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# Edges of influence: overcoming urban isolation in Hillbrow

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MASTER OF URBAN DESIGN
2020

# EDGES OF INFLUENCE:
## OVERCOMING URBAN ISOLATION IN HILLBROW

Nqobile Okyere-Dede



Figure 1: Hillbrow Johannesburg skyline




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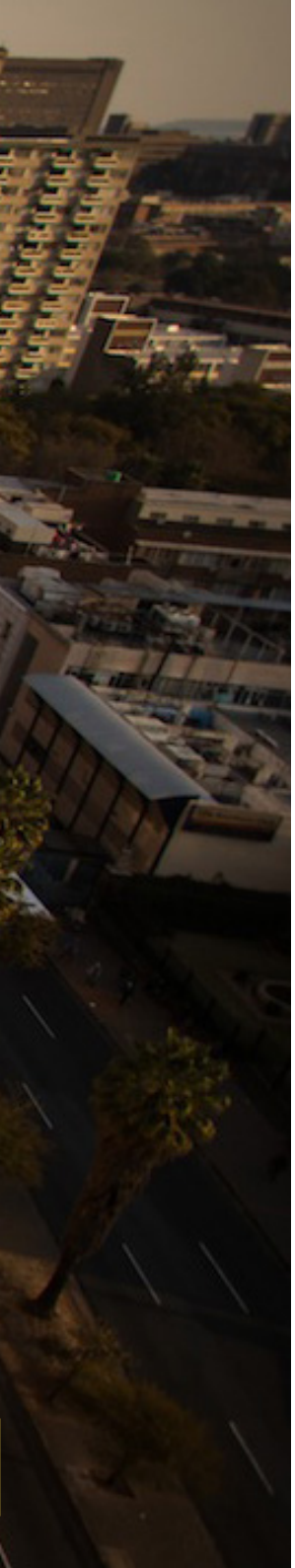


# ABSTRACT


Hillbrow was first developed as a residential neighbourhood consisting of detached houses. It then saw a surge in development during the 1950's with the removal of height restrictions and the advancement of new building technology – this enabled the development of high rise buildings. The neighbourhood was predominantly occupied by European white middle class tenants, with a few black people who worked as servants and security guards living on the rooftops of the apartments.

In the mid 1970's the neighbourhood started seeing racial transformation due to the combination of economic decline, political uncertainty and the withdrawal of the initial white occupants to the northern regions of Johannesburg. The city experienced rapid social change, many of its buildings were left abandoned and the city council at the time was averse to dealing with the changing social circumstance. This resulted in large scale overcrowding, lack of service delivery and lack of law enforcement - prompting urban decline in the neighbourhood. In contrast, the social change that occurred simultaneously resulted in a vibrant, energetic melting pot of diverse cultures.

Today Hillbrow is a well-known neighbourhood grappling with a number of social ills such as crime, drug abuse and prostitution; and is considered by most as a home to dubious members of society. This has led to the neighbourhood being perceived as "bad," which has caused many to shun the neighbourhood. This research aims to firstly unpack the historical context of the development of Hillbrow in order to understand its current complexities and their origin. Secondly, the research aims to explore the causes of urban isolation in Hillbrow by investigating the barriers of connectivity along its edges. The key concepts that will inform this research will be linkages and connectivity, densification, recoding land uses, redistributing traffic flows and place making.

My hypothesis is that spatial integration can be achieved by creating better linkages. My research assumes that improving linkages between the edges of Hillbrow and its surrounding areas would encourage increased mobility of people moving in and out of the neighbourhood, thereby fostering a vibrant, active edge with a greater sense of safety. It will also look at creating good quality public spaces by taking advantage of underutilised spaces such as the alleyways, as well as reconfiguring internal uses. The research will apply a qualitative research method, with the primary research strategy being a case study. Data will be collected through observation of public behaviour and photography.

