast, must navigate the interplay between social inequality, heritage preservation, and environmental sustainability amid its striking natural landscape of mountains and ocean. The city's urban design strives to balance these demands, incorporating the diverse cultural and historical aspects that define its identity.

Mexico City, one of the world's most populous and dense urban areas, faces significant environmental challenges, including air pollution, congestion, and rapid urbanisation. *Plan Verde* directly addresses these issues, prioritising ecological concerns and promoting sustainable urban development to mitigate pollution and foster a more liveable city.

Christchurch, profoundly impacted by the 2010 and 2011 earthquakes, reflects its history in the Public Open Space Strategy. This strategy emphasises resilience and recovery, focusing on creating urban spaces that support community well-being and preserve cultural heritage within the context of urban renewal. These geographic distinctions illustrate Lefebvre's concept of '*perceived space*', where the physical environment and everyday lived experiences inform each city's approach to urban planning.

3.5.2 Alignment with Lefebvre's '*Spatial Triad*'

Each urban planning framework aligns with Lefebvre's '*Spatial Triad*' and the three elements of '*perceived*', '*conceived*', and '*lived*' space although the focus and execution differ by context. Cape Town's urban design framework integrates all three dimensions: It engages '*perceived space*' through community participation, embodies '*conceived space*' in its strategic urban planning, and addresses '*lived space*' by preserving cultural heritage and promoting social equity. This alignment ensures that Cape Town's diverse history and community needs are reflected in its urban design.

Mexico City's *Plan Verde* aligns with the '*Spatial Triad*' by fostering public interaction with green spaces as '*perceived space*', detailed environmental planning '*conceived space*', and enhancing the urban experience as '*lived space*' through sustainable development. This framework centres green spaces in the city's urban experience, addressing critical environmental concerns.

Christchurch's Public Open Space Strategy focuses on '*lived space*', emphasising community well-being and cultural significance, and incorporates '*conceived space*' through post-earthquake strategic planning. The emphasis on resilience and recovery allows public spaces to support emotional healing and cultural continuity. In each case, the triad framework reflects a holistic urban planning approach that interweaves physical, social, and cultural dimensions.

3.5.3 Primary focus of each framework

The primary objectives of these frameworks reflect each city's unique challenges while striving for sustainable urban development. Cape Town's Urban Design Framework prioritises creating liveable, inclusive, and sustainable spaces, addressing the legacy of apartheid alongside the pressures of modern urbanisation. Focusing on social equity, environmental sustainability, and cultural heritage is central to shaping Cape Town's urban identity.

Mexico City's *Plan Verde* emphasises environmental resilience, seeking to improve air quality and expand green infrastructure. The plan addresses pressing environmental issues, such as pollution and congestion, by enhancing the city's green infrastructure and creating a more sustainable urban landscape.

The city's post-earthquake recovery needs influence Christchurch's Public Open Space Strategy, emphasising community well-being and cultural preservation. The strategy supports Christchurch's ongoing efforts to rebuild and strengthen its social fabric, integrating resilience and cultural continuity into public space design. These focal points illustrate how each framework addresses immediate local needs while engaging with broader global concerns around sustainability and resilience.

3.5.4 Community engagement

Community engagement is a central component in implementing these urban design policies, demonstrating a commitment to participatory planning. Cape Town emphasises active involvement from residents, businesses, and stakeholders, ensuring that community input shapes the planning process. This aligns with Lefebvre's concept of '*lived space*', where public spaces are influenced by those who inhabit them, and their voices contribute to urban development.

Mexico City's *Plan Verde* incorporates public engagement, particularly around environmental sustainability. By encouraging interaction with green spaces, the city

integrates community involvement within its broader ecological goals, addressing pollution and urban congestion through participatory strategies.

Christchurch strongly emphasizes community involvement, particularly in its recovery-focused public space planning. Following the earthquakes, the city actively sought input from communities to ensure that public spaces reflected their values and met their needs, aligning with participatory planning principles. This shared emphasis on community engagement demonstrates a commitment to inclusivity, ensuring that urban design processes resonate with the diverse aspirations of each city's population.

3.5.5 Environmental sustainability

Environmental sustainability is integral to each urban planning initiative, though the specific approaches and priorities vary. Cape Town promotes sustainability by incorporating eco-friendly urban development and sustainable transportation within its Urban Design Framework, addressing Harvey's critique of capitalist urbanisation, which often neglects ecological impacts (Harvey, 1996).

Mexico City's *Plan Verde* focuses heavily on environmental objectives, including pollution reduction and green space expansion. The framework emphasises extensive tree planting and green infrastructure as part of its strategy to build a resilient urban environment that addresses the city's environmental challenges.

While focusing on open space and cultural preservation, Christchurch also integrates environmental sustainability into its strategy. The city's approach reflects a multifaceted understanding of sustainability, where public spaces fulfil ecological, cultural, and social roles. In all three cities, sustainability is interwoven with urban design, reflecting a dedication to creating adaptable and resilient urban spaces that respond to human and environmental needs.

3.6 Conclusion

The Urban Design Framework of Cape Town, Mexico City's *Plan Verde*, and the Christchurch Public Open Space Strategy highlight the similarities in their commitment to sustainability, inclusivity, and resilience despite their distinct geographic and social contexts as illustrated in Table 3-3 below. Additionally, the emphasis on community engagement and environmental sustainability across these frameworks underscores a shared vision for urban planning that is both locally responsive and globally relevant. This alignment with global urban development trends illustrates a strategic commitment to enhancing the quality of life for residents, promoting environmental resilience, and fostering inclusive urban spaces.

Table 3-3: A comparative analysis of urban design initiatives

FRAMEWORK	GEOGRAPHIC CONTEXT	PRIMARY FOCUS	COMMUNITY ENGAGEMENT	ENVIRONMENTAL SUSTAINABILITY
Cape Town	Coastal, mountainous, and socially diverse	Inclusivity, heritage, sustainability	Active involvement of residents and stakeholders	Eco-friendly development, sustainable transportation
Mexico City	Dense, metropolitan, environmental challenges	Pollution reduction, green infrastructure	Public interaction with green spaces	Green infrastructure, air quality improvement
Christchurch	Earthquake-prone, focused on recovery	Resilience, Cultural continuity	Community-focused post-earthquake recovery	Multifunctional public spaces that support ecology and culture

Source: Adapted from Cape Town Urban Design Policy, Mexico City Plan Verde , and Christchurch Public Open Space Strategy

The collective insights from these case studies reveal the value of integrated urban planning frameworks that address both local contexts and global challenges. As cities

face environmental, social, and economic pressures, these frameworks serve as models for creating sustainable and inclusive urban spaces that reflect the complex dynamics of modern urban environments.

4. CHAPTER FOUR – RESEARCH METHODOLOGY

4.1 Introduction

Building on the theoretical foundation outlined in Chapter Two and the precedent studies explored in Chapter Three, this chapter examines the research methodologies employed to analyse the role of public spaces in fostering inclusivity within the eThekweni Municipality. Landman (2018) notes that South African urban centres have undergone significant transformations over the last two decades, altering public spaces' structure, dynamics, and uses. This study aims to critically assess the impact of public spaces on the development and execution of inclusive urban practices by urban planners in eThekweni.

This chapter begins by justifying the adoption of a case study approach and then delves into the research philosophy that informs the study. The detailed research design provides a comprehensive overview of the quantitative and qualitative data sources and the sampling techniques employed by the researcher. It also highlights the role of technology in achieving research objectives and enhancing the validity and reliability of data. The chapter concludes by addressing the ethical considerations and acknowledging the limitations inherent to the research process.

The research is premised on the idea that a well-structured citywide public space strategy is fundamental to building inclusive urban environments. Such a strategy serves as a cornerstone for sustainable urban development and supports the creation of equitable and resilient urban spaces. Figure 4-1 presents the research cycle and objectives and has been adapted from the research framework of Paul, Leedy, and Omrod (2010). This framework encapsulates the research objectives. It also illustrates the interconnectedness of the variables within the cycle.

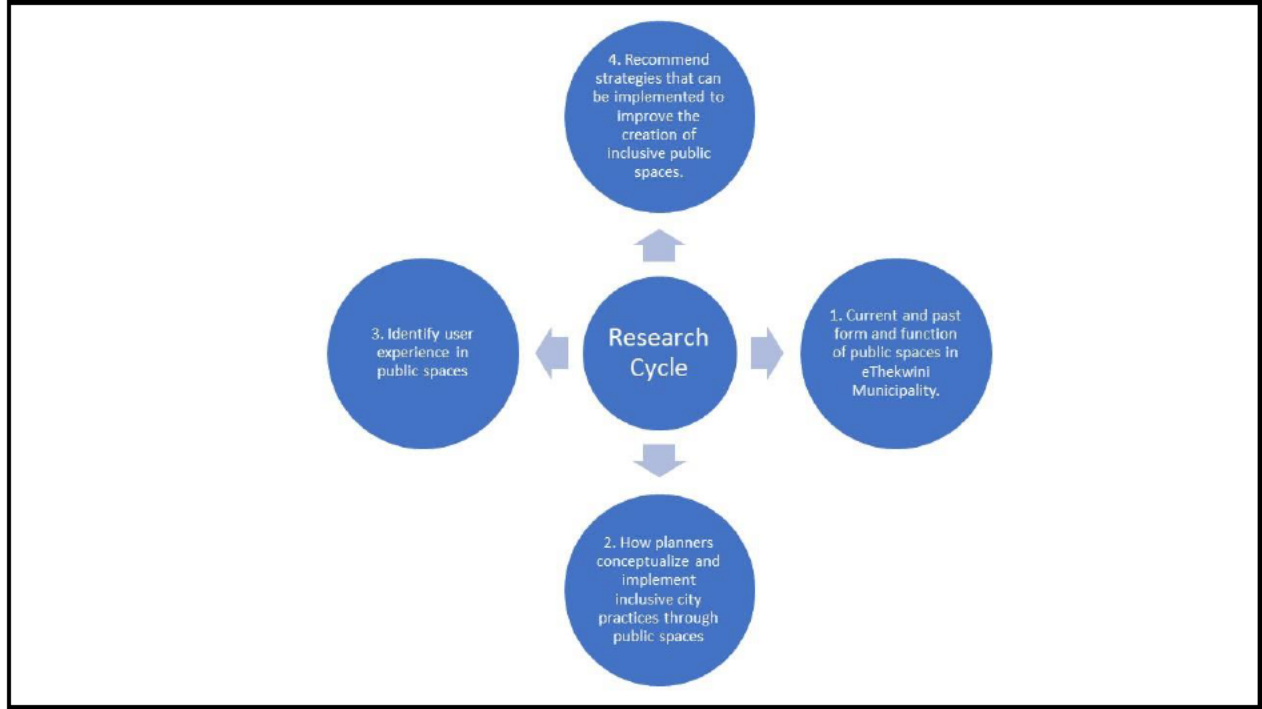


Figure 4-1: The research cycle and objectives

Source Adaptation of the Research Cycle (Paul, D. Leedy and Omrod, 2010)

The study examines three key variables, each contributing a distinct perspective on public spaces in eThekweni Municipality namely:-

- **Variable One:** - which explores the function of public spaces within eThekweni, setting the groundwork for understanding how these spaces contribute to the broader urban landscape. This analysis provides essential insights into public spaces' physical characteristics and strategic positioning and forms the basis for evaluating their role in fostering inclusivity.
- **Variable Two:-** focuses on the role of urban planners in conceptualising inclusive public spaces. This variable delves into the frameworks and strategies planners employ to create spaces that promote inclusivity. The study considers how urban planners navigate complex urban design terrain, addressing socio-spatial disparities through strategic public space interventions.

- **Variable Three:** - which investigates individuals' *'lived experiences'* within these public spaces. By examining user perceptions, interactions, and engagements with urban surroundings, this variable offers a critical lens through which to assess the effectiveness and inclusivity of eThekweni's public spaces.

Through this analysis, the research seeks to generate actionable recommendations for urban planners to enhance the inclusivity and vibrancy of public spaces in the city. The recommendations will be informed by insights from each variable. This method will ensure that the proposed strategies reflect the functional, cultural, and social realities of the municipality's diverse communities.

The case study approach was selected for its ability to provide an in-depth understanding of eThekweni's unique urban context. It allows a nuanced examination of public space and inclusivity. This chapter emphasises the importance of combining quantitative and qualitative data sources to capture public space use and perceptions comprehensively. Sample selection was informed by the need for a representative cross-section of stakeholders, to ensure that the study reflects diverse perspectives from stakeholders – from planners to community members.

Technology played a vital role in data collection, enabling enhanced accuracy and reliability. Digital mapping tools, surveys, and participatory Geographic Information Systems (GIS) techniques were used to analyse spatial patterns and community interactions within public spaces. These methods facilitated a richer understanding of the connections between public space design and social inclusivity, aligning with the study's objectives.

Ethical considerations are central to this research. Given the diverse socio-economic and cultural backgrounds of eThekweni's residents, this aspect is critically important if the research is to have validity. The study adheres to ethical guidelines, particularly in terms of informed consent, confidentiality, and sensitivity to cultural nuances. Additionally, this chapter addresses some of the limitations encountered during the research process, including logistical challenges in data collection and constraints related to sample size.

4.2 Research using the case study methodology

To gain a comprehensive understanding of the research problem, a case study methodology was intentionally chosen for this study. The approach facilitates the identification of complex issues surrounding the utilisation and accessibility of public spaces within the eThekweni Municipality. It is particularly well-suited for examining the multi-faceted challenges inherent in creating inclusive public spaces, especially in the context of the Global South. The case study methodology allows for an analysis of how socio-political, economic, and cultural factors influence public space planning and inclusivity, providing valuable insights for urban planning practitioners and policymakers.

By situating the case studies within geographical locations of the Global South, the research is positioned to explore the relationships among various influencing factors. This positioning provides a richer and more contextualised understanding of the broader frameworks within which public space development occurs. As Creswell (2012) emphasises, case study methodologies enable researchers to examine specific trends and practices within particular spaces, offering findings that are both contextual and potentially applicable to other urban settings.

The use of a case study approach is widely recognised as a valuable research methodology. It is particularly suitable for this research due to several key factors. Firstly, an in-depth exploration is a hallmark of case study research, allowing the researcher to delve deeply into cases. This makes it ideal for addressing the complex and multi-layered research questions that require a comprehensive understanding of public space dynamics. Secondly, the contextual richness is captured by examining real-world situations in their natural settings. This allows the researcher to appreciate the complexity of the public space issues and the interplay between various factors affecting its development and management.

Furthermore, the case study methodology is instrumental in theoretical development and testing. It allows for the application and critical assessment of contemporary theoretical frameworks to real-world scenarios. It facilitates the development of new theoretical constructs based on empirical findings. This approach also aligns well with exploratory

research, as it identifies patterns and provides preliminary insights that inform future research stages.

From a practical problem-solving perspective, case studies effectively address real-world challenges. By examining specific cases, the researcher can identify solutions, best practices, and lessons learned that are directly applicable in professional and policy contexts. Additionally, the empirical richness provided by case study research enables the generation of detailed descriptions, narratives, and evidence-based insights, which enhances the depth and credibility of the study's findings.

Eisenhardt (1989) elaborates that case studies are pivotal in theory building, as they involve closely examining one or more cases to develop theoretical constructs. The case study approach enables researchers to explore, describe, analyse, and draw meaningful conclusions from real-world situations. It is essential for advancing knowledge and addressing various research questions across disciplines.

The decision to employ a case study as the research design for this study was guided by the criteria outlined by Yin (2014), who asserts that the methodology is particularly appropriate when:-

- 1) the primary research questions are framed around "how" or "why" inquiries;
- 2) the researcher has limited control over the behavioural events being studied; and
- 3) the focus of the investigation is on a contemporary phenomenon rather than a historical one (Yin, 2014:2).

Given that this research aims to understand contemporary public space practices in eThekweni, the case study methodology is well aligned with the objectives of the study.

4.3 The research philosophy

A pragmatic research approach has been adopted in this thesis as it is particularly well-suited for examining the complexities of public space. It is grounded in a philosophy that emphasises practicality and real-world application (Creswell & Poth, 2018). As a research philosophy, pragmatism generates actionable outcomes to solve real-world

problems, making it an ideal fit for exploring public space issues. By their very nature, public spaces encompass elements such as urban design principles, community interaction, and social functionality. These are areas where pragmatic solutions could be directly applied to improve societal well-being (Morgan, 2014).

One of the key strengths of the pragmatic approach is its focus on practical outcomes. Public spaces are designed and maintained for general civic use, and the research intends to identify and improve on good practices that enhance their functionality. In adopting a pragmatic lens, this research has prioritised results that could inform urban policy and practice rather than focusing solely on theoretical approaches (Patton, 2015). The research investigates how public spaces are used and seeks to provide insights on how they could be improved for the benefit of communities. This approach aligns with the goals of urban planners and policymakers who require practical, evidence-based recommendations to optimise public spaces.

Moreover, pragmatism allowed for flexibility in methods. It blends qualitative and quantitative approaches to create a robust understanding of complex research questions (Johnson & Onwuegbuzie, 2004). The thesis drew on mixed methods, utilising surveys, interviews, and observational studies to capture the multifaceted dynamics of public spaces. By employing this methodological flexibility, the research explored how different users engaged with public spaces and how urban design elements could be optimised to meet diverse needs. The integration of multiple data sources ensured that the study captured both the patterns of usage and the experiences of individuals.

Its focus on context and social impact was another important reason for employing a pragmatic approach. Public spaces were not isolated but embedded in broader socio-cultural and environmental systems (Healey, 2006). Thus, this framework allowed the research to consider how public spaces function within these larger systems. The question of how urban design, social dynamics, and public policy intersect has been explored in the research. The immediate use of public spaces and their long-term impact on community well-being, inclusivity, and urban development has been critically

examined. The findings are situated within these broader contexts and are crucial for ensuring the research's relevance to both academic discourse and practical application.

Furthermore, pragmatism is inherently a problem-solving-oriented approach. It addresses key urban challenges such as accessibility, safety, and sustainability in public spaces (Maxcy, 2003). Public space research often deals with the practical challenges faced by urban populations. A pragmatic approach allows for the identification of feasible and practical solutions. Adopting such a problem-solving stance identifies actionable insights that urban planners, policymakers, and community organisations can implement.

The experience and exposure to the subject matter have been central to the utilisation of a pragmatic research approach. A researcher's experiences and practical understanding of the problem are integral to the research process, as argues Morgan (2014). Given the researcher's involvement in public space issues and urban development, his expertise and practical knowledge contributed significantly to the study's relevance and application. This enabled the researcher to bridge the gap between academic research and real-world implementation, which ensures that the research outputs are theoretically sound and practically valuable.

Adopting a pragmatism research approach in this thesis aligned well with the study's objectives of investigating and improving public spaces. The pragmatist emphasis on practical outcomes, methodological flexibility, contextual awareness, problem-solving, and researcher reflection allowed the research to contribute meaningfully to academic discourse. By focusing on actionable results, the study aimed to inform public space design and development in ways that enhanced community engagement, inclusivity, and urban functionality.

4.4 Research design

The present study was firmly situated within the domain of social sciences, with a focus on exploring how urban public space planning influences inclusivity within the eThekweni Municipality. Central to this investigation was the research design, which played a crucial role in shaping the methodology for collecting and analysing key variables, as outlined by

Maree (2007). The methodological framework adopted for this study was the mixed methods approach, as illustrated in Figure 4-2. This approach harmonised the strengths of both qualitative and quantitative research methods. Creswell (2012) emphasises that the mixed methods approach is particularly advantageous, as it effectively integrates the depth of qualitative insights with quantitative data, thereby providing a more comprehensive understanding of the research problem.

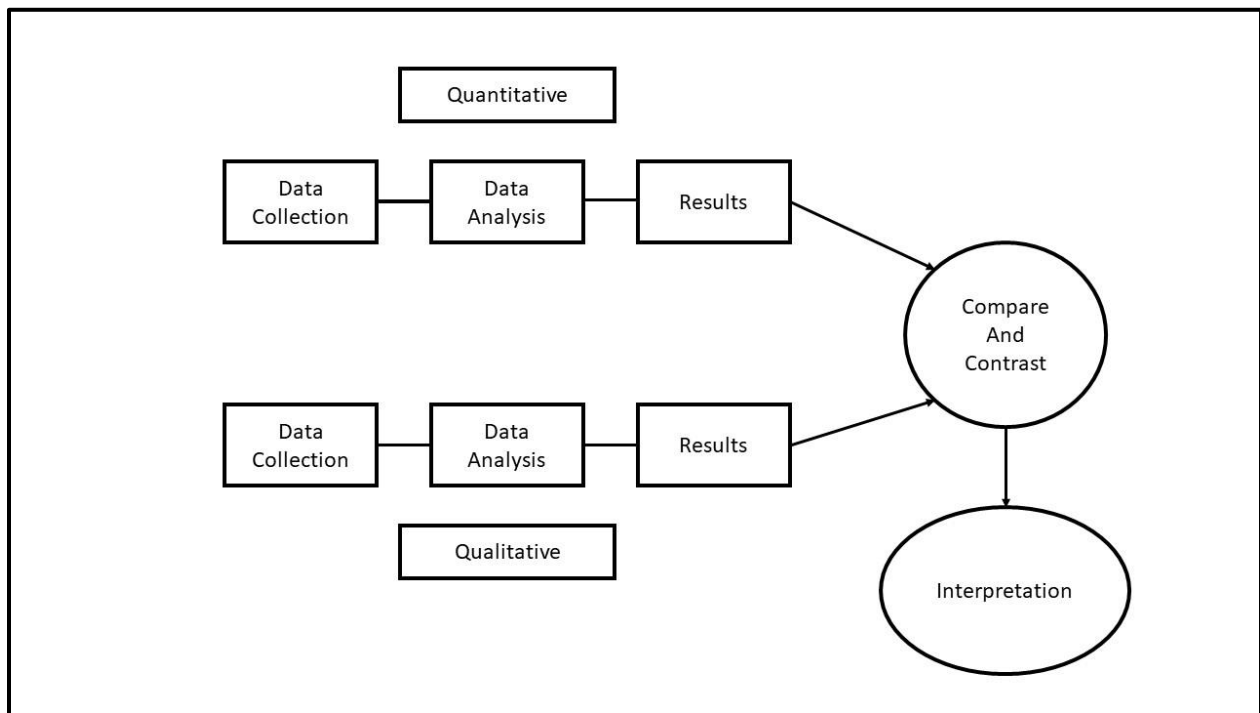


Figure 4-2: A mixed method research design

Source: Adaptation of Creswell’s mixed methods methodology (2012)

The research was underpinned by the premise that achieving sustainable development is linked to formulating a comprehensive, city-wide strategy for the governance and enhancement of public spaces. The necessity of such a strategy was underscored by the complexities inherent in urban environments, where public spaces must be managed in a way that fosters inclusivity and addresses the community's diverse needs.

Building on insights from the literature review and the analysis of relevant case studies, this study formulated a series of carefully constructed research questions. These questions were designed to evaluate the extent to which the eThekweni Municipality has adopted a systematic and strategic approach to implementing and managing public spaces. In doing so, the inquiries served as critical instruments for assessing the effectiveness of the municipality's efforts in public space planning and development, ultimately contributing to the broader discourse on urban inclusivity and sustainable development.

4.5 Data sources

Methodologically, this study was grounded in a mixed methods research philosophy, which emphasises depth and nuance in investigating public spaces' complex social, cultural, and spatial dimensions. The research employed a combination of primary and secondary data sources to understand the phenomena under investigation comprehensively.

4.5.1 Primary data sources

Primary data for this study has been collected through the administration of questionnaires and the conducting of specialist interviews within the suburb of La Lucia located in the north of the city. A GIS-based sampling methodology has been employed to carefully select the household survey population, ensuring the inclusion of a diverse cross-section of individuals within the designated case study area. Fraenkel and Wallen (2009) define primary data as raw, unprocessed information collected by a researcher to address a specific research problem using the most suitable methodologies. In this study, the primary data collection intended to generate new insights into the accessibility and management of public spaces. The respondents in this study included a wide range of participants, such as residents, Local Councillors (LCs), public space experts, and municipal officials and administrators. This diversity provided a broad perspective on the issues surrounding public space access and management. It offers the opportunity for a

holistic understanding of the subject within the context of the municipality's broader strategic framework. Additionally, interviews with key informants formed a critical part of the data collection process, which contributed in-depth knowledge and specialised insights into the challenges and opportunities related to public space governance in the area.

The secondary data for this study involved a comprehensive analysis of legal histories, case studies, and various documents that provided both global and local context for public space development. As detailed in Chapter Three, the analysis extended to global trends, particularly focusing on the integration of sustainable development practices in different countries. This examination was crucial for understanding how cities around the world have approached public space planning and inclusivity.

4.5.2 Secondary data

The research drew upon a wide array of secondary sources, including published and unpublished reports, legislative documents, peer-reviewed journal articles, academic literature, the municipality's Integrated Development Plan (IDP) and Medium-Term Expenditure Framework (MTREF), as well as media sources. These materials were carefully selected to ensure they were credible and relevant. They provide a robust foundation for the study's findings and recommendations. secondary data also served to contextualize best practices and strategies implemented by other cities for the development of inclusive public spaces. By reviewing these diverse sources, the study was able to draw comparisons, identify key trends, and extract lessons that could inform the eThekweni Municipality's approach to public space management and urban inclusivity. The credibility and peer-reviewed status of the information were rigorously assessed to maintain the integrity of the research.

4.6 Qualitative data collection

Creswell (2012) argues that the qualitative research methodology utilised in this study is deeply rooted in the Social Sciences. It draws on knowledge from disciplines such as Anthropology, Sociology, and the Humanities. Golafshani (2003) extends this argument and emphasises that qualitative research methodologies are inherently characterised by a realist approach. It endeavours to understand phenomena within their context-specific settings, often grounded in real-world scenarios. Within the framework of this research, a qualitative approach was employed to unravel the dynamics surrounding access to public spaces and the perceptions of inclusivity among different stakeholders.

The selection of the sample in this study was strategically driven by the objective of gaining a reflective understanding of the research problem. Boddy (2016), articulates the size of the sample in qualitative research is context-dependent and intricately linked to the research philosophy adopted.

The principal aim of the qualitative component in this investigation was to gain a practitioner's perspective, particularly from the point of urban planning practitioners. The focus was on understanding how a citywide public space strategy can shape the developmental trajectory of municipalities, to foster inclusivity. This study intends to provide a compelling argument for the city's administration in considering the adoption of a holistic strategy for public spaces. These spaces would function as an integrated system, rather than isolated pockets of excellence that merely address the immediate needs of individual communities. Through this approach, the study can contribute to the discourse on sustainable urban development and the creation of inclusive public spaces within municipalities.

4.6.1 Target population

As part of this study's qualitative research approach, interviews were conducted with a targeted population of public space experts (global, continental, and national), city administrators, local public space organizations, and Local Councillors. The group was purposefully selected due to their specialised knowledge, direct involvement, and

decision-making authority regarding public space planning, management, and policy implementation within urban environments.

4.6.2 Sampling

The qualitative component of this study involved engaging with a diverse group of key stakeholders to provide a comprehensive understanding of public space planning listed in Table 4-1 , development, and management within the North Region of the eThekweni Municipality. These stakeholders, drawn from various levels of expertise and responsibility, contributed valuable insights into public space governance's technical, strategic, and practical aspects.

Interviews with public space experts offered critical insights into public spaces' design, governance, and their role in promoting inclusivity and sustainability. These experts, with backgrounds in urban planning, architecture, and environmental sustainability, enriched the study by providing theoretical and practical perspectives. Their input was vital in understanding how public spaces can be leveraged to foster community engagement and sustainable development.

City administrators who are responsible for the day-to-day management of public spaces provided practical insights into how public space strategies are implemented at the municipal level. Their contributions highlighted the operational challenges and opportunities in maintaining and enhancing public spaces to meet community needs.

Local Councillors played a crucial role in offering a political and community-oriented perspective. Their input helped highlight the social and political dynamics involved in public space decision-making processes and the community's engagement with public space policies. This perspective was essential for understanding how issues of accessibility, safety, and inclusivity are addressed in local governance.

Additionally, a Senior Manager from the Parks and Recreation Unit, a Town and Regional Planner, and an Environmental Planner in the North Region provided specialised

knowledge on the planning, future design, and environmental sustainability of public spaces. Their understanding and observations shed light on the operational and strategic aspects of managing public spaces and the challenges in balancing development with environmental conservation.

Public space experts at the local, national, and international levels, who chair and represent public space advocacy groups, were also engaged to broaden the study's scope. Their contributions added depth to the analysis by providing a broader context of global best practices, trends, and strategies in public space management.

Lastly, a representative from a community-led park improvement project within Ward 35 was interviewed to provide insights into grassroots efforts to enhance public spaces. This perspective illustrated the role of community involvement in improving and sustaining local public spaces.

Table 4-1 Stakeholder groupings and respondent numbers

Stakeholder grouping	Respondent numbers
Public space experts/networks	1 and 5
Community representative	2
Local councillor	3
Built environment practitioner/Town Planner	4 and 8
Environmental planner	7
Manager of parks	6

Author’s own based on Data Analysis, 2024

Drawing on this diverse set of respondents, the study captured various perspectives, enabling a well-rounded and thorough analysis – as per Chapter 6 - of public space planning and management in the selected area. This comprehensive approach allowed the research to explore both the technical and social dimensions of public space governance, providing valuable insights for future urban development initiatives.

4.6. Data collection

Saunders et al. (2009) offer insights into various data collection methods that can be employed in research. This research used semi-structured interviews, which balanced flexibility and organisation of information. The interview comprised a list of predetermined questions or topics to guide the interview. They also allow for open-ended probing and follow-up questions based on the participant's responses. Semi-structured interviews enabled researchers to explore a range of issues in-depth while still maintaining some level of consistency. The approach was valuable in understanding the complex practices, gathering rich qualitative data and exploring participants' perspectives and experiences.

During interviews, the researcher employed techniques to capture audio responses while supported by manual notetaking forms. The recording of audio ensured that no information or inputs from the interviewee were lost during the interview process. Audio recording also enabled the researcher to concentrate fully on the inputs from the interviewee whilst also having the ability to observe the nonverbal cues and expressions. In conjunction with audio recording, note-taking was employed, utilising electronic forms to capture keywords and phrases. This approach ensured that audio-recorded information could be correlated with written notes. Each note-taking form included essential details such as the interviewee's name (whilst ensuring all ethical and confidentiality considerations), the date of the interview, and relevant identifiers.

4.6.4 Data analysis

The data gathered from these interviews were analysed through thematic analysis, identifying recurring patterns and concepts across the responses. This approach enabled the study to comprehensively understand the multifaceted issues surrounding public space planning, management, and inclusivity, drawing on the diverse perspectives of experts, administrators, and political representatives.

4.7 Quantitative data collection

In this study, the quantitative component employed random sampling as the chosen methodology. The collected samples are meticulously organised and subjected to

statistical processing, with the resultant data being presented in tabular or graphical formats. Leedy and Ormrod (2005) highlight that quantitative data, whether discrete or continuous, is typically gathered through surveys or experimental methods, providing a solid foundation for empirical analysis. For the quantitative component of this study, data collection will be facilitated through a coded household questionnaire, designed to capture relevant variables with precision and reliability.

The subsequent analysis of quantitative data, inherently objective, sought to quantify the frequency and occurrence of various events, employing statistical methodologies to describe these patterns comprehensively (Atieno, 2009). Within the context of this research, the analysis focused on measuring key aspects such as the proportion of households with access to public spaces, the percentage of households satisfied with the safety of these spaces, and the travel distances to preferred public areas. However, it was not limited to these elements. This systematic approach to examining quantifiable parameters enabled a deeper understanding of the quality, accessibility, and availability of public spaces within the targeted area, thereby contributing to the broader discourse on urban planning and inclusivity.

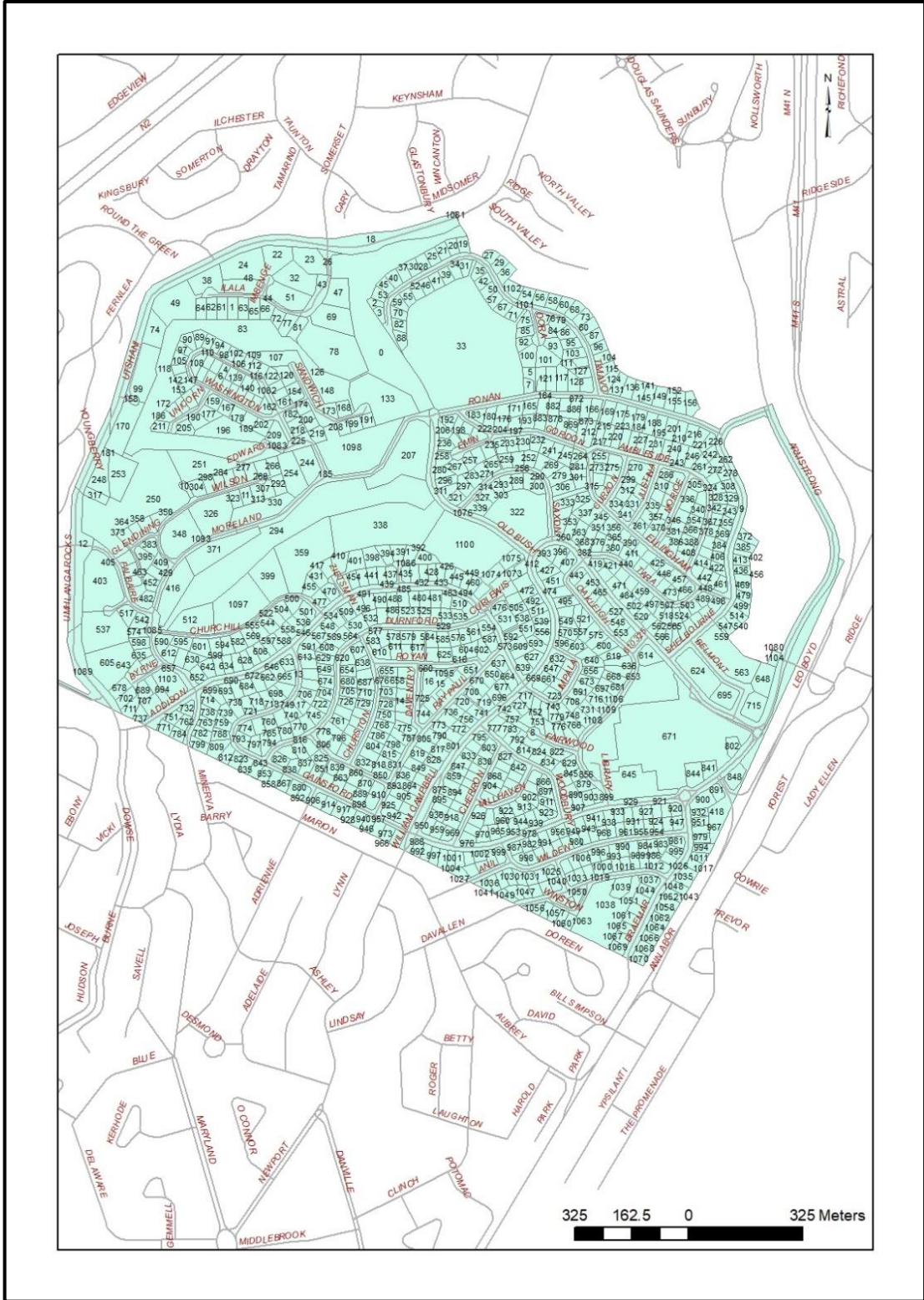
4.7.1 Target population

The study's target population is drawn from the community of eThekweni Municipality. Questionnaires were distributed to La Lucia residents within Ward 35 of the Municipal Area to contextualise the research. The questionnaires investigate public awareness of public space strategy, opinions on public space, concerns related to existing public spaces, factors supporting inclusive city development, and the municipal public participation process, with specific reference to the municipal strategy. There is a diverse and widespread population in Ward 35. A representative sample was selected from various residential suburbs within the ward to ensure an accurate reflection of public perception in this area.

4.7.2 Sampling

The study included an in-depth structured household survey of residents in the suburb of La Lucia in Ward 35 Residents (See Appendix A). Due to the ward having relatively homogenous formal residential areas, a random sample was used in the study. The household questionnaire took approximately 15 – 30 minutes to complete, depending on respondents' interaction with the subject matter,

The sample size was determined using the following variables. As per the municipal cadastral, there are 1,104 properties in the suburb of La Lucia, using a confidence level of 95% and a margin of error of 5%, which yielded a sample size of 294 formal households. Map 4-1 on the next page illustrates the suburb of La Lucia auto-numbered from 1 – 1104.



Map 4-1: Households in the La Lucia case study area

Source: Author's own based on eThekweni Municipality 2022 OpenGIS Data

To achieve the 294-sample size over the site count of 1104 would require every 3,7 (rounded off to every 4th) household to be surveyed. The following equation **MOD(FID, 4) = 0** was used in *ArcGIS* to obtain every 4th household to be surveyed. The results of which are indicated in Map 4-2 below.

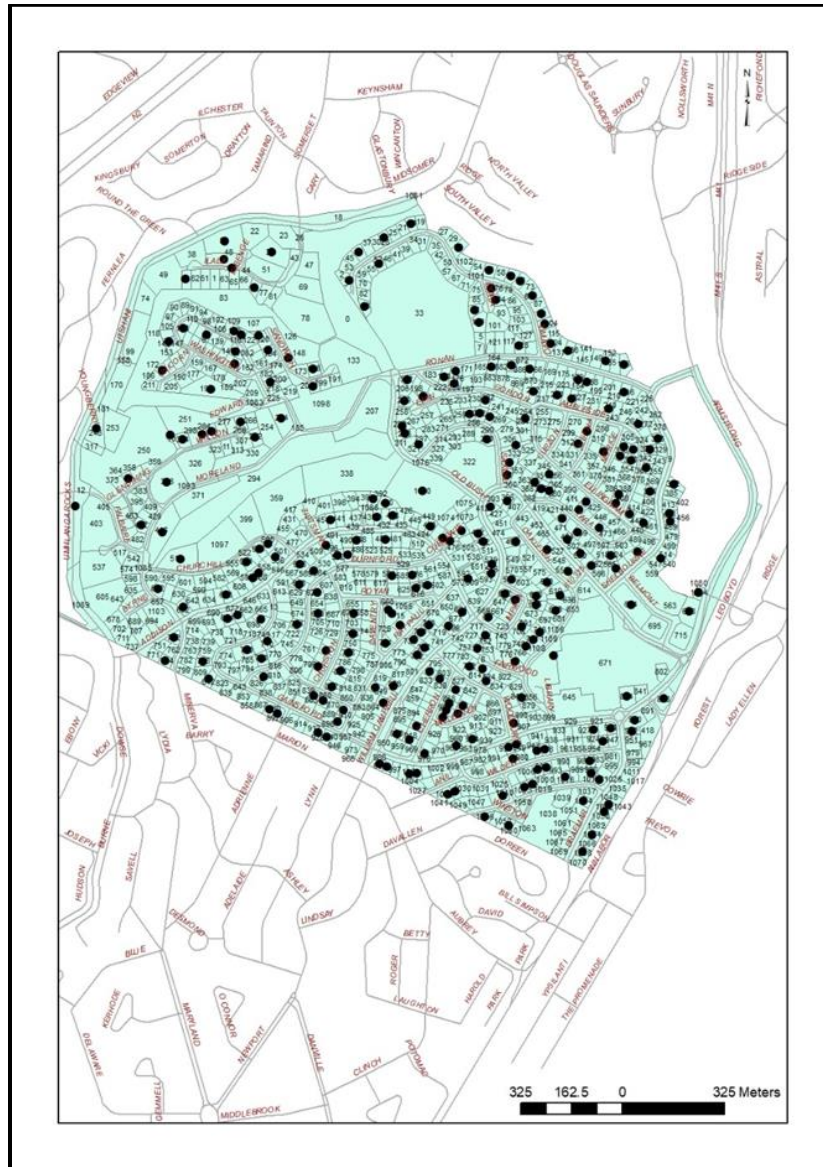


Figure 4-3: A map of La Lucia showing the survey sample

Source: Author's own based on eThekweni Municipality 2022 OpenGIS Data

4.7.3 Data collection

As indicated previously, the primary tool for data collection was a structured interview employing a household survey. The researcher used a predetermined set of questions with standardised wording and order in the structured interviews. These questions were typically closed-ended, requiring brief responses, such as yes or no, or selecting from predefined options. Structured interviews intend to gather quantitative data efficiently and ensure consistency across interviews. Clear and comprehensive information about the research study, including its objectives and voluntary participation, was meticulously communicated to potential participants. To foster trust, assurances of confidentiality and adherence to ethical standards were emphasised throughout the recruitment process. The strategy for participant recruitment was designed to be transparent and accessible, with particular attention given to addressing any concerns or questions that participants might have had. Informed consent was a cornerstone of this process. It was obtained from all individuals before their inclusion in the study, with a clear emphasis on their right to withdraw at any point without any consequences. Principles of inclusivity, fairness, and respect for the autonomy and privacy of participants fundamentally guided the recruitment approach. In cases where households chose to participate in the survey, only one questionnaire was completed per household.

4.7.4 Data analysis

Shamoo and Resnik (2003) define data analysis as the systematic application of logical or statistical procedures to describe, condense, and evaluate data to discover valuable information. Data analysis encompasses several key steps for this research, including data inspection, cleaning, transformation, and interpretation. The overarching goal was to extract meaningful insights that inform the study's conclusions and contribute to informed decision-making. The data analysis approach for this research aligned with the chosen research methodology.

Firstly, case studies of cities that have developed public space strategies were employed to gain an in-depth understanding of how these cities formulated their strategy and how

these approaches contribute to fostering inclusive urban environments. This was achieved through a detailed analysis of key policies and strategies from selected cities. The data from these case studies were analysed by categorising common themes, synthesising key concepts, and identifying their interlinkages. This approach provided insights into the commonalities and differences in public space planning and its role in building inclusive cities.

Secondly, questionnaires were administered to a sample of residents within Ward 35 to explore how the community consumes and perceives public spaces, focusing on their understanding of inclusiveness in these spaces. The data collected from the questionnaires were analysed to identify and interpret key findings, which were then synthesised to reveal emerging trends and interlinkages within the responses. This process enables the study to capture a detailed picture of residents' experiences and perceptions regarding public space use and inclusivity in their local area.

4.8 Research tools

The research study employed a variety of tools and resources to support data collection, analysis, and overall research rigour. Essential resources included extensive use of library materials, which provided access to a wide range of academic literature and related sources vital in grounding the study. Additionally, computer technology and software applications played a significant role, with tools such as Endnote for reference management, Microsoft Suite for data presentation, and GIS for spatial mapping. Where applicable, GIS was employed to analyse further and spatially map critical concerns within the study area. This included but was not limited to identifying transport routes, zoning and Land Use Schemes,(Town Planning), population density distributions, and key sample sites. GIS tools provided an additional layer of spatial analysis, enabling the precise location of areas where urban planning and public space usage intersected.

Analytical software like SPSS was utilised for quantitative data analysis, while NVivo supported qualitative data analysis. Graphic design software was also employed to enhance the visual representation of findings. Furthermore, by administering questionnaires and interviews, the study implemented tailored measurement techniques

to capture and analyse intangible aspects, such as public space perceptions and experiences. These tools and methods ensured that the research was comprehensive and methodologically sound.

As part of the research methodology, observational data was collected from selected public spaces within the study area (refer to Annexure C). This data was systematically recorded using an electronic spreadsheet (Annexure B), which was organised based on a combination of Henri Lefebvre's and David Harvey's frameworks for the production of space. This categorisation allowed for an analysis of the spatial dynamics at play, incorporating aspects of '*perceived*', '*conceived*' and '*lived*' space from Lefebvre's triad alongside Harvey's '*Spatial Matrix*', emphasising the intersection of power, capital, and social relations in urban spaces.

4.9 The validity and reliability of the research

Leedy and Omrod (2015) emphasise the significance of ensuring both the validity and reliability of data in research. Validity pertains to the extent to which the data accurately reflects the reality of the situation under study. At the same time, reliability refers to the consistency with which the data can be reproduced across similar contexts and timeframes. These concepts are closely intertwined, as reliable data collection methods lay the groundwork for deriving valid conclusions. In this study, interviews and questionnaires are the primary data collection methods to ensure the accuracy and dependability of the findings.

Interviews are structured to target public space experts, administrators, and Local Councillors, to generate high-quality insights on the practices associated with inclusive city development and public space management. To maintain consistency, a single researcher will conduct all interviews, uniformly addressing any issues of clarity. Furthermore, an interview template will guide the process, standardising question phrasing across interviews to minimise bias and ensure comparability in responses.

For the questionnaire component, carefully crafted standardised questionnaires have been administered to residents, focusing on their usage and experiences with public

spaces. These questionnaires are designed to be clear and straightforward, avoiding ambiguity and directly aligning with the study's research objectives. This approach facilitates a precise representation of variations in respondent experiences and perspectives, which is essential for drawing robust, reliable conclusions.

By combining rigorously developed research instruments with meticulous interviewing and survey techniques, this study aims to enhance both the validity and reliability of the data collected, thereby supporting the overall trustworthiness of the research findings.

4.10 Ethical considerations

In conducting this research, ethical issues were identified and addressed systematically at various stages to ensure compliance with professional standards and institutional requirements and the protection of participant rights.

Before the commencement of data collection, several critical ethical considerations were addressed. The researcher thoroughly evaluated relevant professional association standards to ensure adherence to ethical guidelines specific to the research area. To further enhance understanding of these standards, the researcher completed an online certification course on ethics in research. Institutional approval was sought from the Institutional Review Board (IRB) at the Durban University of Technology (DUT), which oversees research ethics compliance. Additionally, the municipality and Ward Councillor (WC) secured necessary permissions (such as gatekeepers' letters), ensuring all parties were informed and approved of the research activities.

At the beginning of the study, the ethical focus was on clearly defining the research problem and ensuring transparency with participants. The research wanted to investigate how the eThekweni Municipality has responded to changes in public space delivery from a strategic policy, and implementation perspective. Full disclosure of the research's objectives, purpose, and aim was provided to all participants, ensuring they understood the scope and intent of the study. Participation in the survey has been entirely voluntary,

with no pressure placed on individuals to contribute. Furthermore, participants have been assured of anonymity and confidentiality throughout the research process. Notably, no vulnerable population groups, (such as children under 18 years of age), were involved in the study. This exclusion reduces potential ethical risks.

During data collection, the researcher emphasised the equal treatment of all participants. Participation remained voluntary, and all individuals were treated with respect and dignity, with the researcher maintaining his professionalism. The survey population included a diverse group of experts and citizens. Survey instruments were designed to allow participants to provide input into a research process that respected their needs. This approach mitigated potential power imbalances. It ensures that other participants or the researcher did not influence participants' responses.

The data analysis involves several ethical considerations, particularly ensuring that the researcher's opinions did not influence the participants' responses. The survey tools used allowed for diverse inputs to be captured objectively. Upon completion of the study, participants who expressed interest in the research findings were informed that the results would be shared with them. Throughout the process, confidentiality was maintained by creating profiles that ensured participant anonymity, which protected the privacy of all respondents.

In reporting the research findings, the researcher adhered strictly to ethical guidelines by presenting data honestly, without falsifying information or manipulating findings. Proper accreditation was given to all sources used, thereby avoiding plagiarism. The research findings were communicated using clear, unbiased language to ensure transparency and clarity. All research results were made available to participants who requested access where required. In compliance with the DUT's Data Storage Policy, all survey instruments and raw data will be securely stored for five years. The responsibility for collecting, maintaining, managing, and storing data rests squarely on the shoulders of the researcher. Compliance with all relevant legislation is paramount to ensure that participants' rights are safeguarded and that the researcher meets all ethical and legal obligations.

The DUT data storage policy emphasises the importance of maintaining the confidentiality of collected data. It provides clear guidelines on the appropriate methods for storing various data types and outlines the protocols for securely managing and maintaining this information. This policy is particularly pertinent to the present study, which involves interviews with diverse stakeholders and research participants. Given that some participants may wish to remain anonymous, strict adherence to the policy is essential to upholding the ethical standards of research.

Electronic data will be securely stored in a designated folder on the researcher's laptop, protected by a security code known only to the researcher. Hard copy documents will be stored within the Town and Regional Planning Department for five (5) years, after which they will be securely shredded and disposed of. Interview audio recordings will be stored on Google Drive and accessible only via a password known exclusively to the researcher. Furthermore, the stored data will be carefully anonymised, with no personal identifiers such as names, surnames, or identity numbers included. These measures will ensure the protection of the interviewees' identities.

4.11 The limitations of the research study

In any research study, it is vital to acknowledge the limitations that may affect the scope and outcomes of the investigation. This study on public space planning and inclusivity within the eThekweni Municipality is no exception. The limitations encountered during the research process are outlined below to provide context for interpreting the findings.

Firstly, geographical limitations played a role in shaping the scope of the study. While the research focused on the North Region (in Ward 35) of the eThekweni Municipality, specifically the suburb of La Lucia; this geographic focus limits the generalisation of the findings to other regions. Public space dynamics vary significantly across different areas of the city. They are dependent on local socio-economic factors, urban development practices, and community engagement levels. As such, while the research findings provide valuable insights into the case study area, further work will be needed to ascertain how the research findings may apply to other parts of the metropole.

Secondly, the research relied on cross-sectional data rather than longitudinal data. This limits the ability to analyse changes in public space usage and perceptions over time, which may have provided a deeper understanding of evolving trends in inclusivity and public space management.

Thirdly, sampling limitations also affected the study. While efforts were made to engage a diverse range of participants, including public space experts, municipal officials, councillors, and residents, the sample size was constrained by participants' availability and willingness to engage in interviews or complete questionnaires.

Additionally, data collection methods posed challenges. While using both qualitative and quantitative approaches provided a comprehensive view, limitations inherent in these methods must be acknowledged. For example, the questionnaire responses may have been subject to self-reporting biases, where participants might have provided socially desirable answers rather than ones that are fully honest or reflective. Similarly, while interviews allowed for deeper exploration of critical issues, they may have been limited by the subjective nature of individual experiences and interpretations.

Despite these limitations, the study offers valuable insights into public space planning and inclusivity within the eThekweni Municipality. By identifying these constraints, future research can build upon this work, potentially expanding the geographic scope, using longitudinal data, and engaging a broader cross-section of the community to explore the complex dynamics of public spaces further.

4.12 Conclusion

The research methodology employed in this study was designed to ensure a comprehensive and ethically sound exploration of the role of public spaces in fostering inclusivity within the eThekweni Municipality. The chosen case study approach, underpinned by a mixed methods framework, enabled an in-depth investigation that harmonises qualitative and quantitative insights. This approach was instrumental in

capturing the complex, multi-faceted nature of urban public spaces, offering a rich, theoretically robust, empirically grounded, contextual understanding.

Using random sampling for the quantitative component ensured that the data collected was representative of the diverse subgroups within the suburb of La Lucia in Ward 35. Despite the challenges encountered such as privacy concerns, mistrust of researchers, survey fatigue, and time constraints among residents - the research maintained a commitment to ethical principles. This aspect is critically important in respecting participant autonomy and confidentiality. The ethical rigour of the research has been further reinforced by strict adherence to the DUT Guidelines for Research Data Storage, ensuring that all data is securely managed and stored in compliance with relevant legislation.

The qualitative component, guided by an interpretive paradigm, provided valuable insights into residents *'lived'* experiences, particularly their perceptions of inclusivity and access to public spaces. This approach allowed for a deeper exploration of the social dynamics at play, highlighting the importance of context-specific understanding in urban planning.

The challenges faced during data collection, including the reluctance of many residents to participate due to various concerns, were met with adaptive strategies that ensured the research remained ethically compliant and methodologically sound. By approaching additional willing participants, the study achieved its desired sample size without compromising the integrity of the research process.

Ultimately, the research methodology chapter of this thesis lays a solid foundation for the subsequent analysis and discussion of findings. It provides a clear and coherent pathway through which the complex relationships between public space, inclusivity, and urban planning within the eThekweni Municipality can be understood and addressed. The methodological choices made in this study not only reflect a rigorous academic approach but also demonstrate a deep commitment to the ethical considerations that are paramount in conducting research in real-world settings.

5. CHAPTER FIVE: – THE ETHEKWINI MUNICIPALITY CASE STUDY

5.1 Introduction

This chapter provides a contextual background for the empirical analysis and findings of the research within the eThekweni Municipality. Its specific focus is related to public space development and implementation, along with associated strategies. The initial portion of the case study offers a contextual analysis of the eThekweni Municipality, followed by a narrative detailing the study area of the Suburb of La Lucia, specifically in the context of Ward 35. Section three delves deeper into the current state of municipal public spaces, analysing expenditure patterns from a budgetary perspective. This section also encompasses a policy scan of the municipality's existing public space policy and strategy frameworks. Section four concludes the chapter with a summary of the key issues.

5.2 The City of Durban (eThekweni Municipality)

As per the 1996 Constitution of the Republic of South Africa, the eThekweni Municipality is classified as a metropolitan municipality. It encompasses a vast area of approximately 2,555 square kilometres within the province of KwaZulu-Natal highlights (Chetty, 2022). Sixty-eight percent of the land administered by the municipality is part of the Ingonyama Trust whilst the remainder is held as state land or private property. This municipality is home to a diverse population exceeding 4.23 million residents (StatsSA, 2022). It is the largest city in KwaZulu-Natal and the third-largest urban area in the country. Given its extensive geographical scope and demographic diversity, eThekweni, like many global metropolises, grapples with a spectrum of socio-economic, environmental, and governance challenges.

In fulfilling its commitment to its residents, the eThekweni Municipality is steadfast in its dedication to providing sustainable services. It fully acknowledges its pivotal role as the sphere of government closest to the community. The municipality's vision, articulated as *"By 2030, eThekweni Municipality will enjoy the reputation of being Africa's most liveable city, where all citizens live in harmony"* (eThekweni Municipality IDP 2023:423), reflects its

resolute commitment to enhancing the quality of life for all its inhabitants. This vision is further evidenced by concerted efforts to ensure equitable service delivery, particularly to marginalised communities.

As the site of Africa's busiest multi-cargo port, the Durban Port occupies a crucial position in regional and national economic frameworks, particularly regarding logistics and transportation, highlights Darley-Waddilove et al. (2023). The Port of Durban's annual capacity of 3.5 million twenty-foot equivalent units significantly bolsters the city's economy. In addition to its industrial strengths, eThekweni is a key player in the tourism sector, hosting numerous international conferences and attracting millions of domestic tourists annually.

The municipality's commitment to environmental stewardship is demonstrated through active participation in various environmental initiatives, including tourism promotion, environmental clean-ups, eradication of invasive species, recycling programs, and job creation efforts. These initiatives aim to enhance local content, promote the growth of black industrialists, and support environmental conservation efforts. A notable project within this framework is the Durban Green Corridors Programme, operated by the Green Corridors Non-Profit Company. This program focuses on rehabilitating natural resource areas and maximising their social and economic potential through outdoor leisure, ecotourism, youth development, and supporting Small and Medium-sized Enterprises (SMMEs).

Following the 2019 municipal demarcations, the eThekweni Municipality comprises 111 wards. Each ward is represented by a councillor, contributing to a full metropolitan council of 222 councillors. Of these, 111 councillors are elected at the local level, while the remaining 111 are appointed from party political representation lists, reflecting the municipality's complex and multifaceted governance structure

5.3 Location and context

eThekweni Municipality is situated along the eastern coastline of South Africa, nestled within the province of KwaZulu-Natal. Map 5-1 below illustrates that this geographical

location is depicted in its neighbouring and surrounding district municipalities. It further illustrates the municipality's connectivity via the National Routes. The N2 and N3, serve as vital transportation arteries linking the metro with the broader province and the country, facilitating both north-south and east-west road connectivity.

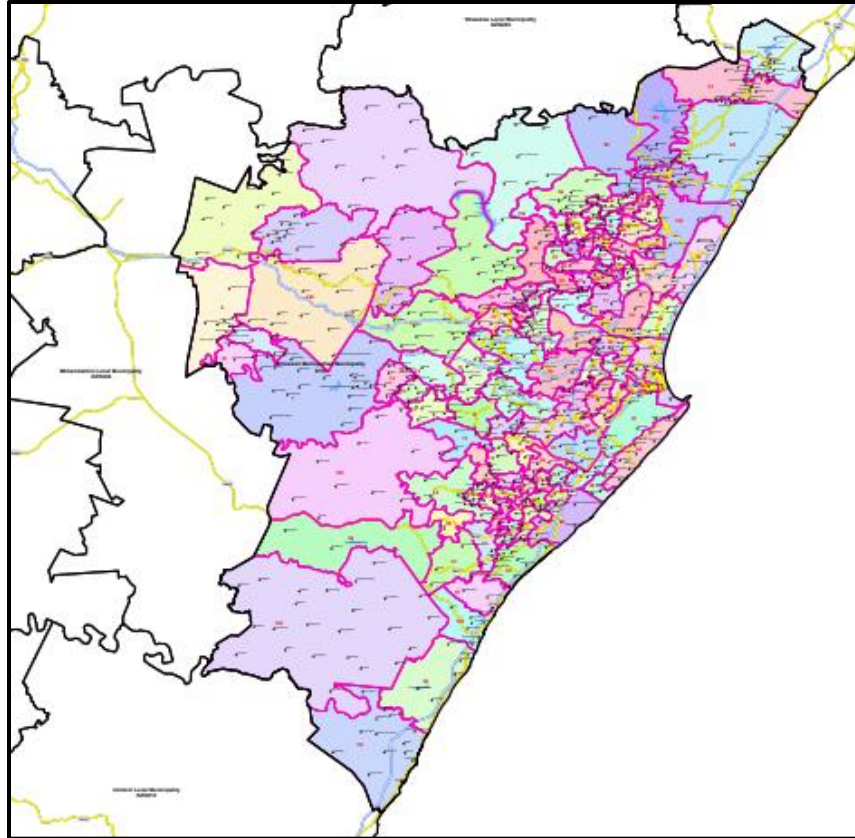


Map 5-1: A map of KwaZulu Natal
Source: The KwaZulu-Natal Top Business (2023)

The boundaries of the municipality are primarily characterised by natural features and administrative demarcations. To the east, eThekweni Municipality is defined by the expansive coastline of the Indian Ocean. This natural boundary marks the city's eastern edge, encompassing a significant stretch of beaches, the port of Durban and coastal areas. The western boundary of the metro extends into the interior of the province. This boundary is determined by a combination of geographical features such as rivers, hills, and valleys, as well as administrative divisions with Cato Ridge being the furthest urban area on the inland side and bordering onto the uMgungundlovu District Municipality. The northern limit of the municipality is marked by the cadastral boundary of the iLembe District Municipality.

The southern boundary of the metro extends along the coastal areas adjacent to the Indian Ocean. This boundary connects with neighbouring coastal communities and suburbs that form part of the city and borders the uGu District Municipality in the South.

Within the broader eThekweni Municipality, Durban is divided into 111 administrative wards, each with its distinct boundaries, as indicated in Map 5-2 below. These administrative divisions assist in the effective management and governance of the city at the ward level.



Map 5-2: eThekweni Municipality boundary and wards

Source: eThekweni Municipality: The Durban Edge, 2023

5.4 eThekweni Municipality's planning framework and observations

The eThekweni Municipality's Package of Plans (POP) is a structured framework that orchestrates the municipality's detailed planning and development processes (See Figure 5-1 on the next page). It involves a hierarchy of interrelated planning documents that guide land use management, infrastructure development, and service delivery across different scales, from the strategic to the operational. The primary purpose of the Package of Plans is to ensure that all development activities are aligned with the municipality's broader strategic objectives, particularly those outlined in the Long-Term Development Framework (LTDF), Integrated Development Plan (IDP) and Spatial Development Framework (SDF). The Package of Plans typically includes various planning instruments, such as Precinct Plans (PPs), Local Area Plans (LAPs), and

detailed Site Development Plans (SDPs). Each of these components serves a specific role within the overall planning framework and are outlined in detail below.

5.4.1 Precinct plans

These plans provide a more detailed spatial vision for specific areas within the municipality. They translate the broader objectives of the SDF into actionable strategies at a local level. Precinct Plans address a particular area's unique characteristics and needs, guiding land use, infrastructure development, and public space design. For the case study area, there is currently no precinct-level planning.

5.4.2 Local area plans

The plans focus on smaller geographic areas or neighbourhoods within the municipality, offering detailed guidance on land use, zoning, and infrastructure provision. They are instrumental in addressing localised issues, such as housing, transport, and community facilities, and ensuring they align with the broader precinct and municipal plans.

5.4.3 Site development plans

SDPs are the most detailed level of planning within the Package of Plans, focusing on individual sites or parcels of land. They outline the specific design, layout, and use of particular sites, ensuring their compliance with zoning regulations and other planning standards. They provide the final level of detail necessary for implementing development projects on the ground.

The Package of Plans ensures a coherent and integrated approach to urban development, where each level of planning informs and supports the others. This layered approach allows the municipality to manage growth effectively, ensuring that development is sustainable, efficient, and responsive to the needs of its residents.

Moreover, the Package of Plans facilitates coordination among various stakeholders, including government departments, private developers, and the community. Providing

clear and consistent guidelines helps streamline the development approval process, reduce conflicts, and promote transparency and accountability in decision-making. It's within the context of the package of plans where observations are highlighted.

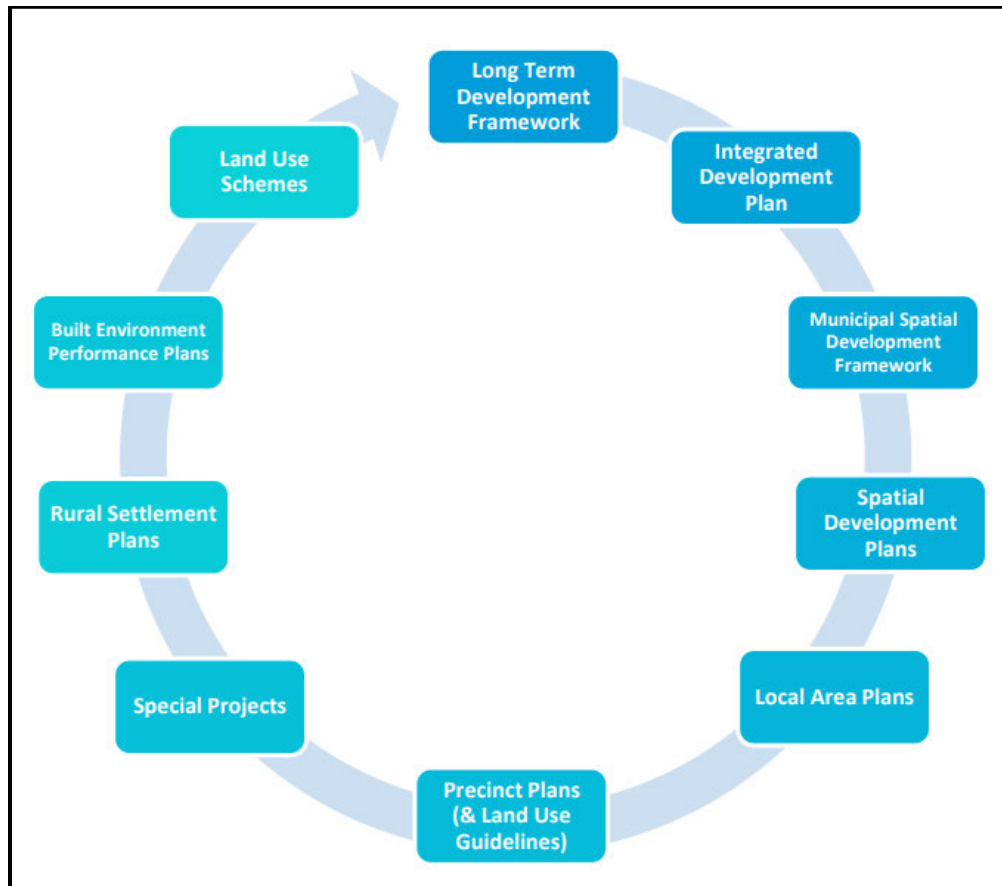


Figure 5-1: eThekweni Municipality's package of plans

Source: eThekweni Municipality 2024-2025 Spatial Development Framework

The following observations are highlighted in Table 5-1 within the context of the Package of Plans.

Table 5-1: Package of plans observations

POLICY/ FRAMEWORKS/ STRATEGY	PURPOSE	OBSERVATIONS
<p>Long-Term Development Framework (LTDF)</p>	<p>eThekweni's Long-Term Development Framework is vital for orchestrating the municipality's transition towards a more sustainable, equitable, and prosperous future. It serves not only as a roadmap for achieving long-term objectives. The framework is also a dynamic guide that evolves in response to the changing needs and aspirations of the community it serves</p>	<p>While the Long-Term Development Framework (LTDF) refers to public spaces, it does so predominantly within the context of creating a safe city. There is additional mention of enhancing accessibility within the city; however, this focus does not extend comprehensively to public spaces. Upon closer examination of the LTDF's treatment of public spaces, it operates under the assumption that public spaces are inherently functional in all aspects, aside from safety concerns. This perspective, however, needs to be narrower and overlooks the multifaceted nature of public spaces.</p> <p>The strategies outlined in the LTDF and their associated actions primarily emphasise the roles and responsibilities of various stakeholders in ensuring safety within public spaces. However, there needs to be more reference to broader actions crucial to these spaces' overall functionality and inclusivity. Specifically, the LTDF provides limited guidance on maintenance, the design of parks to enhance safety, and the integration of diverse activities that cater to various community needs within public spaces.</p>

POLICY/ FRAMEWORKS/ STRATEGY	PURPOSE	OBSERVATIONS
		<p>This oversight suggests a more holistic approach to public space management, transcending safety concerns to encompass a more comprehensive array of factors contributing to public spaces' vibrancy, inclusivity, and utility in urban environments.</p>
<p>Integrated Development Plan (IDP)</p>	<p>The eThekweni Municipality's Integrated Development Plan is fundamental for achieving coordinated, sustainable, and community-centred development. It not only guides the municipality's actions over the medium term (5 Years) but also lays the groundwork for achieving its long-term vision of a more equitable and prosperous urban environment, captured in the LTDF.</p>	<p>The implementation of public spaces within the municipality is institutionalised through Plan 6, which includes significant references to public spaces and their development. However, a critical observation is the need for explicit recognition of public spaces in the municipality's stated aims and program definitions. This omission is a disservice to what should be considered a foundational element of urban development, social cohesion, and inclusivity. There is a clear need for a more deliberate effort to elevate public spaces as key, standalone programs within the municipality's strategic framework.</p> <p>Furthermore, while project budgets related to public spaces are consolidated within the Integrated Development Plan (IDP), detailed budgetary allocations are only accessible through the Medium-Term Revenue and Expenditure Framework</p>

POLICY/ FRAMEWORKS/ STRATEGY	PURPOSE	OBSERVATIONS
		<p>(MTREF) document. This segmentation creates challenges in tracking the specific financial commitments toward public spaces. Additionally, the monitoring of public space implementation within the IDP is conducted at a high level, which complicates the process of assessing progress effectively. To achieve a more granular level of monitoring, engagement with the full-Service Delivery and Budget Implementation Plan (SDBIP) is necessary, as the summary matrix included in the IDP needs more detail for thorough evaluation. The detailed SDBIP, similar to the Budget Document, is a supporting document to the IDP, underscoring the importance of integrating these resources for comprehensive oversight of public space initiatives.</p>
<p>Spatial Development Framework (SDF)</p>	<p>It is a crucial instrument for shaping the municipality's physical landscape to support its long-term developmental goals. It ensures that growth is managed in a sustainable, equitable, and orderly manner, contributing to the</p>	<p>The Spatial Development Framework (SDF) does include references to public spaces; however, these references could be more extensive in the context of comprehensive urban planning. While the SDF acknowledges the need for public spaces, this recognition is not fully integrated into the strategic planning elements of the framework. Public spaces</p>

POLICY/ FRAMEWORKS/ STRATEGY	PURPOSE	OBSERVATIONS
	creation of a more liveable, resilient, and inclusive urban environment; ultimately, it is the spatial interpretation of the municipal IDP	<p>are explicitly mentioned within sections discussing the densification and Umhlanga Nodal strategies. Yet, beyond these mentions, there needs to be more detailed planning or strategic initiatives focused on public spaces.</p> <p>Additionally, the SDF refers to the Durban Metropolitan Open Space System (D'MOSS). However, this is approached primarily from an environmental protection standpoint and as a spatial structuring element rather than a strategy for creating vibrant, activated public spaces. This approach overlooks the potential of D'MOSS to contribute to social cohesion and urban inclusivity by activating and enhancing public spaces. Therefore, while public spaces are acknowledged within the SDF, the framework falls short of fully integrating them into its broader strategic objectives, particularly their potential role in fostering vibrant, inclusive urban environments.</p>
Northern Spatial Development Plan	The eThekweni Municipality's Northern Spatial Development Plan is an essential tool for managing the northern	The Northern Spatial Development Plan (SDP) contains only limited references to public spaces, and the document needs a strategic vision for public space provision. While the SDP mentions the potential

POLICY/ FRAMEWORKS/ STRATEGY	PURPOSE	OBSERVATIONS
	<p>regions' spatial and infrastructural development in a sustainable, equitable, and aligned way with the municipality's long-term vision. It ensures that growth in these areas is well-planned, coordinated, and responsive to the community's needs, contributing to the municipality's overall resilience and prosperity. The Spatial Development Plan provides a more detailed spatial interpretation of the Municipal SDF for the northern areas.</p>	<p>development of a Public Space Plan at the Precinct Level, this initiative has yet to be implemented. The lack of a coherent strategic framework for public space within the SDP highlights a significant gap in the overall planning process, undermining the potential for creating well-integrated, accessible, and vibrant public spaces in the northern region. This oversight suggests a need for a more deliberate and comprehensive approach to public space planning within the SDP to ensure that these spaces are prioritised and effectively developed as key components of the urban landscape.</p>
<p>Open Space System (D'MOSS)</p>	<p>The D'MOSS plan is a key instrument for protecting and enhancing the natural environment within the urban context. It ensures that ecological considerations are integrated into the municipality's planning</p>	<p>A primary and essential spatial structuring element designed to promote the protection and management of ecological assets is intended to be configured to support the sustainable delivery of ecological services within both urban and rural environments. However, its application could be more extensive when it comes to the integration of active public spaces. While the focus on</p>

POLICY/ FRAMEWORKS/ STRATEGY	PURPOSE	OBSERVATIONS
	<p>and development processes, supporting biodiversity conservation, climate resilience, and sustainable urban growth. Through the D'MOSS plan, eThekweni can maintain a harmonious balance between development and nature, securing a healthy and vibrant environment for current and future generations.</p>	<p>ecological sustainability is crucial, the framework needs to adequately address the need to incorporate active public spaces that could enhance community engagement, social interaction, and recreational opportunities within these ecological landscapes. This limitation underscores the need for a more holistic approach that balances ecological preservation with developing dynamic, accessible public spaces that serve the broader needs of urban and rural communities.</p>
<p>Umhlanga Ridge New Town Centre Development Manual</p>	<p>uMhlanga Ridge New Town, Centre Development Manual, is an essential planning document that guides the sustainable, organised, and aesthetically coherent development of one of the municipality's key urban nodes. It ensures that growth in the area is managed in a way that promotes liveability, accessibility, and environmental</p>	<p>The manual promotes a pedestrian-friendly urban environment. It emphasises the importance of creating walkable streets, public squares, and green spaces that encourage social interaction and foster a sense of community. The manual also guides the integration of public transport facilities and non-motorized transport options, ensuring that the area is accessible and well-connected both within the development and to the broader city.</p> <p>Additionally, the manual plays a vital role in ensuring that development in the area is sustainable and environmentally responsible. It includes guidelines for</p>

POLICY/ FRAMEWORKS/ STRATEGY	PURPOSE	OBSERVATIONS
	stewardship while also contributing to the overall vision of a well-designed and thriving urban centre.	energy-efficient building design, water conservation, waste management, and the preservation of natural features. This focus on sustainability helps reduce urban growth's environmental impact and supports the municipality's broader goals of climate resilience and resource efficiency. A key point highlighted in the manual is that public space should be considered an integrated system rather than just the space itself.

Source: Author's own, 2024

A review of eThekweni Municipality's various planning documents reveals a recurring theme namely that the treatment of public spaces is often insufficiently integrated into broader strategic planning efforts despite their critical role in fostering vibrant, inclusive, and sustainable urban environments. Outlined below are summarised versions of the key observations.

- i. The LTDF recognises public spaces mainly regarding safety, with a limited focus on their broader functionality and inclusivity. The framework overlooks essential aspects such as designing, maintaining, and integrating diverse activities within public spaces, indicating a need for a more comprehensive approach.
- ii. While the IDP institutionalises the development of public spaces through Plan 6, it fails to explicitly elevate them as standalone programs, undermining their importance as foundational elements of urban development. Additionally, the

fragmentation of budgetary information and high-level monitoring complicates effective oversight and progress tracking.

- iii. The SDF includes public spaces in its discourse but needs to integrate them fully into the strategic planning process. The focus remains on spatial structuring and environmental protection, as seen with the Durban Metropolitan Open Space System (D'MOSS), rather than on activating and enhancing public spaces to promote social cohesion and urban inclusivity.
- iv. The Northern SDP provides minimal strategic direction for public space provision, with limited references to public spaces and a lack of implementation of a coherent public space plan. This gap highlights the need for a more deliberate approach to prioritise public spaces in the northern region's development.
- v. The D'MOSS plan excels in ecological sustainability but falls short in integrating active public spaces within its framework. While it effectively protects natural environments, it misses the opportunity to incorporate spaces that could enhance community engagement and recreational opportunities, suggesting the need for a more balanced approach.
- vi. The Umhlanga Ridge New Town Centre Development Manual is a positive example of integrating public spaces into urban planning. It promotes pedestrian-friendly environments and ensures public spaces are part of a cohesive urban system. It emphasises sustainability and accessibility, reflecting a more holistic approach to public space planning within this key urban node. It is noted that whilst there are no urban design guidelines for the study area, the city does have examples of such guidelines which can assist in developing an overall city strategy. Currently, the uMhlanga Ridge Town Centre sites are an isolated public space jewel in the north, as opposed to an integrated public space system that transforms the entire northern area as opposed to specific spatial regions.

While eThekweni Municipality's planning documents acknowledge the importance of public spaces, there is a noticeable gap in fully integrating these spaces into the municipality's strategic and operational frameworks. The plans tend to focus on safety, environmental protection, or spatial structuring, often neglecting the multi-faceted role that public spaces play in fostering social cohesion, inclusivity, and community well-being.

This suggests a need for a more holistic and deliberate approach to public space planning that elevates these spaces as critical components of urban development and integrates them more effectively into the broader planning landscape as a system

5.5 Durban Metropolitan Open Space System (D'MOSS)

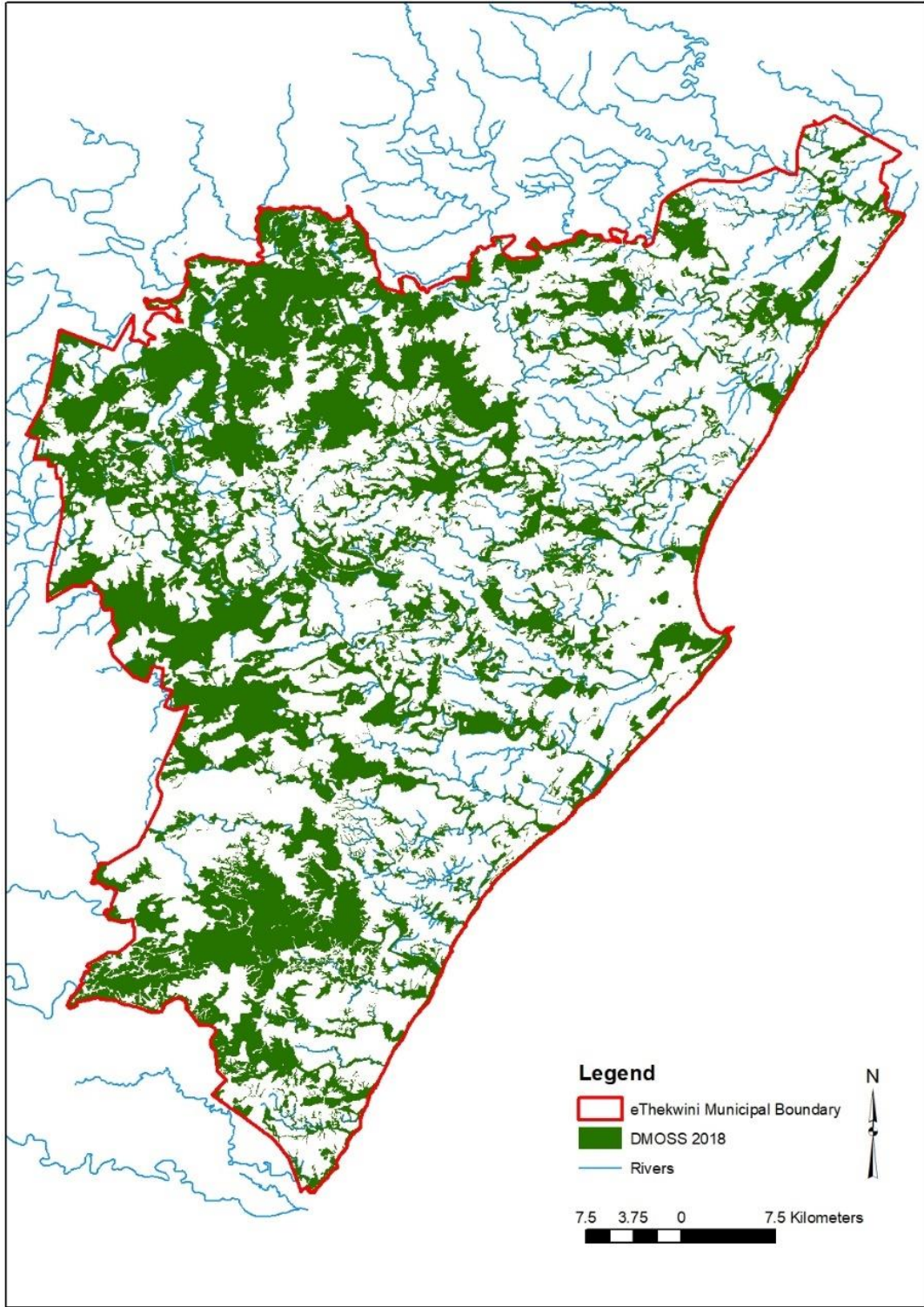
D'MOSS is a council-approved spatial framework that encompasses a network of interconnected open spaces held in various ownership categories, including private, public, and traditional authority. The overarching goal is safeguarding the biodiversity and associated environmental assets and services within the eThekweni Municipal Area. This preservation effort benefits both present and future generations and is in line with the municipality's commitment to sustainable development principles.

As illustrated in Map 5-3, this framework includes Municipal Nature Reserves, which are formally protected areas managed by the Natural Resources Division, as well as those under the jurisdiction of KZ-N Wildlife. Furthermore, it incorporates Critical Biodiversity Areas (CBAs), which were recently incorporated into the D'MOSS system. The plan plays a pivotal role in influencing planning and development at multiple levels within the metropolitan city. It informs a spectrum of planning documents, ranging from the comprehensive Integrated Development Plan (IDP) and its spatial counterpart, the Spatial Development Framework (SDF), to regional planning documents like Spatial Development Plans (SDP) and local-level plans, including Local Area Plans (LAP) and Land Use Schemes (LUS).

Moreover, D'MOSS serves as a vital resource in the evaluation of development proposals, thereby facilitating an informed decision-making process in matters related to urban development and land use management. In biodiversity and conservation planning, substantial progress has been made, resulting in a notable reduction in the threats facing Durban's biodiversity assets. Additionally, D'MOSS has played a pivotal role in achieving provincial and national biodiversity conservation objectives, offering a wide array of services to the local population. These services encompass soil formation, erosion control, water supply and regulation, climate moderation, cultural and recreational

opportunities, the provision of raw materials for crafting and construction, food production, pollination, nutrient cycling, and waste treatment.

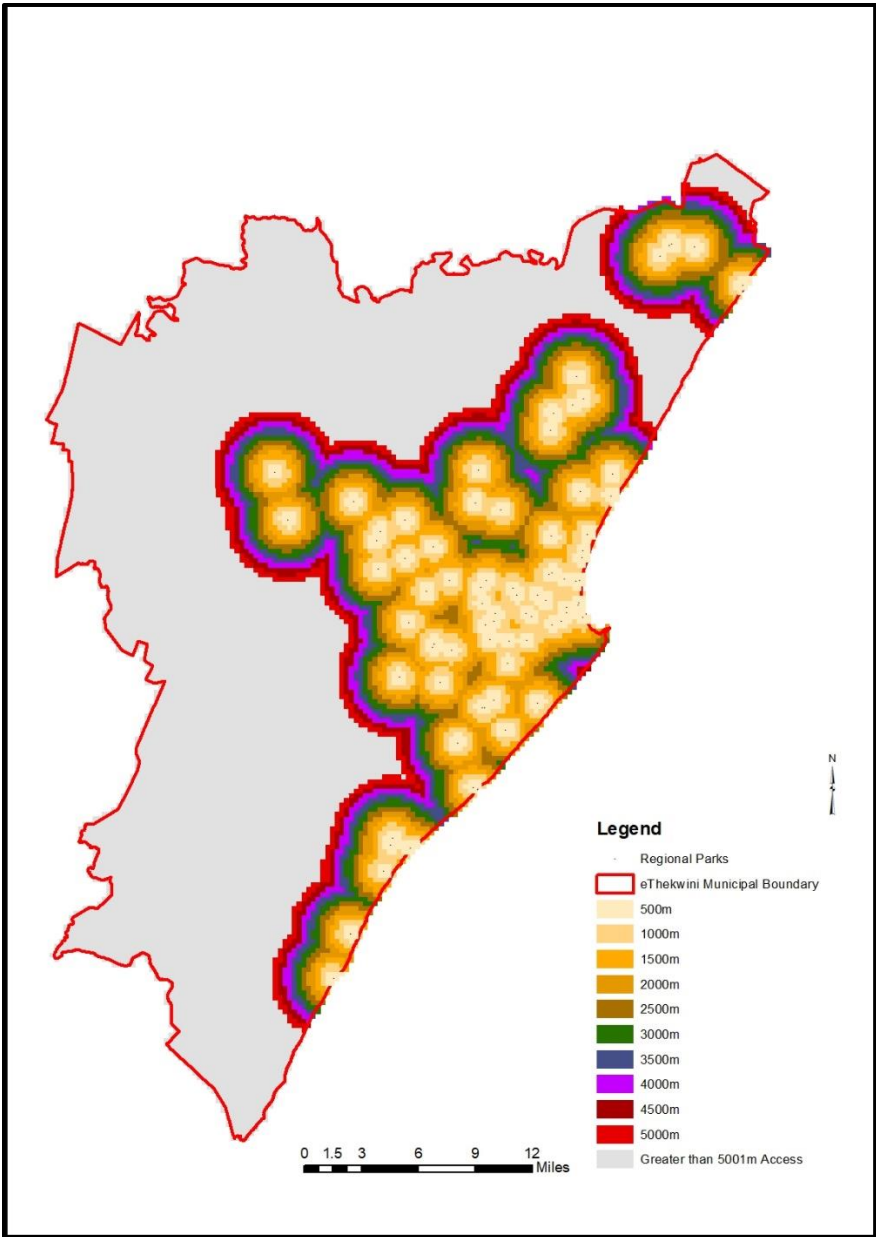
Through its biodiversity stewardship programme, D'MOSS has enhanced the understanding of conservation challenges within regions governed by traditional governance systems. Turpie et al. (2017) underscore in a report by the World Bank the intrinsic value of the plan from the perspective of ecosystem services. This report indicated a significant increase in property values in areas adjacent to D'MOSS-managed zones. Furthermore, their study estimated the total asset value of environmentally protected areas within eThekweni Municipality to be approximately R47.8 billion. These assets, in turn, generate ecosystem services valued at around R4.2 billion annually, illustrating the substantial ecological and economic significance of D'MOSS in the region (Turpie et al., 2017).



Map 5-3: Revised D'MOSS Areas

Source: eThekweni Municipality Integrated Development Plan, 2023/24

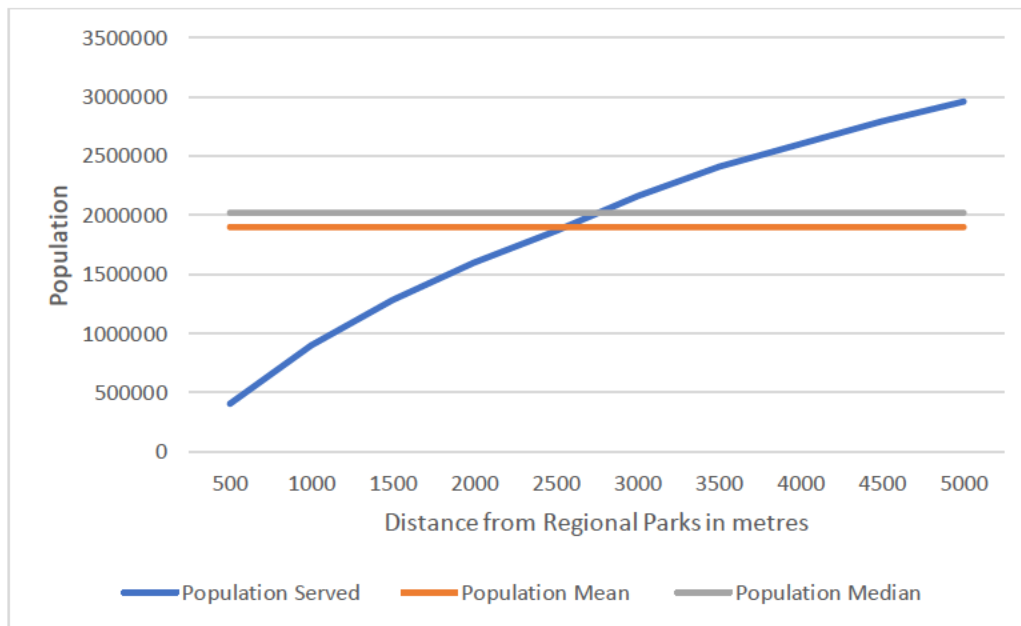
The urban landscape comprises a network of 78 regional parks spanning diverse urban areas. A spatial analysis of the proximity of these regional parks, employing a range of spatial buffers extending from 500 meters to 5,000 meters, yielded a visual representation of spatial relationships (See Map 5-4), which offers a detailed heat map.



Map 5-4: The spatial location of regional parks using 500m buffers

Source: Author's own based on eThekweni Municipality Population Projection 2021

The regional parks under examination are central in addressing the needs of a significant sector of the population, extending their services to an estimated 2.9 million residents residing within a five-kilometre radius. Furthermore, these parks offer access to approximately 404,616 residents within a 500-meter radius, as indicated in Graph 5-1 which illustrates the relationship between regional parks and the encompassed population.



Graph 5-1: The proximity of residents to regional parks

Source: eThekweni Municipality population projection 2021

In the context of this demographic distribution, it is essential to highlight the population characteristics. The population's central tendency manifests a mean value of 1,899,181, with a marginally higher population median of 2,019,783. This reveals a distribution that leans towards a slightly elevated median, signifying that the population distribution may exhibit a minor degree of positive skewness. Such nuanced statistical insights provide a comprehensive understanding of the interplay between regional park accessibility and the broader population dynamics within the municipality.

To contextualise these findings within the broader demographic landscape, it is pertinent to reference the StatsSA 2016 population figures, which approximate the total municipal population at 3,702,231. Using the population figures derived from the eThekweni Municipality Population Projection 2050 would reveal that around 741,359 individuals, or 20.02% of the residents, reside at a distance exceeding five kilometres from a regional park. Notably, these disparities in access are spatially correlated. Regional parks are predominantly concentrated in the urban and suburban zones of the municipality. Thus a sizeable segment of the population has limited access to these types of public spaces. This exclusion affects residents from the rural and peripheral areas of the city. The observation underscores the need for a more equitable distribution of such resources to ensure that all residents can enjoy the benefits offered by regional parks.

5.6 The institutionalisation of a public space delivery system in eThekweni Municipality

Within the eThekweni Municipality's organisational structure, the City Manager is the Chief Accounting Officer and leads the entire organisation. Seven deputy City Managers, each overseeing specific clusters, and seven strategic executives are responsible for distinct units within the municipality. These units encompass internal audit, strategy, operations, information systems, metro police, and investigation. As depicted in Figure 5-2 of the City Manager's Organogram, the Deputy City Managers are entrusted with the leadership of the following clusters within the municipality:

- Finance;
- Economic Development and Planning;
- Trading Services (including water, sanitation, and refuse removal);
- Human Settlements and Engineering (encompassing housing, roads, stormwater management, and coastal engineering);
- Human Resources; and,
- Governance.
- Community Services (encompassing Health, Safety, Parks, Recreation, and Cemeteries)

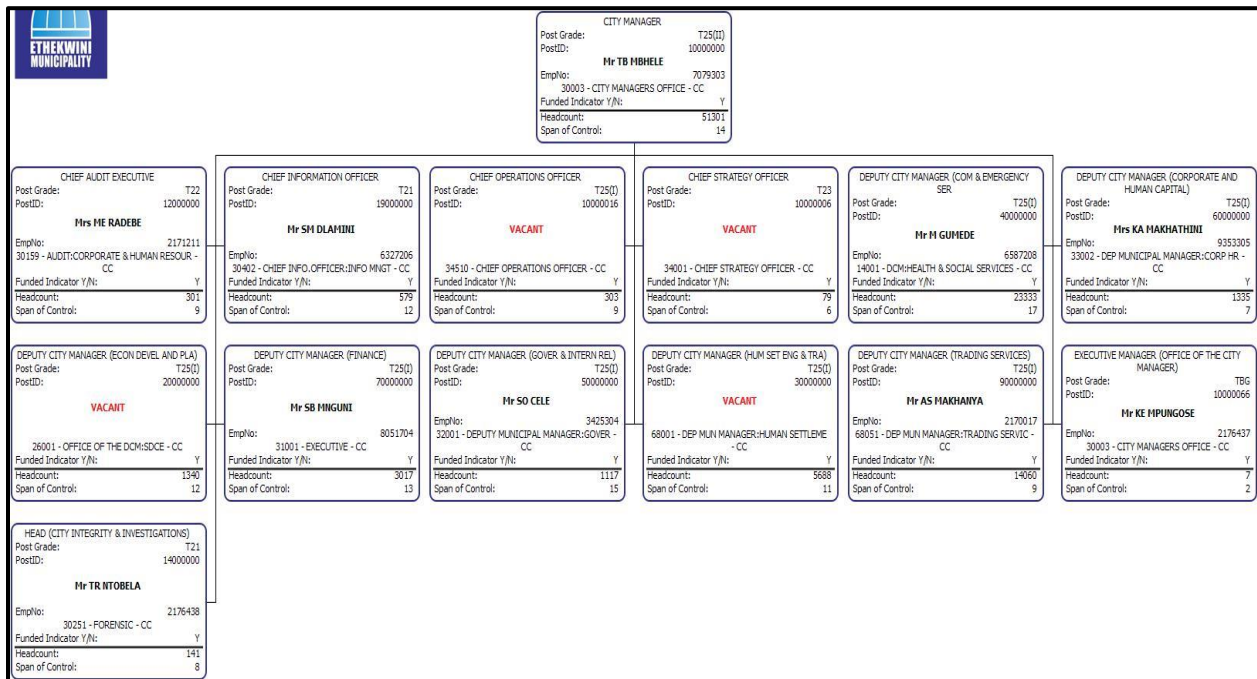


Figure 5-2: The City Managers organogram

Source: South Africa, eThekweni Municipality, 2023:710

It is crucial to recognise that while there are seven distinct clusters, these are intrinsically interconnected and reliant on one another in delivering fundamental municipal services. Moreover, the organisational structure depicted in the organogram aligns with the municipality's Eight-Point Plan as outlined in the IDP. This reflects a deliberate effort to ensure synergy and coherence in the municipality's operational framework.

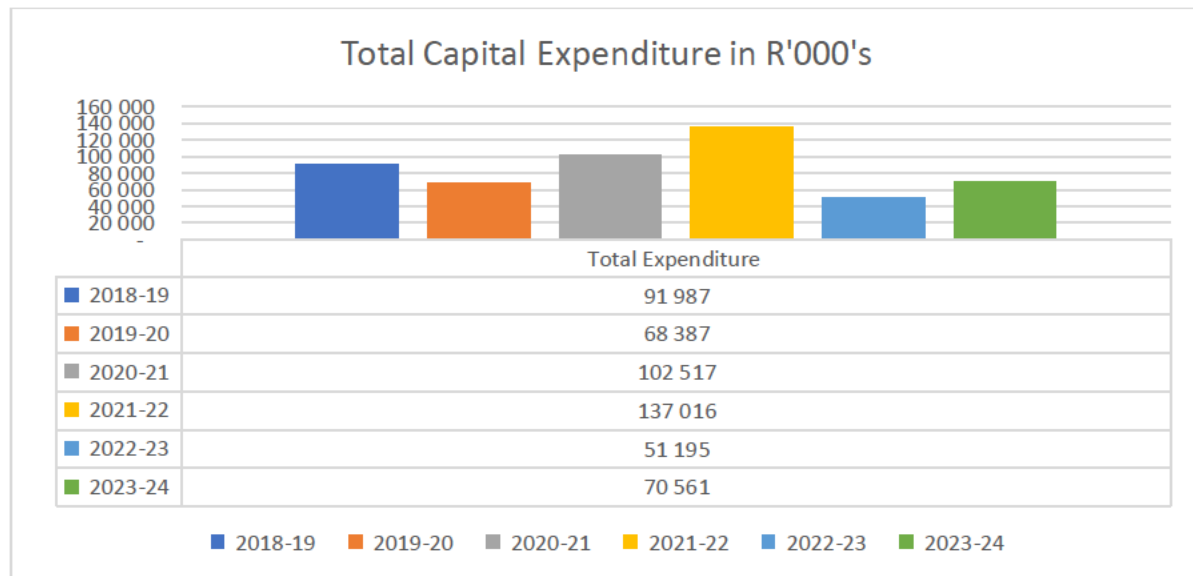
The responsibility to deliver and implement public spaces lay with the Deputy City Manager of Community service and, more specifically, at the Parks, Recreation, Culture and Cemeteries unit level. The five-year analysis of the audited expenditure as captured in the metros' Medium Term Revenue and Expenditure Framework (MTREF) from 2018/19 to 2023/24 yields the following results as indicated in Table 5-2 below. Note that the expenditure items extracted from the budget reflect those for parks, public open space and natural reserves only.