I, Nqobile Nompilo Okyere-Dede (student number: 1645240 am a student registered for the course ARPL 7058 in the academic year 2020. I hereby declare the following:

I am aware that plagiarism (the use of someone else's work without their permission and/or without acknowledging the original source) is wrong. I confirm that the work submitted for assessment for the above degree is my own unaided work except where I have explicitly indicated otherwise. I have followed the required conventions of referencing the thoughts and ideas of others. I understand that the university of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my own unaided work or that I have failed to acknowledge the source of the ideas or words in my writing.

Nqobile Nompilo Okyere-Dede
28 January 2020

This document is submitted in partial fulfilment for the degree: Master of Urban Design at the University of the Witwatersrand, Johannesburg, South Africa, in the year 2020.
Supervised by Diaan Van Der Westhuizen

# DECLARATION

# ACKNOWLEDGEMENTS

I would like to thank my supervisor, Diaan Van der Westhuizen for your patients, insights and the useful crits, your guidance has assisted me greatly through this journey. I have learnt a great deal about design thinking as well as being open minded when it comes to design. I really appreciate the time and effort you put in assisting me. I would also like to thank my loving husband for his continuous support and encouragement, and just always being there to listen to all my crazy ideas. You have been the greatest, thank you so much for believing in me. I am also grateful to the rest of my family and friends for all your prayers and support and continuously checking up on me. Above all, I would like to thank God! For making this at all possible and seeing me through this journey even though at times it seemed impossible. God is able!

# CHAPTER ONE

01

# 01 INTRODUCTION

BACKGROUND

Cities are fascinating dynamic places bustling with life and vibrancy, places where people meet and interact, places where various forms of life exist (Gehl, 2010). Places of exchange, economic productivity as well as cultural diversity. Their growth often mirrors the outcomes of social diversity which in reality often appears to be imagined rather than real (Paddison, 2001). Cities often become a mosaic of social enclaves that exist in isolation, frequently contributing to spatial and social distancing of divergent groups within the city (ibid).

Hillbrow presents the ideal case study, it is a vibrant high-density neighbourhood within the city of Johannesburg. It has high levels of sociality and public space use (with a bias in favour of necessary activities over social or optional activities) but is also faced with several challenges related to the urban environment which will be explored further within the paper. It is necessary to understand the historical context of the neighbourhood and the dynamics that influenced its development. The paper will delineate the evolution of Hillbrow as a starting point.

The research will then investigate the neighbourhood from an urban design perspective with particular interest in examining the effect of high densities on the urban environment, challenges related congestion and conflicts within an urban environment, and the effects this has on the public spaces, road networks, linkages, and movement systems. These elements will then be reviewed and addressed in the form of a design solution. This research argues that linkages and integration are by design and careful consideration and seeks to achieve this through its design intervention.



Figure 3: View of Clarendon circle off park lane road

# HILLBROW THEN

In order to understand the complexities of how cities of today work, it is critical to know and understand how cities have emerged, what has shaped the many different forms of urban fabric that exist today so that as urban designers, we have a diverse arsenal to draw from when creating designs for the future.

Hillbrow, was developed as a residential neighbourhood in 1895, made up of 466 stands (500m² each) mostly taking the form of detached residential houses (Morris, 1999). It started seeing physical changes in the early 1920s with the advance of new building technology that allowed for the development of high rise buildings. The neighbourhood then saw a boom in development in the 1950s with the removal of height restrictions making way for the predominant apartment block (Beavon, 2004). It also saw the relaxation of the parking requirements which decreased the number of mandatory parking bays required in new building projects. For property developers, architects and construction companies, Hillbrow became “a testing ground” for modernist architecture influenced by international architects such as Le Corbusier and Oscar Niemeyer (Silverman, 2007).

Hillbrow evolved into a transient neighbourhood, where young immigrants and migrants settled at their point of entry, a sizeable number of apartments were designed as one/two-bedroom apartments. The neighbourhood became renowned as the “cosmopolitan heart of Johannesburg,” labelled as the most fashionable suburb in Johannesburg (Johannesburg, 2018). It developed into an unconventional entertainment hub with hotels, cafes, restaurants, bakeries, coffee bars, nightclubs and bookshops.