Table 5-2: Capital expenditure as per MTREF 2018/19 to 2023/24 in R'000's

EXPENDITURE ITEM	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Development of new assets						
Parks	0	0	147	0	0	7205
Public Open Space	0	10478	41587	119036	35205	42606
Natural Reserves	0	82	0	168	0	6229
Renewal of existing assets						
Parks	0	2774	6029	19	3361	2844
Public Open Space	84243	10722	2501	28	0	0
Natural Reserves	0	3783	0	0	0	0
Repairs and maintenance of existing assets						
Parks	7027	7519	6647	9873	5697	4314
Public Open Space	0	0	0	0	0	0
Natural Reserves	717	45	358	1112	443	289
Upgrade of existing assets						
Parks	0	800	0	1329	6489	3223
Public Open Space	0	32174	44009	5421	0	3851
Natural Reserves	0	10	1239	30	0	0

Source: eThekweni Municipality Medium Term Revenue and Expenditure Framework 2023/24

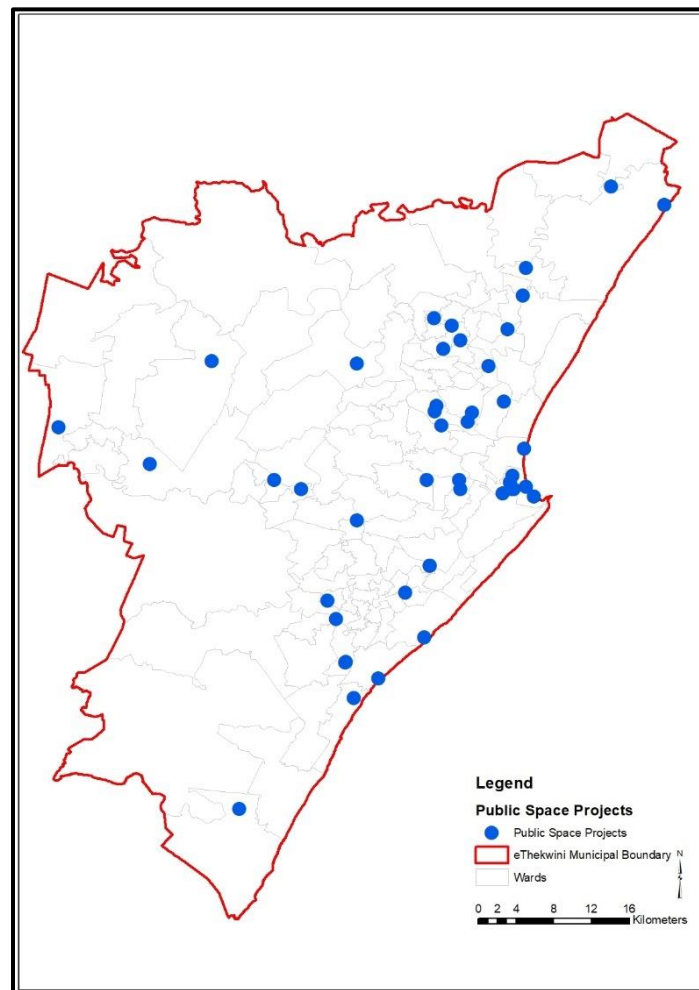
Combined expenditure over the five years for parks, public open spaces and natural reserves is illustrated in Graph 5-2 below.



Graph 5-2: The total capital expenditure 2018/19 to 2022/23 for parks, open spaces and natural reserves

Source: eThekweni Municipality Medium Term Revenue and Expenditure Framework 2023/24

When examining the capital projects within the 2023/24 MTREF and their spatial referencing, it is imperative to recognize that the count of spatially referenced projects, as indicated in Map 5-5, significantly varies from the capital expenditures documented in Table 5-2. This discrepancy arises because capital investments earmarked for renewals, operation, and maintenance are consolidated within the citywide block sum budget, rendering them unfeasible for spatial mapping.



Map 5-5: Spatially referenced public space projects for 2023/24
Source: Author's own, generated from 2023/24 eThekweni Municipality MTREF.

Within the existing town planning scheme for the metro, Table 5-3 highlights the allocation of land parcels zoned for Public Open Space. It is noteworthy that the central area displays the highest concentration of zoned public spaces, possessing 3,167 land parcels, in contrast to the Outer West, which exhibits a more modest count of 211 land parcels with public space zoning designation. However, it is further noted that due to the rural nature of the Outer West, there are more green spaces, mainly due to environmental conservation reservations.

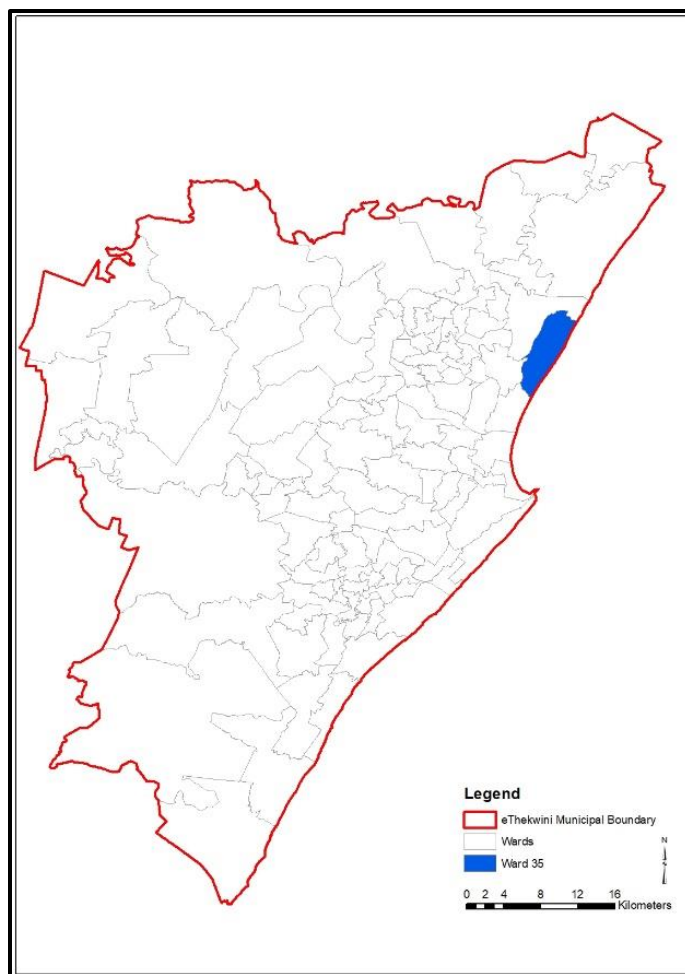
Table 5-3: Land parcels zoned public open space.

TOWN PLANNING SCHEME AREA	NUMBER OF LAND PARCELS IN TOWN PLANNING SCHEME	NUMBER OF LAND PARCELS ZONED FOR PUBLIC SPACE
Central	178,297	3,167
North	43,515	760
South	27,605	497
Inner West	51,754	1,357
Outer West	22,506	211

Source: eThekwini Municipality Town Planning Schemes, 2022

5.7 The Ward 35 context

Ward 35 within the eThekwini Municipality is nestled in the north of the city within the larger eThekwini Municipality and presents an intricate tapestry of demographics, infrastructure, and land use. Geographically, it occupies a defined area within the municipality, boasting a diverse terrain that includes urban, suburban, and semi-rural elements. This geographic diversity is reflected in the ward's boundaries, encompassing a range of neighbourhoods and land uses. Ward 35 is in the north of the city, as illustrated in Map 5-6



Map 5-6: The location of Ward 35 in eThekweni

Source: Author's own based on eThekweni Municipality 2022 OpenGIS Data

The ward is home to a diverse population with varying income levels and cultural backgrounds. The demographic composition, as per the StatsSA 2011 Census, contributes to its rich social fabric, fostering cultural diversity and promoting community cohesion. Delving into Ward 35's demographic profile offers insight into its population structure, housing dynamics, economic status, and educational achievements. Examining these key sectors aims to provide a nuanced understanding of the ward's distinctive socio-demographic landscape.

The area is home to 29,070 individuals within the broader eThekweni Municipality. The median age is 36, and it is noteworthy that approximately 68% of residents fall within the economically active age group of 18 to 64. A hallmark of Ward 35 is its cultural diversity,

exemplified by the following ethnic composition: 50% White, 26% Black African, 21% Indian, 2% Coloured, and 1% unspecified. This mosaic of cultural backgrounds is a testament to the region's inclusivity and multiculturalism. Ward 35 exhibits a predominantly urban and suburban character with significant commercial development. Furthermore, 31% of households are owned and fully paid off, indicating a substantial proportion of homeowners are economically active.

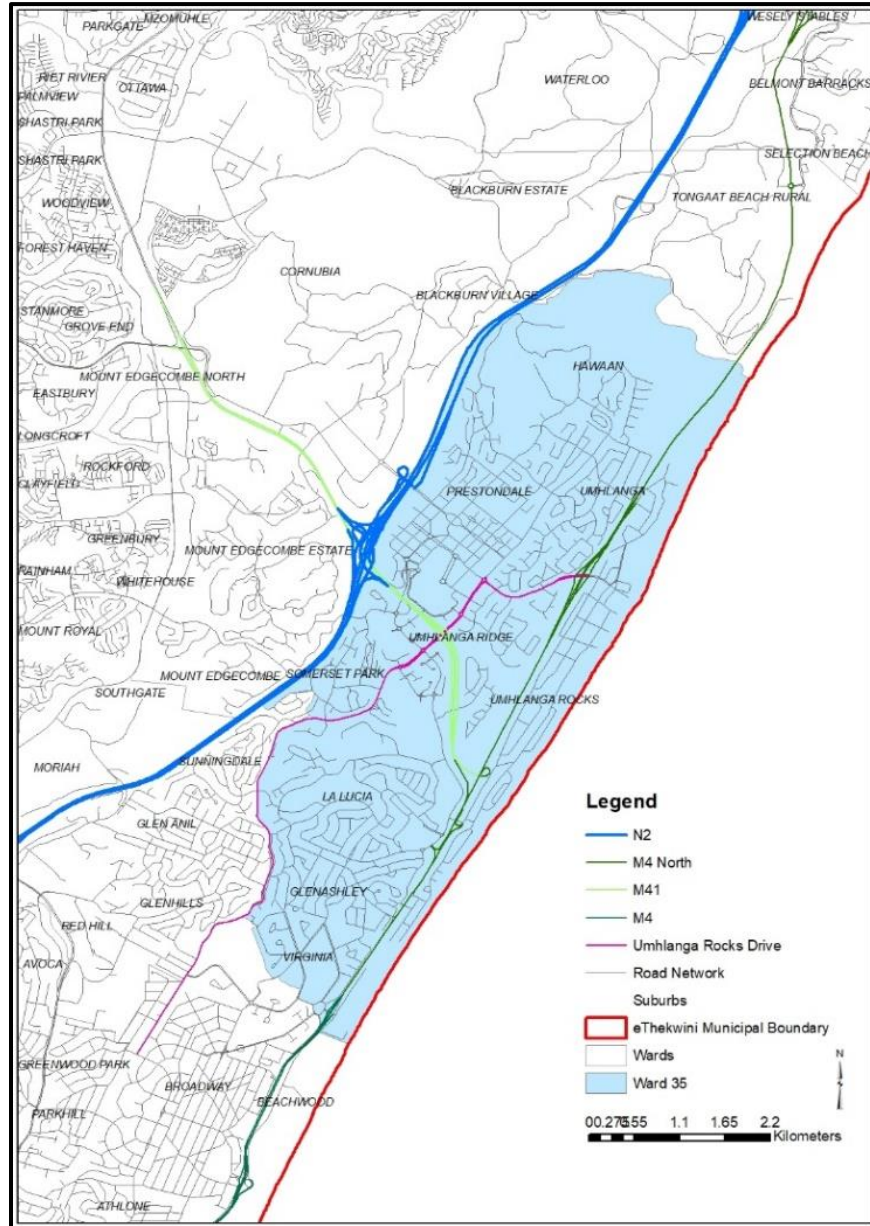
Economic indicators show that the average annual household income in Ward 35 is approximately R230,700, reflecting a diverse income distribution within the community. An impressive 71% of residents own private cars, contributing to the local transportation landscape. Moreover, 67.3% of the population is employed, surpassing the regional average in KwaZulu-Natal, which is 31.51%. A staggering 81% of the employed population in Ward 35 is engaged in the formal sector, highlighting its economic stability.

The area distinguishes itself by its high level of educational attainment, with 82.7% of residents having completed at least Grade 9 or higher. This percentage is notably higher than the corresponding rate in KwaZulu-Natal, which is 64.25%. Additionally, more than 1.5 times the regional rate (39.31%) have completed Matric or higher, underscoring the commitment to education and its strong foundation for a skilled workforce.

The demographic characteristics of Ward 35 within the eThekweni Municipality reveal a diverse and dynamic community with a unique blend of cultural backgrounds, housing dynamics, economic achievements, and a robust educational landscape. The complex interplay of these factors reflects the multi-faceted nature of the area, making it an intriguing subject of study in the context of public space and inclusivity.

It exhibits significant connectivity to the extensive transportation infrastructure encompassing regional and metropolitan routes. The ward is strategically situated near the N2 National Route, facilitating convenient north-south travel and accessibility to the Metropolitan Routes, notably the M4 North and South and the M41 East-West corridor. Furthermore, this locality benefits from prominent arterial roadways such as Umhlanga Rocks Drive, enhancing the availability of multiple entry points to various suburbs within the ward and the broader cityscape. This spatial attribute bears significance as it not only fosters accessibility to public spaces but also underscores the diversity of transportation

options, encompassing both public and private modes of transport. The road connectivity and access to the ward is indicated in Map 5-7 below.

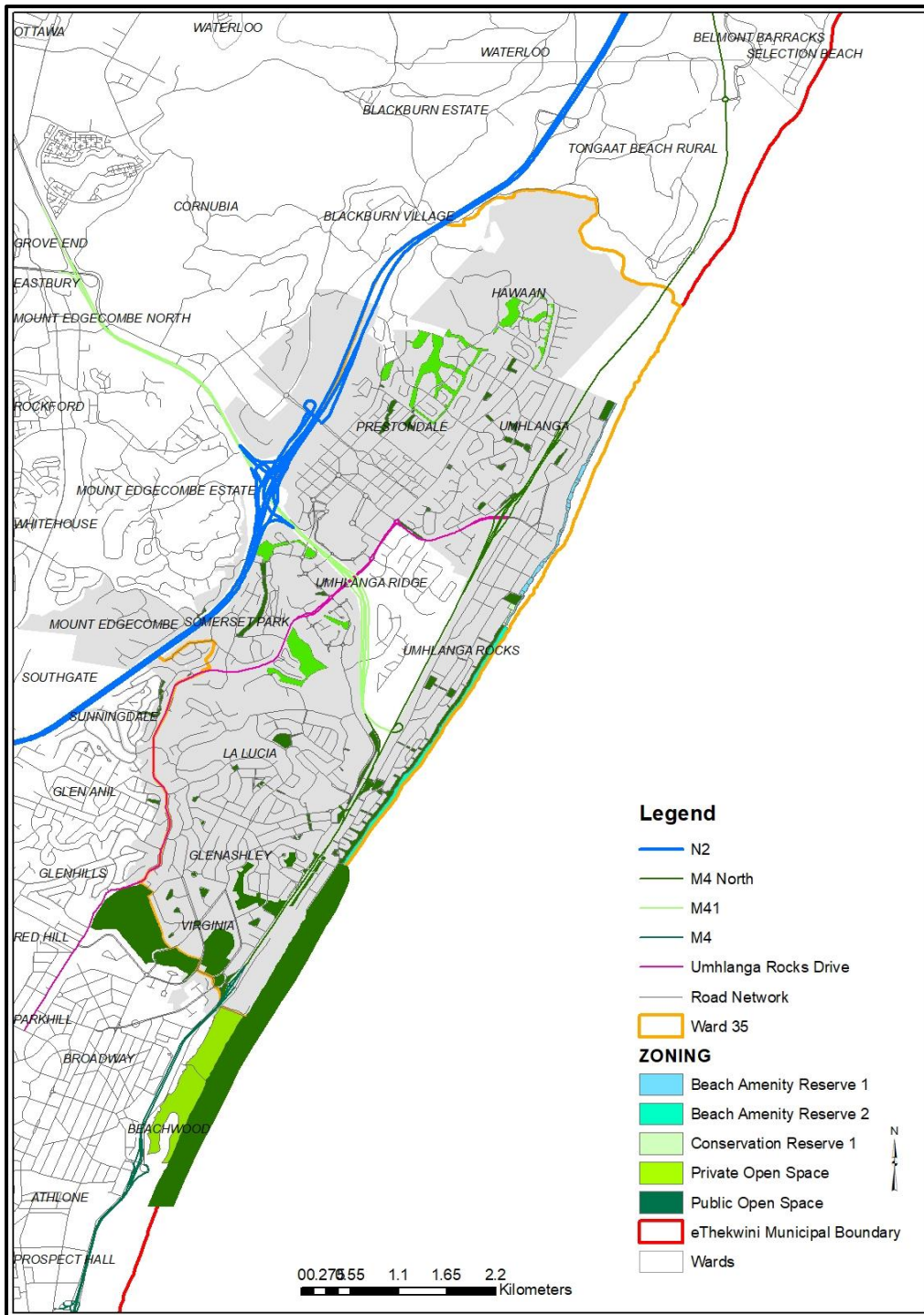


Map 5-7: Ward 35 map with road network

Source: Author's own based on eThekweni Municipality 2022 OpenGIS Data

In Map 5-8, the zoning of land parcels within Ward 35 can be seen, each designated with a classification that endorses open space usage. It is noteworthy that Ward 35 encompasses two distinct Land Use Schemes, specifically the Northern Sub-Scheme and Central Sub-Schemes. However, despite this duality in Land Use Schemes, it is essential to underscore that harmonising zoning definition has led to a uniform interpretation of Open Space zoning across both schemes. The zoning definitions serve as a critical component in these land parcels' identification and extraction process, fostering consistency in their allocation for open space purposes.

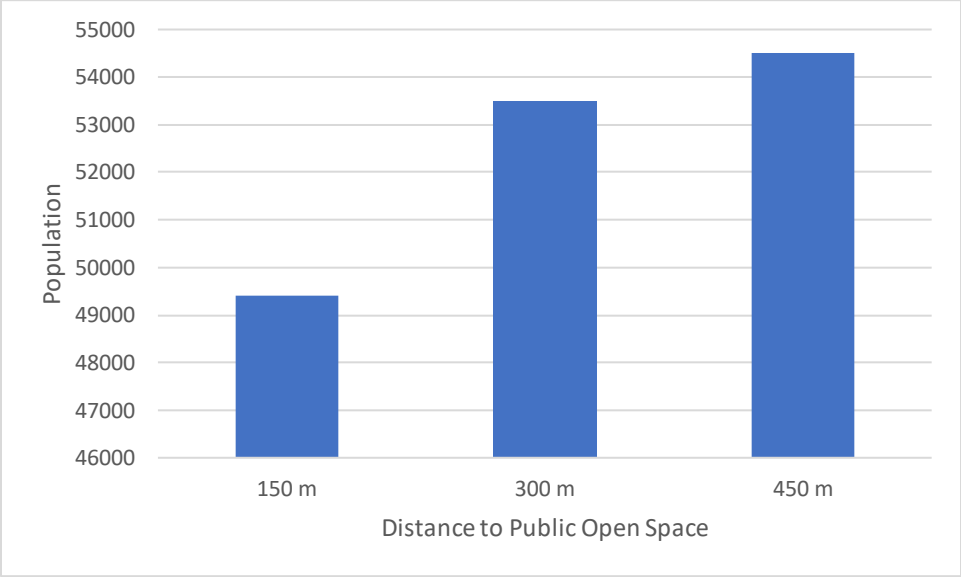
Based on the zoning and classification, with a particular focus on Public Open Spaces and Private Open Spaces, several noteworthy observations come to the forefront. Such sites can be identified when concentrating specifically on the public open spaces within Wards 35 and 149. Additionally, there are 31 private open spaces, predominantly situated within gated estates, exemplified by suburbs like Mount Edgecombe Golf Course, Izinga Ridge, and Havaan Forest, among others.



Map 5-8: Land parcels zoned for public spaces

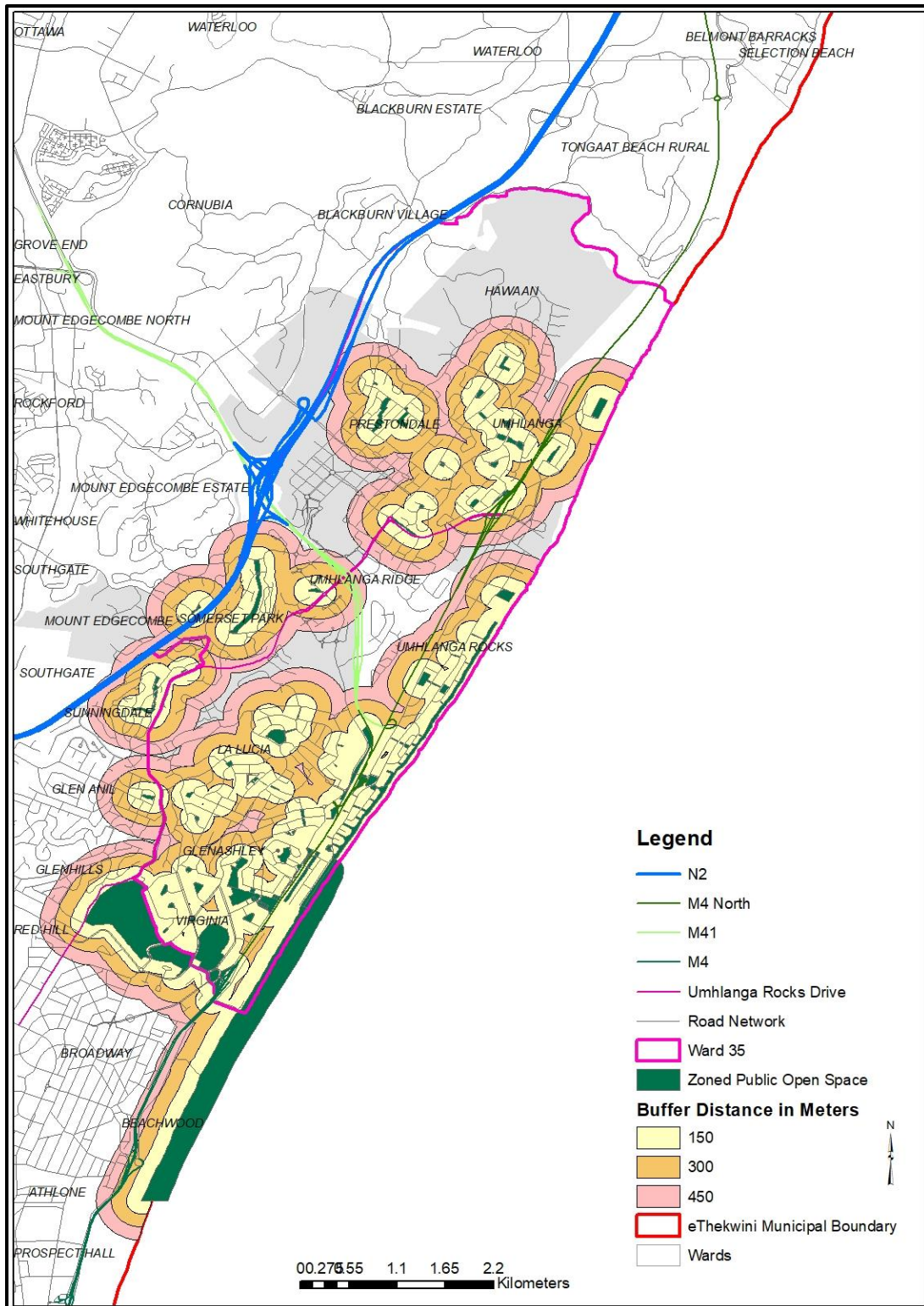
Source: Author's own based on eThekweni Municipality 2022 OpenGIS Data

To further highlight the accessibility of public open spaces to the local population within the ward, Bar Chart 5-1 provides insight into the number of individuals who are near these spaces. This information has been calculated utilising the eThekwini Municipality population projection for 2021 and applying a buffer distance of 150 meters as indicated in Map 5-9 to assess the reach and impact of these public open spaces on the community.



Bar Chart 5-1: Population with access to public open spaces at 150m intervals

Source: eThekwini Municipality population projection, 2021

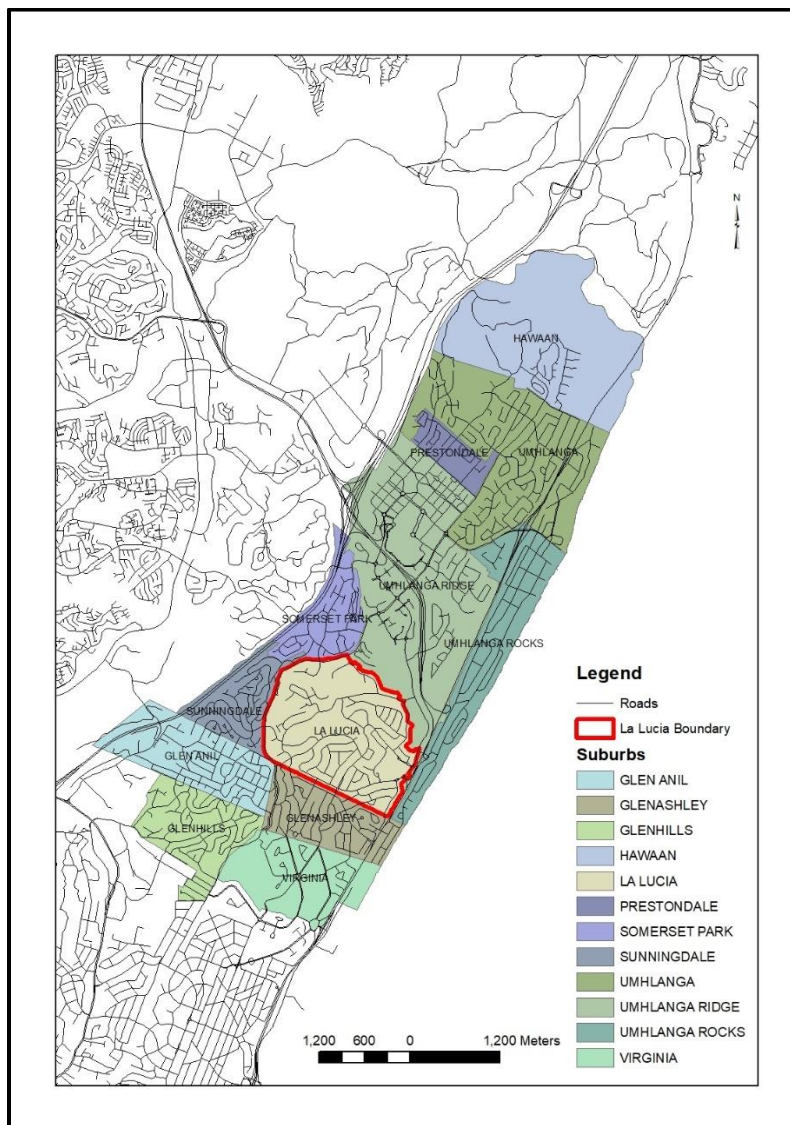


Map 5-9: Spatial access to public open spaces at 150m intervals

Source: Author's own based on eThekweni Municipality 2022 OpenGIS Data

5.8 The case study area – La Lucia

The suburb of La Lucia located within Ward 35, of eThekweni Municipality was chosen for detailed empirical study as it is characterised by its diverse socio-economic landscapes and varied urban forms (See Map 5-10 below). Within this context, the suburb of La Lucia provides a particularly insightful case study for public space research. La Lucia was also chosen for the detailed study because it fits well with the analytical frameworks of Henri Lefebvre’s ‘*Spatial Triad*’ and David Harvey’s ‘*Spatial Matrix*’, which offer robust frameworks for analysing the multifaceted nature of public spaces.



Map 5-10: Spatial location of La Lucia

Source: Author’s own based on eThekweni Municipality 2022 OpenGIS Data

5.8.1 La Lucia's relevance of Lefebvre's 'Spatial Triad'

Henri Lefebvre's '*Spatial Triad*' provides a comprehensive lens for examining La Lucia's public spaces.

'Perceived space'

Everyday activities:- Understanding how La Lucia's residents actively utilise public spaces for various everyday activities, from recreational uses in parks to social interactions in communal areas. This usage reflects the spatial practices of the community, offering a window into the rhythms and routines that shape urban life.

Infrastructure and accessibility: - The suburb's well-developed infrastructure, including walkways, recreational facilities, and green spaces, highlights the practical dimensions of space and its accessibility. Studying these aspects reveals how public spaces support the community's daily practices.

'Conceived space'

Urban planning and design: - La Lucia's public spaces are products of specific urban planning and design principles. Analysing planning documents, zoning laws, and architectural designs can reveal the ideologies and intentions behind these spaces.

Policy and regulation: La Lucia's '*conceived space*' includes the policies and regulations that govern land use and public space management. Understanding these frameworks provides insights into how space is intended to function within Ward 35's broader urban strategy.

'Lived space'

Community interaction and identity: - The lived experiences of La Lucia's residents in public spaces contribute to the suburb's unique identity. A study of these spaces and how they become sites of community interaction, cultural expression, and social cohesion reflects space's subjective and symbolic dimensions.

Symbolic meanings and cultural practices: - Public spaces in La Lucia are imbued with symbolic meanings and cultural practices that resonate with the

community. These lived experiences can reveal how space is personalised and appropriated by its users, providing depth to our understanding of urban life.

5.8.2 La Lucia application of Harvey's 'Spatial Matrix'

David Harvey's 'Spatial Matrix' offers another valuable framework for contextualising the selection of La Lucia.

'Absolute space':

Geographical and physical dimensions: - La Lucia's precise geographical location within Ward 35, its physical boundaries, and the quantifiable aspects of its public spaces (e.g., area, layout, and infrastructure) are critical for understanding its urban fabric. The suburb is also centrally located within the administrative area, reflecting how spatial location relates to accessibility.

Mapping and spatial data: - Utilizing spatial data and mapping techniques, one can analyse the 'absolute space' of La Lucia to identify patterns of public space distribution, accessibility, and connectivity.

'Relative space':

Proximity and connectivity: - La Lucia's 'relative space' involves its connectivity to other parts of Ward 35 and its relational dynamics with adjacent suburbs. The suburb enjoys good connectivity to the rest of the ward through the existing transport networks.

Economic and social networks:- La Lucia's public spaces function within a network of economic and social relations. Studying these connections reveals how relative spatial dynamics influence their functionality and desirability.

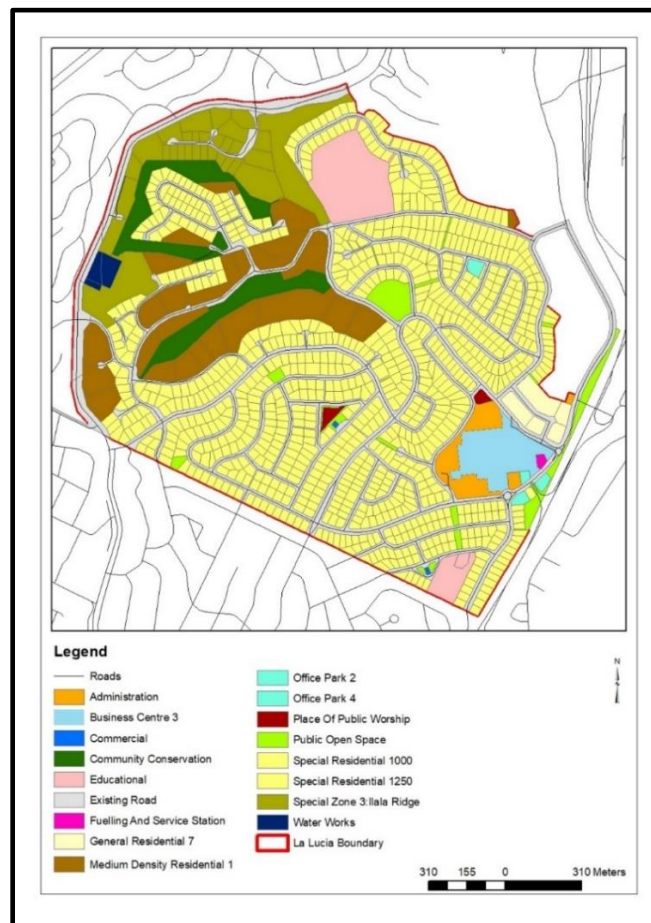
'Relational space':

Power relations and social equity:- 'Relational space' focuses on the socio-political and economic power relations that shape the production and use of space. In La Lucia, examining who has access to public spaces, who controls them, and how they are contested can uncover underlying social equity and inclusion issues.

Cultural and symbolic interactions: - Public spaces in La Lucia are also sites of cultural and symbolic interactions. Understanding these relational dynamics helps to highlight how spaces are experienced and transformed by their users.

5.8.3 Zoning

The zoning for La Lucia is illustrated in Map 5-11 below. The suburb is largely residential in nature, with 93,93% of the properties zoned for residential uses. Residential development in La Lucia varies in typology, from single-dwelling households and planned unit developments to cluster homes and gated estates. Land zoned for public space and non-residential uses accounts for 2,08% and 3,99%, respectively.



Map 5-11: Zoning Plan

Source: Author's own based on eThekwin Municipality 2022 OpenGIS Data and Town Planning Scheme

The selection of La Lucia as a case study for public space research is substantiated by the robust analytical frameworks provided by Lefebvre's '*Spatial Triad*' and Harvey's '*Spatial Matrix*'. These theoretical models enable a deep, multi-faceted examination of public spaces, capturing the complexities of their production, representation, and lived experience. By leveraging these frameworks, comprehensive insights into the dynamics of public spaces in La Lucia can be established, which contributes valuable knowledge to urban studies and planning within the broader context of Ward 35, and the eThekweni Municipality.

5.9 Conclusion

This case study aims to shed light on the strategic importance of selecting eThekweni Municipality as a case study for a public space strategy. The rich socio-cultural and urban fabric and unique geographical and historical context make it an excellent choice for an in-depth examination of public space development and management. Furthermore, the application of Henri Lefebvre's '*Spatial Matrix*' as a foundational framework allows for a comprehensive exploration of the multi-dimensional aspects of public spaces. A detailed analysis of the Suburb of La Lucia in Ward 35 will follow in Chapter Six of this research. The choice of eThekweni Municipality as a case study for a public space strategy is driven by its distinctive characteristics and the implications of Henri Lefebvre's analytical model. Durban's cultural diversity, geographical features, and historical significance make it a compelling subject for understanding how public spaces can be designed and managed to serve a rapidly urbanising and diverse population. By applying Lefebvre's '*Spatial Matrix*', a nuanced understanding of the various dimensions of public spaces in Durban is possible. This analysis includes the resident's perceptions, conceptions, and everyday uses of these places.

The case study can potentially offer valuable insights for urban planners, policymakers, and researchers globally. The dynamic interplay between culture, geography, and history in eThekweni Municipality's public spaces exemplifies the complexities and opportunities many cities face in the 21st Century. The metro stands as a living laboratory where the

theory and practice of public space strategy can be tested and refined, providing lessons that resonate far beyond its borders. As urbanisation continues to shape our world, a case study in the Metro has the potential to develop towards a more inclusive, sustainable, and vibrant city. The findings are presented in the next chapter of this dissertation, which centres its attention on the empirical data acquired through interviews and surveys conducted by the researcher. It provides greater insight into the '*perceived*' and '*lived*' uses of public space. In contrast, Chapter Five has provided a more nuanced look at how public spaces is conceived within the metro environment.

6 CHAPTER SIX - ANALYSIS AND FINDINGS

6.1 Introduction

The previous chapter delved into the contemporary municipal landscape concerning the intricacies of planning, zoning, budget allocation, operational procedures, and maintenance protocols for public spaces. This section endeavours to establish a robust analytical foundation for comprehending the production and conceptualisation of space within the municipal context, as illustrated in Graph 6-1. Building upon this foundational understanding, Chapter Six embarks on a more comprehensive exploration of the user experience in public spaces. In alignment with Lefebvre's (1991) and Harvey's (1992) theoretical models, this chapter investigates the application of key elements as captured in the literature review (Chapter Two). It further draws on the findings of the sample population of 295 households in the suburb of La Lucia.

Cohen and Manion (2002) assert that research methodology is understanding an enquiry. Chapter Five defined the research methodology employed in this study. Research methodology encompasses a set of guidelines and techniques essential for the collection and analysis of data, forming the foundational theories and ideas pertinent to the selected approach. An in-depth analysis of the household survey findings and structured interviews is now outlined.

This chapter's primary aim is to present findings and analyse the results concerning the relationship between residents and their consumption patterns in public spaces. Using inferential data analysis, it examines household data combined with specialist interviews to understand the dynamics between residents and public spaces. This analysis also seeks to identify the user experiences of public places at a suburban level.

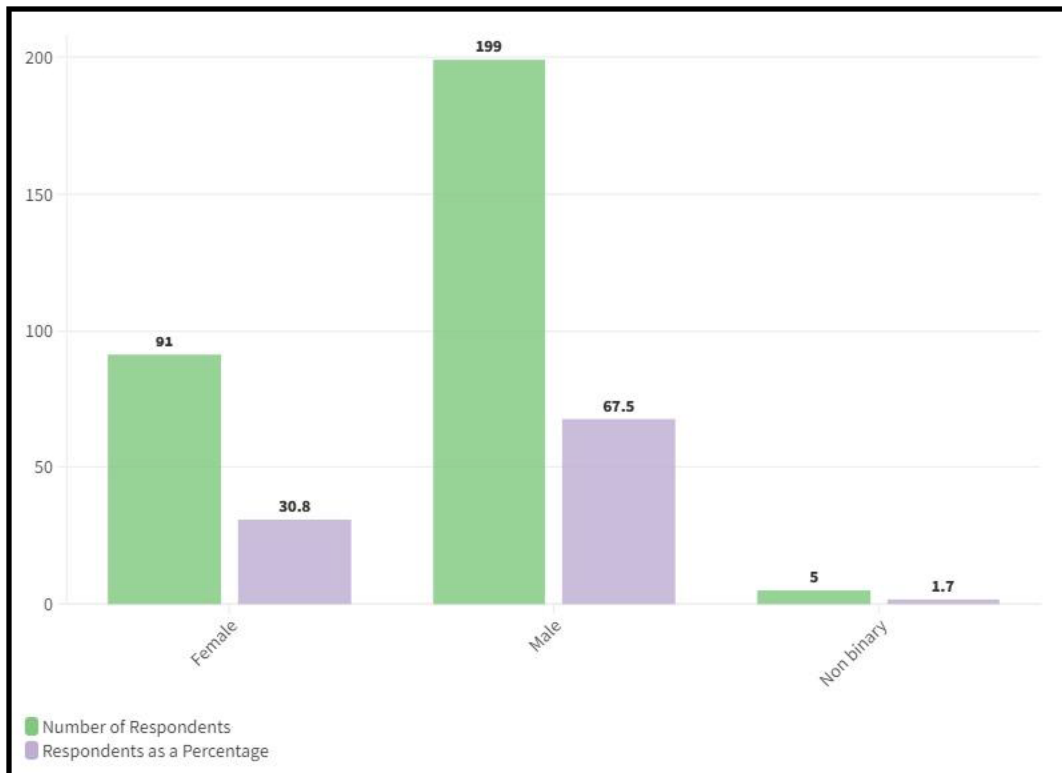
This chapter uses primary and secondary data sources to ascertain public spaces' user experience and consumption patterns. The sample population drew from 295 households living in the suburb of La Lucia. This survey responses provided the primary data for the research. Structured interviews with political and administrative representatives, public space experts and community organisations provided the secondary data for the study.

6.2 Interviewee profile

The following section unpacks the relevant information related to the participants, who engaged with the primary data collection process.

6.2.1 Gender profile

Among the 295 respondents sampled, the survey results were markedly asymmetry in gender distribution, with over two-thirds (67.5%) being male and approximately one-third (30.8%) female, as illustrated in Graph 6-1. A smaller percentage (1.7%) of respondents identified as non-binary. According to the 2011 census data, which is not disaggregated to the suburb level, Ward 35 comprises 48.3% males and 51.7% females.



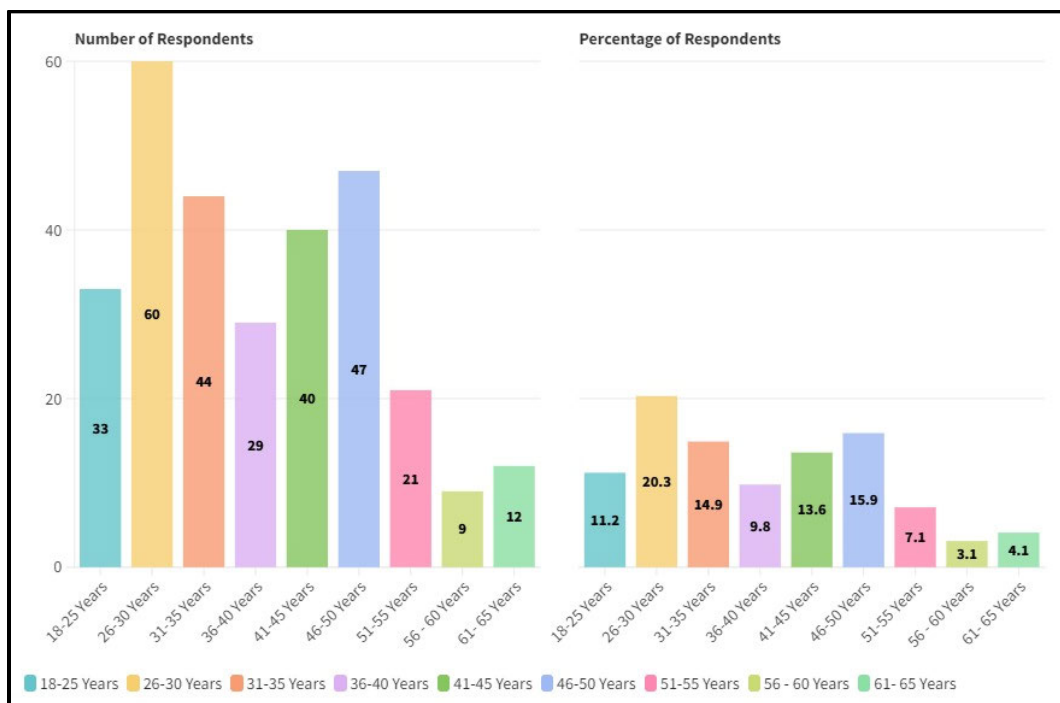
Graph 6-1: The gender profile of survey respondents

Source: Author's own based on data analysis, 2024

The disparity in survey responses may be attributed to several factors. Firstly, the survey could have differing interest levels or availability between genders. Secondly, males might have been more engaged with the topic or had more time to respond, as most of the interviews were conducted during evenings and weekends. Thirdly, the interviewer was male, which could have impacted the process and thus fewer females responded due to socio and cultural factors. Finally, issues related to safety factors might have influenced the willingness of females to participate, potentially leading to their underrepresentation in the survey.

6.2.2 Age distribution

Understanding the age distribution among the respondents will assist in determining the unique characteristics and needs that influence their consumption of public spaces. Bar Chart 6-1 indicates the age distribution of the survey respondents. Participants on the survey exhibited a varied age group. It is noted that there were no respondents under the age of 18 to ensure ethical compliance. The age distribution of the respondents indicates a largely youthful population, with only 7.2% above the age of 56.



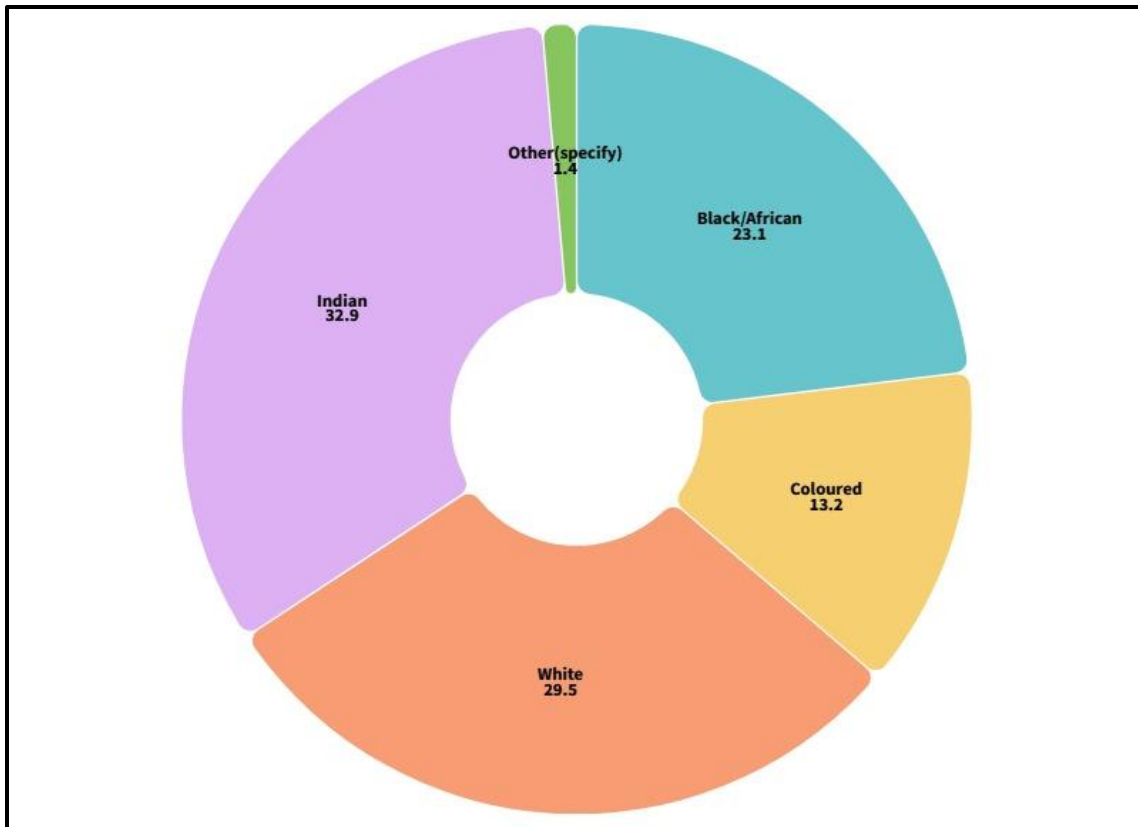
Bar Chart 6-1: The age distribution of respondents by number and percentage

Source: Author's own based on data analysis, 2024

From a 2011 census perspective, the ward age distribution indicates 32,2% for the 15-34 years, 38% for the age group 35-64, and 9,6% for the age group more significant than 65 years of age. While the census categorisation differs from the survey's, it exhibits a correlation in that the ward reflects a predominantly youthful population.

6.2.3 Population groups

Public spaces foster social interaction, cultural exchange, and community cohesion. Understanding how different demographic groups utilise these spaces can provide insights into creating inclusive, accessible, and culturally relevant public spaces. The distribution of various population groups is illustrated in Pie Chart 6-1 on the following page. It shows the largest respondent group is Indian at 32.9%, followed by White at 29,5%, Black/African at 23.1% with Coloured respondents at 13,2%. A minor component of the population distinguishing themselves as others at 1,4%. The 2011 Census data identify the largest population group for the ward being White at 40,5%, followed by Black African at 34,4%, Indian at 22.4%, coloured at 1,8% and other population groups at 0,9%. The predominant home language for the respondents was English at 66,1%, followed by isiZulu at 13,6%, Afrikaans at 12,5% and isiXhosa at 6,4%. Some respondents listed their home languages as isiNdebele, Sesotho and others (Chinese) below 2%, which is statistically insignificant.



Pie Chart 6-1: Population groups in percentages

Source: Author's own based on data analysis, 2024

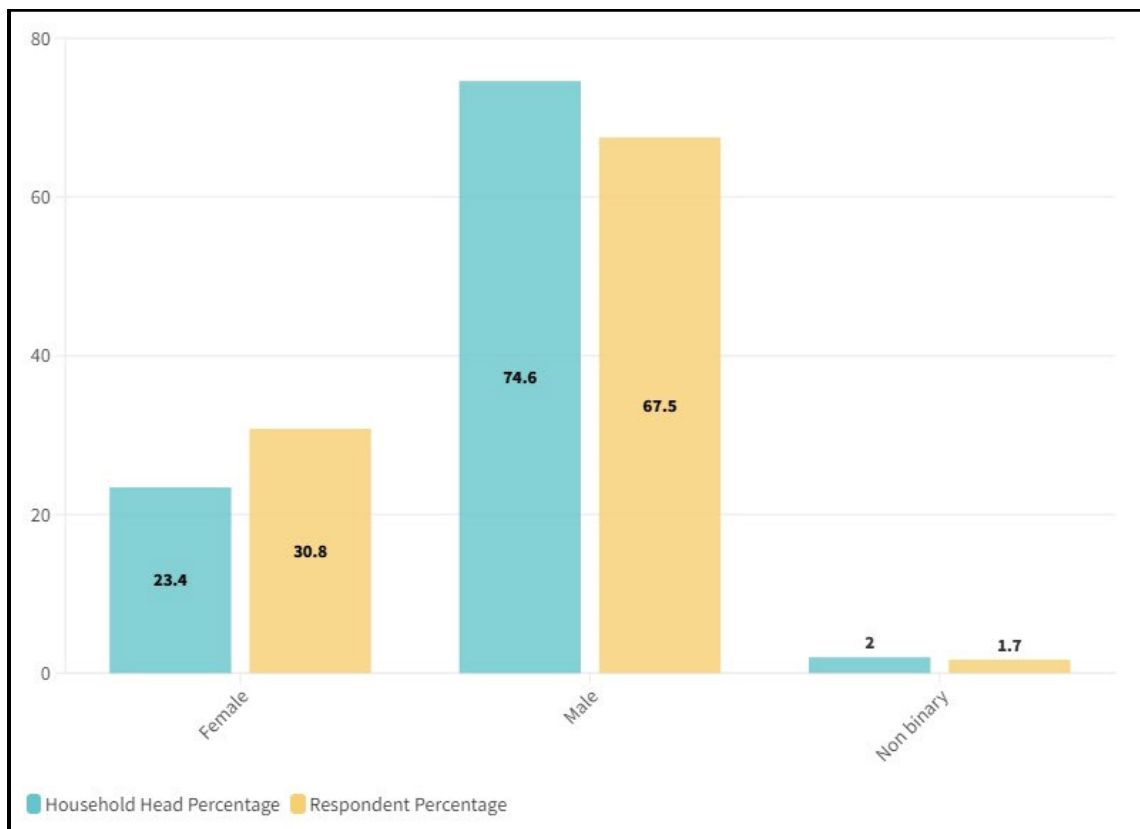
Pre-1994, La Lucia was primarily regarded as a suburb designated for White population groups. However, after the 1994 democratic elections, various population groups relocated to the suburbs. In the absence of the 2022 census data, one cannot accurately quantify the level of racial change in the suburb.

6.3 Household head profile

The following section provides a detailed analysis of the household head, including details relating to the head's length of residency, age, spoken home language, household type, and source of income.

6.3.1 Gender of household head

An analysis of respondents provided some interesting insights into gender dynamics in the context of household leadership and participation in surveys or interviews, as illustrated in Bar Chart 6-2 below. The percentage of female respondents, 30,8%, is higher in interviews than their representation as household heads of 23,4%. This suggests that females are more likely to participate in interviews relative to their presence as heads of households. The converse was observed in the percentage of male respondents, which is lower for interviewees at 67,5 compared to household heads at 74,6%.



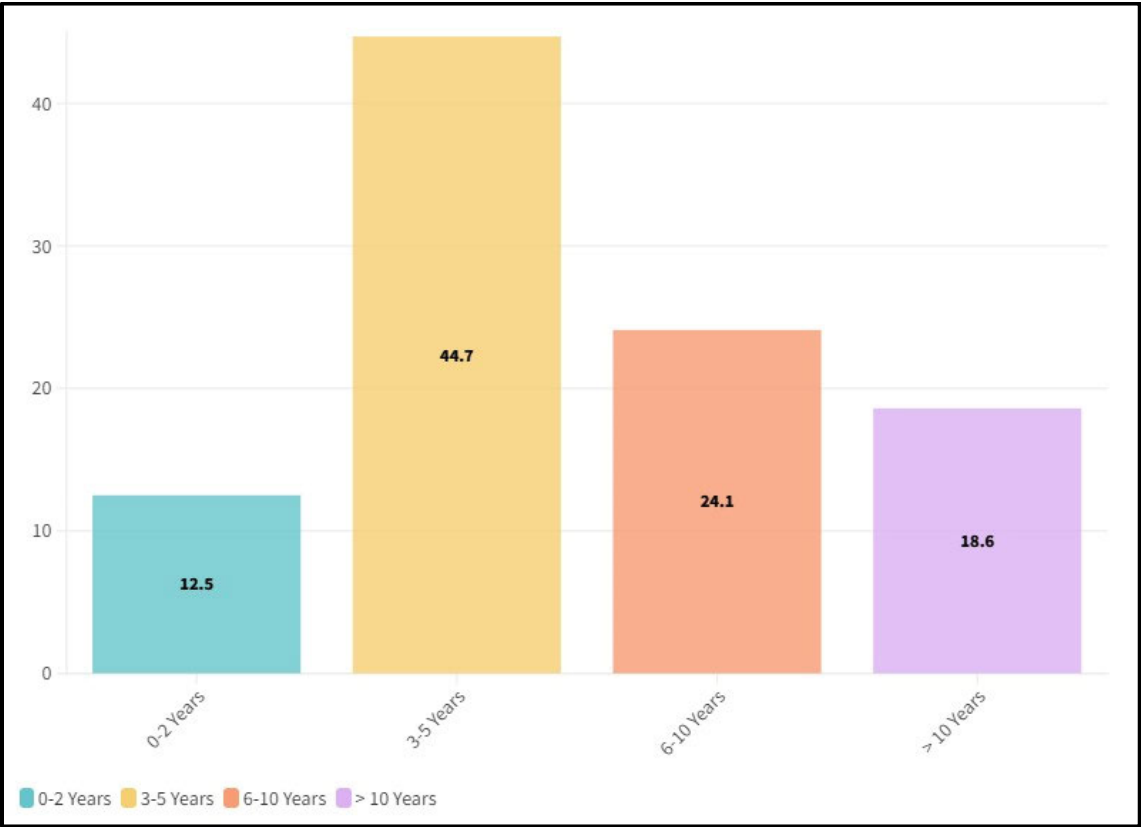
Bar Chart 6-2: A comparison of the gender of household head and respondents in percentages

Source: Author's own based on data analysis, 2024

This indicates that males are predominantly household heads but are slightly less willing to participate in interviews. Non-binary individuals have a minimal representation both as household heads and as interviewees.

6.3.2 The duration of stay

Bar Chart 6-3 below illustrates the respondent's duration or length of stay in their current dwelling in the suburb. The dominant duration of stay in the suburb falls within the three to five years category, comprising 44.7%, close to half of the respondents interviewed. Medium-term residency between six to ten years is the second highest at 24.1%, followed by longer-term residency greater than ten years at 18.6%. The group of respondents that have moved into the area within the last two years account for 12.5% of the sample population.



Bar Chart 6-3: The duration of stay in percentages

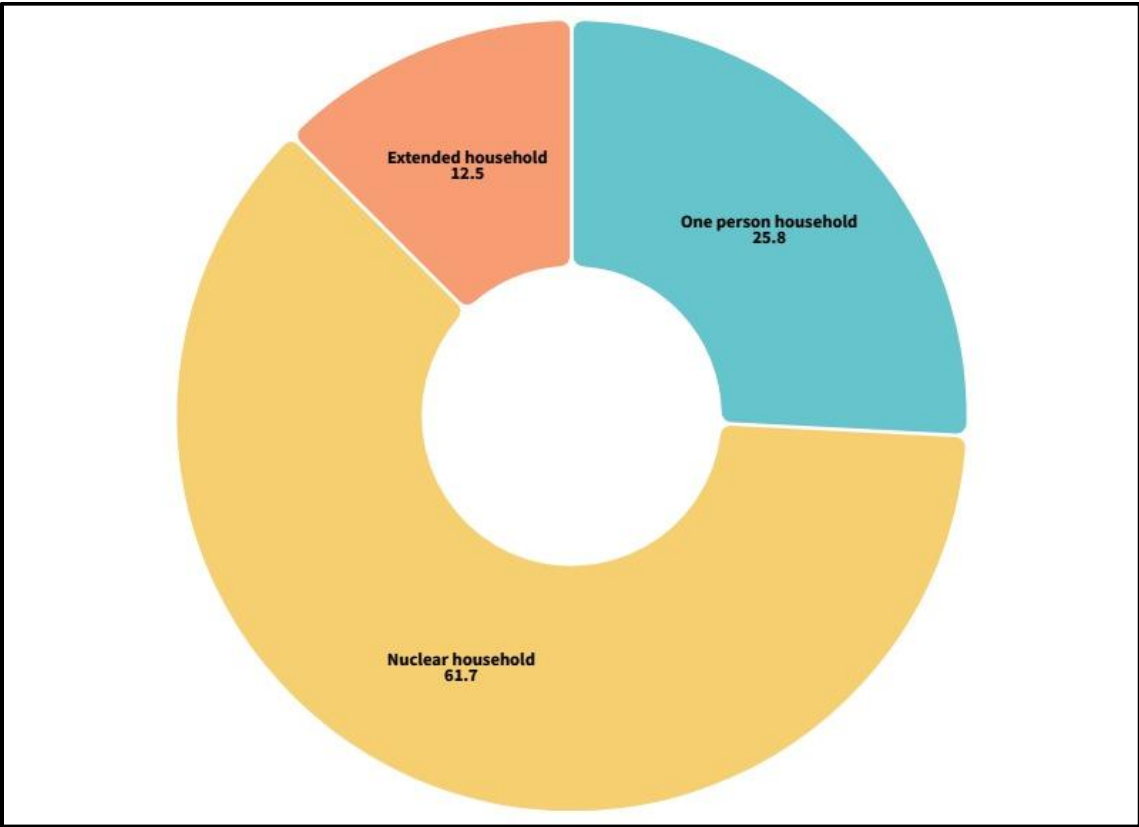
Source: Author’s own based on data analysis, 2024

The above data exhibits a trend of growth in movement into the suburb in the last five years, which could be attributed to the youthful population, as exhibited in Figure 6.2,

moving into the suburbs' numerous planned unit developments, such as Illala Ridge, La Palmas, The Garden, and the Grand Floridian.

6.3.3 Household type

Identifying household types for this study on public space usage is essential for designing inclusive, accessible, and functional public spaces. It allows one to understand different household configurations' diverse needs and preferences, ensuring that public spaces serve all community members effectively. The dominant household type is one of a nuclear family, defined as a family group consisting of parents and their children, which accounts for 61,7%, followed by one-person households at 25,8% and extended families at 12,5%, as depicted in Pie Chart Figure 6-6



Pie Chart 6-2: Household types in percentages

Source: Author's own based on data analysis, 2024

These findings highlight the importance of catering to the varied social structures within the community. Public spaces need to meet the specific needs of nuclear families, single residents, and extended family units alike.

6.3.4 *The age of respondents*

Table 6-1 provides a distribution of respondents by age group; the data presents a compelling narrative about the sample's composition and offers insights into broader demographic patterns. The distribution of respondents reveals an uneven spread across different age brackets, with a notable concentration in certain groups. It shows that most respondents are between 26 and 50 years old, accounting for more than half of the total sample (approximately 64.5%). This distribution highlights the prominence of mid-career individuals in the dataset, while younger (18-25 years) and older (above 55 years) respondents are comparatively underrepresented.

Respondents in the 18-25 age group constitute a modest portion of the sample, representing 11.2%. This group typically consists of individuals transitioning into adulthood, either pursuing higher education or entering the early stages of their careers. Their relatively lower representation might reflect that individuals in this age bracket are often preoccupied with academic or early professional commitments, making them less available or interested in participating in interviews or surveys.

The 26-30 age group is the largest demographic, accounting for 20.3% of the respondents. This reflects a pivotal period in life when individuals typically begin establishing themselves in their careers and personal lives. From a methodological standpoint, the over-representation of this age group may suggest that the research has particularly resonated with or appealed to individuals at this stage of life, often characterised by a desire for personal growth and career progression.

The 31-35 age group constitutes a significant portion of respondents at 14.9%. This age range typically represents individuals in more advanced career stages, often marked by increasing professional and personal responsibility. This period may also coincide with pivotal life changes such as family formation or leadership roles in the workplace. Their

active participation can be linked to their greater financial and social stability and their interest in contributing to research that aligns with their experiences in managing work-life balance, career progression, or other social and economic dynamics. This group may also perceive themselves as having sufficient expertise to provide valuable input into research studies, primarily if the topics are related to professional growth or societal issues.

The 36-40-year-old age group accounts for 9.8% of the sample, reflecting a notable decline compared to the preceding age groups. Despite this, the age group's perspectives remain valuable, particularly in terms of understanding the complexities of mid-career challenges, long-term career planning, and work-life integration.

The 41-45 years (13.6%) and 46-50 years (15.9%) age groups collectively represent a significant portion of respondents, making up nearly 30% of the total sample. These groups will likely provide mature and reflective insights shaped by years of experience, making their contributions critical for research that involves long-term trends or generational shifts in attitudes and behaviours.

The decline in representation among older age groups, particularly those over 50, is striking. The 51-55 age group constitutes only 7.1% of the sample, while those aged 56-60 (3.1%) and 61-65 (4.1%) are even more underrepresented.

Table 6-1: Respondents by age group

AGE GROUPS	PERCENTAGE RESPONDENTS INTERVIEWED
18-25 Years	11,2
26-30 Years	20,3
31-35 Years	14,9
36-40 Years	9,8
41-45 Years	13,6
46-50 Years	15,9
51-55 Years	7,1
56 - 60 Years	3,1

AGE GROUPS	PERCENTAGE RESPONDENTS INTERVIEWED
61- 65 Years	4,1

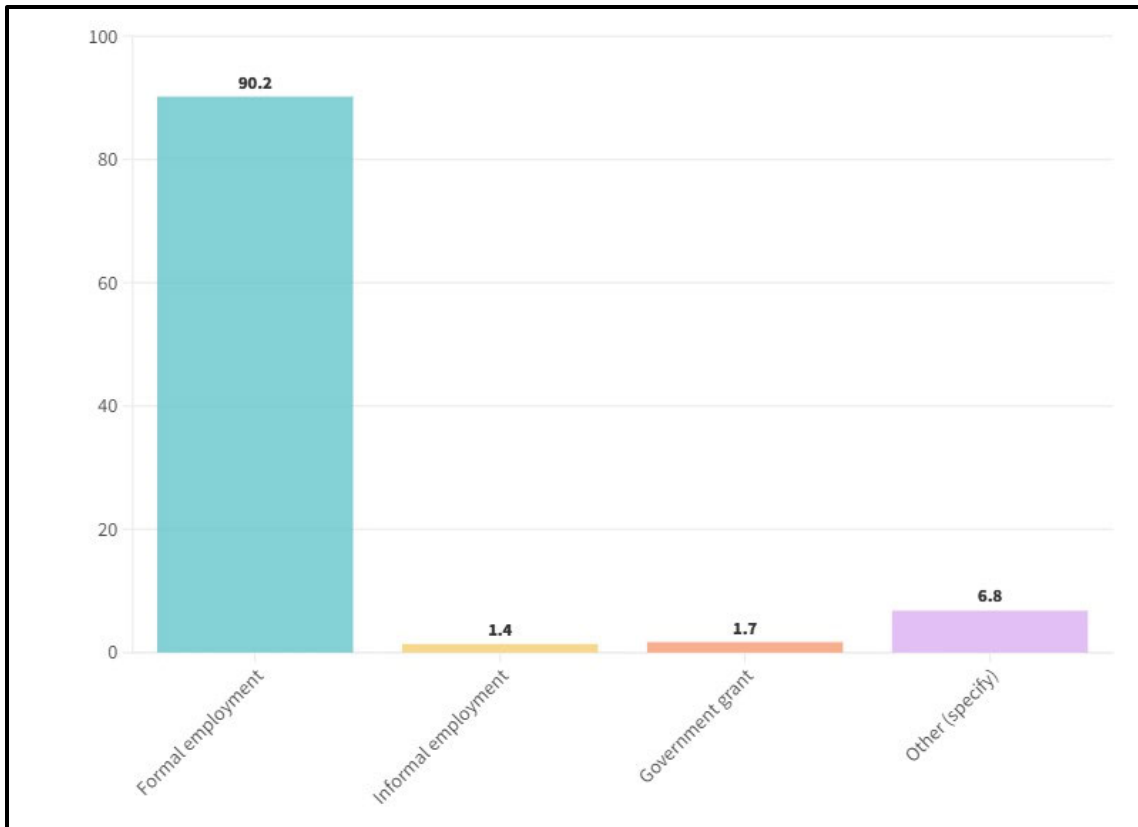
Source: Author’s own based on Data Analysis, 2024

Despite their lower representation, the perspectives of older respondents are crucial for understanding long-term societal and economic trends, particularly in areas such as retirement planning, healthcare, and generational shifts in professional life.

The age distribution offers rich insights into the demographic profile of the respondents and provides valuable context for interpreting the findings within the broader scope of this thesis.

6.3.5 Sources of Income

There is limited diversification in the sources of income, with an overwhelming dominance of 90.2% of respondents relying on formal employment as their primary source of income (See Bar Chart 6-4 below).



Bar Chart 6-4: Household sources of income

Source: Author's own based on Data Analysis, 2024

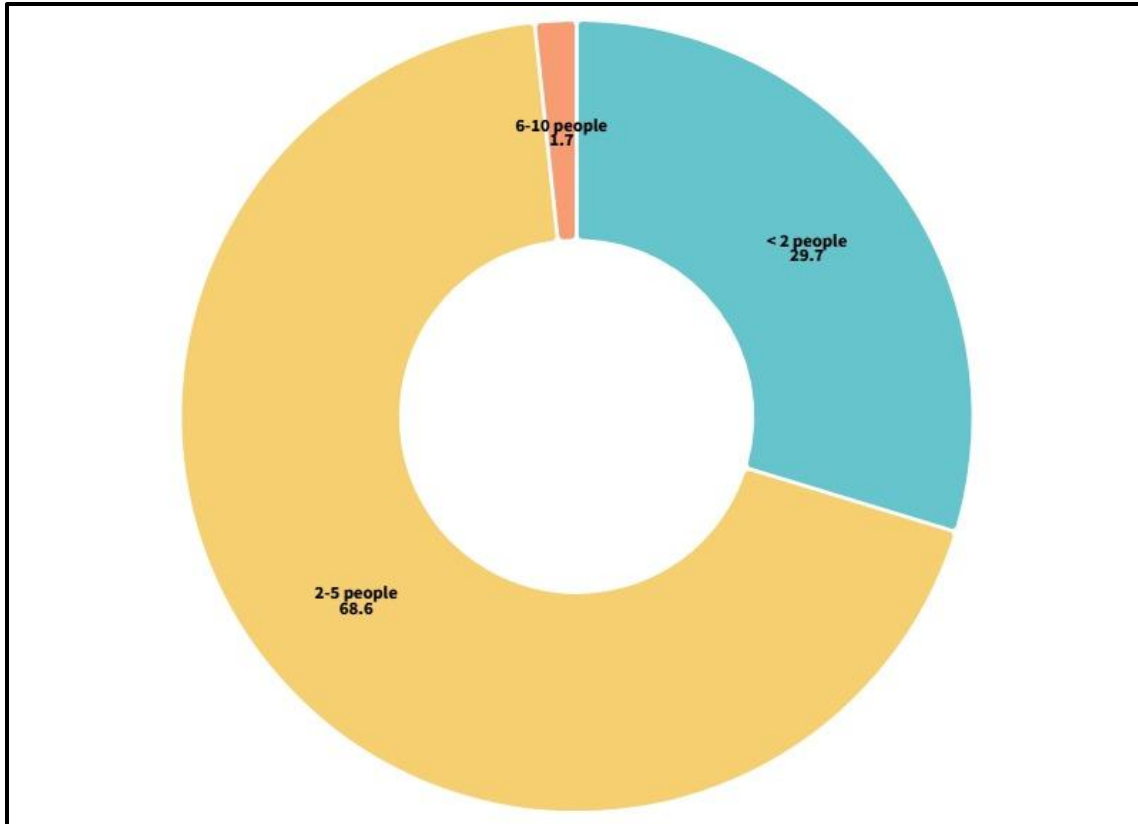
This suggests economic stability and structured employment opportunities within the surveyed population. 6.8% of the respondents indicated another income source, primarily private pensions. A small percentage of government grant recipients (1.7%) reflect limited dependency on the state welfare systems. The low percentage of informal employment (1.4%) indicates minimal engagement in informal business activities.

This variable assists in understanding how economic groups consume various public spaces through multiple sources of income. Formal employment typically provides regular income, social security benefits, and a structured work schedule, which can affect how individuals engage with public spaces. Bromley (2000) contends that informal employment is closely linked to public space usage, as informal workers often rely on public spaces for economic activities such as street vending, casual labour, or informal

markets. The survey results suggest that there would be reliance on public space to provide economic opportunities.

6.3.6 *The size of the household*

Knowing the size of households allows for more precise and practical design, ensuring that public spaces meet the entire community's needs. The results displayed in Pie Chart 6-3 illustrate the size of households in the sample population. Most households (68.6%) fall within the 2-5 people range. This is typical for nuclear or small extended families and correlates with the household types indicated in Pie-Chart 6-2. Nearly one-third (29.7%) of the households comprise less than two people. This shows a significant proportion of single-person households. A tiny percentage (1.7%) of households have 6-10 people, suggesting that larger households are rare in this part of the city. Access to public space is important, particularly where residents live at higher densities. The lower household size in this suburb would suggest that the need and engagement with public spaces will be different from those living in the inner city or crowded neighbourhoods.



Pie Chart 6-3: The size of households in percentages

Source: Author's own based on Data Analysis, 2024

Gehl's (2011) work emphasises the need for public spaces to support social interactions and activities that cater to different types of groups, including families, which is relevant to the design implications based on household sizes. According to him, public spaces must strike a balance between catering to small and nuclear families' needs, offering solitude opportunities to individuals from single-person households, and providing facilities that can accommodate larger gatherings. This view is further supported by the works of Oldenburg (1999), Whyte (1980), and Jacobs (1961), who emphasise the importance of designing inclusive and flexible public spaces that foster diverse social interactions across various household compositions.

6.3.7 Household composition

Table 6-2 provides a more detailed analysis of the number of people per household for the survey population. The Age groups 0-14 years together constitute 25% of the population, indicating a significant presence of young children. The highest representation is seen in the 26-30 and 41-45 age groups, each at 11%, followed by the 31-35 age group at 10%. Much of the population, 50%, falls within the 26-50 age range, accounting for a large portion of the workforce and active adults. Those over 60 constitute 5% of the population, reflecting a smaller elderly segment.

Table 6-2: The number of people per age group in surveyed households

AGE GROUP	FREQUENCY (COUNT)	PERCENTAGE
0-5	62	9
6-10	71	10
11-14	43	6
15-20	25	4
21-25	38	6
26-30	77	11
31-35	69	10
36-40	60	9
41-45	77	11
46-50	63	9
51-55	35	5
56-60	30	4
Over 61	36	5
Totals	686	100

Source: Author's own based on Data Analysis, 2024

Age distribution is critical in determining how different population segments design, access, and utilise public spaces. The data highlights significant trends such as the substantial presence of children, the large proportion of working-age adults, and the relatively small elderly population. These results should all influence the approach to public space planning and design. Loukaitou-Sideris and Sideris (2010) emphasise the

importance of designing public spaces that promote physical activity and social interaction for children. This is an important factor to consider given the high number of children in the surveyed population. At the same time, Gehl's (2011) work highlights the importance of designing public spaces that foster social interaction and physical activity, particularly for working-age adults. Again, this observation is crucial given the significant proportion of this demographic in the survey. Plouffe and Kalache's (2010) research on age-friendly cities highlights how urban environments, including public spaces, must be designed to accommodate ageing populations' physical and social needs, this is another relevant factor given the more minor but crucial elderly demographic. Limitations in the data collection tool, specifically in determining the number of people over 65, have restricted the calculation of a dependency ratio for the sample population.

6.3.8 Reflections of household data using Lefebvre 'Spatial Triad' and Harvey's 'Spatial Matrix'

The dataset that has emerged through the household surveys provides rich insights into the socio-spatial dynamics of Ward 35. It reveals key dimensions that can be examined through the lens of Lefebvre's 'Spatial Triad' and Harvey's 'Spatial Matrix'. Both theoretical frameworks offer distinct but complementary views on the production and experience of space. When the models, are applied to this data, they display the intricate ways public space, demographics, and socio-economic structures interact within this suburban context. Lefebvre's triad provides a useful analytical tool to unpack this study's disparities and social relations.

From a '*perceived space*' perspective, the physical environment and the tangible aspects of space, such as the population distribution, housing types, and patterns of mobility, are reflected in the survey. The data indicates that most respondents (44.7%) have resided in the suburb for 3-5 years, followed by medium-term residents (6-10 years) at 24.1%. This signifies a growing influx of new residents attracted by planned unit developments (PUDs) such as Illala Ridge and The Grand Floridian. The prevalence of nuclear families (61.7%) aligns with the suburban ideal of structured and organised space. It is reflective

of Lefebvre's '*perceived space*' and the materiality of suburban life shaped by urban planning and housing typologies.

Analysing the data from a '*conceived space*' perspective involves understanding the representation of space and how it is conceptualised by planners, developers, and authorities. The development of these PUDs aligns with a neo-liberal urban agenda aimed at attracting a youthful, economically stable population, as evidenced by the high reliance on formal employment (90.2%) and the significant proportion of households earning through private pensions (6.8%). The demarcation of space in this way reflects the socio-economic agenda to design a suburban environment conducive to formal employment and economic security, minimising dependency on state welfare systems.

The most subjective of Lefebvre's triad, '*lived space*' encompasses the experiences and social relations that emerge within these physical and conceived environments. In the data, the underrepresentation of women in the survey responses (30.8%) - despite being 51.7% of the ward's population - suggests that socio-cultural factors, such as concerns about safety and participation in public life, shape the lived experiences of different demographic groups. Additionally, the very low representation of non-binary respondents (1.7%) signals the possibility of exclusion or marginalisation in terms of gender identity within the suburb. This reflects how social relations and '*lived*' experiences differ from the abstract, planned space and physical environments. This finding highlights a gendered experience of public space.

David Harvey's '*Spatial Matrix*' also presents a valuable framework for further data analysis, emphasising how space is both a physical and a socially produced construct. In Harvey's terms, '*absolute space*' corresponds to the fixed and measurable dimensions of the environment. The demographic distributions from the survey and the 2011 census data offer a snapshot. For instance, the suburban racial composition shift, with a post-Apartheid diversification of population groups, reflects how '*absolute space*' has been reconfigured in association with political change. The increasing presence of Indian (32.9%) and Black African (23.1%) residents contrasts with the historical predominance of Whites (40.5% in 2011), indicating a transformation in the spatial landscape of La Lucia.

'Relational space' is produced by the social interactions and economic systems that both shape and are determined by the physical environment. The dominance of formal employment (90.2%) and low reliance on informal economic activities (1.4%) reflects a relationship between the space and its residents that is largely structured by formal financial systems. This economic dynamic influences how space is experienced and valued, the low percentage of larger households (1.7% with 6-10 people) and the prevalence of single-person households (25.8%) suggests that space is being consumed in a highly individualised manner. This finding reflects a broader neo-liberal socio-economic pattern that prioritises private ownership and smaller household sizes. Plate 6-1 illustrates an example of the privatisation of public space, where green areas within the gated complex are visually accessible yet fenced off, serving as recreational areas exclusively for residents.



Plate 6-1: A photograph of privatised open space on Moreland Drive

Source: Author's own, (2024)

While the design and aesthetics of this space are of high quality, it lacks the defining characteristics of a public space, which is accessibility to all members of the community. This privatisation limits the space's functionality as a genuinely public area, transforming it into a semi-private domain that serves only a select group rather than fostering inclusivity and community interaction. The example reflects broader trends of gated developments restricting access to otherwise communal resources, effectively creating barriers to shared urban environments. It underscores the tension between high-quality design and accessibility, revealing that a well-designed space does not fulfil the role of a public space if it remains inaccessible. The shift in residency patterns, where younger age groups dominate the area (50% of respondents between 26-50 years), and the steady movement into the area in the last five years aligns with the concept of '*relational space*' in Harvey's matrix. The temporal dynamics are also reflected in the mobility patterns. Short-term residencies (44.7% within 3-5 years) are becoming the norm, indicating a more transient, flexible relationship with space driven by housing developments and economic factors.

There are areas where the survey data aligns closely with Lefebvre's and Harvey's theoretical frameworks. Both Lefebvre and Harvey emphasise that space is socially and economically produced. The high percentage of formal employment and the low levels of state dependency reflect the production of a middle-class suburban space driven by neoliberal economic forces that shape both the conceived and '*relational space*'.

The gender and racial dynamics observed in the data, such as the under-representation of women and non-binary individuals, resonate with Lefebvre's concept of '*lived space*' and Harvey's notion of '*relational space*'. The lived experiences of different groups within public spaces are shaped by historical, socio-economic, and cultural factors that produce exclusions or disparities in access, engagement, safety, and participation.

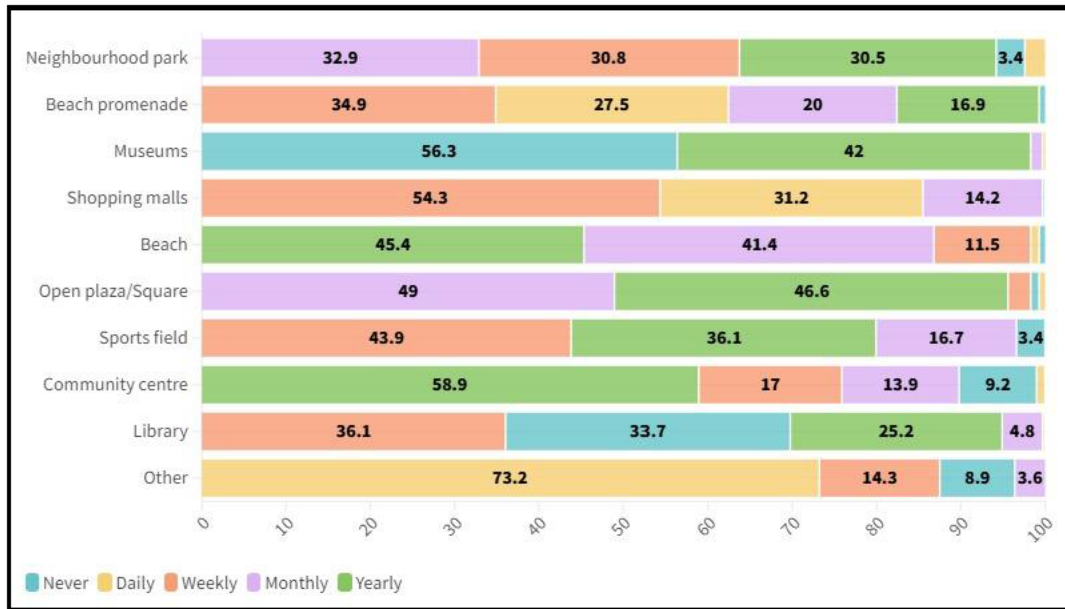
Over the last five years, the influx of younger populations and the movement into the area have reflected Harvey's concept of '*relational space*'. La Lucia's temporal transformation from a predominantly White, affluent suburb to a more racially diverse one signifies a reconfiguration of social relations within space over time. These changes have been driven by broader political and economic changes post-1994.

The data from the study presents a microcosm of how public space is produced, contested, and lived in a contemporary suburban context. By applying the theoretical concepts of Lefebvre and Harvey, an observation can be made that public space is not merely a static backdrop to human activity. Rather it is a dynamic and socially constructed entity shaped by economic structures, historical processes, and social relations. Through this lens, the suburban public spaces of La Lucia can be critically analysed to assess how they evolve to accommodate, exclude, or marginalise different population groups based on factors such as race, gender, and economic status. This reinforces the need for inclusive and equitable urban planning that acknowledges space's multifaceted and lived nature. A more detailed analysis of the household survey based on this analysis follows in the next section.

6.4 Perceived space

6.4.1 The frequency of use of public spaces

Carr et al. (1992) define public spaces as areas openly accessible and frequented for individual or group activities. The frequency of usage, illustrated in Graph 6-2, reveals distinct consumption patterns across public spaces. Neighbourhood parks experience significant monthly (32.9%) and yearly (30.5%) usage, with notable weekly visits (30.8%) and minimal daily use (2.4%). Beach promenades show high daily (27.5%) and weekly (34.9%) visitation. Museums register the highest non-visitation (56.3%), with limited annual visits (42%) and negligible daily use (0.3%). Shopping malls have weekly (54.2%) and daily (31.2%) visits dominating their consumption, with minimal monthly use (14.2%). Open plazas are predominantly visited monthly (49.0%) and annually (46.6%), with rare daily or weekly visits. Sports fields are primarily utilised weekly (43.9%) and annually (36.1%). Community centres are visited mostly annually (58.8%), with moderate weekly (17%) and monthly (13.9%) use. Libraries record high non-visitation (33.7%), though weekly visits are notable (36.1%).



Graph 6-2: The frequency of use of public spaces in percentages

Source: Author’s own based on Data Analysis, 2024

A significant 56.3% of respondents indicated that they never visit museums. Relph (1976) argues that place space operates at varying levels and scales of comprehension, a perspective that Smith and Low (2006) similarly endorse in their research work.

Respondents that listed “Other” public spaces see predominant combined daily usage at 73.2%.

Table 6-3: The frequency of public spaces listed as ‘Other’

"OTHER" PUBLIC SPACES	NEVER	DAILY	WEEKLY	MONTHLY	YEARLY
Gym	7.1	69.6	0	0	0
Place of worship	1.8	3.6	10.7	1.8	0
School’s sports field	0	0	1.8	0	0
Tennis courts	0	0	1.8	0	0
Nature reserve	0	0	1.8	0	0

Author’s own based on Data Analysis, 2024

Table 6-3 highlights ‘Other’ spaces, revealing daily gym visits at 69.6%, attributable to proximity (two gyms within a 5 km radius). Places of worship reflect moderate weekly use (10.7%).

Limited utilisation of public swimming beaches corresponds to water quality concerns in eThekweni Municipality. Analysis of 173 samples (January-September 2024) revealed significant *Escherichia coli* contamination (>500 CFU/100mL in 106 samples), compromising suitability for recreation and tourism. This highlights the critical need for integrated environmental and public health management to balance recreational use against contamination risks.

The qualitative analysis highlights varying conceptualisations of public space among respondents. Respondents 1, 3, and 8 emphasise that public spaces encompass a broad spectrum, from fully public areas such as parks and beaches to semi-public spaces like shopping malls. Respondent 8 further extends this definition to include functional spaces such as taxi ranks, transport terminals, libraries, and municipal buildings. Respondents 1 and 7 underscore the fluid and context-dependent nature of public spaces. However, conflicting views emerge regarding privately owned spaces functioning as public spaces: Respondents 1 and 8 acknowledge their public benefits, whereas Respondents 4 and 5 argue that genuine public spaces must remain non-commercial and free from restrictive policing. Respondent 5 specifically stresses the importance of spaces being freely accessible for collective use. This tension reflects broader debates about ideal publicly managed spaces versus the realities of public-private partnerships in urban development.

6.4.2 Visiting public space

Chondrogian and Stephanedes (2022) emphasise the community benefits derived from well-designed public spaces that encourage outdoor activities and social interaction. Table 6-4 summarises public space visitation based on accompanying persons (alone, spouse/partner, family, friends, or nil response).

Table 6-4: Public space visits by accompanying person in percentages

PUBLIC SPACE VISITED	ALONE	SPOUSE/PARTNER	FAMILY (INCLUDING CHILDREN)	FRIENDS	NILL RESPONSE
Neighbourhood Park	2.4	14.2	51.5	28.5	3.4
Beach Promenade	18.6	18.3	45.8	16.6	0.7

Museums	0.7	5.4	24.1	13.2	56.6
Shopping Mall	16.9	26.1	39.3	17.3	0.3
Beach	2.0	8.1	32.9	56.3	0.7
Open Plaza Square	2.0	13.6	39.0	44.1	1.4
Sports Field	2.7	4.7	22.7	66.8	3.1
Community Centre	2.7	5.1	28.1	55.3	8.8
Library	8.1	9.8	42.7	7.8	31.5
Other	8.1	9.8	42.7	7.8	81.4

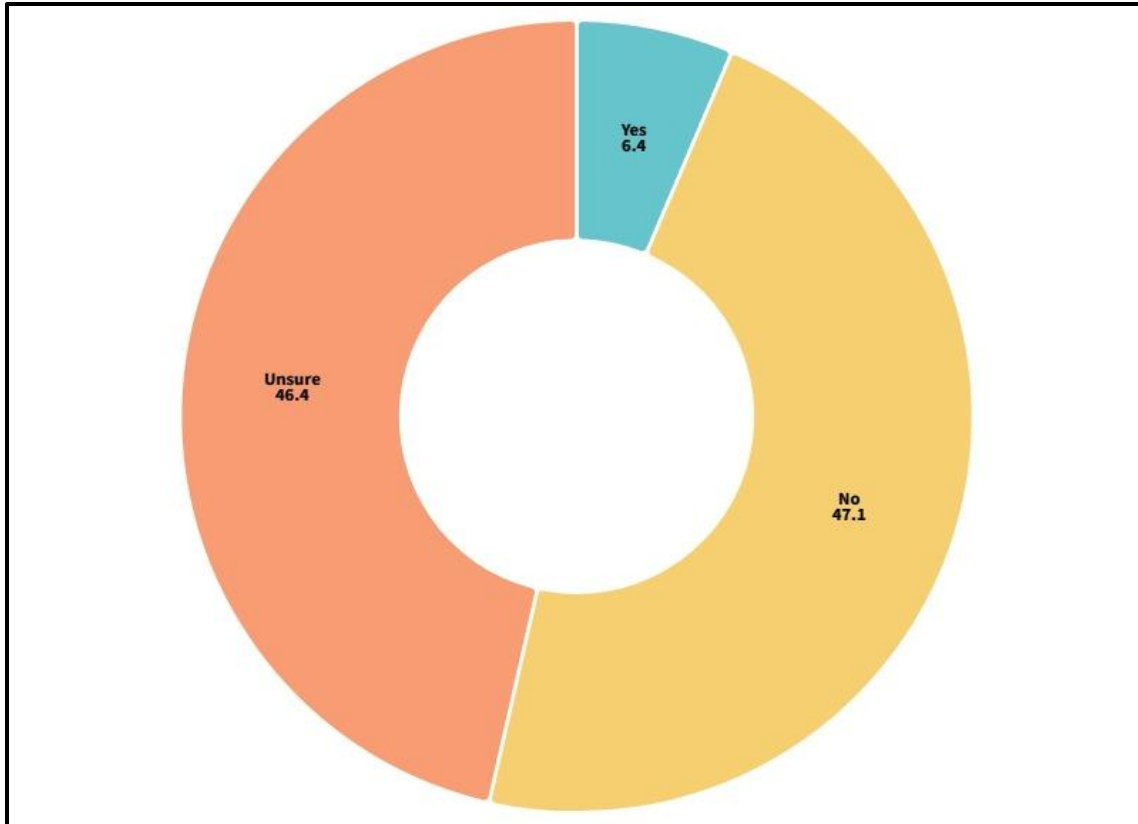
Author’s own based on Data Analysis, 2024

The data indicates that families predominantly frequent neighbourhood parks (51.5%), beach promenades (45.8%), and shopping malls (39.3%). Beaches (56.3%), sports fields (66.8%), open plazas/squares (44.1%), and community centres (55.3%) are primarily visited with friends, highlighting these spaces' social nature. Libraries exhibit varied patterns with high family visitation (42.7%), but also significant non-responses (31.5%), suggesting inconsistent engagement. Museums have notably low visitation, with the highest non-response rate (56.6%).

Respondents identified that public spaces like parks and shopping malls effectively cater to family-oriented activities, while beaches and sports fields facilitate social interaction among friends. This reflects diverse spatial dynamics and social uses, as evidenced by the differing visitation patterns. However, significant non-response rates for libraries and museums suggest limited public engagement or awareness, warranting attention for improved inclusivity.

6.4.3 Municipal public space strategy

According to UN-Habitat (2019), comprehensive city-wide strategies enhance the protection and establishment of high-quality public spaces. Figure 6-4 illustrates awareness among respondents regarding their municipality's public space strategy.



Pie Chart 6-4: The percentage response regarding a public space strategy

Source: Author's own based on Data Analysis, 2024

Of the 295 respondents, only 6.4% confirmed the existence of such a strategy, while nearly half (47.1%) indicated its absence, and 46.4% were uncertain. This highlights a notable communication gap between municipal initiatives and public perception, potentially undermining community engagement and strategic effectiveness.

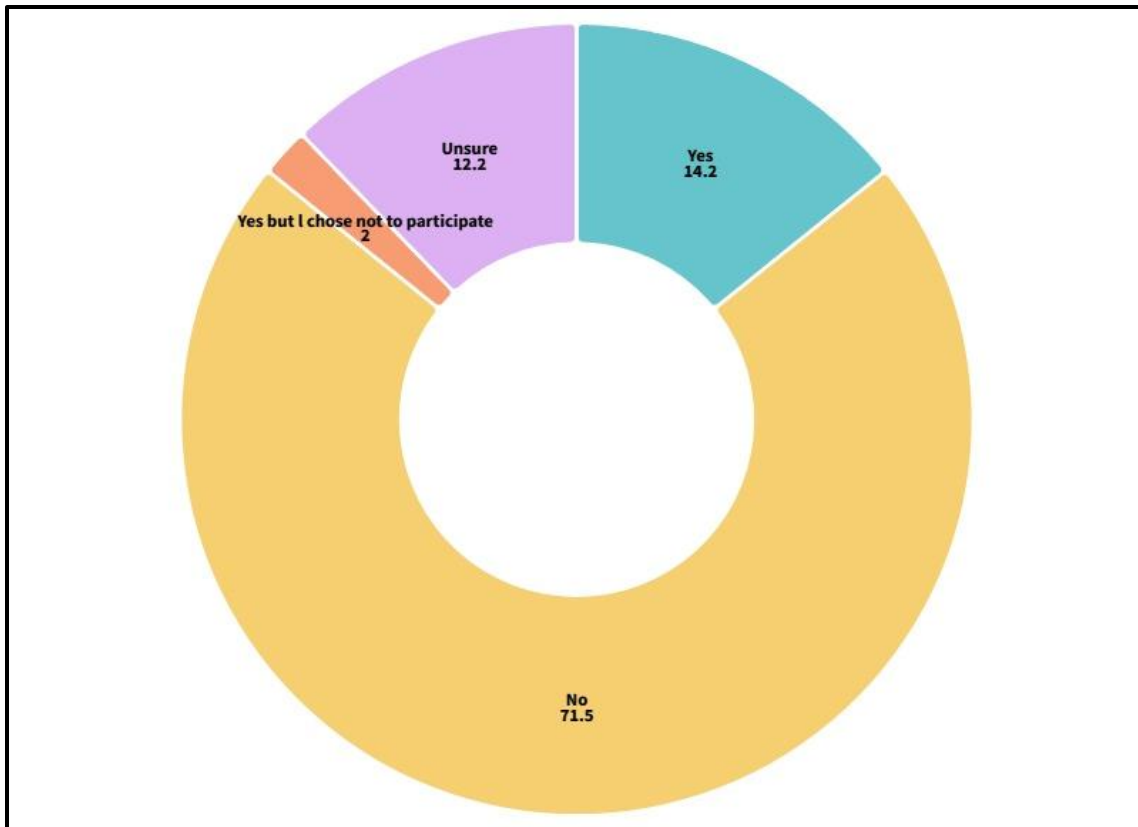
Qualitative insights align with these findings. Respondents from Durban noted a lack of cohesive public space strategy, compounded by ambiguity reported in cities like Cape Town and Nairobi regarding strategy visibility and accessibility (Respondent Two). Respondent One advocated a flexible, integrated approach that incorporates leadership, community engagement, and capacity-building, contrasting sharply with critiques by Respondents Three and Five, who identified bureaucratic fragmentation and overly formal structures as barriers to effective public engagement and policy implementation.

Respondent Five emphasised sectoral fragmentation in Nairobi, arguing for a holistic integration of public space with broader urban development initiatives. Conversely, Respondent One recommended balancing grassroots participation with strategic governance frameworks. This tension reflects the need to reconcile flexible, inclusive planning approaches with the demands of formal policy structures.

Overall, the analysis underscores the necessity for clearer communication and strategic alignment to bridge gaps between municipal intentions and public perceptions of public space planning.

6.4.4 Public space and community engagement

Jiménez-Caldera et al. (2024) assert that public participation is essential for developing inclusive urban spaces. However, findings Figure 6-5 reveal a significant gap, with 71.5% of respondents reporting no municipal engagement in public space planning. Only 14.2% confirmed active engagement, while 12.2% were uncertain, indicating poor visibility or communication of municipal strategies.



Pie Chart 6-5: The percentage of respondents engaged in public space

Source: Author's own based on Data Analysis, 2024

Qualitative analysis emphasises the necessity of inclusive and participatory engagement. Respondents One, Six, and Seven highlight that meaningful community involvement aligns spaces closely with user needs. Respondent One references New York's successful participatory approaches, such as the "place game," emphasising continuous dialogue. Similarly, Respondents Six and Seven noted effective public involvement in Durban's Metropolitan Open Space System (DMOSS).

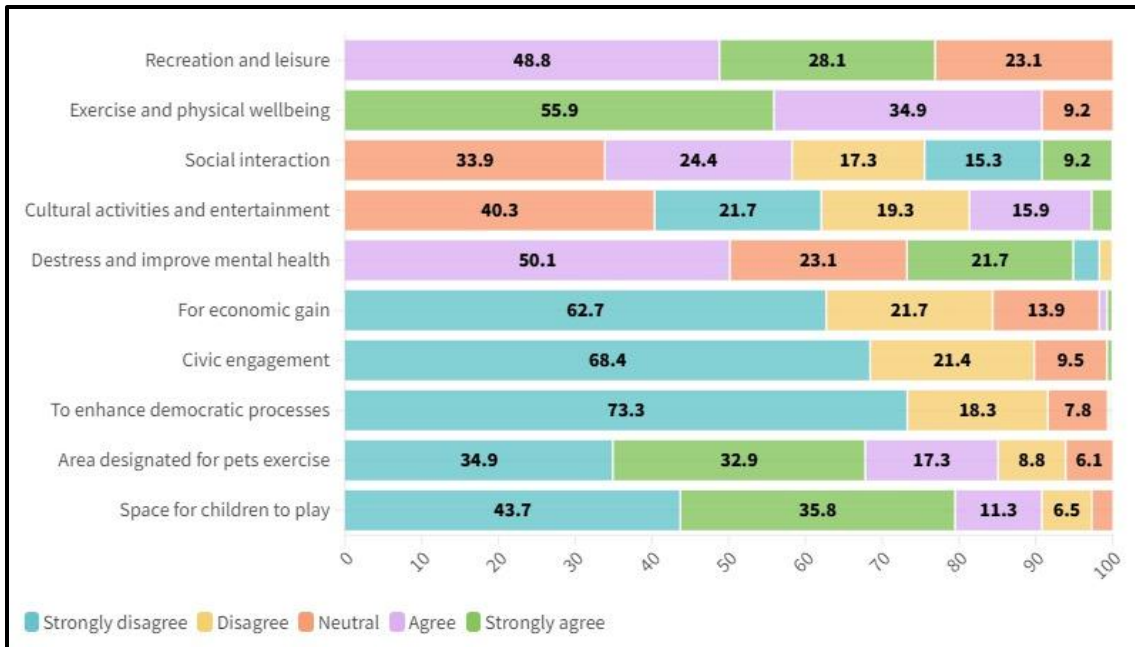
However, respondents differed regarding effective engagement methods. Respondent Three criticises traditional public consultations as superficial, suggesting they fail to capture authentic community input. This contrasts with Respondent Five, who advocates more creative and flexible engagement beyond formal bureaucratic structures. Respondent Eight reinforces the need for adaptable, context-sensitive strategies, acknowledging diverse community dynamics.