Figure 4: Banket street looking south

The neighbourhood was predominantly occupied by European white middle class tenants, with a few black people who worked as servants and security guards living on the roof tops in the servant's quarters (Morris, 1999). It started seeing racial transformation during the mid-1970's despite the group areas act which was approved between 1978-1982, with coloured and Indian residents moving into the neighbourhood prior to this. The drivers of the transformation were multifaceted, however the most notable were economic decline, political uncertainty and the withdrawal of white occupants to the northern regions of Johannesburg. The most significant political event of this time was the Soweto uprising of 1976. This together with the housing shortage experienced in black communities, "set the stage for the dramatic transition in the racial composition of Hillbrow (ibid)."

The city as a whole experienced rapid social change with many of its buildings left abandoned and the city council averse to dealing with the changing social circumstance (Garner, 2011). Another contributing factor which led to the influx of black South Africans to Hillbrow was the large drop in property prices after the Soweto uprising, this inversely escalated white flight as a result of the apartheid sociology. "The inward movement of black tenants encouraged a climate of neglect or withdrawal by some landlords, managing agents, financial institutions and local authority (Morris, 1999)." Enforcement of city by-laws were ineffective, with the growth of the taxi industry becoming a law unto itself.

The inner-city decay experienced in Johannesburg "was not just another case of another post-industrial city changing shape, rather it was a complex, unprecedented multifaceted reshaping of the city (Garner, 2011)."

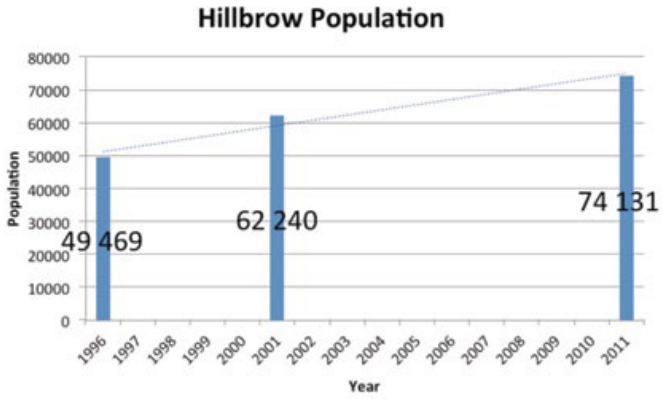



Figure 5: Population Change in Hillbrow: 1996 to 2011

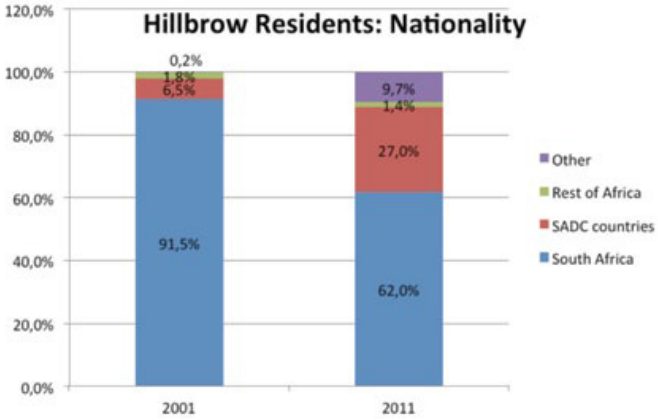



Figure 6: Percentage distribution of Nationality in Hillbrow



Figure 7

Figure 7: Qwesy cafe Hillbrow 1980s
Image showing the street condition that existed, the prominent private vehicle use as well as land uses.

Figure 8: Fire station and ridgeview 1960s
Image showing intersection between Clarendon street ans Louis Botha Avenue.

Figure 9: View of Clarendon circle looking up Twist street
Image showing residential apartments as well as different forms of vehicular transport modes that existed.