Respondents Four and Six emphasise integrating universal accessibility, placemaking, and multi-stakeholder collaboration early in the planning process, balancing technical expertise with community knowledge.

This analysis underscores the critical need for municipalities to adopt flexible, context-specific, and inclusive approaches to community engagement, ensuring public spaces reflect diverse local needs and foster genuine community ownership.

6.4.5 Public space consumption patterns

Graph 6-3 highlights respondents' reasons for public space utilisation. The most prominent factors include exercise and physical well-being (90.8% agreement), recreation and leisure (76.9%), and stress reduction or mental health improvement (71.9%). Moderate importance was placed on social interaction, with mixed responses (33.6% agreement, 32.6% disagreement), indicating its relevance but not predominance. Conversely, respondents largely disagreed with using public spaces for cultural activities (41% disagreement), economic gain (84.4%), civic engagement (89.9%), and democratic processes (91.5%). The perceived importance of spaces for pets (34.6% agreement; 43.7% disagreement) and children's play areas (47.1% agreement; 50.2% disagreement) revealed notable polarisation.



Graph 6-3: The reasons for using public spaces in percentage

Source: Author’s own based on Data Analysis, 2024

Based on the specialist interviews, it was noted that while most respondents agree that public spaces play a role in promoting social cohesion, Respondent Five highlights public spaces as platforms for political expression and social cohesion, noting that restrictions on gatherings can undermine inclusivity. This perspective identifies a tension in managing public spaces, balancing their role as orderly environments with their potential as venues for free expression and political discourse.

6.4.6 A reflective analysis of Perceived space

Analysis of public space utilisation in La Lucia reveals distinct patterns in community engagement and space functionality. Highly frequented spaces such as shopping malls (54.2% weekly visits), beach promenades (27.5% daily), and sports fields (43.9% weekly) indicate their integral role in daily and weekly routines, highlighting their perceived importance for social interaction and physical well-being. Conversely, the limited use of museums (56.3% non-visitation) and libraries (33.7% non-visitation) suggests inadequate alignment between design intentions and residents' daily spatial practices.

Environmental constraints, notably poor water quality at local beaches, significantly restrict public usage, indicating a divergence between planning intentions and practical usability. This reflects broader socio-environmental challenges, highlighting critical gaps in maintaining public spaces as seen similarly in Mexico City's Plan Verde, where certain public spaces became neglected due to insufficient consideration of accessibility and environmental factors (Moreno, 2015).

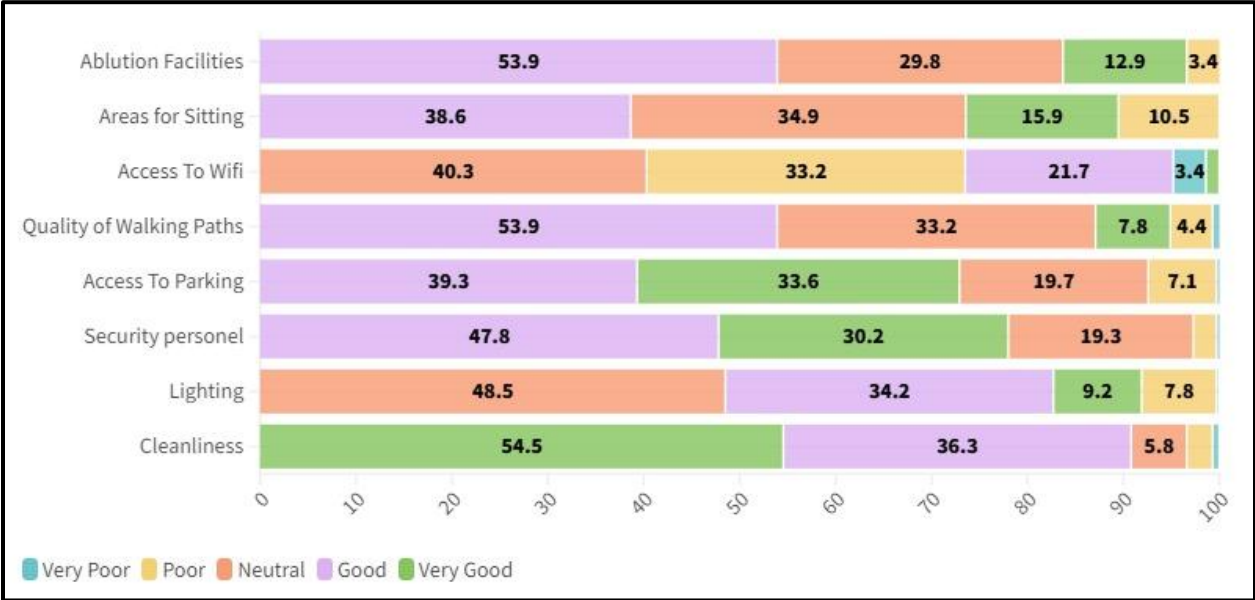
Regarding civic and cultural functions, La Lucia exhibits limited engagement (89.9% disagreement for civic use), demonstrating that public spaces predominantly serve recreation, health, and leisure purposes rather than democratic or cultural engagement. This trend aligns partially with Christchurch's strategy, which successfully integrates cultural and community-focused amenities, enhancing civic identity and social cohesion (Christchurch City Council, 2010). However, La Lucia's gap underscores a need to broaden spatial functions to include diverse civic and cultural activities. Similar to Cape Town's Urban Design Policy, La Lucia's frequented spaces reflect successful planning for accessibility, recreation, and social interaction, meeting immediate community needs. Unlike Christchurch, where cultural identity and civic engagement are explicitly embedded into public space planning, La Lucia's spaces underperform in facilitating democratic and cultural interactions, highlighting the necessity for inclusive planning approaches.

Overall, the analysis highlights the necessity for La Lucia to address both environmental and functional challenges in public space planning to ensure inclusivity, sustainability, and broader civic engagement.

6.5 Lived space

The quality of facilities significantly influences public space use and user satisfaction, as noted by Ramlee et al. (2016). Figure 6-14 illustrates respondents' perceptions of various facility features.

6.5.1 The quality of public space



Graph 6-4: The Quality of the Public Space in Percentages

Source: Author’s own based on Data Analysis, 2024

Respondents' ratings of public space facilities highlight specific strengths and areas requiring improvement. Cleanliness received the highest ratings, with 54.6% rating it as "Very Good" and 36.3% as "Good." Security personnel were similarly rated positively ("Good": 47.8%; "Very Good": 30.2%), underscoring safety as a perceived strength. Access to parking was also well-regarded ("Good": 39.3%; "Very Good": 33.6%), reflecting adequate infrastructure. Ablution facilities ("Good": 53.9%; "Neutral": 29.8%), quality of walking paths ("Good": 53.9%; "Neutral": 33.2%), and seating areas ("Good": 38.6%; "Neutral": 34.9%) were generally viewed favourably, though with notable neutrality, indicating room for enhancement. Lighting received mixed ratings, reflecting variability in user perceptions. However, access to Wi-Fi emerged as a clear weakness, with 33.2% rating it as "Poor" and 40.3% as "Neutral," highlighting this as a critical area for future intervention.

Qualitative Respondents' priorities for selecting public spaces further inform urban planning strategies. Safety and security emerged as the most critical factor across respondents, underscoring its foundational role in space utilisation. Respondents Two, Four, and Five prioritised cleanliness highly, reflecting its impact on overall comfort and

appeal. Transportation access held moderate importance, with Respondents One, Two, and Three placing it higher than others, indicating varying reliance on transportation modes.

Factor	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7	Respondent 8
Safety and security	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Cleanliness of spaces	6.00	1.00	5.00	2.00	2.00	3.00	3.00	2.00
Ease of access by transport	4.00	3.00	3.00	6.00	5.00	6.00	4.00	5.00
Access to public ablutions	2.00	5.00	4.00	7.00	3.00	5.00	6.00	4.00
Level of inclusivity to all groups	3.00	4.00	7.00	4.00	7.00	4.00	2.00	3.00
Access to parking	7.00	7.00	6.00	5.00	6.00	7.00	7.00	7.00
Aesthetic appeal	6.00	6.00	2.00	3.00	4.00	2.00	5.00	6.00

Figure 6-1: Determining factors in choosing public spaces for qualitative study respondents

Source: Author’s own based on Data Analysis, 2024

Amenities, such as seating and restrooms, revealed diverse preferences; Respondents One and Five emphasised these facilities, while Respondents Four and Seven assigned lower importance. Inclusivity similarly received mixed prioritisation, with Respondents One and Seven rating it highly, suggesting demographic or situational influences. In contrast, parking access was consistently least important among respondents, aligning with sustainable urban planning trends emphasising reduced vehicle dependency. Aesthetic appeal received moderate priority, suggesting it enhances user experience but is secondary to functional attributes like safety and cleanliness.

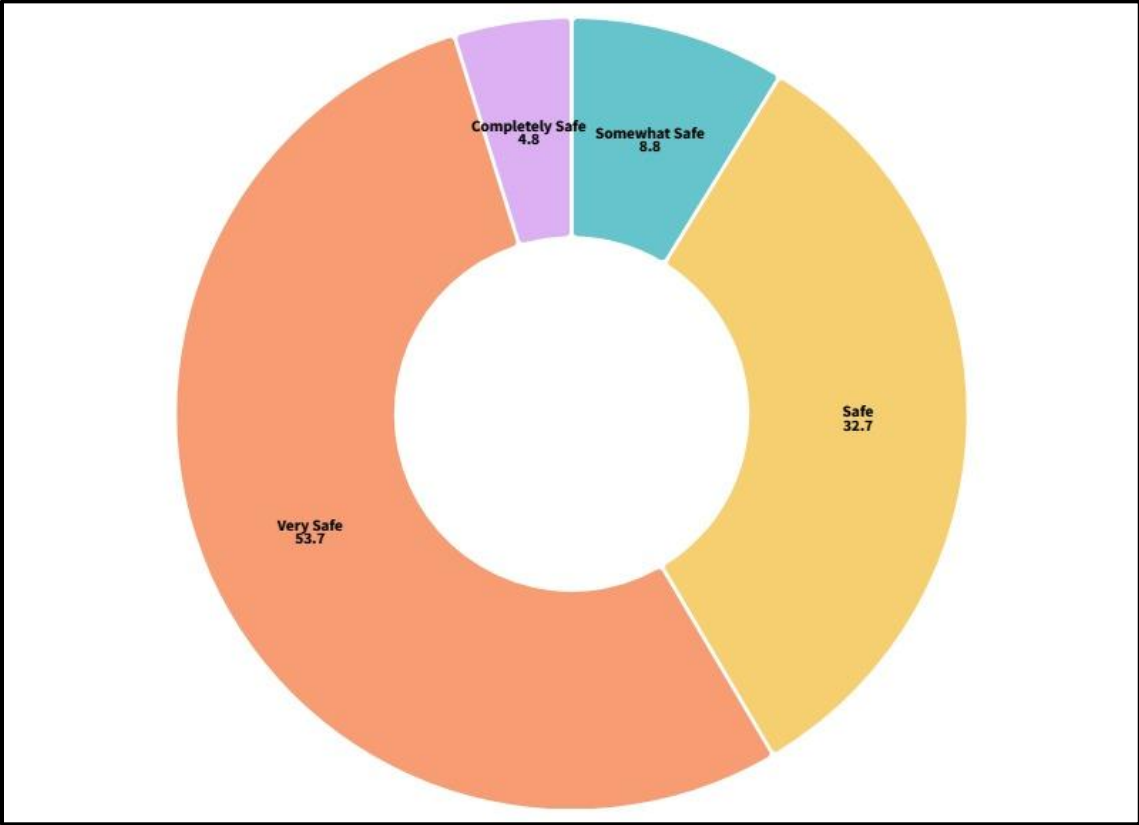
The findings converge with the public space strategies of Cape Town and Christchurch, which emphasise safety, cleanliness, and accessibility to enhance public utilisation.

However, there is divergence regarding amenities such as Wi-Fi and inclusivity, areas prioritised by Mexico City's Plan Verde through targeted interventions (Moreno, 2015). Thus, La Lucia's planning could benefit from adopting strategies evident in these case studies, particularly in addressing technological infrastructure and inclusivity to ensure broader community engagement and satisfaction.

6.5.2 Safety in public spaces

Pie Chart 6-6 provides an overview of how safe respondents feel in public spaces. Safety is a crucial factor influencing public space usage. Analysis indicates that most respondents perceive public spaces positively concerning safety, with 53.7% feeling "Very Safe," 32.7% feeling "Safe," and 4.8% feeling "Completely Safe."

Pie Chart 6-6: The respondent's feeling of safety in percentages

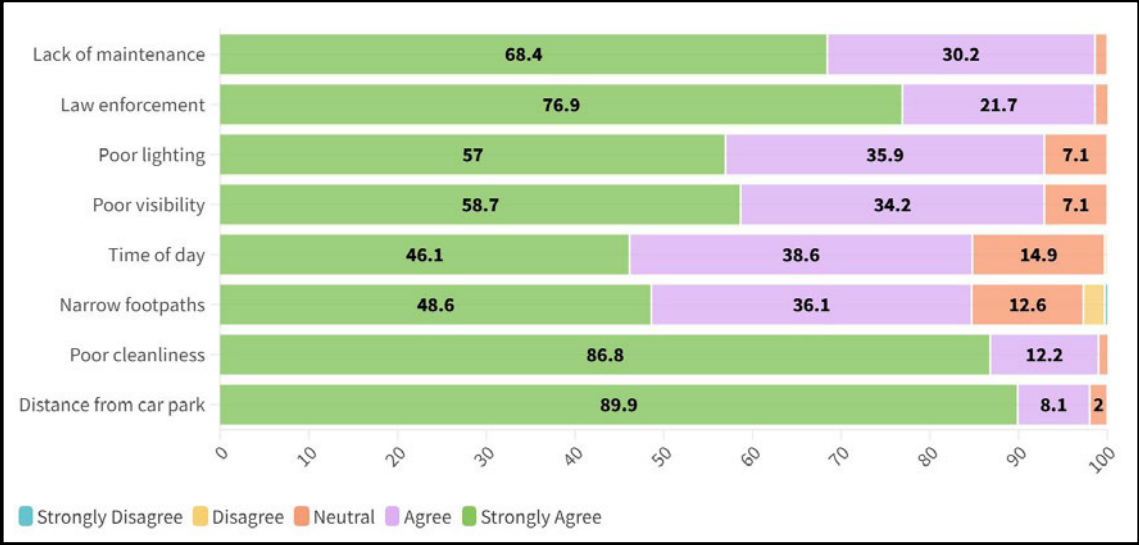


Source: Author's own based on Data Analysis, 2024

However, 8.8% reported feeling only "Somewhat Safe," highlighting potential areas for improvement. Given the importance of perceived safety in determining public space visitation, enhancing safety measures—such as increasing visible security presence, improving lighting, and maintaining clean environments—may further elevate overall perceptions of safety, particularly addressing concerns of those who feel only moderately safe.

6.5.3 Factors impacting safety in public spaces

To assess which factors, impact the perception of safety, respondents provide their inputs on the following factors as indicated in Graph 6-6. Respondents identified several key factors significantly impacting their perception of safety in public spaces. Poor cleanliness (99%), the presence of law enforcement (98.6%), and distance from parking areas (97.9%) emerged as critical concerns (Author’s own based on Data Analysis, 2024). Additionally, respondents widely agreed that lack of maintenance (98.7%), poor lighting (92.8%), and poor visibility (92.8%) notably influenced perceptions of safety. Factors such as narrow footpaths and time of day also held importance, though with slightly greater variability (neutral responses at 12.6% and 14.9%, respectively).



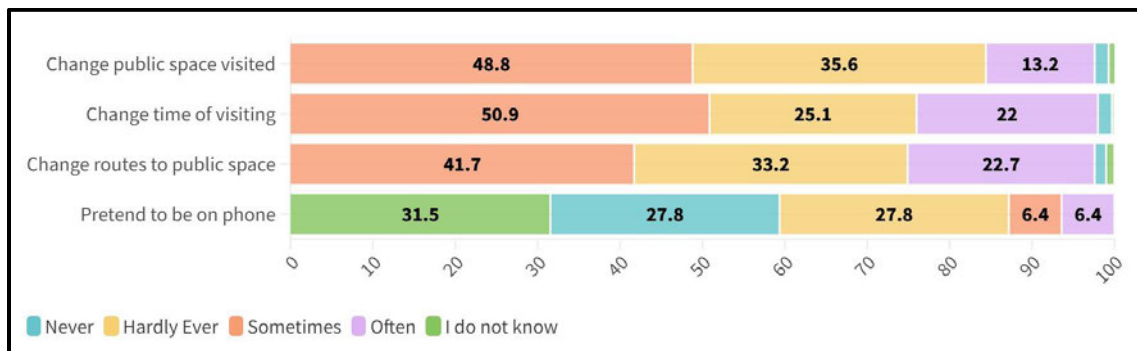
Graph 6-5: Factors impacting safety in public spaces in percentages

Source: Author’s own based on Data Analysis, 2024

Qualitative respondents uniformly emphasised safety as their highest priority when selecting public spaces, consistently ranking it first or second. This underscores the fundamental need for perceived security as a prerequisite for public space utilisation.

6.5.4 Coping mechanisms for addressing safety in public spaces

Svensdotter and Guaralda (2018) argue that perceived dangers in public spaces foster environmental awareness and encourage proactive safety behaviours. Respondents demonstrated these proactive measures, with most (72.8%) frequently adjusting the time of their visits, 64.4% altering their routes, and 62% choosing different public spaces altogether due to safety concerns as illustrated in Graph 6-6.



Graph 6-6: Adjusting Behaviour in Public Spaces

Source: Author’s own based on Data Analysis, 2024

Conversely, tactics like pretending to be on the phone were seldom utilised, with 55.6% rarely or never employing this strategy and 31.5% uncertain of its effectiveness. These behavioural adjustments indicate persistent safety concerns, significantly influencing how users interact with public spaces. Such adaptations highlight the need for urban planning strategies that address perceived safety, such as improved lighting, route accessibility, and visible security measures, to enhance user confidence, foster inclusivity, and promote social well-being, inclusive, and welcoming environments.

6.5.5 A reflective analysis of Lived spaces

The analysis of La Lucia’s public spaces, interpreted through Lefebvre’s ‘Spatial Triad’ and Harvey’s ‘Spatial Matrix’, reveals insights into how physical, social, and temporal dimensions shape space usage. Positively rated physical features, such as cleanliness (91%), security presence (78%), and access to parking (72.9%), reflect effective maintenance and management. However, certain infrastructure gaps undermine the quality of perceived space, notably the absence of formal parking zones—illustrated in Plate 6-2 in Old Bush Road which presents safety hazards due to uncontrolled vehicle access. This contrasts sharply with best practices from Christchurch’s structured zoning and dedicated planning processes, which emphasise clear spatial delineation and pedestrian safety.



Plate 6-2: A photograph of the Old Bush Road car park

Source: Author’s own , 2024

Mixed user ratings for seating (38.6% Good, 34.9% Neutral), lighting, and particularly poor Wi-Fi provision (33.2% Poor) indicate gaps in the 'conceived space', where planning has not fully incorporated contemporary user needs, especially regarding digital inclusivity. While La Lucia's management of cleanliness and security aligns with Cape Town's proactive stance on safety and public realm quality, the lack of digital infrastructure contrasts sharply with Mexico City's strategic use of contemporary urban amenities, including connectivity in revitalised public spaces (Moreno, 2015).

Regarding Harvey's concept of 'relative space', respondents' altered behaviours—such as changing visitation times (72.8%) and routes (64.4%) due to safety perceptions—highlight temporal and contextual variability in how space is experienced. Poor lighting exacerbates safety concerns during evenings, limiting accessibility and usability, diverging from Christchurch's comprehensive focus on accessible spaces at all times.

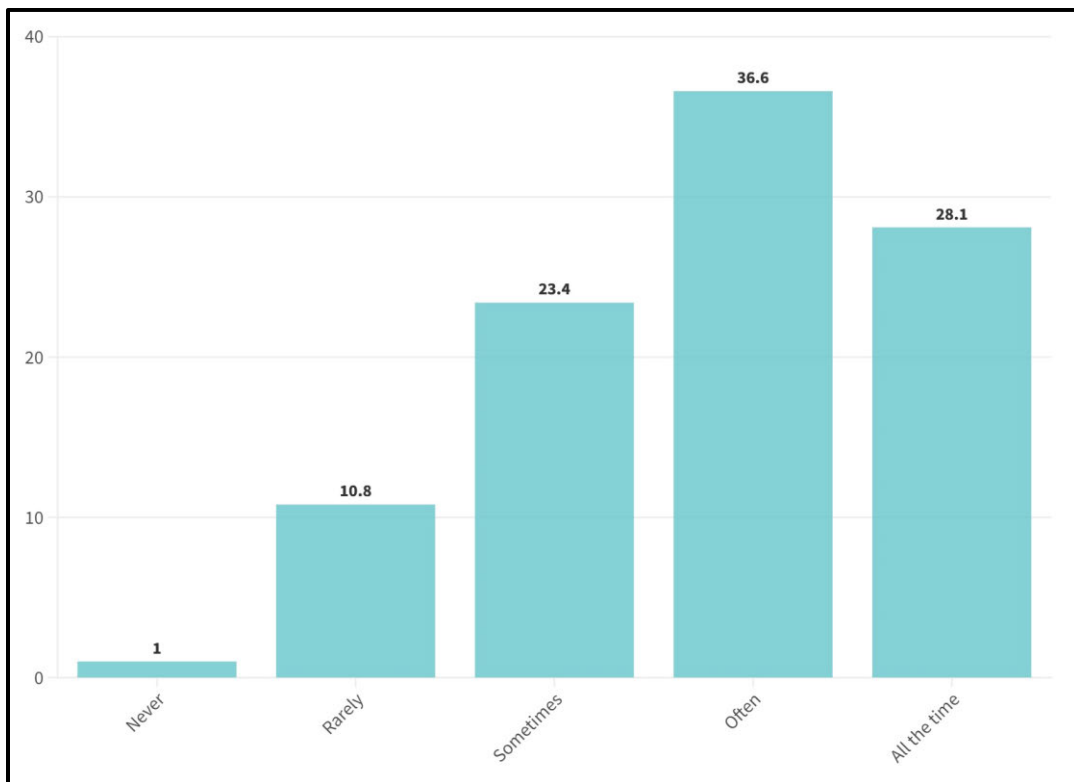
The relational dimension is also evident, as nearly all respondents (99%) link cleanliness to safety perceptions, reflecting broader socio-environmental dynamics shaping public space usage. This aligns with the community-centric approaches in Cape Town, where safety, inclusivity, and perceived comfort are central urban planning considerations. However, La Lucia's noticeable behavioural adaptations due to safety concerns reveal a relational gap not prominently observed in Mexico City's successful integration of spaces promoting continuous social interaction (Moreno, 2015).

While La Lucia effectively manages certain elements of physical infrastructure and security, significant gaps remain in digital infrastructure, defined parking areas, and lighting, influencing users' perceived and lived experiences of public space. Aligning more closely with comprehensive strategies observed in Christchurch, Cape Town, and Mexico City—emphasising integrated planning, pedestrian prioritisation, digital inclusivity, and temporal consistency—could address these shortcomings, enhancing overall user experience and inclusivity.

6.6 Conceived space

6.6.1 The frequency of meeting a known/familiar person in a public space

Bar Chart 6-5 illustrates respondents' frequency of encountering familiar individuals in public spaces, serving as an indirect measure of community interaction and attachment. A significant majority of respondents frequently (36.6%) or always (28.1%) encounter known individuals, indicating strong social dynamics and habitual use of these spaces. This finding aligns with Oldenburg's (1999) concept of "third places," suggesting that these public areas successfully facilitate informal community interactions outside of home and work.



Bar Chart 6-5: The frequency of meeting someone you know in public spaces indicated in percentages

Source: Author's own based on Data Analysis, 2024

Conversely, a minority of respondents rarely (10.8%) or never (1%) recognise familiar faces, potentially indicating social isolation or barriers to space utilisation. This highlights

the need for inclusivity in urban design to ensure accessibility and attractiveness to all community members.

Consistent social encounters in public spaces reflect robust social capital, as conceptualised by Putnam (2000), underscoring their role in enhancing community resilience and cohesion. The findings also support Whyte's (1980) assertion that effective urban planning promotes spontaneous social interactions, enhancing social health and safety through active community presence, as advocated by Jacobs (1961). A well-utilised public space with frequent social interactions will likely be safer, more vibrant, and more inviting, encouraging further use and interaction.

6.6.2 Representation of arts and culture in public spaces

Public spaces play a vital role in urban life, providing platforms for social interaction, cultural expression, and community identity (Carr et al., 1992; Gehl, 2011). The New Urban Agenda (United Nations, 2016) recognises these spaces as essential for fostering inclusivity, cultural diversity, and social cohesion. However, data from this study, highlighted in Table 6-5, reveals a significant gap in cultural representation within eThekweni's public spaces. Nearly half of respondents (48.8%) feel their culture is rarely or never reflected through public art, sculptures, and murals, while 49.5% report a similar lack of representation in community park activities. Although signage (37%) and billboards (30.5%) offer slightly better cultural representation, a notable proportion of respondents still feel underrepresented.

This perceived lack of cultural inclusivity may contribute to feelings of marginalisation and diminished community belonging, undermining social cohesion and civic participation (Oldenburg, 1999; Putnam, 2000). Public art and community events are powerful mechanisms for celebrating cultural diversity and promoting intercultural dialogue (Gehl, 2011). Thus, the limited representation identified here highlights missed opportunities for fostering cultural inclusivity.

Table 6-5: The importance of representing culture in public space

	NEVER REPRESENTED	RARELY REPRESENTED	SOMETIMES REPRESENTED	OFTEN REPRESENTED	ALWAYS REPRESENTED
Public Art, Sculptures and murals	9.8	39.0	31.9	19.0	0.3
Billboards	3.4	34.6	31.5	28.8	1.7
Signage	4.1	31.5	27.5	35.3	1.7
Community Activities allowed in the park	15.9	33.6	27.5	22.7	0.3

Source: Author’s own based on Data Analysis, 2024

Comparatively, Cape Town and Christchurch’s emphasis on inclusive urban design and cultural programming provides an effective model, highlighting eThekweni's divergence regarding cultural expression. Mexico City's success with initiatives such as Plan Verde, which integrated cultural and community identity into urban design, similarly underlines the potential benefits of deliberate cultural representation.

To enhance inclusivity, urban policymakers in eThekweni should prioritise culturally diverse public art, inclusive signage, and community activities reflective of local cultural identities. Such measures are essential for building inclusive, cohesive, and culturally vibrant public spaces, aligning with Jacobs’ (1961) vision of urban environments that resonate meaningfully with all residents.

6.6.3 Inclusiveness of public spaces

Landman (2020) emphasises that inclusive public spaces are essential for fostering physical and social inclusion among diverse community groups. Table 6-6 reflects

respondents' perceptions of inclusivity in public spaces across factors such as gender, race, age, and income.

Table 6-6: Perceptions regarding the inclusiveness of public space in percentages

INCLUSIVITY FACTORS	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
Gender	0.0	4.4	23.8	51.4	20.4
Race Groups	0.0	6.5	24.1	48.3	21.1
Age Groups	0.0	9.2	33.0	34.7	23.1
Income Groups	7.8	37.4	30.6	21.1	3.1

Source: Author's own based on Data Analysis, 2024

The majority of respondents perceive public spaces as inclusive regarding gender (71.8%) and race (69.4%), although a considerable portion (approximately 30%) remain neutral or disagree, indicating room for further improvement. Age inclusivity shows more mixed perceptions, with only 57.8% agreeing or strongly agreeing, highlighting the necessity for age-sensitive design, particularly to accommodate younger and older demographics. Income inclusivity is perceived least positively, with only 24.2% agreeing or strongly agreeing and a significant 75.8% remaining neutral or disagreeing. This underscores a critical issue related to urban inequality, where public spaces may unintentionally cater primarily to higher-income groups (Harvey, 2004).

Respondents from the qualitative study align broadly with quantitative findings, emphasising the multidimensional nature of inclusivity. Respondents One, Two, Six, and Eight highlight physical accessibility as essential, particularly for vulnerable populations such as people with disabilities and the elderly. However, respondents diverge regarding inclusivity's scope: Respondent Three emphasises economic inclusivity, specifically in addressing historical inequities in South Africa, whereas Respondents Four and Six prioritise social inclusivity, underscoring the importance of belonging and representation for marginalised groups.

Public spaces are consistently regarded by respondents (One, Four, Five, Six, and Seven) as critical arenas for social inclusion and community building. Accessibility emerges as central, with Respondent Eight asserting that inclusive cities depend fundamentally on universally accessible public spaces. Nevertheless, tensions exist concerning privately-owned public spaces, with Respondents Four, Five, and Eight expressing concerns about how privatisation can limit inclusivity through access restrictions.

Respondent One identifies gentrification as a significant challenge, suggesting that enhanced public spaces can inadvertently drive economic exclusion. Similarly, Respondent Three raises issues related to inadequate infrastructure and public transportation, highlighting logistical barriers to inclusivity, particularly for rural or economically disadvantaged groups.

Overall, findings indicate significant achievements in gender and racial inclusiveness but reveal critical gaps regarding age and socioeconomic inclusivity. These insights reinforce Lefebvre's (1991) "right to the city," advocating for urban policies that provide equitable access, participatory governance, and inclusive design of public spaces. To achieve genuinely inclusive urban environments, urban planning must address both procedural inclusivity—ensuring diverse stakeholder engagement—and substantive inclusivity—ensuring equitable outcomes for all community members.

6.6.4 A reflective analysis of Conceived space

The analysis of public spaces in eThekweni indicates their effectiveness as vital social hubs, with 64.7% of respondents frequently encountering familiar faces, underscoring the role these spaces play in community building (Oldenburg, 1999). This frequent social interaction aligns with Whyte's (1980) perspective on creating environments conducive to spontaneous encounters, highlighting successful spatial design and accessibility.

However, significant gaps remain in cultural representation: nearly half (48.8%) of respondents feel their culture is inadequately represented through public art and

community activities. This gap suggests misalignment between the conceived space of planners and residents' lived experiences (Lefebvre, 1991). Furthermore, respondents identified disparities in inclusivity—gender (71.8%) and race (69.4%) received positive ratings, whereas age (57.8%) and particularly income (24.2%) inclusivity were perceived as significantly lower. This disparity highlights deeper power dynamics, reflecting Soja's (2010) concept of spatial injustice, where public spaces disproportionately favour certain demographics, especially higher-income groups.

Comparative reflections from the case studies of Cape Town, Mexico City, and Christchurch reveal convergence and divergence on these issues. Similar to eThekweni, Cape Town's public spaces have effectively fostered community interaction but face critiques regarding socioeconomic exclusion and cultural representation. In contrast, Mexico City has proactively utilised public art and cultural programming to enhance inclusivity, successfully bridging cultural divides, although challenges related to socioeconomic inequality persist. Christchurch demonstrates effective inclusive urban planning post-earthquake, prioritising diverse community representation through deliberate public engagement strategies. This divergence illustrates varied municipal approaches to addressing inclusivity, suggesting opportunities for eThekweni to integrate best practices, particularly around culturally reflective programming and targeted socioeconomic accessibility.

Public spaces in eThekweni effectively serve as sites of social engagement but require strategic interventions to improve cultural representation and inclusivity, particularly concerning age and income. Learning from comparative case studies could inform policy adjustments aimed at ensuring these spaces foster a genuinely inclusive and cohesive community environment.

6.7 Relative space

6.7.1 Accessing public spaces

Moreno's (2024) "15-Minute City" concept emphasises urban environments designed for proximity and ease of access, aligning closely with respondents' transportation preferences revealed in Table 6-7.

Table 6-7: Accessing public space by mode of choice

MODE OF ACCESS	0-5 MINUTES	6-10 MINUTES	11-15 MINUTES	16-20 MINUTES	> 20 MINUTES	NOT A MODE OF CHOICE
Walking	8.1	34.2	46.4	11.2	0.0	0.0
Cycling	3.1	20.0	48.1	16.3	0.3	12.2
Private Transport	0.3	1.0	12.5	45.1	41.0	0.0
Public Transport	0.7	2.4	6.8	12.9	38.6	38.6

Source: Author's own based on Data Analysis, 2024

The data highlights a clear preference for active transport modes—walking and cycling—for shorter distances, with 80.6% of respondents walking 6–15 minutes and 84.4% cycling for trips up to 20 minutes. For longer journeys (over 15 minutes), private (86.1%) and public transport (51.5%) are preferred, although public transport use is constrained by significant non-preference (38.6%), suggesting service limitations. Despite high preferences for walking, infrastructure deficiencies limit its practicality, exemplified by inadequate pedestrian facilities on key routes like Moreland Drive (Plate 6-3). This infrastructural gap disproportionately affects residents without access to private vehicles, underlining the necessity for improved pedestrian networks (Gehl, 2011). Respondents (One, Four) indicated willingness to walk longer distances if infrastructure supported comfort and safety, highlighting potential areas for intervention. Similarly, cycling infrastructure enhancements could extend its appeal for moderate-distance trips (Respondents One, Two, Six, Seven, Eight).

Private transport remains dominant for distances beyond 15 minutes, reflecting the reliance on cars common in car-dependent cities (Cervero, 1998). Public transport's mixed usage suggests barriers, including reliability and convenience, limiting broader adoption (Respondents One, Three, Four, Six, Eight).



Plate 6-3: A photograph Moreland Drive

Source: Author's own, (2024)

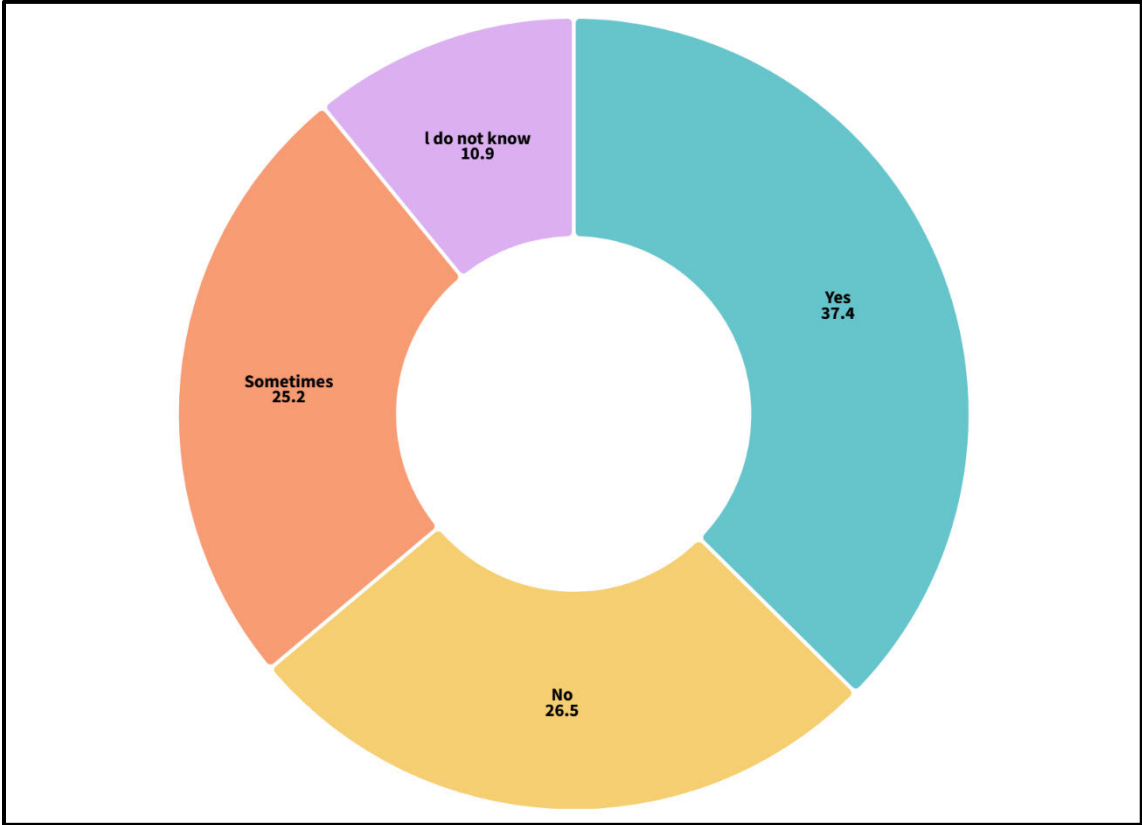
Reflecting on comparative case studies, Cape Town similarly exhibits a strong preference for active transportation modes yet faces infrastructural challenges akin to eThekweni. Mexico City has successfully leveraged comprehensive cycling infrastructure and improved public transport to promote modal shifts, diverging positively by supporting sustainable travel over longer distances. Christchurch offers another point of divergence, effectively integrating multimodal networks through post-earthquake redevelopment focused explicitly on connectivity and accessibility.

Enhancing pedestrian and cycling infrastructure for short trips and improving public transport for longer journeys are critical to achieving sustainable urban mobility in eThekweni. Adopting integrated transport planning strategies, as evidenced in Mexico City

and Christchurch, could substantially enhance accessibility, equity, and sustainability, aligning urban development with residents' mobility preferences and broader urban sustainability goals.

6.7.2 Spatial distribution trend

Respondents were asked to identify any noticeable spatial trends regarding the distribution of public spaces, assessing awareness of apartheid-era spatial inequalities still influencing urban form is illustrated in Pie Chart 6-7 below.



Pie Chart 6-7: The respondent's perceptions of spatial patterns and trends regarding the spatial distribution of public spaces in percentages

Source: Author's own based on Data Analysis, 2024

A significant proportion (37.4%) indicated observing clear spatial patterns, suggesting adequate public space distribution in certain neighbourhoods. Conversely, a substantial

minority (26.5%) perceived distribution as inadequate, highlighting possible underserved areas. Approximately 25.2% provided conditional responses, acknowledging varied distribution across different neighbourhoods, while a smaller segment (10.9%) remained uncertain. These findings reflect ongoing spatial disparities rooted in historical planning practices, highlighting the necessity for targeted interventions to ensure equitable access across all neighbourhoods.

6.7.3 Reflective analysis of Relative space

An integrated analysis of qualitative and quantitative findings underscores the critical role of urban infrastructure in facilitating accessible and inclusive public spaces within eThekweni. A significant majority of respondents prefer walking (80.6% for journeys between 6–15 minutes) and cycling (84.4% up to 20 minutes) as primary transport modes for short to moderate distances. This aligns with urban design principles promoting walkability and bike-ability, as advocated by Gehl (2011), reflecting a conscious effort in designing pedestrian-friendly spaces. However, infrastructure inadequacies, such as poorly maintained sidewalks identified on Moreland Drive, challenge practical pedestrian mobility, highlighting gaps between planners' intentions and residents' lived experiences.

The data further reveals an evident shift to motorised transport—private vehicles (86.1%) and public transport (51.5%)—for journeys exceeding 15 minutes, indicating spatial distribution limitations or perceived inadequacies in pedestrian and cycling infrastructure for longer trips. This reliance on private vehicles resonates with trends observed in car-dependent urban environments described by Cervero (1998), exacerbating spatial segregation and reducing equitable access to public spaces.

From Lefebvre's 'Spatial Triad' perspective, while urban spaces are physically conceived to encourage short-distance active mobility, the lived reality suggests limitations in longer-distance accessibility. Respondents noted uneven spatial distribution of public spaces, with 37.4% observing adequate distribution and 26.5% highlighting inadequacies, reflecting spatial disparities rooted in historical and socio-economic factors.

Harvey's concepts of absolute and relational space further illuminate these dynamics. The dominance of private transport indicates the influence of absolute space, wherein car-centric infrastructure dictates mobility choices. Concurrently, socio-economic factors shaping relational space emerge through uneven distribution and limited public transport uptake (38.6% non-usage), suggesting infrastructural or perceptual barriers preventing equitable access for lower-income residents.

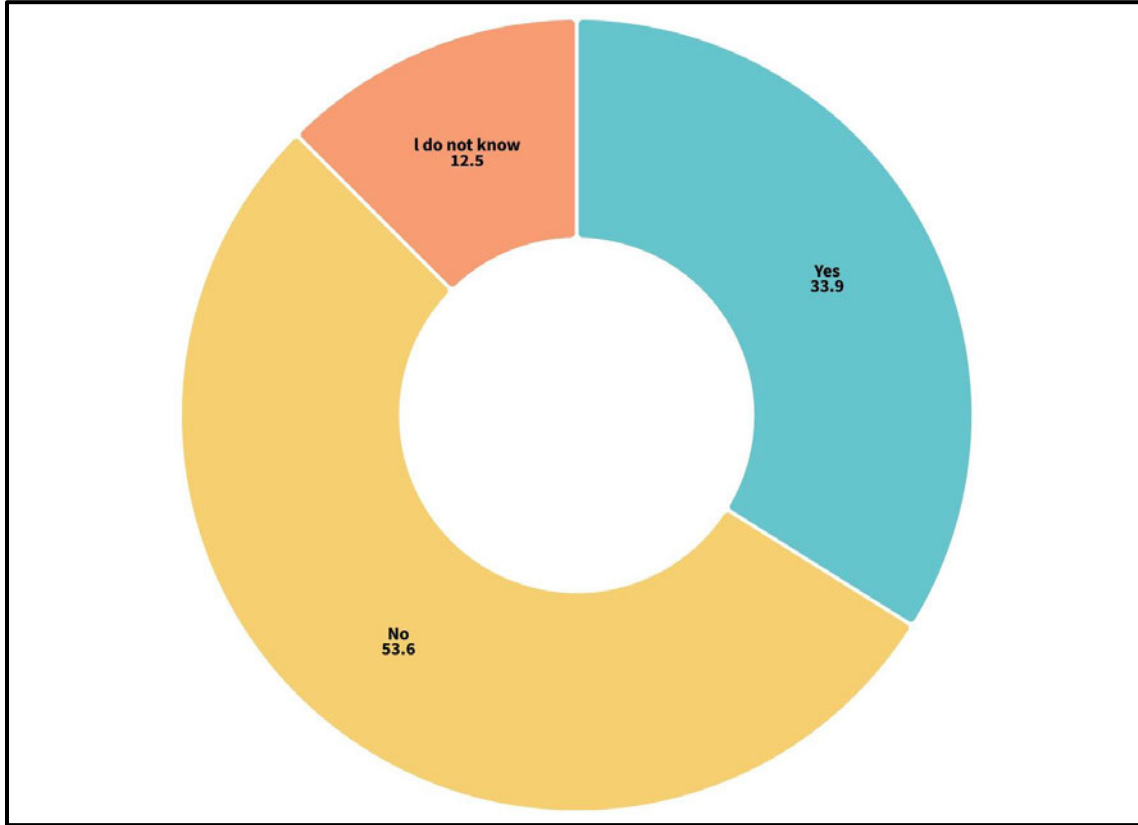
Comparatively, case studies from Cape Town, Mexico City, and Christchurch offer convergent and divergent reflections. Like eThekweni, Cape Town demonstrates persistent spatial inequalities rooted in historical urban planning, with uneven infrastructure impacting accessibility to public spaces, particularly disadvantaging lower-income neighbourhoods. In contrast, Mexico City's recent investments in multimodal transport networks illustrate a divergence, actively reducing car-dependency and enhancing equitable access through improved public transport. Christchurch provides another divergent example, integrating pedestrian and cycling infrastructure post-earthquake, emphasising the importance of infrastructure in reshaping mobility behaviours and fostering inclusivity.

Addressing eThekweni's challenges requires an integrated urban mobility strategy prioritising improved pedestrian, cycling, and public transportation infrastructure. This approach would align conceived spaces more closely with residents' lived experiences, reduce car-dependency, and address spatial inequalities, fostering more accessible, inclusive, and sustainable urban environments.

6.8 Relational space

6.8.1 *Symbolic and cultural significance*

Respondents were asked if accessing public spaces held cultural or symbolic significance, reflecting deeper social meanings beyond their functional use. Pie Chart 6.8 illustrates the responses regarding any cultural or symbolic significance held by users of public spaces.



Pie Chart 6-8: The symbolic or cultural significance of public spaces in percentages

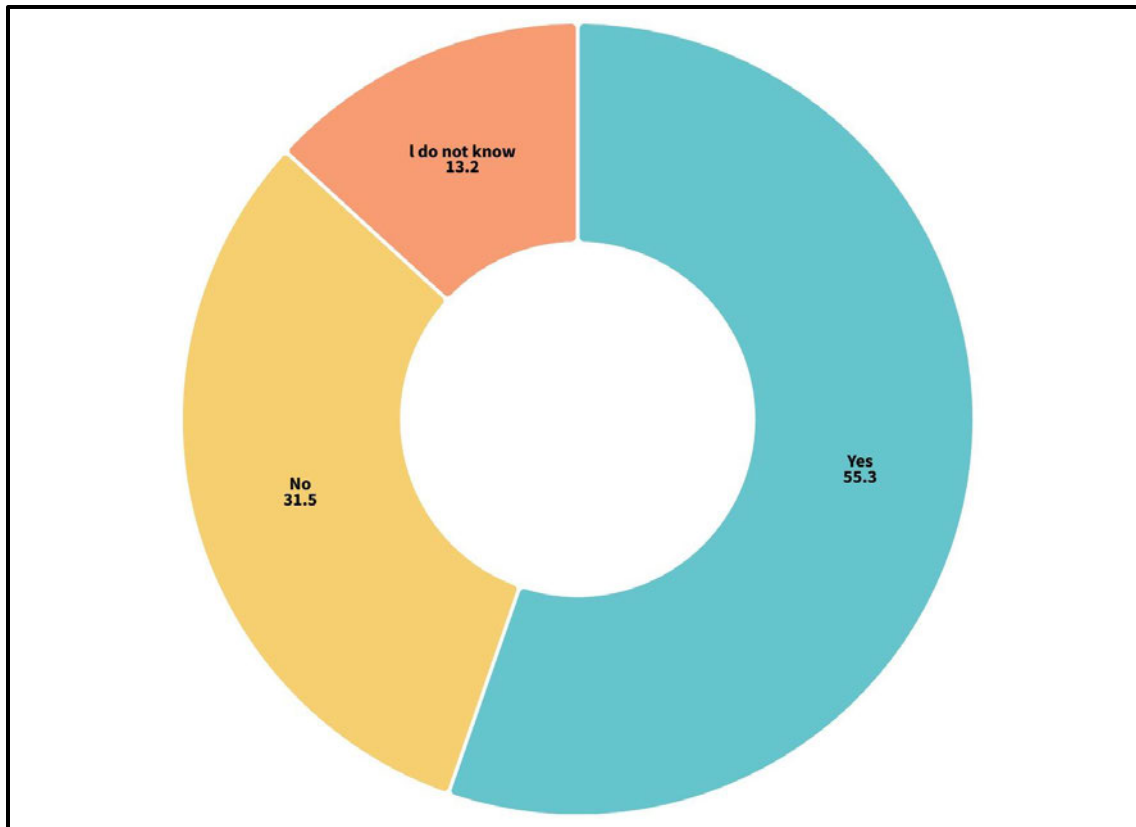
Source: Author's own based on Data Analysis, 2024

A notable portion (33.9%) affirmed this, highlighting the cultural importance of these spaces, which aligns with Lefebvre's (1991) notion of spaces as imbued with social symbolism and Low's (2000) perspective on public spaces as sites of collective memory. Conversely, most respondents (53.6%) primarily viewed public spaces in functional or recreational terms, focusing on routine activities like leisure and socialising, consistent with Carmona et al.'s (2010) emphasis on the practical utility of public areas. A smaller segment (12.5%) expressed uncertainty about the cultural or symbolic roles of these spaces, suggesting limited awareness or connection.

This variation indicates a gap in integrating cultural symbolism into public space design and highlights the need for urban planners to balance functionality with symbolic meaning, incorporating culturally resonant features to strengthen community identity, as advocated by Lynch (1964).

6.8.2 The responsiveness of public spaces to societal values and ideologies

Public spaces reflect societal norms and ideologies, embodying values such as inclusivity or exclusion through their design and management (Low, 2016). Analysis of respondents' perceptions, Pie Chart 6-9 reveals that a majority (55.3%) recognise public space design as representative of broader societal values or ideologies.



Pie Chart 6-9: The resident's perception of the percentage of public spaces that reflect broader societal values and ideologies

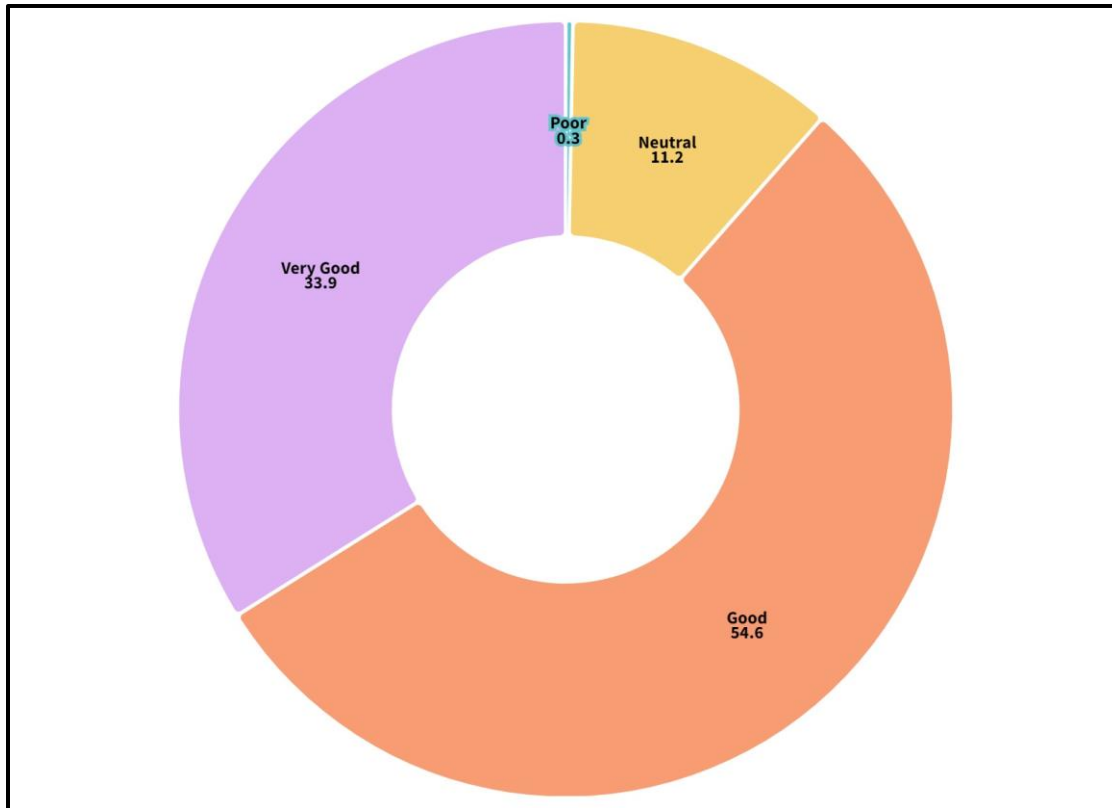
Source: Author's own based on Data Analysis, 2024

However, nearly a third (31.5%) perceive a disconnect between public spaces and societal values, while a smaller group (13.2%) remains uncertain. This mixed perception highlights Lefebvre's (1991) argument that public spaces are contested sites reflecting power dynamics, either reinforcing or challenging dominant ideologies. Therefore, urban planners and policymakers must critically assess how public spaces embody or resist prevailing societal ideologies, aiming to create environments that accurately reflect community values and collective identities.

6.9 Absolute space

6.9.1 The quality of physical layouts and characteristics of public spaces

The analysis of respondents' perceptions regarding the physical layout and geographic characteristics of public spaces illustrated by Pie Chart 6-10 indicates generally high satisfaction levels.



Pie Chart 6-10: The layout and characteristics of public spaces frequented in percentages

Source: Author's own based on Data Analysis, 2024

A substantial majority rate these aspects positively, with 54.6% considering them 'good' and 33.9% 'very good'. Only a small proportion express neutrality (11.2%), while dissatisfaction is negligible (0.3%). These findings reinforce Lynch's (1964) assertion that spatial design significantly influences user interaction, functionality, and inclusivity, ultimately affecting residents' sense of place and urban belonging. This suggests that, overall, the physical layouts and geographic attributes of public spaces effectively support user experience and urban life.

6.9.2 The influence of design features on public space

The analysis of respondents' evaluations of public space design elements, Table 6-8 highlights the considerable impact of specific features on user experience and comfort.

Table 6-8: The influence of design features on user's experience and comfort in public spaces

DESIGN FEATURES	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
Lighting	58.0	31.2	10.2	0.3	0.3
Sidewalks	46.4	32.2	18.0	3.1	0.3
Bike lanes	29.8	20.3	30.2	15.6	4.1
Ablutions	70.8	24.1	3.7	1.0	0.3
Wi-Fi	28.1	18.3	28.1	22.0	3.4
Seating Areas	78.6	13.9	6.8	0.7	0.0

Source: Author's own based on Data Analysis, 2024

Most respondents emphasise the significance of ablution facilities (94.9%), seating areas (92.5%), and lighting (89.2%) in enhancing comfort and usability. These findings align closely with Whyte's (1980) assertion on the importance of seating and lighting for encouraging social interaction and extended use of public spaces. Sidewalks were also highly rated, with 78.6% noting their positive influence, corroborating Gehl's (2013) emphasis on human-scale design for enhanced accessibility and comfort. Conversely, perceptions of bike lanes and Wi-Fi were mixed, with approximately half (50.1% and 46.4%, respectively) recognising their importance, suggesting variable relevance or quality across different public spaces. This variability indicates the need for tailored strategies to accommodate diverse user preferences and needs, reinforcing the importance of adaptable and context-specific urban design interventions.

6.9.3 A reflective analysis of Relational and Absolute spaces

The analysis of public spaces in eThekweni reveals diverse perceptions regarding their functionality, symbolic value, and broader societal representation. Most respondents positively assessed the physical layout and geographic characteristics (54.6% rated "good," and 33.9% rated "very good"), underscoring the functional and practical appeal of these spaces (Carmona et al., 2010). Conversely, only a third (33.9%) identified symbolic or cultural significance, aligning with Low's (2000) assertion of public spaces as sites for cultural expression and collective memory. However, a majority (53.6%) viewed these spaces predominantly in utilitarian terms, suggesting limited cultural engagement and potential gaps in inclusive representation.

Over half (55.3%) perceived public spaces as reflecting societal values or ideologies, supporting Lefebvre's (1991) argument that urban spaces embody dominant cultural narratives. Nevertheless, nearly a third (31.5%) contested this perception, highlighting a disconnect between intended design meanings and users' interpretations. These varied perspectives reflect Harvey's relational space concept, revealing differential experiences shaped by cultural identity and socio-economic status.

A reflection on case studies from Cape Town, Mexico City, and Christchurch illustrates convergence and divergence in these findings. Cape Town similarly grapples with legacies of spatial inequality and culturally representative spaces, while Mexico City's emphasis on inclusive and culturally resonant public spaces shows convergence with respondents' desires for more meaningful representation. Conversely, Christchurch's intentional design of culturally symbolic spaces post-earthquake contrasts with eThekweni's predominantly utilitarian public spaces, suggesting an opportunity for planners to enhance cultural inclusivity.

Urban planners in eThekweni should thus seek a balanced integration of functional and symbolic dimensions, emphasising cultural inclusivity and community representation, to foster public spaces that resonate more broadly with diverse user groups.

6.10 An analysis of relationships between selected key variables using inferential statistics

This cross-tabulation section aims to identify and analyse these relationships between the collected data variables. This analysis will provide an understanding of the correlations between these variables. In the following tables, the p-values obtained from the cross-tabulation were all below 0.05, indicating statistical significance.

Analysing the frequency of visits to various public spaces based on household types provides important insights, as per Tables 6-9, into the dynamics of urban life and community engagement. This analysis is particularly relevant for urban planners and policymakers who aim to create inclusive and vibrant public spaces that cater to residents' diverse needs.

Table 6-9: The cross tabulation between variables of interest and household type for the frequency of visits

VARIABLE OF INTEREST		HOUSEHOLD TYPE					
		ONE PERSON HOUSEHOLD		NUCLEAR HOUSEHOLD		EXTENDED HOUSEHOLD	
Frequency of Visits: Neighbourhood Park	Chi-square = 0.000	76 (25.8%)		182 (61.7%)		37 (12.5%)	
	Never	6	(2.0%)	4	(1.4%)	0	(0.0%)
	Daily	2	(0.7%)	5	(1.7%)	0	(0.0%)
	Weekly	7	(2.4%)	72	(24.4%)	12	(4.1%)
	Monthly	25	(8.5%)	58	(19.7%)	14	(4.7%)
	Yearly	36	(12.2%)	43	(14.6%)	11	(3.7%)
Frequency of Visits: Beach Promenade	Chi-square = 0.000	76 (25.8%)		182 (61.7%)		37 (12.5%)	
	Never	2	(0.7%)	0	(0.0%)	0	(0.0%)
	Daily	43	(14.6%)	35	(11.9%)	3	(1.0%)
	Weekly	20	(6.8%)	69	(23.4%)	14	(4.7%)
	Monthly	6	(2.0%)	46	(15.6%)	7	(2.4%)
	Yearly	5	(1.7%)	32	(10.8%)	13	(4.4%)
Frequency of Visits: Museums	Chi-square = 0.000	76 (25.8%)		182 (61.7%)		37 (12.5%)	

VARIABLE OF INTEREST		HOUSEHOLD TYPE					
		ONE PERSON HOUSEHOLD		NUCLEAR HOUSEHOLD		EXTENDED HOUSEHOLD	
Never		60	(20.3%)	91	(30.8%)	14	(4.7%)
Daily		0	(0.0%)	1	(0.3%)	0	(0.0%)
Weekly		0	(0.0%)	0	(0.0%)	0	(0.0%)
Monthly		0	(0.0%)	4	(1.4%)	0	(0.0%)
Yearly		15	(5.1%)	85	(28.8%)	23	(7.8%)
Frequency of Visits: Shopping Mall	Chi-square = 0.000	76 (25.8%)		182 (61.7%)		37 (12.5%)	
Never		0	(0.0%)	1	(0.3%)	0	(0.0%)
Daily		11	(3.7%)	70	(23.7%)	11	(3.7%)
Weekly		46	(15.6%)	98	(33.2%)	16	(5.4%)
Monthly		19	(6.4%)	13	(4.4%)	10	(3.4%)
Yearly		0	(0.0%)	0	(0.0%)	0	(0.0%)
Frequency of Visits: Beach	Chi-square = 0.023	76 (25.8%)		182 (61.7%)		37 (12.5%)	
Never		2	(0.7%)	0	(0.0%)	0	(0.0%)
Daily		1	(0.3%)	2	(0.7%)	0	(0.0%)
Weekly		10	(3.4%)	20	(6.8%)	4	(1.4%)
Monthly		31	(10.5%)	84	(28.5%)	7	(2.4%)
Yearly		32	(10.8%)	76	(25.8%)	26	(8.8%)
Frequency of Visits: Sports Field	Chi-square = 0.017	76 (25.8%)		182 (61.7%)		37 (12.5%)	
Never		7	(2.4%)	2	(0.7%)	1	(0.3%)
Daily		0	(0.0%)	0	(0.0%)	0	(0.0%)
Weekly		31	(10.5%)	80	(27.1%)	18	(6.1%)
Monthly		7	(2.4%)	34	(11.5%)	8	(2.7%)
Yearly		30	(10.2%)	66	(22.4%)	10	(3.4%)
Frequency of Visits: Community Centre	Chi-square = 0.000	76 (25.8%)		182 (61.7%)		37 (12.5%)	
Never		16	(5.4%)	9	(3.1%)	2	(0.7%)
Daily		2	(0.7%)	1	(0.3%)	0	(0.0%)
Weekly		16	(5.4%)	21	(7.1%)	13	(4.4%)
Monthly		7	(2.4%)	29	(9.8%)	5	(1.7%)
Yearly		34	(11.5%)	122	(41.4%)	17	(5.8%)

VARIABLE OF INTEREST		HOUSEHOLD TYPE					
		ONE PERSON HOUSEHOLD		NUCLEAR HOUSEHOLD		EXTENDED HOUSEHOLD	
Frequency of Visits: Library	Chi-square = 0.000	75 (25.8%)		182 (61.9%)		37 (12.6%)	
Never		46	(15.6%)	44	(15.0%)	9	(3.1%)
Daily		0	(0.0%)	1	(0.3%)	0	(0.0%)
Weekly		14	(4.8%)	79	(26.9%)	13	(4.4%)
Monthly		0	(0.0%)	11	(3.7%)	3	(1.0%)
Yearly		15	(5.1%)	47	(16.0%)	12	(4.1%)

Source: Author’s own based on Data Analysis, 2024

The analysis categorises households into one-person (25.8%), nuclear (61.7%), and extended (12.5%) types, each exhibiting distinct visitation patterns to public spaces.

Neighbourhood parks are predominantly visited weekly (24.4%) and monthly (19.7%) by nuclear households, highlighting their importance for family-oriented recreation. One-person households show moderate monthly visitation (8.5%), whereas extended households participate less frequently (4.7%).

Beach promenades are frequently visited daily by one-person households (14.6%), suggesting these spaces cater to solitary recreational activities. Nuclear households prefer weekly visits (23.4%), while extended households show modest participation, indicating a need for targeted engagement strategies.

Museums attract infrequent, mainly annual visits by nuclear households (28.8%), pointing to potential gaps in cultural engagement or accessibility across all household types.

Shopping malls are heavily frequented daily (23.7%) and weekly (33.2%) by nuclear households, reinforcing malls' role as vital social and economic hubs. One-person and extended households show lower but notable weekly visitation, reflecting their secondary but still significant role for these groups.

Beach visits show a periodic preference, with nuclear households predominantly visiting monthly (28.5%) or annually, suggesting seasonal recreational use across household types.

Sports fields have highest weekly usage among nuclear households (27.1%) and modest weekly engagement from one-person households (10.5%), indicating the relevance of sports fields for family and individual fitness activities.

Community centres primarily attract annual visits from nuclear households (41.4%), reflecting their function as venues for community gatherings. Lower engagement by one-person households suggests barriers or different needs that should be addressed to enhance inclusivity.

Libraries have significant weekly use by nuclear households (26.9%), underscoring their educational role. Limited visitation by one-person households highlights a need for libraries to better address diverse community needs.

Tables 6-10 provide insights into the patterns and preferences of public space usage by various household sizes. They reveal key trends in how different groups engage with public spaces in the study area.

Table 6-10: The cross tabulation between variables of interest and household size for accompanying visits

VARIABLE OF INTEREST		HOUSEHOLD SIZE					
		< 2 PEOPLE		2- 5 PEOPLE		> 6 PEOPLE	
Accompanying persons during Visits: Neighbourhood park	Chi-square = 0.000	81 (28.6%)		197 (69.6%)		5 (1.8%)	
Alone		7	(2.5%)	0	(0.0%)	0	(0.0%)
Spouse/ Partner		3	(1.1%)	39	(13.8%)	0	(0.0%)
Family (including children)		16	(5.7%)	131	(46.3%)	4	(1.4%)
Friends		55	(19.4%)	27	(9.5%)	1	(0.4%)
Accompanying persons during Visits: Beach promenade	Chi-square = 0.000	85 (29.2%)		201 (69.1%)		5 (1.7%)	
Alone		50	(17.2%)	5	(1.7%)	0	(0.0%)
Spouse/ Partner		3	(1.0%)	51	(17.5%)	0	(0.0%)
Family (including children)		9	(3.1%)	121	(41.6%)	4	(1.4%)
Friends		23	(7.9%)	24	(8.2%)	1	(0.3%)
Accompanying persons during Visits: Museums	Chi-square = 0.000	21 (16.4%)		104 (81.3%)		3 (2.3%)	

VARIABLE OF INTEREST	HOUSEHOLD SIZE						
	< 2 PEOPLE		2- 5 PEOPLE		> 6 PEOPLE		
Alone		2	(1.6%)	0	(0.0%)	0	(0.0%)
Spouse/ Partner		0	(0.0%)	16	(12.5%)	0	(0.0%)
Family (including children)		4	(3.1%)	65	(50.8%)	2	(1.6%)
Friends		15	(11.7%)	23	(18.0%)	1	(0.8%)
Accompanying persons during Visits: Shopping mall	Chi-square = 0.000	87 (29.8%)		200 (68.5%)		5 (1.7%)	
Alone		41	(14.0%)	9	(3.1%)	0	(0.0%)
Spouse/ Partner		5	(1.7%)	72	(24.7%)	0	(0.0%)
Family (including children)		20	(6.8%)	91	(31.2%)	4	(1.4%)
Friends		21	(7.2%)	28	(9.6%)	1	(0.3%)
Accompanying persons during Visits: Beach	Chi-square = 0.000	85 (29.2%)		201 (69.1%)		5 (1.7%)	
Alone		5	(1.7%)	1	(0.3%)	0	(0.0%)
Spouse/ Partner		1	(0.3%)	23	(7.9%)	0	(0.0%)
Family (including children)		22	(7.6%)	71	(24.4%)	4	(1.4%)
Friends		57	(19.6%)	106	(36.4%)	1	(0.3%)
Accompanying persons during Visits: Open plaza / Square	Chi-square = 0.000	87 (30.1%)		197 (68.2%)		5 (1.7%)	
Alone		6	(2.1%)	0	(0.0%)	0	(0.0%)
Spouse/ Partner		7	(2.4%)	33	(11.4%)	0	(0.0%)
Family (including children)		19	(6.6%)	93	(32.2%)	3	(1.0%)
Friends		55	(19.0%)	71	(24.6%)	2	(0.7%)
Accompanying persons during Visits: Sports fields	Chi-square = 0.000	80 (28.2%)		199 (70.1%)		5 (1.8%)	
Alone		5	(1.8%)	3	(1.1%)	0	(0.0%)
Spouse/ Partner		1	(0.4%)	13	(4.6%)	0	(0.0%)
Family (including children)		8	(2.8%)	54	(19.0%)	4	(1.4%)
Friends		66	(23.2%)	129	(45.4%)	1	(0.4%)
Accompanying persons during Visits: Community centres	Chi-square = 0.002	69 (25.8%)		193 (72.3%)		5 (1.9%)	
Alone		5	(1.9%)	3	(1.1%)	0	(0.0%)
Spouse/ Partner		0	(0.0%)	15	(5.6%)	0	(0.0%)
Family (including children)		14	(5.2%)	64	(24.0%)	4	(1.5%)

VARIABLE OF INTEREST	HOUSEHOLD SIZE						
	< 2 PEOPLE		2- 5 PEOPLE		> 6 PEOPLE		
Friends		50	(18.7%)	111	(41.6%)	1	(0.4%)
Accompanying persons during Visits: Libraries	Chi-square = 0.000	36 (18%)		160 (80%)		4 (2%)	
Alone		19	(9.5%)	4	(2.0%)	0	(0.0%)
Spouse/ Partner		0	(0.0%)	29	(14.5%)	0	(0.0%)
Family (including children)		9	(4.5%)	113	(56.5%)	3	(1.5%)
Friends		8	(4.0%)	14	(7.0%)	1	(0.5%)

Source: Author’s own based on Data Analysis, 2024

Households comprising 2–5 individuals represent the predominant user group across nearly all public spaces, emphasising that families and small groups primarily drive public space usage through recreational and social activities. Specifically, neighbourhood parks are heavily frequented by 2–5 person households (69.6%), predominantly families (46.3%), alongside smaller groups of friends (19.4%). Beach promenades similarly attract families (41.6%) and notably solitary visitors (17.2%), highlighting dual functionality for both group and individual use.

Museums have significant family visitation (50.8%) within the 2–5 person category (81.3%), reflecting a family-oriented appeal for educational and cultural activities. Shopping malls show strong visitation by small households (68.5%), notably couples (24.7%), underlining their social function. Beaches and sports fields attract considerable friend groups (36.4% and 45.4%, respectively), affirming their roles as social and recreational hubs.

Open plazas and squares (68.2%) and community centres (72.3%) also predominantly attract small households, indicating their versatility for diverse social interactions and events. Libraries have substantial family visitation (56.5% within the 80% of 2–5 person households), demonstrating their importance as educational resources.

Conversely, households of fewer than two members have moderate yet meaningful presence, favouring more solitary or intimate uses, whereas households exceeding six members consistently show minimal representation, potentially due to differing

recreational preferences or constraints. This distribution underscores the necessity for planners to cater primarily to the recreational and social needs of smaller household groups, while still addressing the varied preferences of solitary and larger households.

Table 6-11 focuses on the chi-square results and the distribution of responses across different household types for each primary use of public space.

Table 6-11: A cross tabulation between variables of interest and household type for the use of public space

VARIABLE OF INTEREST		HOUSEHOLD TYPE					
		ONE PERSON HOUSEHOLD		NUCLEAR HOUSEHOLD		EXTENDED HOUSEHOLD	
Primary use of public space for Recreation and leisure	Chi-square = 0.046	76 (25.8%)		182 (61.7%)		37 (12.5%)	
	Strongly Disagree	0	(0.0%)	0	(0.0%)	0	(0.0%)
	Disagree	0	(0.0%)	0	(0.0%)	0	(0.0%)
	Neutral	24	(8.1%)	35	(11.9%)	9	(3.1%)
	Agree	26	(8.8%)	98	(33.2%)	20	(6.8%)
	Strongly Agree	26	(8.8%)	49	(16.6%)	8	(2.7%)
Primary use of public space for Cultural and entertainment events	Chi-square = 0.002	76 (25.8%)		182 (61.7%)		37 (12.5%)	
	Strongly Disagree	27	(9.2%)	33	(11.2%)	4	(1.4%)
	Disagree	7	(2.4%)	47	(15.9%)	3	(1.0%)
	Neutral	28	(9.5%)	70	(23.7%)	21	(7.1%)
	Agree	12	(4.1%)	27	(9.2%)	8	(2.7%)
	Strongly Agree	2	(0.7%)	5	(1.7%)	1	(0.3%)
Primary use of public space for: Economic Gain	Chi-square = 0.041	76 (25.8%)		182 (61.7%)		37 (12.5%)	
	Strongly Disagree	56	(19.0%)	113	(38.3%)	16	(5.4%)
	Disagree	16	(5.4%)	38	(12.9%)	10	(3.4%)
	Neutral	4	(1.4%)	27	(9.2%)	10	(3.4%)
	Agree	0	(0.0%)	2	(0.7%)	1	(0.3%)
	Strongly Agree	0	(0.0%)	2	(0.7%)	0	(0.0%)

Primary use of public space for Pets to exercise	Chi-square = 0.000	76 (25.8%)		182 (61.7%)		37 (12.5%)	
Strongly Disagree		39	(13.2%)	55	(18.6%)	9	(3.1%)
Disagree		6	(2.0%)	10	(3.4%)	10	(3.4%)
Neutral		1	(0.3%)	12	(4.1%)	5	(1.7%)
Agree		9	(3.1%)	37	(12.5%)	5	(1.7%)
Strongly Agree		21	(7.1%)	68	(23.1%)	8	(2.7%)
Primary use of public space for Kids to play	Chi-square = 0.000	76 (25.8%)		182 (61.7%)		37 (12.5%)	
Strongly Disagree		64	(21.7%)	55	(18.6%)	9	(3.1%)
Disagree		9	(3.1%)	6	(2.0%)	4	(1.4%)
Neutral		1	(0.3%)	6	(2.0%)	1	(0.3%)
Agree		1	(0.3%)	25	(8.5%)	7	(2.4%)
Strongly Agree		1	(0.3%)	88	(29.8%)	16	(5.4%)

Source: Author’s own based on Data Analysis, 2024

The analysis highlights significant variations in how different household types utilise and value public spaces. Nuclear households, comprising 61.7% of respondents, exhibit the highest propensity for recreational and leisure activities, cultural and entertainment events, and pet-friendly facilities. This group particularly emphasises spaces suitable for children, reflecting strong family-oriented preferences. In contrast, one-person (25.8%) and extended households (12.5%) display comparatively lower levels of agreement but maintain moderate interest, suggesting diverse but nuanced usage patterns.

Notably, all household types strongly disagree with the economic utilisation of public spaces, emphasising a clear preference for community-oriented rather than economically driven spaces.

The importance of pet-friendly spaces is underscored by significant agreement from nuclear households (35.6%), illustrating the role of these spaces as vital social hubs aligning with Oldenburg’s (1999) "third places" concept. However, the management challenge of pet excrement at facilities such as Old Bush Road Park , Plate 6-26, highlights broader urban planning concerns regarding facility maintenance, adequate amenities, and cleanliness to ensure inclusive usability and positive user experiences.



Plate 6-4: A photograph of Old Bush Road Park

Source: Author's Own (2024)

Urban planners should prioritise family-focused amenities, child-friendly areas, and well-maintained pet facilities in neighbourhoods dominated by nuclear households, while recognising varied needs of other household groups to ensure inclusive and multifunctional public spaces.

The data in Tables 6-12 analyse the reasons behind feelings of unsafety among various demographic groups, specifically Black/African, Coloured, White, and Indian populations. This includes a detailed account of the reasons for these feelings of unsafety, accompanied by Chi-square values and the distribution of responses categorised as Neutral, Agree, and Strongly Agree. It is noted that none of the respondents provided responses for Disagree or Strongly Disagree; as such, these responses were removed from the table.

Table 6-12: A cross tabulation between variables of interest and population groups of respondents for feeling unsafe

VARIABLE OF INTEREST		POPULATION GROUP OF RESPONDENTS							
		BLACK/AFRICAN		COLOURED		WHITE		INDIAN	
Reasons for feeling unsafe: Lack of maintenance	Chi-SQUARE = 0.001	68 (23.4%)		39 (13.4%)		87 (29.9%)		97 (33.3%)	
Neutral		0 (0.0%)	0 (0.0%)	3 (1.0%)	0 (0.0%)				
Agree		21 (7.2%)	13 (4.5%)	30 (10.3%)	23 (7.9%)				
Strongly Agree		47 (16.2%)	26 (8.9%)	54 (18.6%)	74 (25.4%)				
Reasons for feeling unsafe: Lack of presence of law enforcement	Chi-square = 0.001	68 (23.4%)		39 (13.4%)		87 (29.9%)		97 (33.3%)	
Neutral		1 (0.3%)	0 (0.0%)	2 (0.7%)	0 (0.0%)				
Agree		17 (5.8%)	8 (2.7%)	22 (7.6%)	15 (5.2%)				
Strongly Agree		50 (17.2%)	31 (10.7%)	63 (21.6%)	82 (28.2%)				
Reasons for feeling unsafe: Poor or inefficient lighting	Chi-square = 0.008	68 (23.4%)		39 (13.4%)		87 (29.9%)		97 (33.3%)	
Neutral		4 (1.4%)	4 (1.4%)	5 (1.7%)	6 (2.1%)				
Agree		26 (8.9%)	14 (4.8%)	40 (13.7%)	25 (8.6%)				
Strongly Agree		38 (13.1%)	21 (7.2%)	42 (14.4%)	66 (22.7%)				
Reasons for feeling unsafe: Poor visibility and natural surveillance	Chi-square = 0.018	68 (23.4%)		39 (13.4%)		87 (29.9%)		97 (33.3%)	
Neutral		2 (0.7%)	2 (0.7%)	4 (1.4%)	11 (3.8%)				
Agree		25 (8.6%)	14 (4.8%)	34 (11.7%)	27 (9.3%)				
Strongly Agree		41 (14.1%)	23 (7.9%)	49 (16.8%)	59 (20.3%)				
Reasons for feeling unsafe: Poor cleanliness	Chi-square = 0.000	68 (23.4%)		39 (13.4%)		87 (29.9%)		97 (33.3%)	
Neutral		0 (0.0%)	0 (0.0%)	2 (0.7%)	0 (0.0%)				
Agree		6 (2.1%)	4 (1.4%)	14 (4.8%)	10 (3.4%)				
Strongly Agree		62 (21.3%)	35 (12.0%)	71 (24.4%)	87 (29.9%)				
Reasons for feeling unsafe: Distance from car park to public space	Chi-square = 0.000	68 (23.4%)		39 (13.4%)		87 (29.9%)		97 (33.3%)	
Neutral		1 (0.3%)	0 (0.0%)	3 (1.0%)	1 (0.3%)				
Agree		6 (2.1%)	4 (1.4%)	11 (3.8%)	1 (0.3%)				
Strongly Agree		61 (21.0%)	35 (12.0%)	73 (25.1%)	95 (32.6%)				

Source: Author's own based on Data Analysis, 2024

The analysis reveals distinct racial differences in perceptions of safety related to public space management. The Indian group consistently expresses the highest concern across all assessed factors, with 33.3% indicating feeling unsafe due to inadequate maintenance, insufficient law enforcement, poor lighting, limited visibility, cleanliness issues, and distance from car parks. Notably, this group's strong agreement responses are particularly high for inadequate maintenance (25.4%) and poor cleanliness (29.9%).

The White respondents similarly report significant safety concerns, with 29.9% consistently expressing unease across factors, notably highlighting inadequate law enforcement (21.6% strongly agree), cleanliness (24.4% strongly agree), and distance from parking facilities (25.1% strongly agree). Black/African (23.4%) and Coloured (13.4%) populations report lower but still notable concerns, indicating a widespread perception of insecurity, though less pronounced.

These findings emphasise a need for targeted urban interventions addressing maintenance, law enforcement visibility, lighting, cleanliness, and proximity to parking to enhance safety perceptions and foster inclusive public spaces across diverse demographic groups.

The representation of different cultural groups in public spaces through art, sculptures, murals, billboards, signage, and community activities varies significantly, as Table 6-13 shows.

Table 6-13: A cross tabulation between variables of interest and population group of respondents by cultural Representation

VARIABLE OF INTEREST		POPULATION GROUP OF RESPONDENTS							
		BLACK/AFRICAN		COLOURED		WHITE		INDIAN	
Cultural representation through public art, sculptures and murals	Chi-square = 0.000	68 (23,4%)		39 (13,4%)		87 (29,9%)		97 (33,3%)	
Never Represented		3	(1,0%)	5	(1,7%)	5	(1,7%)	12	(4,1%)
Rarely Represented		15	(5,2%)	18	(6,2%)	27	(9,3%)	55	(18,9%)
Sometimes Represented		23	(7,9%)	10	(3,4%)	36	(12,4%)	25	(8,6%)
Often Represented		27	(9,3%)	5	(1,7%)	19	(6,5%)	5	(1,7%)
Always Represented		0	(0,0%)	1	(0,3%)	0	(0,0%)	0	(0,0%)

VARIABLE OF INTEREST		POPULATION GROUP OF RESPONDENTS							
		BLACK/AFRICAN		COLOURED		WHITE		INDIAN	
Cultural representation through billboards	Chi-square = 0.000	68 (23,4%)		39 (13,4%)		87 (29.9%)		97 (33,3%)	
Never Represented		0 (0,0%)	2 (0,7%)	1 (0,3%)	4 (1,4%)				
Rarely Represented		14 (4,8%)	16 (5,5%)	20 (6,9%)	51 (17,5%)				
Sometimes Represented		15 (5,2%)	14 (4,8%)	36 (12,4%)	28 (9,6%)				
Often Represented		37 (12,7%)	7 (2,4%)	29 (10,0%)	12 (4,1%)				
Always Represented		2 (0,7%)	0 (0,0%)	1 (0,3%)	2 (0,7%)				
Cultural representation through signage	Chi-square = 0.000	68 (23,4%)		39 (13,4%)		87 (29.9%)		97 (33,3%)	
Never Represented		0 (0,0%)	3 (1,0%)	1 (0,3%)	4 (1,4%)				
Rarely Represented		10 (3,4%)	16 (5,5%)	19 (6,5%)	48 (16,5%)				
Sometimes Represented		21 (7,2%)	11 (3,8%)	27 (9,3%)	22 (7,6%)				
Often Represented		36 (12,4%)	8 (2,7%)	38 (13,1%)	22 (7,6%)				
Always Represented		1 (0,3%)	1 (0,3%)	2 (0,7%)	1 (0,3%)				
Cultural representation through community activities allowed in public space	Chi-square = 0.000	68 (23,4%)		39 (13,4%)		87 (29.9%)		97 (33,3%)	
Never Represented		4 (1,4%)	9 (3,1%)	8 (2,7%)	22 (7,6%)				
Rarely Represented		19 (6,5%)	12 (4,1%)	26 (8,9%)	42 (14,4%)				
Sometimes Represented		23 (7,9%)	10 (3,4%)	28 (9,6%)	20 (6,9%)				
Often Represented		22 (7,6%)	8 (2,7%)	25 (8,6%)	12 (4,1%)				
Always Represented		0 (0,0%)	0 (0,0%)	0 (0,0%)	1 (0,3%)				

Source: Author’s own based on Data Analysis, 2024

The analysis reveals distinct racial variations regarding perceptions of cultural representation in public spaces. Indian respondents consistently report feeling the least represented across all mediums, with notably high percentages indicating they feel 'rarely' or 'never' represented, particularly in public art (18.9% rarely, 4.1% never), billboards (17.5% rarely), signage (16.5% rarely), and community activities (14.4% rarely, 7.6% never). Conversely, Black/African respondents perceive higher representation levels, especially in billboards (12.7% often) and signage (12.4% often), though a significant

proportion still feel underrepresented. White respondents exhibit a relatively balanced perception of representation, though fewer feel 'often represented' in comparison to Black/African respondents. These findings highlight a clear gap in cultural inclusivity, particularly affecting Indian respondents, suggesting the need for targeted strategies in urban design and community programming to ensure equitable cultural representation across all demographic groups.

Table 6-14 illustrates the perceived inclusiveness of public spaces among various racial groups. The chi-square value of 0.041 indicates a statistically significant variation in perceptions across these groups.

Table 6-14: A cross tabulation between variables of interest and population group of respondents for inclusiveness

VARIABLE OF INTEREST		POPULATION GROUP OF RESPONDENTS							
		BLACK/AFRICAN		COLOURED		WHITE		INDIAN	
Inclusiveness of public space to all race groups	Chi-square = 0.041	68 (23,4%)		39 (13,4%)		87 (29,9%)		97 (33,3%)	
	Strongly Disagree	0	(0,0%)	0	(0,0%)	0	(0,0%)	0	(0,0%)
	Disagree	7	(2,4%)	1	(0,3%)	5	(0,0%)	4	(1,4%)
	Neutral	18	(6,2%)	11	(3,8%)	20	(0,0%)	20	(6,9%)
	Agree	29	(10,0%)	21	(7,2%)	42	(0,0%)	50	(17,2%)
	Strongly Agree	14	(4,8%)	6	(2,1%)	20	(0,0%)	22	(7,6%)

Source: Author's own based on Data Analysis, 2024

The analysis reveals notable racial variations in perceptions of inclusiveness within public spaces. Indian respondents exhibit the highest perception of inclusivity, with 33.3% identifying these spaces as inclusive, and significant agreement levels (17.2% agree; 7.6% strongly agree). White respondents follow closely, with 29.9% perceiving inclusivity and a high level of agreement (42%). In contrast, Black/African respondents demonstrate more varied perceptions, with 23.4% perceiving inclusiveness but lower agreement (10% agree; 4.8% strongly agree). Coloured respondents report the lowest perception of inclusivity (13.4%) and correspondingly lower agreement rates (7.2% agree; 2.1% strongly agree). Neutrality regarding inclusiveness was moderate among White (20%) and Indian respondents (6.9%), suggesting ambivalence. Minimal disagreement was

noted, predominantly among Black/African (2.4%) and Indian (1.4%) respondents. These findings underscore differential experiences of inclusivity, highlighting the need for targeted interventions to enhance equitable access and belonging across all demographic groups.

Table 6-15: A cross tabulation between variables of interest and population group of household head by mode of transport

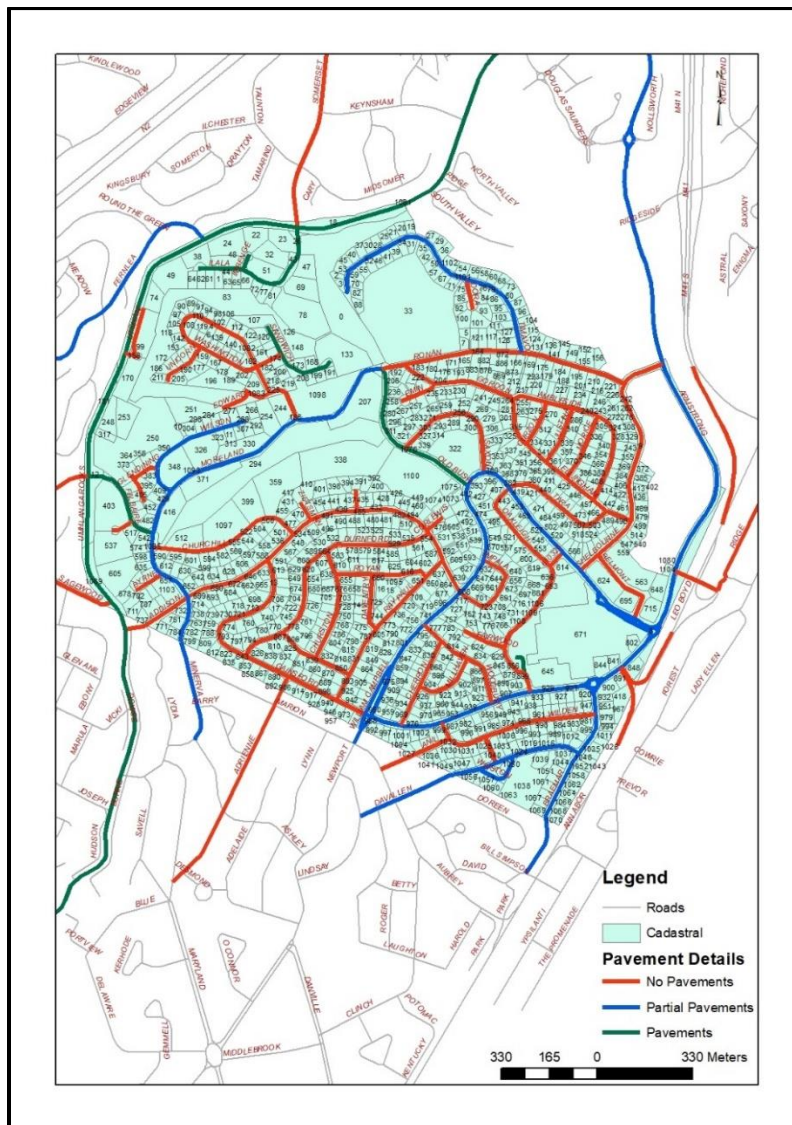
VARIABLE OF INTEREST		POPULATION GROUP OF HOUSEHOLD HEAD							
		BLACK/AFRICAN		COLOURED		WHITE		INDIAN	
Willingness to travel by Walking	Chi-square = 0.000	68 (23,4%)		39 (13,4%)		87 (29.9%)		97 (33,3%)	
0-5 minutes		7 (2.4%)	2 (0.7%)	5 (1.7%)	10 (3.4%)				
6-10 minutes		27 (9.3%)	11 (3.8%)	36 (12.4%)	27 (9.3%)				
11-15 minutes		30 (10.3%)	18 (6.2%)	37 (12.7%)	52 (17.9%)				
16-20 minutes		3 (1.0%)	6 (2.1%)	10 (3.4%)	10 (3.4%)				
> 20 Minutes		0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)				
Willingness to travel by Cycling	Chi-square = 0.024	68 (23,4%)		39 (13,4%)		87 (29.9%)		97 (33,3%)	
0-5 minutes		3 (1.0%)	1 (0.3%)	1 (0.3%)	4 (1.4%)				
6-10 minutes		18 (6.2%)	5 (1.7%)	22 (7.6%)	14 (4.8%)				
11-15 minutes		34 (11.7%)	20 (6.9%)	43 (14.8%)	45 (15.5%)				
16-20 minutes		6 (2.1%)	6 (2.1%)	14 (4.8%)	18 (6.2%)				
> 20 Minutes		0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.3%)				

Source: Author's own based on Data Analysis, 2024

The data in Table 6-15 highlights the willingness to walk or cycle to public spaces among different population groups. Indian respondents exhibit the highest willingness to walk (33.3%), predominantly for 11-15 minutes (17.9%). White respondents (29.9%) also prefer walking for 11-15 minutes (12.7%), while Black/African respondents (23.4%) show similar preferences (10.3% for 11-15 minutes). Coloured respondents (13.4%) are least represented, with a peak preference at 11-15 minutes (6.2%). Cycling follows a similar trend, with Indian respondents most inclined (33.3%; 15.5% at 11-15 minutes), followed by White (29.9%; 14.8%), Black/African (23.4%; 11.7%), and Coloured respondents

(13.4%; 6.9%). Across all groups, willingness to walk or cycle notably declines beyond 15 minutes, with no respondents favouring durations exceeding 20 minutes.

Observational analysis indicates inadequate pedestrian and cycling infrastructure within suburban contexts, significantly hindering safe and convenient access to public spaces. Despite respondents' evident preference for walking and cycling, insufficient pavement networks and absent cycling lanes, as depicted in Map 6-1, reinforce dependence on private transport, limiting sustainable urban mobility and equitable public space access. This infrastructure gap emphasises the critical need for targeted improvements to foster accessible, inclusive, and sustainable urban environments.



Map 6-1: The provision of pavements

Source: Author’s own based on Data Analysis, 2024

The analysis (Table 6-16) reveals significant associations between household size and perceptions of public ablution design features. The majority of respondents reside in medium-sized households of 2-5 individuals (68.6%), followed by smaller households with fewer than two individuals (29.7%), while large households with more than six individuals constitute only 1.7%.

Respondents from medium-sized households exhibit the highest levels of strong agreement (49.2%) and agreement (16.3%) regarding the influence of ablution design features on their comfort and experience. Smaller households (<2 people) also show notable agreement, though lower (20.3% strongly agree; 7.5% agree), whereas large households display minimal agreement (0.7% strongly agree; 0.3% agree). Neutral and disagreeing responses are scarce across all household types, with slight ambivalence more evident among medium and large households.

Table 6-16: A cross tabulation between variables of interest and household size by design features

VARIABLE OF INTEREST		HOUSEHOLD SIZE					
		< 2 PEOPLE		2- 5 PEOPLE		> 6 PEOPLE	
Influence of design features on your comfort and experience: Public ablutions	Chi-square = 0.007	87 (29.7%)		201 (68.6%)		5 (1.7%)	
Strongly Agree		60	(20,3%)	145	(49,2%)	2	(0,7%)
Agree		22	(7,5%)	48	(16,3%)	1	(0,3%)
Neutral		3	(1,0%)	6	(2,0%)	2	(0,7%)
Disagree		1	(0,3%)	2	(0,7%)	0	(0,0%)
Strongly Disagree		1	(0,3%)	0	(0,0%)	0	(0,0%)

Source: Author’s own based on Data Analysis, 2024

These findings underscore household size as a determinant in perceptions of ablution design, suggesting medium-sized households prioritise these features more significantly. Overall consensus on the importance of ablution design is high across all household

sizes, with only marginal disagreement, implying broad recognition of its importance to user comfort and experience.

6.11 Components required for public spaces

Based on the collective analysis above, the following key components listed in Table 6-17, have been identified to assist practitioners in creating inclusive public spaces, with associated indicators included to provide a deeper understanding of implementation effectiveness, inclusivity outcomes, and community impact.