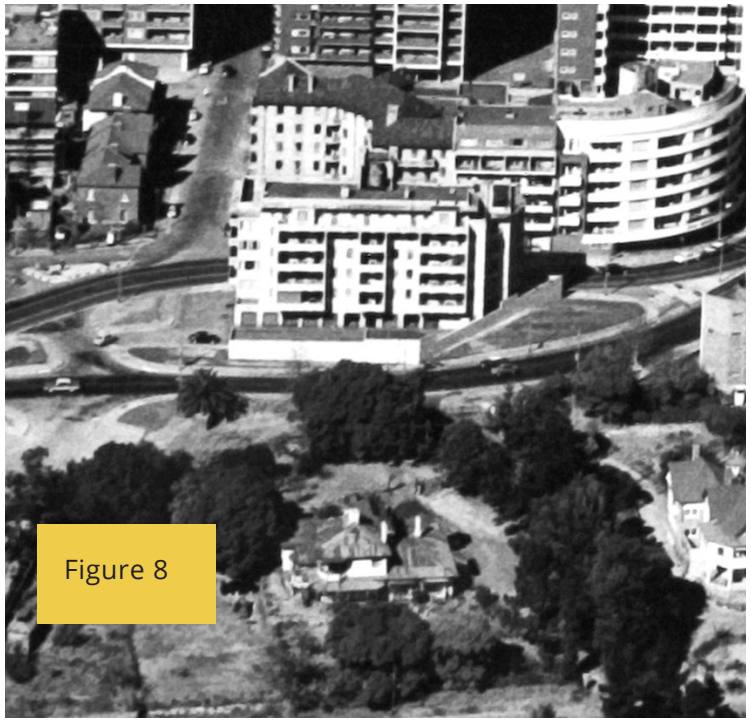


Figure 8




Figure 9




Figure 10: Pretoria Street, Hillbrow

# TIMELINE

## 1895 — THE MANHATTAN OF AFRICA

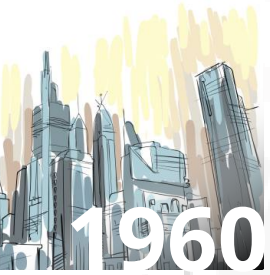
Hillbrow was proclaimed as a township




1900
1905
1910
1915

## 1920 — NEW BUILDING TECHNOLOGY

New building technology allows for construction of




1925
1930
1935
1940
1945
1950

Hillbrow becomes an entry point for European migrants from Germany, Austria, France, Italy, Greece, Portugal and Holland ‘cosmopolitan mix’.

1955
1960

## 1970 — CENSUS OF RESIDENTS IN HILLBROW

- Black: 1095
- Indian: 8
- Coloured: 17
- White: 10517

## 1976

Soweto uprising, political instability leads to a drop in the economic rate, a plunge in property prices resulted in white flight from the city centre to the northern suburbs.



## 1980 — SHIFT IN RACIAL COMPOSITION

- Black: ??
- Indian: 36747
- Coloured: 77930
- White: 1773

1985 Racial composition shift with coloured and Indian residents moving into the neighbourhood

## 1989 — NO WHITE HILLBROW OCCUPANTS

## 1990 — IMMIGRANTS FROM AFRICA

New migrants from the African continent move into Hillbrow, mostly from Nigeria and the DRC

## 2000 — BEGINNINGS OF OVERCROWDING

The trend towards overcrowding begins with escalating rental prices forcing tenants to sublet.

## MONITORING HILLBROW'S POPULATION

1993 **30000 - 62% Black, 20% Indian and Coloured**

1996 **49469 - 10% Indian and Coloured (2,3 people per residential unit)**

2001 **62240**

2011 **74131 - 6,3 people per residential unit, 686 people/ha**

# HILLBROW NOW

Hillbrow continued to experience rapid social change especially with the end of the apartheid era. It also saw the flight of corporate businesses, large retailers and residents to the northern suburbs in what is termed 'white flight' (Garner, 2011). Despite this, the inner city was not abandoned in its entirety, it instead experienced rapid urbanization resulting in extensive overcrowding due to subletting, the deterioration of buildings due to lack of maintenance and neglect, a collapse in service delivery and lack of law enforcement prompting urban decline in the neighbourhood (ibid). Whilst this is the case, it can also be argued that densification in Hillbrow has contributed to the resilience of its community (Todes, 2015).