Table 6-17 Components of an inclusive public space

Category	Components / Actions Needed	Indicators
1. Gender Inclusivity and Safety	- Gender-sensitive urban design	- Increase in female visitors (%)
	- Enhanced safety measures (lighting, surveillance, policing)	- Incidents of crime reduction (%)
	- Amenities tailored to females (restrooms, seating, private spaces)	- Number of gender-sensitive amenities installed
	- Sports and recreational programs appealing to females	- Participation rates of females in programs
	- Inclusive design for all gender identities	- User satisfaction surveys on safety/inclusivity
	- Infrastructure for connectivity (WiFi, lighting)	
2. Engaging Older Adults and Enhancing Accessibility	- Comfortable, ergonomic seating	- Increase in older adult visitors (%)
	- Shaded and sheltered rest areas	- Number of ergonomic and shaded seating installed
	- Gentle exercise and social engagement programs	- Participation rates in elderly-focused programs
	- Accessible public transportation	- Accessibility audit scores
	- Pedestrian-friendly routes	- Satisfaction levels among older adults
	- Accessible amenities (restrooms, drinking water, shaded resting areas)	
3. Universal Design and Accessibility for All Abilities	- Universal design principles	- Compliance rates with universal design standards
	- Wheelchair-friendly ramps and pathways	- Number of accessible facilities installed
	- Accessible restroom facilities	- User satisfaction scores from differently-abled visitors

	- Clear, accessible, multilingual signage	- Reduced accessibility complaints
	- Sensory-friendly environments (quiet zones, sensory gardens)	
4. Community Involvement and Participatory Planning	- Community engagement mechanisms (surveys, workshops, feedback sessions)	- Frequency and attendance of community meetings
	- Participatory design for diverse groups	- Number of community suggestions implemented (%)
	- Ongoing community dialogue and feedback channels	- Diversity of participants (demographic breakdown)
	- Spaces designed around community preferences	- Community satisfaction ratings
5. Cultural Sensitivity and Engagement	- Recognition of diverse cultural usage patterns	- Number of cultural events held annually
	- Hosting cultural events and festivals	- Visitor diversity statistics
	- Culturally sensitive infrastructure and amenities	- User satisfaction with cultural representation
	- Regular consultation with cultural groups	- Number of culturally inclusive facilities and installations
	- Culturally inclusive public art and design	
6. Family-Friendly Infrastructure and Activities	- Playgrounds and child-friendly recreational spaces	- Family visitation rates (%)
	- Picnic and shaded areas for families	- Number and quality of family-focused facilities installed
	- Family-oriented safety and cleanliness measures	- Cleanliness and maintenance audit scores
	- Diverse recreational activities (water sports, games)	- Participation rates in family-oriented programs
	- Pet-friendly areas with clear management policies	
7. Strengthening Community Centres and Libraries	- Multifunctional, flexible space designs	- Number of new community/library programs offered annually
	- Modern libraries with digital resources	- Visitor frequency and repeat visitation rates
	- Diverse programming (educational, recreational, cultural)	- User satisfaction with programming variety and facilities
	- Spaces for various group sizes and events	- Utilisation rates of digital and physical resources
	- Regular evaluation and responsiveness to community needs	

8. Enhancing Inclusivity in Shopping Malls and Sports Facilities	- Shopping malls as community hubs (community services, cultural events, recreational spaces)	- Increased visits from underrepresented groups (%)
	- Loyalty and promotional programs for underrepresented groups	- Number and types of community events hosted
	- Inclusive sports programs and facilities	- Participation rates in inclusive sports programs
	- Non-commercial, welcoming public areas	- User feedback on commercial-free public spaces
9. Safety and Security Measures	- Enhanced lighting and visibility	- Crime and incident reduction rates (%)
	- Community policing and surveillance initiatives	- User perception of safety surveys
	- Safe, well-lit trails and quiet zones	- Number of installed safety features (lighting, surveillance cameras)
	- Multiple safe access routes	- Frequency of police/community patrols
	- Security tailored specifically for vulnerable populations	
10. Age-Friendly and Walkable Neighbourhoods	- Close proximity to essential amenities (healthcare, groceries, parks)	- Reduction in vehicle usage (%)
	- Mixed-use developments reducing car dependency	- Increased pedestrian activity (%)
	- Walkable, accessible infrastructure	- Walkability audit scores
	- Safe pedestrian pathways and crossings	- Distance from residences to essential services (avg. walking time/distance)
11. Cultural Representation and Continuous Feedback	- Culturally diverse public art and signage	- Frequency and attendance at cultural events
	- Regular cultural events and festivals	- Diversity of cultural representation in public art/signage
	- Community-oriented communication and visual representation	- Regularity of community feedback sessions
	- Continuous feedback loops (surveys, workshops, participatory design)	- Responsiveness rate to community feedback (% suggestions implemented)
	- Responsiveness to changing community demographics and preferences	

Source: Author’s own based on Data Analysis, 2024

The usefulness of the identified components and associated indicators for practitioners lies in providing a structured and practical framework for planning, designing, and managing inclusive public spaces. Specifically, these indicators enable practitioners to:

Evaluate Implementation Effectiveness: Measure how successfully inclusivity-oriented actions are carried out in practice, guiding ongoing improvements and adaptations.

Monitor Inclusivity Outcomes: Track the degree to which public spaces attract diverse user groups, ensuring that inclusivity objectives translate effectively into actual usage and engagement patterns.

Assess Community Impact: Understand the broader social, cultural, and economic benefits generated by inclusive public spaces, ensuring interventions remain relevant and beneficial to the communities they serve.

Facilitate Evidence-Based Decisions: Provide data-driven insights, enabling planners to allocate resources effectively, justify interventions, and secure support from stakeholders.

Encourage Continuous Improvement: Offer clear benchmarks and feedback loops for continual assessment, refinement, and innovation in public space management.

In summary, Table 6-17 equips practitioners with measurable criteria that enhance their capacity to deliver truly inclusive, safe, and welcoming public environments that respond to diverse community needs.

6.12 A reflection of recommendations and alignment to precedent studies

Based on the analysis and recommendations above, and drawing insights from the case studies of Cape Town, Christchurch, and Mexico City, clear alignments and divergences with the theoretical frameworks emerge. These case studies provide practical validation and nuances that strengthen the recommendations.

Firstly, the necessity to cater to gender-specific needs, older adults, individuals with disabilities, and families is confirmed by practical experiences from all three cities.

Mexico City's Plan Verde emphasized improved lighting and the creation of pocket parks, significantly enhancing how spaces are physically experienced. Cape Town's Urban Design Policy prioritizes safety, accessibility, and inclusivity by systematically addressing historical gender disparities through improved pedestrian routes, safety lighting, and accessible public amenities.

Christchurch's Public Open Space Strategy further validates these findings by extensively implementing universal design principles in its parks and open spaces. Christchurch's focus on multifunctionality, accessible infrastructure, and age-friendly environments strongly supports recommendations for universally usable and physically inclusive public spaces.

The emphasis on community involvement and participatory planning is clearly supported by the examined case studies. Christchurch demonstrates a strong participatory approach through its collaboration with communities and indigenous groups (Ngāi Tahu). Mexico City's Plan Verde similarly involved communities, although its implementation reveals tensions between public utility and private interests, particularly evident in under-bridge projects. Cape Town's structured governance and Urban Design Policy explicitly incorporate community feedback into planning frameworks, ensuring spaces align more closely with community values.

However, survey findings highlight a notable gap: despite robust community participation frameworks, many respondents (31.5%) still perceive public spaces as not adequately reflecting broader societal values. This aligns with Mexico City's critiques where privatization limited public accessibility and Christchurch's lack of explicit monitoring frameworks, highlighting discrepancies between planning intentions and actual experiences.

In terms of cultural representation, the symbolic and emotional significance attributed to public spaces (33.9%) aligns well with Christchurch's approach, which integrates cultural heritage preservation and symbolic landmarks, fostering shared identity. Cape

Town similarly preserves historical landmarks and cultural landscapes, reinforcing collective memory. Nonetheless, most respondents (53.6%) primarily view public spaces as functional rather than culturally significant, underscoring an ongoing challenge for planners to address through culturally responsive design processes.

The recommendations advocating improved walkability, age-friendly designs, and universal accessibility strongly align with observed physical improvements in Cape Town, Christchurch, and Mexico City. These practical enhancements are critical initial steps toward inclusive spaces. However, disparities identified in usage patterns across gender, age, and cultural groups reinforce the need for planners to bridge gaps between physical improvements and social inclusivity.

Power dynamics and societal values play crucial roles in shaping public spaces, as illustrated by Cape Town's regulatory approach balancing economic pressures with community objectives. Mexico City's experiences with privatization, despite successful green space expansions, highlight ongoing tensions between economic interests and public benefit. These cases underscore the need for robust governance to ensure public spaces genuinely reflect community values and aspirations.

Integrating insights from these case studies emphasizes the importance of addressing both functional improvements and symbolic dimensions of public spaces. Successful inclusive urban planning requires continuous community engagement, clear accountability mechanisms, and responsive governance structures. Practitioners must actively align theoretical ideals with lived experiences to create genuinely inclusive, culturally meaningful, and socially reflective public spaces.

6.13 Conclusion

Public spaces are integral to the social fabric of urban environments, serving as platforms for community interaction, recreation, and cultural exchange. The analysis and recommendations presented in this chapter emphasise the importance of creating public

spaces that are not only functional but also inclusive, equitable, and responsive to the diverse needs of all residents. The critical role that urban planners play in this process cannot be overstated.

As Jacobs (1961) famously advocates in *“The Death and Life of Great American Cities”*, successful urban spaces are designed with the people who use them in mind. This chapter builds on Jacobs' insights by highlighting the need for public spaces to reflect their communities' unique cultural, social, and demographic diversity. By focusing on the underrepresented groups identified in this study such as women, older adults, and various cultural communities, urban planners can ensure that public spaces are inclusive and accessible to all.

One of the key findings is the gender disparity in public space usage, with males consistently representing a higher proportion of visitors across all spaces. This underscores the importance of incorporating gender-specific needs into public space design. Echoing the views of urbanist Kern (2020), who advocates for feminist urban planning in *“Feminist City”*, the recommendations emphasise improving safety, convenience, and attractions tailored to female visitors. Planners can create more welcoming, inclusive, and equitable environments by addressing barriers to female participation, such as inadequate safety measures and a lack of gender-sensitive amenities.

The analysis also highlights the underutilisation of public spaces by older adults, particularly those aged 61 and above. Whyte (1980) notes that public spaces thrive when accommodating various users, including older adults. Therefore, targeted interventions, such as providing comfortable seating, shaded areas, and gentle exercise programs, make public spaces more appealing to older populations. Ensuring that public spaces are easily accessible via public transportation and pedestrian-friendly routes is also crucial for enhancing their usability among older adults and individuals with mobility challenges.

Mace (1985) advocates for universal design principles, which are central to creating public spaces that are accessible to people of all abilities. By adopting these principles, urban planners can create inclusive environments, allowing for full participation

regardless of physical or cognitive abilities. The implementation of accessible pathways, clear signage, and amenities for individuals with disabilities is not only a matter of equity but also a reflection of a community's commitment to inclusivity.

Community engagement emerged as a crucial component of the planning process in this study. The value of participatory planning, as emphasised by Arnstein(1969), is evident in the findings. Engaging the community through feedback sessions, surveys, and participatory design workshops allows planners to tailor public spaces to serve their users better. This approach fosters a sense of ownership and connection, ensuring that public spaces resonate with the values and needs of the community.

Cultural sensitivity is another vital aspect of inclusive public space design. The findings reveal varying usage patterns among different cultural groups, particularly in beach visitation and recreational spaces. To address this, urban planners must engage with these communities to understand their specific needs and preferences. Designing amenities and activities to reflect cultural interests and incorporating cultural symbols and representations in public spaces can enhance engagement and ensure all groups feel represented and valued.

In addition to cultural sensitivity, the recommendations underscore the importance of family-friendly infrastructure. As demonstrated by the success of well-designed playgrounds, picnic areas, and shaded spots, family-friendly spaces can attract more frequent visits and foster intergenerational connections. Public spaces that cater to diverse activities, such as sports fields, libraries, and community centres, are vital for promoting social cohesion and community health.

Safety and security measures also play a significant role in the inclusivity of public spaces. Drawing on the insights of Jeffery's(1971) "*Crime Prevention Through Environmental Design*", the importance of enhanced lighting, increased surveillance, and the promotion of community policing initiatives are highlighted as critical elements for designing safe environments. These measures can improve public spaces' perceived safety, encouraging more frequent visits from solo visitors, particularly women and older adults.

Finally, based on the analysis, one advocates for the continuous evaluation and adaptation of public space design through data-driven approaches. Regular feedback

mechanisms, coupled with community involvement, are essential for ensuring that public spaces remain relevant, inclusive, and responsive to their users' changing needs. By adopting a flexible, iterative approach to urban planning, cities can create vibrant, welcoming environments that enhance the quality of life for all residents.

The findings demonstrate alignment with both Lefebvre's '*Spatial Triad*' and Harvey's '*Spatial Matrix*' in recognising that public spaces must be physically accessible (*perceived/absolute space*), socially responsive (*conceived/relative space*), and culturally meaningful (*lived/relational space*). The emphasis on inclusive design, cultural representation, and participatory planning reflects a holistic understanding of space that incorporates both its physical and symbolic dimensions. Despite these theoretical alignments, the study also reveals areas of divergence. While planners may '*conceive*' public spaces with inclusivity in mind, the lived experiences of women, older adults, and cultural groups indicate that these spaces are not always welcoming or representative. Additionally, the gap between the '*relational*' production of space and its perceived reflection of societal values suggests that public spaces are not yet fully attuned to their users' power dynamics and social realities.

In conclusion, the development of inclusive public spaces requires a multi-faceted approach that integrates Lefebvre's concepts of '*perceived*', '*conceived*', and '*lived spaces*', as well as Harvey's '*absolute*', '*relative*', and '*relational*' dimensions of space to enable gender-specific needs, universal design principles, cultural sensitivity, and community engagement. Urban planners must prioritise the creation of spaces that are accessible and welcoming to all. These places need to reflect the diversity of the communities they serve. By doing so, they will improve public spaces' functionality and contribute to urban environments' social and cultural vitality. Through careful planning, strategy development, appropriate design standards, ongoing community involvement, and a commitment to inclusivity, public spaces can become true assets that enhance the well-being of all individuals within the community. By adopting a flexible, iterative approach to urban planning, cities can create vibrant, welcoming environments that improve the quality of life for all residents. Through continuous evaluation, cultural sensitivity, and participatory planning, public spaces can become true assets contributing to urban environments' social, cultural, and relational fabric.

7. CHAPTER SEVEN - SYNOPSIS AND RECOMMENDATIONS

7.1 Introduction

Public spaces are vital for fostering social interaction, cultural expression, and civic engagement. As cities continue to evolve and grow, urban planners face the challenge of creating public environments that are inclusive, accessible, and reflective of the diverse needs of the population. This research has explored the complex dynamics of public space design through theoretical insights from prominent urban theorists, empirical data analysis, and practical recommendations. It highlights the importance of gender-specific needs, age-friendly environments, universal design principles, and cultural sensitivity in creating inclusive public spaces. Moreover, the research underscores the necessity of a city-wide public space strategy to drive the development of inclusive spaces, according to Akkiah (2022). This concluding chapter synthesises the study's key findings, situates them within the broader theoretical discourse, and offers practical recommendations for urban planning, emphasising the need for a strategic, city-wide approach.

7.2 The theoretical implications: Space as a social product

This research's core is a critical engagement with space as a socially produced entity shaped by power relations, cultural practices, and everyday experiences. Harvey's (1973) concept of the '*Spatial Matrix*' provides a valuable framework for understanding how broader socio-political and economic forces influence public spaces. His theory emphasises that space is not merely a neutral container but an active heuristic medium through which social processes are produced and reproduced. In the context of public spaces, this implies that their design, regulation, and use are deeply embedded in power structures that dictate who has access and who benefits from them.

This research reveals how public spaces often reflect existing inequalities in society. Gender disparities are not just individual preferences but are deeply rooted in the patriarchal structures that shape urban environments. Similarly, the under-representation of older adults and individuals with disabilities in public spaces can be traced to

infrastructural and social barriers that limit their access. Harvey's '*Spatial Matrix*' assists urban researchers in understanding these disparities as outcomes of more significant systemic issues, which urban planners must address to create more equitable public spaces.

Lefebvre's (1991) '*Spatial Triad*' further enriches this analysis by emphasising the interplay between '*perceived space*' (the physical environment), '*conceived space*' (the conceptualised designs and regulations), and '*lived space*' (the everyday experiences of individuals). Public spaces are not just physical entities, rather they are imbued with meaning and are actively shaped by those who use them. Lefebvre's triad reminds planners that creating inclusive public spaces requires attention to all three dimensions. This approach includes ensuring physical accessibility (*perceived space*), designing spaces that reflect diverse needs (*conceived space*), and fostering environments where people feel welcome and included (*lived space*).

7.3 Key findings: The role of public space in social justice

This research highlights several critical trends that significantly affect the development of inclusive public spaces. First, gender disparities in public space usage reveal the gendered nature of urban environments. As Kern (2020) notes in her work on feminist urbanism, public spaces are often designed with a default male user in mind, which can marginalise women and limit their participation. The data from this study supports this claim and demonstrates that men consistently represent a higher proportion of visitors across all public spaces. Urban planners must consider gender-specific needs, including safety concerns, social practices, and spatial preferences, to address these disparities.

Second, the marginalisation of older adults and individuals with disabilities in public spaces reflects broader societal inequities. Gehl (2007) argues that urban spaces are often designed to focus on speed and efficiency, which can alienate those who require slower, more accessible environments. The outcome of this research supports Gehl's critique by demonstrating the need for age-friendly and universally designed public spaces that accommodate the needs of all users. By incorporating components such as appropriate design accessible pathways, comfortable seating, and shaded areas,

planners can create environments welcoming to older adults and individuals with disabilities.

Cultural sensitivity also emerged as a crucial factor in creating inclusive public spaces. The research shows that different cultural groups use public spaces in varying ways, and public space design must reflect this diversity. Low (2000) emphasises the importance of recognising cultural differences in urban design, and this thesis reinforces her argument by highlighting the need for culturally resonant spaces that cater to the specific needs and preferences of different communities. Planners must engage with these communities to ensure that public spaces are not only physically accessible but also culturally relevant.

7.4 The need for a City-wide public space strategy

One of the central conclusions of this thesis is the need for a city-wide public space strategy that drives the development of inclusive spaces across the urban landscape. While individual efforts to create accessible and inclusive public spaces are essential, they are insufficient without a broader strategic framework that guides development at the city level. A city-wide strategy would ensure that inclusivity is not an afterthought but a foundational principle in the planning and designing of all public spaces.

Such a strategy should be rooted in the concept of the *'Right to the city'* as articulated by Lefebvre. Lefebvre (1991) argues that all residents, regardless of their socio-economic status, gender, age, or cultural background, have a right to participate in shaping the urban landscape. The outcome of this research demonstrates that public spaces often reflect and reinforce existing inequalities. A city-wide strategy must seek to redress these imbalances by ensuring that all residents have equal access to high-quality public spaces. The respondents' perceptions also confirm the lack of engagement and involvement in city strategies and policies specifically referring to public space.

A strategic approach would involve setting clear goals and standards for public space design, ensuring every neighbourhood has access to inclusive and accessible public spaces. This strategy should be informed by data, such as the survey findings presented

in this thesis, highlighting the specific needs of underrepresented groups. Urban planners should prioritise the development of gender-inclusive spaces, age-friendly environments, and culturally sensitive designs, all of which have been shown to enhance public space accessibility and usage.

Additionally, a city-wide strategy should include mechanisms for continuous community engagement and feedback. As this research has shown, public spaces are dynamic environments shaped by their users. Planners must, therefore, engage in ongoing dialogue with communities to ensure that public spaces remain responsive to their evolving needs. This could involve regular surveys, participatory planning workshops, and public forums where residents can voice their concerns and suggestions.

Furthermore, Harvey (1992) highlights that a city-wide public space strategy should address space's economic and political dimensions. Public spaces are often sites of contestation, where different social groups compete for access and control. Therefore, a strategic approach to public space development must consider issues of power and inequality, ensuring that public spaces serve as sites of social justice rather than exclusion.

7.5 Recommendations for future practice

Building on the theoretical insights of Henri Lefebvre and David Harvey and the empirical findings of this research, several key recommendations emerge for future urban planning practice. To foster inclusivity and ensure the equitable development of public spaces, this study recommends a strategic, multi-faceted approach to urban planning within the eThekweni Municipality. A city-wide public space strategy is crucial for creating environments that meet the diverse needs of residents and address systemic inequities.

The following key recommendations provide a comprehensive, inclusive public space planning and development framework.

A comprehensive strategy prioritising inclusivity across all neighbourhoods is essential for ensuring equitable access to public spaces. This strategy should establish clear, measurable goals that focus on the inclusion of underrepresented groups such as

women, children, older people, and individuals with disabilities. It should promote gender inclusivity, age-friendly environments, and universal design while also being culturally sensitive to the unique characteristics of the communities it serves. This approach must be informed by robust data collection and analysis, alongside ongoing community engagement, to ensure that the public spaces are continuously responsive to the evolving needs of residents.

Public space planning must prioritise the needs of women and gender minorities to create safe, welcoming environments. Gender-inclusive design addresses safety concerns by providing well-lit areas, surveillance, and emergency services. Public facilities should support female participation by offering amenities such as childcare spaces and gender-sensitive restrooms. Moreover, urban planners should design spaces that challenge traditional gender norms and encourage diverse forms of social and recreational participation by all genders.

Public spaces must cater to all users, including older adults and individuals with disabilities. Adopting universal design principles such as creating accessible pathways, providing comfortable seating, and ensuring clear and readable signage will ensure that public spaces are usable by individuals of all ages and abilities. Universal design is not only a means of accessibility but also enhances the overall user experience, making public spaces more inclusive and welcoming to all.

Public spaces should reflect the cultural diversity of their communities, offering environments that resonate with different cultural groups. Urban planners should engage with these communities to understand their specific cultural needs and ensure that public spaces incorporate culturally relevant programming, events, and public art. This would create spaces that are not only inclusive but also celebratory of the diverse identities present within the city. Cultural sensitivity should be an integral component of the public space design process to promote a sense of belonging for all users.

For public spaces to remain relevant and effective in serving their communities, urban planners must foster ongoing dialogue with residents. This can be achieved through participatory planning workshops, regular public forums, and feedback mechanisms that allow community members to voice their concerns and preferences. Continuous

engagement ensures that public spaces evolve in line with the community's needs and aspirations, allowing residents to take ownership of these spaces and participate actively in their development.

Public spaces are often sites of social and political contestation, where issues of power and inequality become evident. Urban planners must acknowledge these dynamics and adopt a strategic approach to redress existing inequalities in access to and use of public spaces. This involves ensuring that marginalised groups have the right to participate in the planning and development of public spaces and that these spaces are designed to promote social cohesion and equity. A key focus should be dismantling barriers that prevent equitable access and ensuring that public spaces serve as truly inclusive environments for all residents.

By implementing these recommendations, the eThekweni Metropolitan Municipality can create public spaces that are functional and aesthetically pleasing but also inclusive, equitable, and reflective of its population's diverse needs. These strategies are integral to fostering social cohesion and ensuring that public spaces contribute meaningfully to the well-being of all residents.

The idea of cities as dynamic forms is often associated with multiple urban theorists and scholars who have discussed cities' fluid and evolving nature. In Jane Jacobs's seminal work "*The Death and Life of Great American Cities*" (1961), she refers to cities as dynamic entities. Jacobs emphasised that cities are not static. They are organic, constantly evolving, and shaped by the interactions of their residents. Jacobs views urban environments as complex systems with ever-changing patterns of human behaviour, economics, and physical space. Lefebvre (1991) discusses the dynamic nature of cities through his concept of the "*production of space*". He argued that space is not a passive backdrop for human activity but is actively produced and constantly changing through social relations, power structures, and economic forces. His '*Spatial Triad*' theory with its '*perceived space*', '*conceived space*', and '*lived space*' reflect this dynamism.

Lynch's "*The Image of the City*" (1960) explores cities as dynamic forms through the lens of urban design and perception. He discusses how cities are experienced as dynamic

systems of paths, edges, districts, nodes, and landmarks that shape how people navigate and understand urban environments.

As identified above, cities and urban spaces are very dynamic and constantly changing and evolving, so too should the framework for developing public space be fluid and dynamic in enabling the creation and production of inclusive public spaces. Public spaces have long been the focal points of urban life, shaping social interactions, cultural exchanges, and the identity of cities. Yet, as the urban environment continues to evolve, so must our understanding of how public spaces contribute to communities' social, economic, and environmental well-being. An emerging concept of a "*Public Space Dividend*" emerges from this rethinking, proposing that public spaces generate multi-dimensional returns that extend beyond their immediate physical presence. This emerging concept, while the term itself may not be attributed to a single individual, reflects broader theories about how public spaces generate value beyond just aesthetic or recreational purposes. It is deeply grounded in theoretical frameworks such as Henri Lefebvre's and David Harvey's conceptual approaches, which offer valuable insights into the complex dynamics of urban space.

7.6 The theoretical foundations for the public space dividend

The concept of the Public Space Dividend is fundamentally rooted in Lefebvre's Spatial Triad and Harvey's Spatial Matrix, yet it crucially extends beyond both frameworks by introducing an additional layer of analytical depth and quantification. Lefebvre's triad establishes a foundational understanding by conceptualising public spaces as simultaneously perceived, conceived, and lived. The perceived dimension illustrates public spaces as tangible, practical environments providing measurable benefits such as recreation, commerce, and social interactions. Conceived spaces highlight the strategic intentions behind planning decisions, aiming to optimise social, economic, and environmental outcomes, whereas lived spaces underscore intangible community experiences, including cultural expression, identity, and collective memory (Lefebvre, 1991).

Harvey's Spatial Matrix enriches this foundation by framing the production of space within broader socio-economic dynamics and capitalist processes (Harvey, 2004). His dimensions of absolute, relative, and relational space expand Lefebvre's triad by adding complexity and scale. Absolute space signifies the physical infrastructure of urban environments—parks, plazas, streets—that underpins city life. Relative space situates these public spaces within broader urban connectivity, mobility networks, and resource accessibility, while relational space emphasises the intricate social and political relationships public spaces mediate, shaping community interactions and civic engagement (Harvey, 2006).

However, while Lefebvre and Harvey establish a comprehensive theoretical foundation for understanding public spaces' multi-dimensional roles, neither explicitly provides a mechanism for quantifying nor systematically measuring their outcomes. The Public Space Dividend concept addresses this gap by adding a quantifiable analytical layer, allowing for a systematic assessment of the tangible and intangible returns generated by public spaces. It operationalises the nuanced dimensions described by Lefebvre and Harvey into measurable indicators, thus facilitating a clearer assessment of public spaces' impacts on urban quality of life, social cohesion, economic vitality, and environmental sustainability.

By incorporating quantification into the existing qualitative frameworks, the Public Space Dividend becomes not only theoretically robust but practically actionable. It enables urban planners, policymakers, and researchers to evaluate the effectiveness of public space interventions through clearly defined metrics, such as improved health outcomes, economic gains from increased commerce, enhanced community interaction, or increased civic participation. This capability to measure outcomes provides crucial evidence for the broader value of public spaces, reinforcing the significance of investment decisions and policy initiatives aimed at fostering inclusive and sustainable urban development.

Thus, the Public Space Dividend concept is deeply anchored in the theoretical insights of Lefebvre and Harvey, yet meaningfully expands their frameworks. It bridges the gap

between theory and practice by providing a structured, measurable approach to evaluating and enhancing the multiple returns generated by urban public spaces.

7.6.1 The public space dividend framework

The Public Space Dividend is conceptualised as a multi-dimensional return on investment from public spaces, understood through the lenses of Lefebvre and Harvey. This framework can be broken down into several key areas of impact:

- **Social dividends:**

Public spaces generate social capital by bringing people together, fostering social cohesion, and promoting inclusive interaction across different demographic and cultural groups. Experts like Jan Gehl emphasise the importance of "*life between buildings*", where public spaces create opportunities for spontaneous social encounters that enrich urban life.

- **Economic dividends:**

Economically, public spaces contribute to urban vitality by attracting businesses, increasing property values, and supporting local economies. William Whyte's work highlights how well-designed public spaces can drive economic activity by drawing people to urban centres, where they engage in commerce and cultural activities.

- **Environmental dividend:**

From an ecological perspective, public spaces play a critical role in urban sustainability. Green spaces mitigate urban heat islands, enhance biodiversity, and provide essential ecosystem services. As noted by landscape architects like James Corner, public spaces are integral to cities' ecological resilience.

- **Cultural dividends:**

Public spaces are also cultural assets, serving as platforms for artistic expression, cultural events, and heritage preservation. Public space experts like Richard Sennett argue that vibrant public spaces are essential for maintaining the cultural vitality of urban communities.

- **Health dividends:**

Access to well-designed public spaces is linked to improved physical and mental health outcomes. Public health research underscores the importance of parks and recreational areas in promoting active lifestyles and reducing stress, contributing to the overall well-being of urban populations.

- **Civic dividends:**

Public spaces provide arenas for civic participation, protest, and democratic engagement. Scholars like Don Mitchell have emphasised the role of public spaces in supporting the "right to the city", where public spaces serve as platforms for political expression and collective action.

7.6.2 The public space dividend

Below is a diagram illustrating the Public Space Dividend, integrating and building on the Lefebvre's 'Spatial Triad' and Harvey's 'Spatial Matrix'. Figure 7-1 represents the interplay between Lefebvre's triad and Harvey's spatial dimensions, showing how each aspect of space can contribute to the overall Public Space Dividend across social, economic, environmental, cultural, health, and civic dimensions.

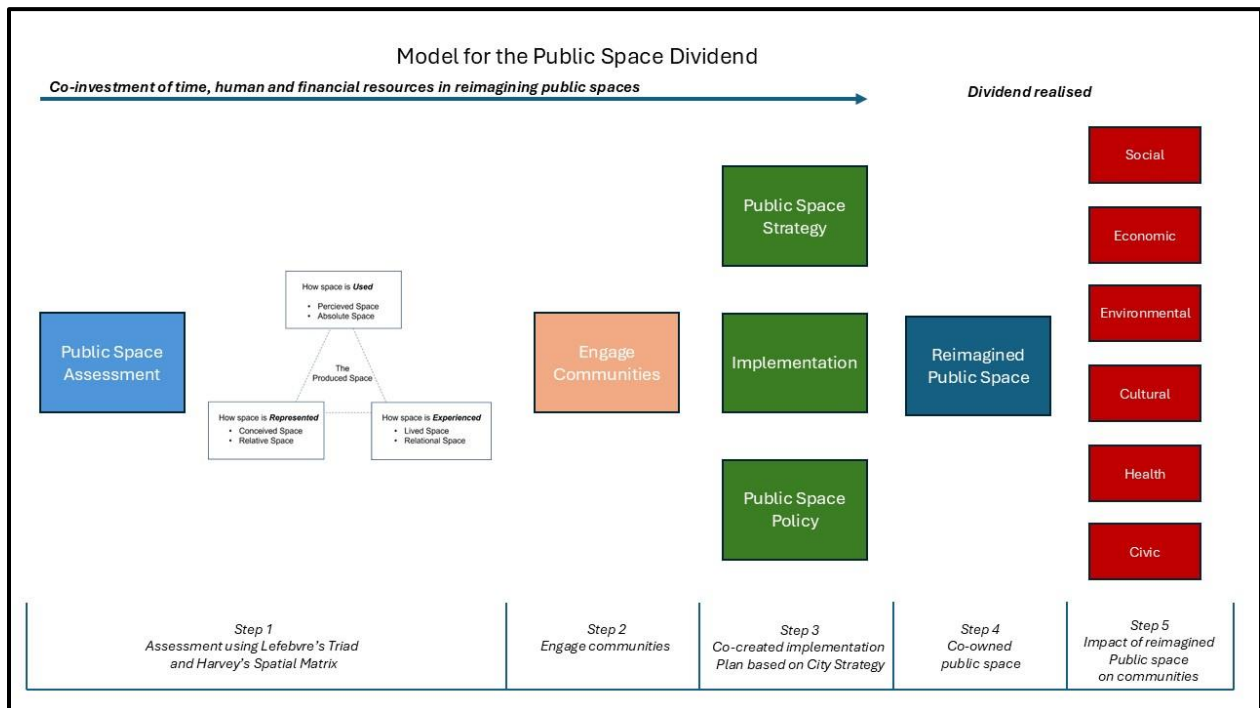


Figure 7-1: Diagram representing public space dividend

Source: Author's own, (2024)

Step 1: - Detailed analysis

The first critical step in developing public spaces is to undertake an assessment or diagnostic analysis. It is fundamental for laying a solid foundation for subsequent design, engagement, and implementation processes. This initial phase is vital for understanding the existing conditions, identifying gaps, and evaluating the potential for maximising the "Public Space Dividend." The importance of an in-depth assessment cannot be overstated, as it ensures that accurate data and a comprehensive understanding of community needs inform the public space development process.

A detailed spatial analysis of the public space, including its physical layout, connectivity, accessibility, and relationship to surrounding areas, provides essential insights. Such an analysis will identify the current usage patterns, potential access barriers, and underutilised areas. By mapping out these elements, urban planners can better understand how the space fits into the broader urban fabric and serves its community.

Public spaces often have historical and cultural significance that must be considered in their development. A diagnostic analysis helps uncover these layers of meaning, ensuring that new developments respect and enhance the area's cultural heritage.

Understanding the demographics of the community that surrounds a public space is crucial. Age distribution, income levels, cultural diversity, and social dynamics all affect how a space is used and what it needs to offer. A diagnostic analysis should capture this data to tailor the development to the community's specific needs.

Engaging the community at this early stage helps identify their aspirations, concerns, and priorities. Planners can gather qualitative and quantitative data that informs the design process through surveys, interviews, focus groups, and workshops. This initial engagement also sets the stage for more meaningful participation in later phases.

A thorough understanding of a public space's environmental conditions is essential for sustainable design. Factors such as climate, biodiversity, air quality, and water management need to be analysed to create resilient and environmentally friendly spaces.

Public spaces contribute to local economies. They, impact increasing property values and can boost tourism and local business activity. A diagnostic analysis can help assess the potential economic impact of the space and identify opportunities for economic development.

The concept of the public space dividend is centred on the idea that public spaces are valuable assets that can yield significant returns for individuals and communities. These returns include improved health outcomes, enhanced social cohesion, increased property values, and more vibrant local economies. However, realising these dividends requires a nuanced understanding of what the space offers and how it can be improved.

A diagnostic analysis allows for targeted interventions that address specific challenges and opportunities within the space. Rather than applying a one-size-fits-all approach, planners can develop solutions tailored to the site's unique characteristics and users' needs, thereby maximizing the potential benefits.

The public space dividend must be equitably distributed among all community members. A comprehensive assessment ensures that vulnerable or marginalised groups are not overlooked, and that the development process is inclusive. By identifying gaps in access and usage, planners can design spaces that are welcoming and accessible to everyone, thereby enhancing social equity.

A diagnostic analysis is crucial in ensuring that public spaces are sustainable and resilient in the face of environmental challenges. By understanding the ecological characteristics of the space, planners can implement green infrastructure, enhance biodiversity, and design for climate resilience. This benefits the environment and contributes to the long-term viability of the space, ensuring that the public space dividend continues to accrue over time.

Public spaces are dynamic, evolving environments that must adapt to changing community needs and external conditions. A thorough assessment provides the baseline data needed to measure the space's long-term impact and make necessary adjustments over time. This adaptability is key to ensuring that the space remains relevant and continues to provide value to the community.

The assessment or diagnostic analysis phase is a foundational step in public space development that has far-reaching implications for the project's success. By providing a clear understanding of the space's current conditions, community needs, environmental factors, and economic potential, this analysis sets the stage for informed decision-making throughout the development process. Most importantly, it ensures that public spaces are designed to maximise the Public Space Dividend, by delivering social, economic, and environmental benefits that enhance the quality of life for all community members. Without this critical first step, the potential of public spaces to serve as engines of community well-being and resilience may go unrealised.

It is essential to allow cities sufficient flexibility to develop their individual assessment frameworks utilising the Public Space Dividend framework. This local applicability is necessary given the evolving nature and dynamics of urban environments. Cities are influenced by various factors that necessitate adaptable assessment approaches. For instance, this research proposes an assessment framework, Annexure 2, based on observed data.

The framework comprises several key components. The first is the "*Category*", which references Harvey's and Lefebvre's conceptual approach. The second component is the "*Aspect*" of public space, which encompasses areas directly addressed in the Household Survey Annexure 1. Indicators play a crucial role in any assessment framework. Therefore, a set of indicators aligned with the categorisation of the "*Aspect*" has been proposed.

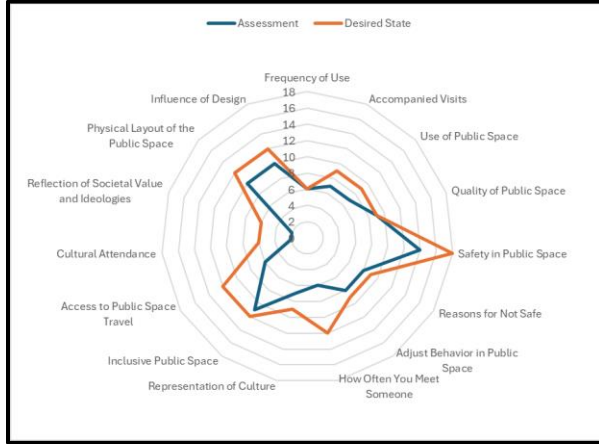
A three-point scoring system is suggested, as per Annexure C, based on assessors' evaluations. Scores are assigned under the headings Needs Improvement = 1, Adequate = 2, and Excellent = 3. The total score is then compared to the maximum possible "*Desired*" score that can be achieved for each "*Aspect*."

The above, four public spaces were assessed through observation; these spaces were: -

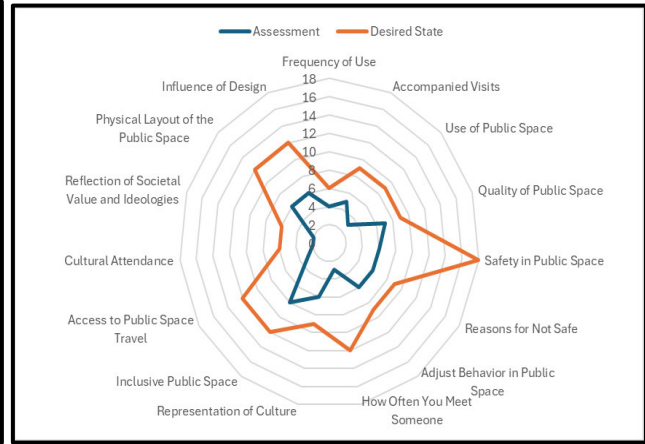
- Neighbourhood Park, Old Bush Road;
- Beach Promenade – Umhlanga;
- Shopping Mall - La Lucia Mall; and,
- Beach – Saratoga Park.

The above sites reflect the public spaces frequented by residents.

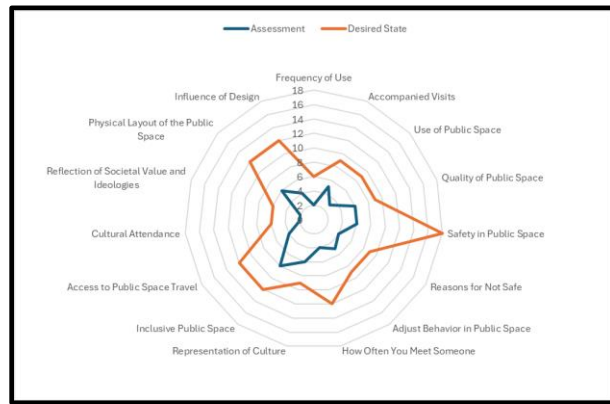
The outcome of the assessment is captured in the Figure 7-2 below with the detailed scoring listed in Annexure C:



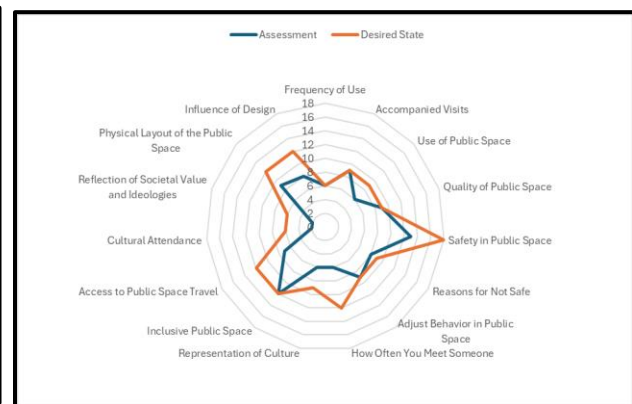
(a) Umhlanga Promenade



(b) Saratoga Park



(c) Old Bush Road Park



(d) La Lucia Mall

Figure 7-2: Observational assessment of sample public space

Source: Author's own, (2024)

The assessment aims to identify gaps and areas where interventions can enhance the quality of public spaces. However, it is equally critical that, in the process of identifying these gaps, communities are actively engaged in discussions about potential interventions. This collaborative approach fosters the co-creation of public spaces that

are inclusive, equitable, and accessible to all members of the community. It ensures the resulting spaces meet the diverse needs and aspirations of those who use them.

Step 2: - Public engagement

The concept of Public Space Engagement extends the theoretical frameworks provided by Henri Lefebvre's Spatial Triad and David Harvey's Spatial Matrix, offering an additional dimension of community participation and quantification that these foundational models lack. Lefebvre's Triad conceptualises space through perceived, conceived, and lived dimensions, addressing the tangible and intangible attributes of public spaces (Lefebvre, 1991). Similarly, Harvey's Spatial Matrix examines the complexity of spatial production within urban capitalism, considering absolute, relative, and relational spaces (Harvey, 2004). However, neither framework explicitly incorporates a mechanism for systematically engaging or quantifying community participation within public spaces. The Public Space Engagement model fills this critical gap by operationalising community involvement into measurable strategies and outcomes.

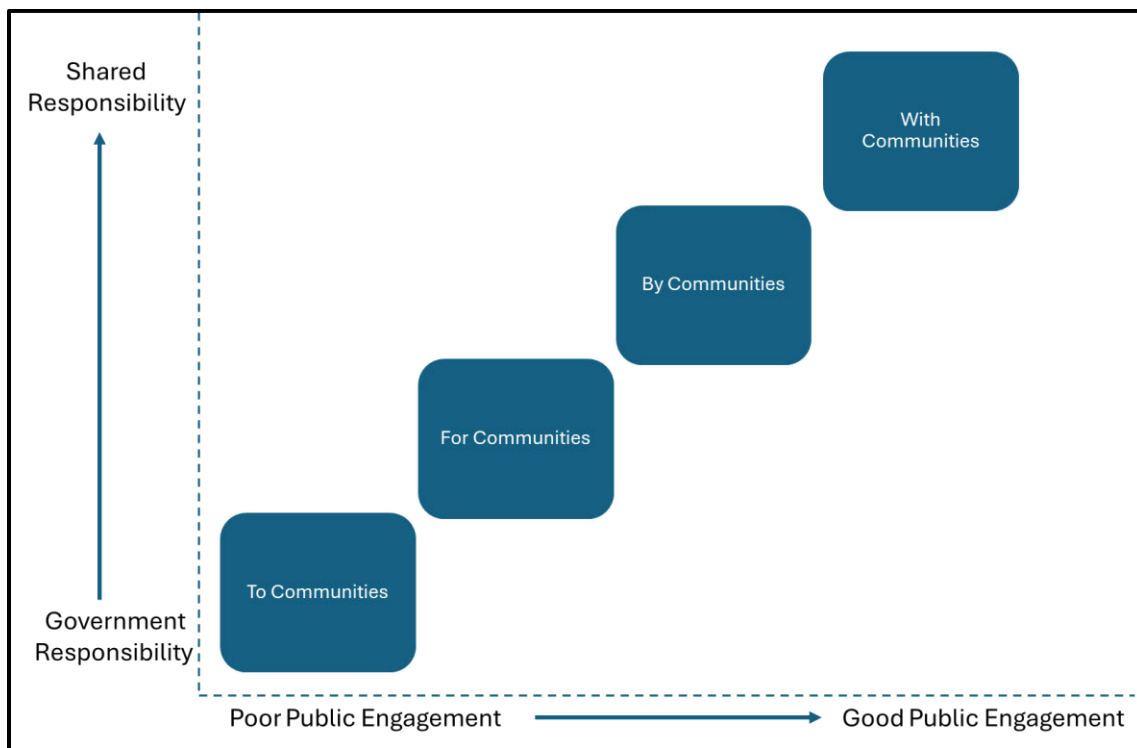


Figure 7-3: A conceptual model for engaging communities

Source: Author's own, (2024)

Figure 7-3 presents a robust conceptual framework illustrating four distinct modes of engagement: To Communities, For Communities, With Communities, and By Communities, each representing varying degrees of community influence and participation.

Engagement 'To Communities' reflects a top-down, institution-driven approach where spaces are delivered with limited community input. This aligns closely with Lefebvre's 'conceived space', demonstrating planned intentions, yet it risks neglecting local needs without transparent communication and feedback mechanisms.

The 'For Communities' approach similarly involves external planning but focuses explicitly on addressing perceived community needs based on expertise and policy priorities. While pragmatic in scenarios demanding immediate interventions (e.g., post-disaster responses), this method may miss the nuanced experiences and local knowledge embedded in Lefebvre's 'lived space'.

Conversely, 'By Communities' engagement exemplifies the bottom-up, community-driven model, closely mirroring Harvey's concept of 'relational space', which is produced and sustained through social interactions. This quadrant empowers residents, fostering strong local identity, ownership, and stewardship of public spaces, though it requires enabling policies and resource support to ensure long-term viability.

The quadrant 'With Communities' illustrates a collaborative governance approach (Ansell, 2008), embodying elements from both Lefebvre and Harvey's frameworks. It merges strategic, planned interventions (conceived space/absolute space) with the experiential insights and collective aspirations of the community (lived space/relational space). This approach necessitates structured methodologies such as those outlined in Arnstein's Ladder of Citizen Participation (1969) and the IAP2 Spectrum (2007), facilitating shared decision-making processes and quantifiable participatory outcomes.

Crucially, the Public Space Engagement model introduces an analytical and quantifiable dimension to community participation. It allows urban planners and municipalities to measure the effectiveness of various engagement strategies, assessing their impacts on social cohesion, inclusivity, and spatial equity. The dynamic interplay among the four quadrants, depicted through evolving engagement methods based on community context

and capacity, provides a flexible yet structured approach that complements and enriches Lefebvre and Harvey's theoretical frameworks.

Thus, the Public Space Engagement concept deepens the theoretical foundation laid by Lefebvre and Harvey by explicitly embedding community participation within spatial analysis, offering both a theoretical expansion and a practical, quantifiable approach to inclusive public space development.

Step 3: - The implementation phase - extracting and enhancing the public space dividend

The implementation phase is crucial for actualising the Public Space Dividend, translating theoretical and policy frameworks into tangible urban outcomes. Effective implementation demands coordinated action among municipal departments, urban planners, community organisations, and residents, guided by transparency, collaboration, and responsiveness to local needs.

Central to this phase is the transformation of public spaces into vibrant, accessible, and multifunctional areas through physical upgrades, enhanced amenities, and equitable usage policies. Continuous community engagement remains essential, enabling iterative improvements aligned with evolving community preferences.

Strategically implemented public spaces contribute to broader urban goals such as health promotion, social cohesion, and environmental sustainability, positioning them as catalysts for comprehensive urban improvement. Thus, effective implementation realises the Public Space Dividend, turning public spaces into inclusive areas of opportunity, connectivity, and vitality for urban residents.

Step 3.1 - The need for a city-wide public space strategy and policy

To fully realise the Public Space Dividend, cities must adopt a comprehensive, city-wide public space strategy that integrates inclusivity, sustainability, and resilience. Such a strategy should prioritise equitable access for all residents, regardless of socio-economic status, gender, age, or cultural background, reflecting participatory planning principles advocated by urbanists such as Jane Jacobs (1961). Effective implementation requires robust collaboration among urban planners, policymakers, community organisations, and

residents, aligning closely with Lefebvre’s ‘Spatial Triad’ and Harvey’s ‘Spatial Matrix’ as depicted in Figure 7-4 (Author’s own, 2024).



Figure 7-4: The conceptual public space framework

Source: Author’s own, (2024)

Respondents from this study have consistently highlighted the importance of inclusive and culturally representative public spaces. However, the notable perception gaps in cultural representation and inclusivity across different demographic groups indicate the necessity for targeted interventions within such a strategy. The experiences of Cape Town, Mexico City, and Christchurch reinforce this need. In Cape Town, despite extensive investment in public spaces, persistent spatial inequality underscores the challenge of translating conceived spaces into equitable lived experiences. Mexico City illustrates convergence, as substantial community involvement has successfully fostered inclusive and culturally vibrant public spaces. Conversely, Christchurch reveals

divergence, with public spaces serving as critical components of post-disaster resilience but demonstrating mixed outcomes in inclusivity and equity.

Complementing the strategy, cities must develop a robust public space policy providing the legal and institutional frameworks necessary for consistent yet context-sensitive planning, management, and development of public spaces. Such policy frameworks ensure alignment with strategic goals of inclusivity, sustainability, and community-driven approaches, facilitating both regulatory clarity and funding opportunities for sustained public investment. An integrated strategy-policy approach would enable cities to systematically maximise the Public Space Dividend, ensuring that public spaces equitably serve diverse community needs, enhancing urban resilience and quality of life.