With a malfunctioning local government structure, and a lack of oversight in the property sector, landlords and managing agents also took advantage of the situation by collecting significant rental income without any investment into the maintenance of buildings or payment of municipal service and levies. The emergence of the taxi industry also introduced another veneer to the growing population of the city, giving rise to traffic congestion (Garner, 2011). The neighbourhood developed a reputation of being a "dark and dangerous place" grappling with social ills such as crime, drugs and prostitution (Johannesburg, 2018). It is considered by most as a home to drug lords and dubious members of society. These perceptions have caused a large number of society to shun the neighbourhood.

In contrast, the social change that occurred has resulted in a vibrant, energetic melting pot of diverse cultures. "From the vibrant shoe repair store ran by an Angolan, a barber shop that belongs to a Zimbabwean, grocery shops owned by Bangladeshis to the hairdressers from Mozambique, Swaziland and South Africa who compete for business, Hillbrow is a melting pot of cultures worthy to be emulated across South Africa (Mbola, 2015)." Although faced with social ills, economic and urban challenges, the neighbourhood has in recent times started seeing change with urban renewal projects driven by the city of Johannesburg under its Jozi@work programme as well as business driven initiatives.





Figure 11: Street view Tudhope ave, Berea

"Hillbrow is a melting pot of cultures worthy to be emulated across South Africa"

Bathandwa Mbola

Street condition with large sidewalks for pedestrian movement

# FUTURE VISION

My vision for Hillbrow is to see its diversity and vibrancy embraced throughout the boundaries of its borders, with people being able to live together in difference. It has been said that "diversity is vital because it is through combining and colliding new and old that innovation and adaptation occur. The more open a city is to new people, new ideas and new ways of living, the greater its creative metabolism will me (Binnie, 2006)." At the centre of what makes a 20th century city vibrant appears to be ethnicity, religion as well as cultural diversity, but difference seems to be more prominent in defining what make a city cosmopolitan. As described by Young (1995) where she proposed the ideal of 'City Life', as one represents social relations of difference without exclusion, where different groups live side by side interacting in city spaces. This ideal implies the possibility of belonging to more than one ethnic and cultural localism (Binnie, 2006). Although difference comes with both positive and negative perspectives, the focus here would be celebrating the possibilities and opportunities of living together and encountering deference.

"Cosmopolitans think globally, aim to exceed their own local specifiers, welcome unfamiliar cultural encounters and express the wish to move toward a true humanity of equality and respect, free of racial, national and other prejudices."

David Ley

# Lessons From Hillbrow

WHAT WORKS?

- Walkability, big sidewalks geared to pedestrian prioritisation.
- Legible grid system, easily readable.
- High rise buildings allowing for high densities.
- Densification has resulted in more business opportunities and more intense land uses.
- Choice around housing and accommodation options.
- The intensity of land uses has meant that there is a strong grouping of activities and increased vibrancy.

WHAT DOESN'T?

- Congestion and conflict of space between private vehicles, taxis and pedestrians.
- Institutional interface between Hillbrow, Braamfontein and Parktown creates a lack of connectivity on the western edge of the neighbourhood.
- A shortage of public open spaces.
- Traffic congestion and wasted spaces allocated for parking.
- A high level of crime activities.
- Hijacked, derelict and abandoned buildings 'bad buildings'.
- The architecture has remained relatively unchanged since the 1970s.
- A clear distinction between public and private spaces.
- Degradation of infrastructure due to poor urban management.

# PROBLEM STATEMENT

Hillbrow is a well-known neighbourhood confronted with social issues such as a high crime incidence, drug abuse, prostitution and general safety in the neighbourhood. A popular tourism website describes Hillbrow as “a place of alarming crime statistics and a place where inner-city lawlessness reigns unchecked (Venues, 2018).” This together with urban design issues such as overcrowding, traffic congestion, the dominance of private vehicles, lack of investment in public amenities and public spaces, the systematic degradation of infrastructure, ‘bad buildings’ in the neighbourhood as well as physical barriers (barricades and large institutional buildings) preventing connectivity and permeability with the surrounding areas, have created urban isolation in the neighbourhood. Although Hillbrow works well as a neighbourhood, it tends to be self-contained in a sense that it fails to integrate with its surrounding context.

## [ISOLATION]

As the author of this document, a question that I ask myself is what do people mean when they say Hillbrow is isolated?

For the purpose of this research, isolation is defined as a lack of connectedness of one neighbourhood to its surrounding context, caused either by a lack of linkages connecting one place to the other, or by large institutions which fail to integrate with the neighbourhood because of privatisation ,and perceptions around safety. Chile et al (2014) describe isolation as having both physical and psychological characteristics resulting in low levels of interaction between members of the community.

# RESEARCH QUESTIONS

1. What is needed to improve the quality of the physical environment within Hillbrow, with the intention of improving the quality of life through the urban environment?

2. How can we promote better connectivity along the edges of Hillbrow in order to foster greater mobility with its surrounding neighbourhoods?



# AIMS & OBJECTIVES

The research aims firstly to understand the historical context of Hillbrow's development as a high-density neighbourhood. This will assist in understanding the current complexities faced by the neighbourhood and where they stem from. It will draw on lessons learnt from Hillbrow in order to activate development in the surrounding areas.

Secondly the research aims at exploring the causes of Urban Isolation in Hillbrow. Hillbrow is insular in nature with physical barriers preventing entrance and exit as well as perceived barriers preventing entrance into the neighbourhood. The paper will investigate the barriers of connectivity along its edges with the purpose of achieving a systematic approach on how such areas can be transformed to become more liveable. The research proposes a design intervention that creates greater linkages between Hillbrow and its surroundings, promoting spatial integration and encouraging greater social mobility in order to facilitate accessibility to Hillbrow and its surroundings. It also looks at reinventing public open spaces within the neighbourhood.

# RATIONALE FOR THE STUDY

Hillbrow is said to be the most densely populated neighbourhood in the South Africa, with a population density of 74 131 people spanning over its 1.08km2 area, with a gross density of 686 people/ha. Although one would expect such high densities would naturally have spill over effects into surrounding areas, this is not the case with Hillbrow due to its strong edges, congestion and conflicts within the urban environment. Furthermore, while designed for a particular population demographic and occupancy capacity at the time, it has now exceeded its planned capacity. This means that there have been certain push-pull factors that impacted on the urban environment which must be examined. Hillbrow complex transformation, its multicultural and diverse social mix makes for an interesting study related to how people are using the space now, and how it can be improved.

The most successful cities are those that are well integrated and have a strong interaction with their surrounding context. Furthermore, what is essential in city spaces is good quality public spaces, where people can meet and interact. At the core of what makes cities work is the people who use the city spaces. As a result of the high densities in Hillbrow and the negative consequences that they have come with it, there is a shortage in good quality public spaces which will be explored through the design.

# RESEARCH METHOD

The research will be explored through a qualitative research method entailing a historical review of the neighbourhood's development as well as the prevailing conditions within the context of Hillbrow in order to understand the issues faced by the neighbourhood. The primary research strategy that will be employed is a single case study, which is widely use when trying to understand "how "or "why" certain things happen (Yin, 2002). Case studies are commonly used when examining contemporary phenomena within a real-life context in research of empirical evidence, this method allows for the preservation of the holistic and meaningful characteristics of real-life events (Yin, 2009). Case study method is a flexible research strategy in that it deals with a variety of techniques in gathering evidence, with data needing to merge in a triangulating manner. Some of the evidence gathering techniques that will be used for the purpose of this research include documents gathering, arifacts and observations. This data collection will be guided by theoretical underpinnings based on concepts centred on city life, city form, densification, urban renewal and gentrification as well as the historical overview of the neighbourhood's development.

With the case studies being the preferred research method, the research will rely on observation of public behaviour, whereby spontaneous everyday experiences will be studied in order to gain insight of how public spaces are used by the people who occupy them. This will help in gaining a useful first-hand insight about the study area. In order to strengthen some of the arguments, another method that will be employed will take the form of visual data collection. Through the use of photography, capturing everyday life occurrences visually and identifying various elements within the setting that will assist in providing answers to the research questions.