Step 4: - Realizing the public space dividend

Following the assessment, community engagement, and strategic implementation of co-created public spaces, the Public Space Dividend represents the multi-dimensional return on investment, of time, and the combination of human and financial resources derived from public spaces. If the strategy has been informed by the spatial theories of Lefebvre and Harvey reimagined inclusive public spaces could be created. The impact of these reimagined spaces can be extracted through a dividend using the following broad categories with associated indicators. The more indicators realised, the greater the effect of the Public Space Dividend. The indicators for calculating the benefits of the dividend are as follows:

1. Social dividends indicators: -

- **Social interaction frequency:** Number of social interactions observed or reported in public spaces (e.g., spontaneous conversations, group activities).
- **Diversity of users:** The demographic diversity of public space users includes age, gender, ethnicity, and socio-economic status.
- **Social cohesion:** Perception surveys that measure a sense of community, belonging, and social trust among users of public spaces.
- **Inclusivity of design:** Assessing the accessibility of public spaces for individuals with disabilities, the elderly, and other vulnerable groups.

- **Public space usage:** Percentage of the local population using public spaces regularly (e.g., daily or weekly).

2. **Economic dividends indicators: -**

- **Foot traffic:** Increase in pedestrian traffic in and around public spaces, as measured by footfall counters or observational studies.
- **Property values:** Change in property values surrounding improved public spaces, tracked through real estate data. It could result in additional rate incomes due to improved property values if the public places are implemented correctly.
- **Business activity:** Number of new businesses, pop-up shops, and street vendors operating in or near public spaces.
- **Event revenue:** The economic impact of public space-hosted events (e.g., markets, festivals) is measured by attendance and revenue generated.
- **Employment rates:** Changes in local employment, particularly in sectors like retail, food services, and tourism linked to public space improvements.

3. **Environmental dividends indicators: -**

- **Urban heat island mitigation:** Changes in local temperatures in areas with increased green spaces compared to non-improved areas.
- **Biodiversity:** Increase in local biodiversity, including the number of native plant species, pollinators, and bird species observed in green public spaces.
- **Air quality improvement:** Changes in air quality, particularly reductions in pollutants (e.g., particulate matter, NO₂) in areas near green public spaces.
- **Stormwater management:** The volume of stormwater runoff is mitigated by green infrastructure (e.g., permeable surfaces, rain gardens) integrated into public spaces.
- **Tree canopy coverage:** Increase tree canopy coverage and its impact on shade provision and carbon sequestration.

4. **Cultural dividends indicators: -**

- **Cultural events frequency:** The number of cultural events (e.g., performances, exhibitions, festivals) held in public spaces annually.

- **Public art installations:** Calculating the number of public art installations and their impact on community engagement (e.g., participation in art-related events).
- **Cultural representation:** Diversity of cultural representation in public spaces, including traditional and contemporary artistic expressions.
- **Heritage preservation:** Estimating the number of heritage sites or culturally significant landmarks that have been protected and integrated into public space designs.
- **Public perception of cultural value:** Survey data on residents' perceptions of public spaces as vital to local cultural identity and expression.

5. **Health dividends indicators: -**

- **Physical activity levels:** Increase in the number of people engaging in physical activities (e.g., walking, jogging, cycling) in public spaces.
- **Mental health benefits:** Public space users report reducing stress levels and improving mental well-being (through surveys or interviews).
- **Obesity rates:** Changes in obesity and related health outcomes (e.g., diabetes, heart disease) in communities with improved access to public spaces.
- **Access to green spaces:** Percentage of the population living within a certain distance (e.g., 500 meters) of a park or green public space.
- **Health-related events:** The number of health-related events (e.g., fitness classes, wellness workshops) conducted in public spaces resulting in improved health outcomes.

6. **Civic dividends indicators**

- **Public participation:** The number of public forums, protests, or community meetings held in public spaces, which indicates civic engagement.
- **Voter turnout:** Correlation between improvements in public spaces and voter turnout or civic participation rates in the surrounding areas.
- **Community-led initiatives:** The number of community-driven projects or public space improvements reflecting active civic involvement.

- **Public space policy engagement:** The extent to which public space users are involved in policy discussions or decision-making processes about space management.
- **Protest and expression:** Frequency: Number and diversity of peaceful demonstrations or public expressions of opinion held in public spaces.
- **Empowered communities:** There has been an increase in community empowerment, as measured by residents' participation in decision-making processes, leadership in public space projects, and access to resources that support community initiatives.
- **Social capital building:** Growth in social networks and trust within communities using public spaces, as evidenced by the formation of local organisations, volunteer groups, and collaboration between different community stakeholders.

This multi-dimensional framework captures the wide range of benefits of public spaces and emphasises their critical role in creating equitable, sustainable, and thriving urban communities.

7.7 The public space dividend as a catalyst for sustainable development

Public spaces are critical to realising the Sustainable Development Goals (SDGs) as they yield a multitude of benefits known as identified in the conceptual model of the public space dividend. This concept encompasses the social, economic, environmental, cultural, health, and civic dividends that public spaces contribute to communities. These dividends make public spaces invaluable assets that enhance sustainability, inclusivity, and resilience across urban and rural landscapes. The relationship between public spaces and the SDGs reflects their multi-functional impact, underscoring their centrality in fostering thriving, sustainable communities, a summary of which is indicated in Table 7-1.

The social dividend of public spaces directly contributes to SDG 3: Good Health and Well-being. Public spaces such as parks, playgrounds, and green areas promote physical activity, providing accessible spaces for walking, cycling, jogging, and recreational sports. This accessibility supports physical health and reduces obesity rates, while green spaces are linked to positive mental health outcomes, reducing stress and enhancing overall well-

being. Access to public spaces is essential for mental health in densely populated urban areas. Public spaces also offer venues for health-focused activities, such as fitness classes and wellness workshops, making health resources more available and strengthening the population's well-being.

The Public Space Dividend also enhances SDG 10: Reduced Inequalities through its social dividend by creating inclusive environments where people from all backgrounds, ages, abilities, and socioeconomic statuses can interact. Public spaces serve as equalisers by accommodating diverse groups, addressing social inequities and fostering integration across communities. Amenities such as wheelchair ramps, tactile paving, and accessible restrooms allow individuals with disabilities, the elderly, and other vulnerable populations to benefit equally. Furthermore, free or low-cost access to public spaces mitigates income disparities, allowing everyone to engage in recreational, cultural, and social activities regardless of economic background.

Within SDG 11: Sustainable Cities and Communities, public spaces contribute a significant environmental and social dividend by fostering urban resilience. Public spaces that utilise green infrastructure can mitigate urban heat islands, improve air quality, and manage stormwater runoff, reducing the risk of flooding and creating a healthier urban environment. These spaces enhance social cohesion by offering areas where people can feel a sense of community and belonging, essential for fostering social capital. In supporting recreational and cultural activities, public spaces also elevate the quality of urban life and promote sustainable urban development, ensuring that cities and communities are inclusive, safe, resilient, and accessible to all.

SDG 13: Climate Action is closely linked to the environmental dividend public spaces provide. Green spaces reduce the impacts of climate change by increasing urban green cover, which regulates city temperatures, sequesters carbon, and improves air quality. Trees and vegetation in public spaces absorb pollutants and cool city landscapes, reducing the effects of urban heat islands. Public spaces encourage sustainable transportation by promoting walking, cycling, and public transit over car use, helping to lower greenhouse gas emissions. These efforts make public spaces essential to climate resilience and the cornerstone of sustainable urban transportation systems.

Public spaces' environmental and biodiversity dividends align with SDG 15: Life on Land. By incorporating green infrastructure, public spaces contribute to biodiversity conservation, supporting local ecosystems and promoting ecological diversity within cities. Urban parks, community gardens, and green corridors are habitats for various plant and animal species. These biodiversity-friendly spaces may feature native plants, pollinator gardens, and bird-friendly designs, fostering a connection to nature among city residents and promoting sustainable environmental practices. In doing so, public spaces help safeguard natural habitats and support ecological networks within urban areas.

In terms of SDG 16: Peace, Justice, and Strong Institutions, the civic dividend of public spaces becomes evident. These spaces serve as venues for civic engagement, such as community meetings, public forums, and peaceful demonstrations, allowing citizens to voice opinions and participate in decision-making processes. Public spaces enhance community resilience by facilitating interactions among diverse groups, promoting social trust, and creating more harmonious communities. As platforms for public participation and transparency, these spaces encourage civic engagement and support the creation of inclusive, accountable institutions where all voices are represented.

The economic dividend associated with public spaces aligns with SDG 8: Decent Work and Economic Growth. Public spaces stimulate local economies by attracting businesses, street vendors, and pop-up markets, which create employment opportunities and support local entrepreneurship. Well-designed public spaces increase foot traffic, which benefits nearby retail establishments and generates revenue through markets, fairs, and festivals. Improving public spaces can also boost property values, attract investment, and create jobs within surrounding areas. Well-located public spaces contribute significantly to sustainable economic growth by fostering local economic activity and providing a range of opportunities that support decent work.

SDG 6: Clean Water and Sanitation is reflected in the environmental dividend public spaces offer through sustainable water management. Public spaces often incorporate stormwater infrastructure, such as rain gardens and permeable pavements, which help reduce urban flooding and allow water to infiltrate the ground, supporting cleaner water systems. These green infrastructure features prevent water pollution and recharge

groundwater. Public spaces that provide sanitation facilities, such as restrooms and drinking water fountains, fulfil basic hygiene needs, ensuring that everyone can safely enjoy these spaces with access to essential amenities.

The public space dividend is integral to achieving the Sustainable Development Goals. Public spaces connect individuals with nature, enhance social ties, promote physical and mental well-being, and support economic, cultural, and civic activities, while simultaneously addressing multiple SDGs. They serve not just as amenities but as vital infrastructure that underpins sustainable development. Their multi-faceted contributions reflect a broad spectrum of dividends related to social, economic, environmental, cultural, health, and civic aspects of development. They are indispensable to building more inclusive, resilient, and sustainable communities. As such, the public space dividend is a concept that underscores the fundamental role these spaces play in fostering a better quality of life and ensuring a more sustainable future for society as a whole.

Table 7-1: Dividend alignment to the Sustainable Development Goals indicators

DIVIDEND CATEGORY	INDICATOR	DESCRIPTION	SDG INDICATOR FIRST ALIGNMENT	SDG INDICATOR SECOND ALIGNMENT
Social	Social Interaction Frequency	Number of social interactions observed or reported in public spaces (e.g., spontaneous conversations, group activities).	SDG 11.7 - Sustainable Cities and Communities	SDG 10.2 - Reduced Inequalities
Social	Diversity of Users	Demographic diversity of public space users, including age, gender, ethnicity, and socio-economic status.	SDG 10.2 - Reduced Inequalities	SDG 11.7 - Sustainable Cities and Communities
Social	Social Cohesion	Perception surveys measure a sense of community, belonging, and social trust among users of public spaces.	SDG 16.1 - Peace, Justice and Strong Institutions	SDG 11.7 - Sustainable Cities and Communities
Social	Inclusivity of Design	Assessment of the accessibility of public spaces for individuals with disabilities, the elderly, and other vulnerable groups.	SDG 10.2 - Reduced Inequalities	SDG 11.7 - Sustainable Cities and Communities
Social	Public Space Usage	Percentage of the local population using public spaces regularly (e.g., daily or weekly).	SDG 11.7 - Sustainable Cities and Communities	SDG 3.4 - Good Health and Well-being

DIVIDEND CATEGORY	INDICATOR	DESCRIPTION	SDG INDICATOR FIRST ALIGNMENT	SDG INDICATOR SECOND ALIGNMENT
Economic	Foot Traffic	Increase in pedestrian traffic in and around public spaces, as measured by footfall counters or observational studies.	SDG 8.9 - Decent Work and Economic Growth	SDG 11.7 - Sustainable Cities and Communities
Economic	Property Values	Change in property values surrounding improved public spaces, tracked through real estate data. Also resulting in additional rate incomes due to improved property values.	SDG 11.3 - Sustainable Cities and Communities	SDG 8.3 - Decent Work and Economic Growth
Economic	Business Activity	Number of new businesses, pop-up shops, and street vendors operating in or near public spaces.	SDG 8.3 - Decent Work and Economic Growth	SDG 11.7 - Sustainable Cities and Communities
Economic	Event Revenue	The economic impact of public space-hosted events (e.g., markets, festivals) measured by attendance and revenue generated.	SDG 8.9 - Decent Work and Economic Growth	SDG 11.7 - Sustainable Cities and Communities
Economic	Employment Rates	Changes in local employment, particularly in retail, food services, and tourism, are linked to improvements in public space.	SDG 8.5 - Decent Work and Economic Growth	SDG 11.3 - Sustainable Cities and Communities
Environmental	Urban Heat Island Mitigation	Changes in local temperatures in areas with increased green spaces compared to non-improved areas.	SDG 13.3 - Climate Action	SDG 11.6 - Sustainable Cities and Communities
Environmental	Biodiversity	Increase in local biodiversity, including the number of native plant species, pollinators, and bird species observed in green public spaces.	SDG 15.5 - Life on Land	SDG 11.4 - Sustainable Cities and Communities
Environmental	Air Quality Improvement	Changes in air quality, particularly reductions in pollutants (e.g., particulate matter, NO ₂) in areas near green public spaces.	SDG 11.6 - Sustainable Cities and Communities	SDG 13.2 - Climate Action

DIVIDEND CATEGORY	INDICATOR	DESCRIPTION	SDG INDICATOR FIRST ALIGNMENT	SDG INDICATOR SECOND ALIGNMENT
Environmental	Stormwater Management	The volume of stormwater runoff is mitigated by green infrastructure (e.g., permeable surfaces, rain gardens) integrated into public spaces.	SDG 6.3 - Clean Water and Sanitation	SDG 11.6 - Sustainable Cities and Communities
Environmental	Tree Canopy Coverage	Increase in tree canopy coverage and its impact on shade provision and carbon sequestration.	SDG 15.2 - Life on Land	SDG 13.2 - Climate Action
Cultural	Cultural Events Frequency	The number of cultural events (e.g., performances, exhibitions, festivals) held in public spaces annually.	SDG 11.4 - Sustainable Cities and Communities	SDG 10.2 - Reduced Inequalities
Cultural	Public Art Installations	The number of public art installations and their impact on community engagement (e.g., participation in art-related events).	SDG 11.4 - Sustainable Cities and Communities	SDG 10.2 - Reduced Inequalities
Cultural	Cultural Representation	Diversity of cultural representation in public spaces, including traditional and contemporary cultural expressions.	SDG 10.2 - Reduced Inequalities	SDG 11.7 - Sustainable Cities and Communities
Cultural	Heritage Preservation	The number of heritage sites or culturally significant landmarks is protected and integrated into public space designs.	SDG 11.4 - Sustainable Cities and Communities	SDG 11.7 - Sustainable Cities and Communities
Cultural	Public Perception of Cultural Value	Survey data on residents' perceptions of public spaces as vital to local cultural identity and expression.	SDG 11.4 - Sustainable Cities and Communities	SDG 16.1 - Peace, Justice and Strong Institutions
Health	Physical Activity Levels	The number of people engaging in physical activities (e.g., walking, jogging, cycling) in public spaces has increased.	SDG 3.4 - Good Health and Well-being	SDG 11.7 - Sustainable Cities and Communities
Health	Mental Health Benefits	Public space users reported reduced stress levels and improved mental well-being (through surveys or interviews).	SDG 3.4 - Good Health and Well-being	SDG 11.7 - Sustainable Cities and Communities

DIVIDEND CATEGORY	INDICATOR	DESCRIPTION	SDG INDICATOR FIRST ALIGNMENT	SDG INDICATOR SECOND ALIGNMENT
Health	Obesity Rates	Changes in obesity and related health outcomes (e.g., diabetes, heart disease) in communities with improved access to public spaces.	SDG 3.4 - Good Health and Well-being	SDG 10.2 - Reduced Inequalities
Health	Access to Green Spaces	Percentage of the population living within a certain distance (e.g., 500 meters) of a park or green public space.	SDG 11.7 - Sustainable Cities and Communities	SDG 3.4 - Good Health and Well-being
Health	Health-Related Events	The number of health-related events (e.g., fitness classes, wellness workshops) conducted in public spaces that result in improved health outcomes.	SDG 3.4 - Good Health and Well-being	SDG 11.7 - Sustainable Cities and Communities
Civic	Public Participation	The number of public forums, protests, or community meetings held in public spaces, indicates civic engagement.	SDG 16.7 - Peace, Justice and Strong Institutions	SDG 11.7 - Sustainable Cities and Communities
Civic	Voter Turnout	Correlation between improvements in public spaces and voter turnout or civic participation rates in the surrounding areas.	SDG 16.7 - Peace, Justice and Strong Institutions	SDG 11.3 - Sustainable Cities and Communities
Civic	Community-Led Initiatives	Number of community-driven projects or improvements in public spaces reflecting active civic involvement.	SDG 16.7 - Peace, Justice and Strong Institutions	SDG 11.7 - Sustainable Cities and Communities
Civic	Public Space Policy Engagement	The extent to which public space users are involved in policy discussions or decision-making processes about space management.	SDG 16.7 - Peace, Justice and Strong Institutions	SDG 11.3 - Sustainable Cities and Communities
Civic	Protest and Expression Frequency	The number and diversity of peaceful demonstrations or public expressions of opinion held in public spaces.	SDG 16.7 - Peace, Justice and Strong Institutions	SDG 11.7 - Sustainable Cities and Communities

DIVIDEND CATEGORY	INDICATOR	DESCRIPTION	SDG INDICATOR FIRST ALIGNMENT	SDG INDICATOR SECOND ALIGNMENT
Civic	Empowered Communities	Increase in community empowerment, as measured by residents' participation in decision-making processes, leadership in public space projects, and access to resources that support community initiatives.	SDG 16.7 - Peace, Justice and Strong Institutions	SDG 11.3 - Sustainable Cities and Communities
Civic	Social Capital Building	Growth in social networks and trust within communities using public spaces, as evidenced by the formation of local organisations, volunteer groups, and collaboration between different community stakeholders.	SDG 16.7 - Peace, Justice and Strong Institutions	SDG 11.7 - Sustainable Cities and Communities

Source: Author's own, (2024)

7.8 An alignment of public space dividend indicators with Lefebvre's 'Spatial Triad' and Harvey's 'Spatial Matrix'

The convergence between the Public Space Dividend (PSD) indicators and the spatial theories of Lefebvre and Harvey offers a comprehensive framework for understanding and evaluating the multifaceted value of public spaces. While Lefebvre's Spatial Triad and Harvey's Spatial Matrix provide conceptual tools to analyse how space is produced, perceived, and experienced, the PSD framework introduces a quantifiable layer that both complements and advances these theories.

Lefebvre's *perceived space*—the realm of daily practices—aligns with indicators such as social interaction frequency, public space usage, and physical activity levels. These reflect how individuals engage with public spaces in everyday life, revealing spatial routines and patterns of behaviour. Respondents in eThekweni, for instance, frequently cited social and recreational use of public spaces, echoing similar findings in Cape Town, where observed interactions in upgraded public squares reflected active spatial practices. In contrast, Mexico City displayed uneven engagement due to safety concerns, despite the availability of redesigned public areas.

Conceived space, reflecting planners' and policymakers' visions, is captured through indicators like inclusivity of design, stormwater management, and urban heat island mitigation. These show how public spaces are designed to meet sustainability and equity goals. For example, Christchurch's post-earthquake rebuilding efforts were highly aligned with this dimension, integrating community needs with green infrastructure and climate resilience. In comparison, Cape Town's spatial strategy, while visionary, often faced implementation gaps due to entrenched socio-economic divides.

Lived space, with its focus on emotional, symbolic, and cultural appropriations of space, is reflected in indicators like social cohesion, mental health benefits, and public perception of cultural value. These indicators illuminate how users attach meaning to space. In Mexico City, the use of murals and plazas for cultural festivals demonstrates the richness of lived space despite structural inequalities. Respondents in eThekweni who felt culturally underrepresented highlighted the need for more inclusive cultural expressions, pointing to a divergence between lived experiences and planned intentions.

Harvey's *absolute space* is represented through concrete improvements such as tree canopy coverage, biodiversity, and green infrastructure. These physical interventions transform space materially, aligning with Harvey's notion of spatial restructuring to address ecological crises. Across all three case studies, initiatives like Christchurch's Greening the Red Zone or Mexico City's linear parks embody these transformations.

In *relative space*, public spaces function within networks of movement and capital. Indicators like foot traffic, employment rates, and access to green spaces reflect how public spaces link to broader urban systems. EThekweni respondents who rely on walking and cycling demonstrate how space is experienced through time and distance, a reality also seen in Cape Town's transit-oriented development zones.

Finally, Harvey's *relational space*—where power, identity, and resistance intersect—is revealed through indicators like public participation, community-led initiatives, and protest frequency. Public spaces are not neutral; they are contested terrains. This is evident in Cape Town's Reclaim the City movement, Mexico City's street protests, and Christchurch's community-led transitional projects, all demonstrating how public space becomes a platform for civic expression and resistance.

The PSD framework thus operationalises these theoretical concepts by offering measurable outcomes across six dividend categories: social, economic, environmental, cultural, health, and civic. It fills a critical gap in both Lefebvre and Harvey's models, which are analytically rich but lack practical tools for implementation or evaluation. The indicators translate abstract spatial concepts into tangible metrics, enabling municipalities like eThekweni to assess public space interventions' effectiveness systematically.

In summary, while Lefebvre and Harvey provide the theoretical foundation to understand the complexity of urban space, the Public Space Dividend introduces an applied dimension that captures its value. The combination of theory and measurable indicators facilitates a holistic and empirically grounded approach to urban spatial planning—one that recognises public space as simultaneously produced, lived, and contested. This convergence, as demonstrated across case studies, offers a replicable model for inclusive, equitable, and sustainable public space development in diverse urban contexts.

7.9 Reflecting on the objectives of the study

The evolution of public spaces in eThekweni Municipality, particularly the development of inclusive city practices, provides crucial insights into the complex relationship between urban planning, social justice, and community cohesion. This study's exploration of public spaces across different historical contexts offers a comprehensive understanding of how public spaces have shifted in form and function over time. The study has critically examined how planners conceptualise and implement inclusivity, the challenges they face, and the strategies that can be employed to create more inclusive urban environments.

Examining past and present public spaces, the study reveals a persistent legacy of spatial inequality despite the significant strides made towards inclusivity post-1994. Public spaces, once designed to reinforce racial exclusion, have gradually become more accessible and diverse. However, contemporary patterns of space use continue to reflect underlying socioeconomic disparities. This highlights the ongoing influence of historical spatial design on the current urban landscape, where certain socio-economic groups are still privileged over others.

Interviews with urban planners shed light on their growing awareness of creating spaces accommodating the city's diverse social fabric. Their efforts to conceptualise inclusivity are rooted in post-apartheid values of equality, aiming to design public spaces that serve all demographic groups. However, the study identifies a significant gap between conceptualising these inclusive ideals and their practical implementation. Constraints such as limited budgets often impede the realisation of fully inclusive spaces.

Moreover, through user experiences, the study uncovers various challenges planners face in creating genuinely inclusive public spaces. These challenges include issues of accessibility, the provision of appropriate facilities, meaningful community engagement, and cultural inclusivity. Spatial fragmentation and persistent social inequality remain substantial barriers to creating equitable spaces. Socio-cultural factors such as perceptions of safety and belonging further complicate these efforts. Operational limitations within the municipality, including resource constraints and outdated regulatory frameworks, hinder the effective implementation of inclusive urban designs.

To address these challenges, the study concludes by proposing a conceptual model for a Public Space Dividend, which emphasises a holistic approach to public space development. This model integrates analysis, strategy, participation, implementation, and monitoring into a cohesive framework that fosters multi-sectoral benefits. Central to this model is the establishment of a comprehensive public space strategy, supported by relevant policy directives, to promote developmental outcomes that are inclusive and sustainable. By prioritising a participatory planning process and ensuring that public spaces cater to the population's diverse needs, the approach offers a pathway to more equitable and inclusive urban environments within eThekweni Municipality.

This study has met its core objectives by understanding the historical and contemporary dynamics shaping public spaces in eThekweni. It has addressed the urban planners' conceptual and practical efforts to promote inclusivity and unpacked the challenges they encounter. It has also presented potential strategies for improvement. This reflection underscores the necessity of continued innovation and commitment to creating public spaces that truly reflect all citizens' diverse needs and aspirations.

7.10 Final comments

In conclusion, this thesis has demonstrated that public spaces are not merely physical landscapes but dynamic social places where power relations, cultural practices, and everyday experiences converge. Through the lens of theoretical frameworks such as David Harvey's *'Spatial Matrix'* and Henri Lefebvre's *'Spatial Triad'*, this research has highlighted the critical role that public spaces play in shaping the social fabric of urban life. Public spaces are socially produced places that reflect and often reinforce broader social, economic, and environmental inequalities. As such, they are key sites for both the perpetuation of disparity and the potential for transformation.

Urban planners, therefore, have a profound responsibility to address these inequalities through the design, management, and policymaking of public spaces. They are uniquely positioned to challenge the status quo and create public spaces that are inclusive, equitable, and responsive to the needs of all urban residents. This thesis has argued that a city-wide public space strategy is essential to achieving these goals. Such a strategy should be grounded in the principles of the right to the city, ensuring that all residents have access to public spaces where they can participate fully in civic life. Continuous community engagement is crucial to this process, as it ensures that the voices of marginalised and underrepresented groups are heard and incorporated into the design and planning of public spaces.

The concept of the Public Space Dividend is central to this discussion. Public spaces generate a wide range of dividends in terms of social, economic, environmental, cultural, health, and civic attributes. These dividends can contribute significantly to the vitality and sustainability of cities. By enhancing social cohesion, supporting local economies, improving environmental resilience, fostering cultural expression, promoting health and well-being, and enabling civic participation, well-designed public spaces can transform communities and cities. They are not merely abstract benefits. Rather they have tangible impacts on urban areas' quality of life, economic prosperity, and environmental sustainability.

The urban planners' role in extracting and enhancing these dividends cannot be overstated. Planners must adopt a strategic, data-driven approach prioritising inclusivity,

sustainability, and resilience. By leveraging data and evidence-based practices, planners can create public spaces that meet urban populations' diverse needs while maximising the broader dividends that these spaces generate. This requires a holistic approach integrating social, economic, environmental, and cultural considerations into the planning process.

Moreover, the value of the Public Space Dividend extends beyond immediate benefits to individuals and communities. Public spaces can potentially contribute to long-term urban development goals, such as reducing inequality, fostering social mobility, and enhancing democratic engagement. By creating spaces where people from all walks of life can interact, share ideas, and participate in civic life, public spaces can help bridge social divides and build stronger, more cohesive communities.

Future research should continue to explore innovative approaches to public space design that address the needs of underrepresented groups and create environments where everyone feels welcome and valued. This includes examining how digital technologies, participatory design processes, and new forms of governance can be harnessed to create more inclusive public spaces. As cities grow and change, the need for equitable, inclusive, and vibrant public spaces will only become more pressing.

In conclusion, the future of our cities depends on creating public spaces that are inclusive, equitable, and reflective of the diverse communities they serve. Urban planners, policymakers, and communities must work together to realise the full potential of the Public Space Dividend. They must ensure that public spaces contribute to the well-being, sustainability, and resilience of our cities for generations to come.

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ANNEXURE A – HOUSEHOLD SURVEY



PUBLIC SPACE SATISFACTION SURVEY IN ETHEKWINI MUNICIPALITY

Questionnaire Number	
Interviewer Name	
Date of Interview	

Dear Volunteer.

The questionnaire is part of household survey for the Masters' in-Built Environment study that seeks to examine the lived and perceived experiences of public spaces in Ward 35 eThekweni Municipality. I am requesting your participation in this research project so that I can gain in-depth knowledge as to how residents in Ward 35 consume or experience public spaces.

This questionnaire will take approximately 15-20 minutes to complete. Participation in the study is strictly voluntary, and you may withdraw at any time. The responses are completely anonymous, and information will be confidentially kept. If you choose to participate in this survey, please answer all the questions as honestly as possible. Completion and return of this questionnaire will indicate your willingness to participate in this research. To preserve anonymity, do not write your name on the questionnaire. Your participation is highly appreciated.

For inquiries and more information concerning this research study, please contact the researcher and/or the supervisor.

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INSTRUCTIONS: *Please indicate your response by making a cross(x) in the appropriate box, or by typing in the spaces provided*

SECTION A : INTERVIEW PROFILE

A1. Settlement Name/Suburb Name/Neighbourhood Name

La Lucia (including Illala Ridge)	
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A2. Gender

Female		Male	
Non-Binary		Prefer not to say	

A3. Age Group

18-25		26-30 Years		31-35 Years	
36-40 Years		41-45 Years		46-50 Years	
51-60 Years		61-65 Years		>65 Years	

A4. Population Group

Black/African		Coloured		White	
Indian		Other (specify)			

A5. Home Language

English		IsiZulu		IsiXhosa	
IsiNdebele		Sesotho		Afrikaans	
Sepedi		Tshivenda		Setswana	
Tsonga		Swati		Other (specify)	

SECTION B: HOUSEHOLD CHARACTERISTICS

B1. How many years have you been staying in the current home?

0-2 years		3-5 years	
6-10 years		More than 10 years	

B2. How do you describe the type of household you belong to?

Descriptions:

One-person Household: One person makes provision for his or her own food or other essentials for living, without combining with any other person to form part of a multi-person household.

Nuclear Household: Family group consisting of parents and their children.

Extended Household: Extends beyond the nuclear family, consisting of parents, aunts, uncles and cousins, all living nearby or in the same household.

Composite Household: Those that contain more than one family or several isolated persons or any composition of isolated person and families.

One-person Household		Nuclear Household		Extended Household	
Composite Household		Other (specify)			

B3. What is the gender of the Household Head?

Female		Male	
Non-Binary		Prefer not to say	

B4. What is the age group of the household head?

18-25		26-30 Years		31-35 Years	
36-40 Years		41-45 Years		46-50 Years	
51-60 Years		61-65 Years		Older than 65 Years	

B5. Which population group of the household head?

Black/African		Coloured		White	
Indian		Other (specify)			

B6. What is (are) source(s) of income for the household head? (You may select one or more answers)

Formal employment		Informal employment	
Government grant		Other (Specify)	

B7. What is the size of your household?

< 2 people		2-5 people		6-10 people	
11-15 people		>15 people			

B8. What are the age groups of the different household members? (You may select more than one answer)

Age category (Years)	Number
0-5	
6-10	

11-14	
15-20	
21-25	
26-30	
31-35	
36-40	
41-45	
46-50	
51-55	
56-60	
61+	

SECTION C : PERCEIVED PUBLIC SPACE

C1. Please indicate how often you frequent each of the following public spaces within your ward on a scale ranging from Never = 1, Daily = 2, Weekly = 3, Monthly = 4 to Yearly = 5?

C1.1	Neighbourhood Park	1	2	3	4	5
C1.2	Beach Promenade	1	2	3	4	5
C1.3	Museums	1	2	3	4	5
C1.4	Shopping Mall	1	2	3	4	5
C1.5	Beach	1	2	3	4	5
C1.6	Open Plaza/Square	1	2	3	4	5
C1.7	Sports field	1	2	3	4	5
C1.8	Community Centre	1	2	3	4	5
C1.9	Library	1	2	3	4	5
C1.10	Other (Please specify)	1	2	3	4	5

C2. When visiting the public space, who do you visit with MOST of the time on a scale ranging from Alone = 1, Spouse/Partner = 2, Family (including children) = 3, Friends = 4?

C2.1	Neighbourhood Park	1	2	3	4
C2.2	Beach Promenade	1	2	3	4
C2.3	Museums	1	2	3	4
C2.4	Shopping Mall	1	2	3	4
C2.5	Beach	1	2	3	4
C2.6	Open Plaza/Square	1	2	3	4
C2.7	Sports field	1	2	3	4

C2.8	Community Centre	1	2	3	4
C2.9	Library	1	2	3	4
C2.10	Other (Please specify)	1	2	3	4

C3. In your own opinion, does eThekweni Municipality have a public space strategy?

Yes	No	Unsure
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C4. Has eThekweni Municipality ever engaged you in the development of public space(s) in the ward?

Yes	No
Yes but I chose not to participate	Unsure

C5. What are your reasons for using public spaces in your ward on a scale ranging from Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4 to Strongly Agree = 5?

C5.1	Recreation and Leisure	1	2	3	4	5
C5.2	Exercise and physical wellbeing	1	2	3	4	5
C5.3	Social interaction	1	2	3	4	5
C5.4	Cultural and entertainment events	1	2	3	4	5
C5.5	To destress and improve mental wellbeing	1	2	3	4	5
C5.6	For economic gain i.e. selling goods and services	1	2	3	4	5
C5.7	Civic engagement	1	2	3	4	5
C5.8	To enhance democratic processes	1	2	3	4	5
C5.9	Area designated for pets to exercise	1	2	3	4	5
C5.10	Space for children play	1	2	3	4	5

SECTION D: LIVED SPACE

D1. Specify the level of quality of the following public spaces on a scale ranging from Very Poor = 1, Poor = 2, Neutral = 3, Good = 4 to Very Good = 5.

D1.1	Ablution facilities	1	2	3	4	5
D1.2	Areas for sitting and resting	1	2	3	4	5
D1.3	Access to Wi-Fi	1	2	3	4	5
D1.4	Quality of the walking paths	1	2	3	4	5
D1.5	Access to parking	1	2	3	4	5
D1.6	Availability and quality of security personnel	1	2	3	4	5
D1.7	Quality of lighting	1	2	3	4	5
D1.8	Overall cleanliness of the public space	1	2	3	4	5

D2. How safe do you feel in the public spaces you frequent (mentioned in Qsn C1)?

Very Unsafe		Safe		Somewhat safe		Very safe		Completely safe	
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D3. To what extent do you agree or disagree that the following are reasons that make you feel unsafe when using public spaces on a scale ranging from Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4 to Strongly Agree = 5?

D3.1	The lack of maintenance of public spaces	1	2	3	4	5
D3.2	Lack of presence of law enforcement	1	2	3	4	5
D3.3	Poor or inefficient lighting	1	2	3	4	5
D3.4	Poor visibility and natural surveillance	1	2	3	4	5
D3.5	Time of the day	1	2	3	4	5
D3.6	Narrow path widths	1	2	3	4	5
D3.7	Poor cleanliness of the public space	1	2	3	4	5
D3.8	Long walking distance from parking lot to the public space	1	2	3	4	5

D4. How often do you adjust your behaviour in the public space to ensure that you feel safe on a scale ranging from Never = 1, Hardly Ever = 2, Sometimes = 3, Often = 4 to I do not know = 5?

D4.1	Change the public space you visit	1	2	3	4	5
D4.2	Change the time you visit the public space	1	2	3	4	5
D4.3	Change the route you use to get to the public space	1	2	3	4	5
D4.4	Pretend to be on the phone to avoid people	1	2	3	4	5

SECTION C: CONCEIVED PUBLIC SPACE

E1. How often do you bump into someone you know or recognise in the public space that you frequent (Select the most appropriate answer)?

Never		Rarely	
Sometimes		Often	

All the time			
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E2. To what degree do you feel that your culture is represented in the public space of your choice on a scale ranging from Never Represented = 1, Rarely represented = 2, Sometimes Represented = 3, Often Represented = 4 to Always Represented = 5?

E2.1	Public art such as sculptures and murals	1	2	3	4	5
E2.2	Billboards	1	2	3	4	5
E2.3	Signage	1	2	3	4	5
E2.4	Community activities allowed in the public space	1	2	3	4	5

E3. To what extent do you agree or disagree with the following statement about public spaces in Ward 35 on a scale ranging from Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4 to Strongly Agree = 5?

E3.1	Public spaces are inclusive to all genders	1	2	3	4	5
E3.2	Public spaces are inclusive of all race groups	1	2	3	4	5
E3.3	Public spaces are inclusive of age groups	1	2	3	4	5
E3.4	Public spaces are inclusive of all income groups	1	2	3	4	5

SECTION F: RELATIVE SPACE

F1. How far are you willing to travel to access public spaces that meet your needs using various modes of transport where 0-5 Minutes = 1, 6-10 Minutes = 2, 11 – 15 Minutes = 3, 16 – 20 Minutes = 4, More than 20 minutes = 5?

F1.1	Walking	1	2	3	4	5
F1.2	Cycling	1	2	3	4	5
F1.3	Private Transport	1	2	3	4	5
F1.4	Public Transport	1	2	3	4	5

F2 Do you notice any patterns or trends in the spatial distribution of public spaces across different neighbourhoods within the ward?

Yes		No	
Sometimes		I do not know	

SECTION G: RELATIONAL SPACE

G1. Are there any symbolic or cultural meanings associated with the public space(s) you visit?

Yes	No	I do not know	
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G2 Do you think the design and aesthetics of the public spaces reflect broader societal values or ideologies?

Yes		No		I do not know	
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SECTION H: ABSOLUTE SPACE

H1. How would you describe the physical layout and geographic characteristics of the public spaces you frequent?

Very Poor		Poor		Neutral		Good		Very Good	
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H2. How do you perceive the influence of design features on your comfort and experience in public spaces? On a scale ranging from 1= Strongly Agree, 2 = Agree, 3 = Neutral, 4= Disagree, 5= Strongly Disagree

H2.1	Lighting	1	2	3	4	5
H2.2	Sidewalks	1	2	3	4	5
H2.3	Bike lanes	1	2	3	4	5
H2.4	Public ablutions	1	2	3	4	5
H2.5	Wifi	1	2	3	4	5
H2.6	Areas for seating	1	2	3	4	5

Thank you so much for taking the time to complete this questionnaire!

ANNEXURE B – A DRAFT ASESMENT FRAMEWORK

Category	Aspect	Indicators	Needs Improvement = 1	Adequate = 2	Excellent = 3	Assessment Score	Desired Score
<i>Perceived space</i>	Frequency of Use	Number of visitors					
<i>Perceived space</i>	Frequency of Use	Duration of stay in public space					
<i>Perceived space</i>	Accompanied Visits	Presence of solo visitors					
<i>Perceived space</i>	Accompanied Visits	Presence of family unit					
<i>Perceived space</i>	Accompanied Visits	Presence of groups					
<i>Perceived space</i>	Use of Public Space	Varied range of activities					
<i>Perceived space</i>	Use of Public Space	Varied range of operating hours					
<i>Perceived space</i>	Use of Public Space	Type of facilities used during visits					
<i>Lived space</i>	Quality of Public Space	Level of maintenance of natural features					
<i>Lived space</i>	Quality of Public Space	Level of maintenance of man made features					
<i>Lived space</i>	Quality of Public Space	Quality of equipment					
<i>Lived space</i>	Safety in Public Space	Good natural surveillance through design					
<i>Lived space</i>	Safety in Public Space	Presence of quality security personnel					
<i>Lived space</i>	Safety in Public Space	Adequate natural lighting during the day					
<i>Lived space</i>	Safety in Public Space	Adequate artificial lighting during the night					
<i>Lived space</i>	Safety in Public Space	Presence of CCTV cameras					

Category	Aspect	Indicators	Needs Improvement = 1	Adequate = 2	Excellent = 3	Assessment Score	Desired Score
<i>Lived space</i>	Safety in Public Space	Infrastructure protecting public space users from transport					
<i>Lived space</i>	Reasons for Not Safe	Crime rates					
<i>Lived space</i>	Reasons for Not Safe	Addressing hazards					
<i>Lived space</i>	Reasons for Not Safe	Management of graffiti					
<i>Lived space</i>	Adjust Behavior in Public Space	User avoidance of certain areas					
<i>Lived space</i>	Adjust Behaviour in Public Space	User change in routes or times of visit					
<i>Lived space</i>	Adjust Behaviour in Public Space	User carrying protective equipment					
<i>Conceived space</i>	How Often You Meet Someone	Frequency of planned encounters					
<i>Conceived space</i>	How Often You Meet Someone	Frequency of spontaneous encounters					
<i>Conceived space</i>	How Often You Meet Someone	Social interactions per visit					
<i>Conceived space</i>	How Often You Meet Someone	Perception of familiarity with other users					
<i>Conceived space</i>	Representation of Culture	Inclusion of cultural features such as art and murals					
<i>Conceived space</i>	Representation of Culture	Representation of historical narratives					
<i>Conceived space</i>	Representation of Culture	Frequency of community gatherings					
<i>Conceived space</i>	Inclusive Public Space	Inclusive of all ages groups					

Category	Aspect	Indicators	Needs Improvement = 1	Adequate = 2	Excellent = 3	Assessment Score	Desired Score
<i>Conceived space</i>	Inclusive Public Space	Inclusive of all population groups					
<i>Conceived space</i>	Inclusive Public Space	Universal access promoting access to disabled					
<i>Conceived space</i>	Inclusive Public Space	Inclusive of all income groups					
<i>Conceived space</i>	Inclusive Public Space	Inclusive of all genders					
<i>Relative space</i>	Access to Public Space Travel	Access by Public transport routes and services					
<i>Relative space</i>	Access to Public Space Travel	Access to well-located parking for private transport					
<i>Relative space</i>	Access to Public Space Travel	Infrastructure supporting use of cycling					
<i>Relative space</i>	Access to Public Space Travel	Pedestrian access					
Relational Space	Cultural Attendance	Number of cultural events arranged					
Relational Space	Cultural Attendance	Diversity of cultural programming					
Relational Space	Reflection of Societal Value and Ideologies	Public discourse events					
Relational Space	Reflection of Societal Value and Ideologies	Multilingual messaging on billboards and signage					
<i>Absolute space</i>	Physical Layout of the Public Space	Design of public space					
<i>Absolute space</i>	Physical Layout of the Public Space	Spatial layout					

Category	Aspect	Indicators	Needs Improvement = 1	Adequate = 2	Excellent = 3	Assessment Score	Desired Score
<i>Absolute space</i>	Physical Layout of the Public Space	Zoning					
<i>Absolute space</i>	Physical Layout of the Public Space	Connectivity between surrounding areas					
<i>Absolute space</i>	Influence of Design	Adequate public space furniture					
<i>Absolute space</i>	Influence of Design	Adaptability of space for activities					
<i>Absolute space</i>	Influence of Design	Environmental impacts addressed					
<i>Absolute space</i>	Influence of Design	Community engagement held					

ANNEXURE C – AN ASSESSMENT OF PUBLIC SPACES (SUMMARISED)

Umhlanga Promenade

Aspect	Indicators	Needs Improvement = 1	Adequate = 2	Excellent = 3	Assessment	Desired State
Frequency of Use	Number of visitors			3	6	6
Accompanied Visits	Presence of solo visitors		2		7	9
Use of Public Space	Varied range of activities		2		7	9
Quality of Public Space	Level of maintenance of natural features		2		9	9
Safety in Public Space	Good natural surveillance through design		2		14	18
Reasons for Not Safe	Crime rates		2		8	9
Adjust Behaviour in Public Space	Avoidance of certain areas			3	8	9
How Often You Meet Someone	Frequency of planned encounters		2		6	12
Representation of Culture	Inclusion of cultural features such as art and murals	1			7	9
Inclusive Public Space	Inclusive of all age's groups			3	11	12
Access to Public Space Travel	Access by Public transport routes and services		2		6	12
Cultural Attendance	Number of cultural events arranged	1			2	6
Reflection of Societal Value and Ideologies	Public discourse events	1			2	6
Physical Layout of the Public Space	Design of public space		2		10	12

Influence of Design	Adequate public space furniture		2		10	12
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Saratoga Park

Category	Aspect	Indicators	Needs Improvement = 1	Adequate = 2	Excellent = 3	Assessment	Desired State
<i>Perceived space</i>	Frequency of Use	Number of visitors		2		4	6
<i>Perceived space</i>	Accompanied Visits	Presence of solo visitors	1			5	9
<i>Perceived space</i>	Use of Public Space	Varied range of activities	1			3	9
<i>Lived space</i>	Quality of Public Space	Level of maintenance of natural features		2		7	9
<i>Lived space</i>	Safety in Public Space	Good natural surveillance through design	1			6	18
<i>Lived space</i>	Reasons for Not Safe	Crime rates		2		6	9
<i>Lived space</i>	Adjust Behaviour in Public Space	Avoidance of certain areas		2		6	9
<i>Conceived space</i>	How Often You Meet Someone	Frequency of planned encounters	1			3	12
<i>Conceived space</i>	Representation of Culture	Inclusion of cultural features such as art and murals	1			6	9
<i>Conceived space</i>	Inclusive Public Space	Inclusive of all age's groups		2		8	12
<i>Relative space</i>	Access to Public Space Travel	Access by Public transport routes and services	1			3	12
<i>Relational Space</i>	Cultural Attendance	Number of cultural events arranged	1			2	6
<i>Relational Space</i>	Reflection of Societal Value and Ideologies	Public discourse events	1			2	6

<i>Absolute space</i>	Physical Layout of the Public Space	Design of public space	1			6	12
<i>Absolute space</i>	Influence of Design	Adequate public space furniture	1			6	12

La Lucia Mall

Category	Aspect	Indicators	Needs Improvement = 1	Adequate = 2	Excellent = 3	Assessment	Desired State
<i>Perceived space</i>	Frequency of Use	Number of visitors			3	6	6
<i>Perceived space</i>	Accompanied Visits	Presence of solo visitors			3	9	9
<i>Perceived space</i>	Use of Public Space	Varied range of activities		2		6	9
<i>Lived space</i>	Quality of Public Space	Level of maintenance of natural features	1			9	9
<i>Lived space</i>	Safety in Public Space	Good natural surveillance through design		2		13	18
<i>Lived space</i>	Reasons for Not Safe	Crime rates		2		8	9
<i>Lived space</i>	Adjust Behaviour in Public Space	Avoidance of certain areas			3	9	9
<i>Conceived space</i>	How Often You Meet Someone	Frequency of planned encounters		2		6	12
<i>Conceived space</i>	Representation of Culture	Inclusion of cultural features such as art and murals	1			6	9
<i>Conceived space</i>	Inclusive Public Space	Inclusive of all age's groups			3	12	12
<i>Relative space</i>	Access to Public Space Travel	Access by Public transport routes and services			3	7	12
<i>Relational Space</i>	Cultural Attendance	Number of cultural events arranged	1			2	6
<i>Relational Space</i>	Reflection of Societal Value and Ideologies	Public discourse events	1			2	6

<i>Absolute space</i>	Physical Layout of the Public Space	Design of public space		2		9	12
<i>Absolute space</i>	Influence of Design	Adequate public space furniture		2		8	12

Old Bush Road Park

Category	Aspect	Indicators	Needs Improvement = 1	Adequate = 2	Excellent = 3	Assessment	Desired State
<i>Perceived space</i>	Frequency of Use	Number of visitors	1			2	6
<i>Perceived space</i>	Accompanied Visits	Presence of solo visitors	1			5	9
<i>Perceived space</i>	Use of Public Space	Varied range of activities	1			3	9
<i>Lived space</i>	Quality of Public Space	Level of maintenance of natural features	1			6	9
<i>Lived space</i>	Safety in Public Space	Good natural surveillance through design		2		6	18
<i>Lived space</i>	Reasons for Not Safe	Crime rates	1			4	9
<i>Lived space</i>	Adjust Behaviour in Public Space	Avoidance of certain areas		2		5	9
<i>Conceived space</i>	How Often You Meet Someone	Frequency of planned encounters	1			4	12
<i>Conceived space</i>	Representation of Culture	Inclusion of cultural features such as art and murals	1			6	9
<i>Conceived space</i>	Inclusive Public Space	Inclusive of all age's groups			3	8	12
<i>Relative space</i>	Access to Public Space Travel	Access by Public transport routes and services		2		4	12
<i>Relational Space</i>	Cultural Attendance	Number of cultural events arranged	1			2	6

<i>Relational Space</i>	Reflection of Societal Value and Ideologies	Public discourse events	1			2	6
<i>Absolute space</i>	Physical Layout of the Public Space	Design of public space	1			6	12
<i>Absolute space</i>	Influence of Design	Adequate public space furniture	1			4	12