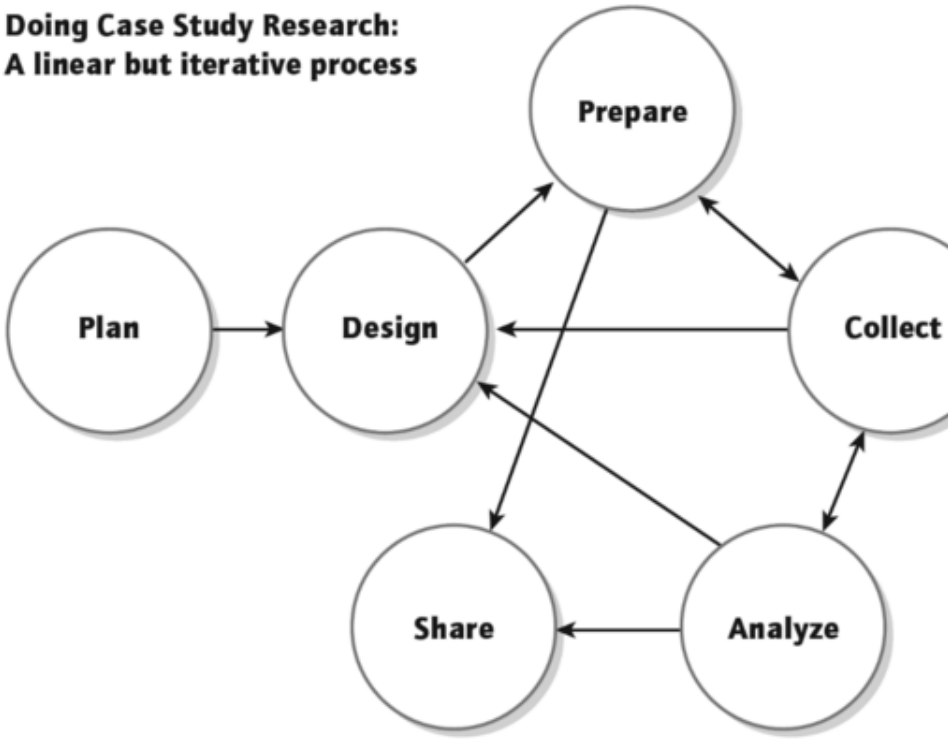



Figure 12: Doing case study research

# POSITION STATEMENT

The design approach comprises a multilevel way to addressing the issues in Hillbrow with the purpose of finding a holistic solution for the neighbourhood and its surrounding context. The approach involves attracting more investment to create quality public environments and improving the safety in and around the neighbourhood by activating the strategic unused alleyways. It also includes improving the movement systems within the neighbourhood with the purpose of relieving traffic congestion through redistributing traffic flows. Creating a central transport node to serve as a new taxi rank as well as priority public transport lanes in the neighbourhood. The approach also includes taking advantage of densification opportunities through urban infill where possible and through the diversification of land uses through the reconfiguration of existing land uses within and around the neighbourhood. But most importantly the design approach seeks to achieve spatial integration through creating greater connectivity , assuming that improving linkages along the edges of Hillbrow and its surrounding would encourage increased mobility of people moving in and out the neighbourhood, thereby fostering a vibrant active edge with a greater sense of safety.




Figure 13: Conceptual framework

CONC

The conceptual framework looks at the different variables within the study and how they connect with one another (journal ref). The development of the conceptual framework was developed in three stages:

1.) Identifying the opportunities that exist

2.) Reviewing relevant literature

3.) Proposing a design intervention for addressing 1 and 2.

# EPTUAL FRAMEWORK

# CHAPTER TWO

"One takes pleasure in being drawn out of oneself to understand that there are other meanings, practices, perspectives on the city, and that one could learn or experience something more different by interacting with them (Young 2000)."

02

# 02 URBAN RENEWAL

LITERATURE REVIEW

The concept of urban renewal was envisioned as a new approach for the remaking of industrial cities after World War II. With the intention of using state powers to take private property for public purpose and clearing the city of slums. This approach used modern architecture and rational city planning to wipe out the aged built environment, replacing it with a new cityscape (Zipp, 2010). This was done in anticipation of drawing the 'middle-class' back to the city centre in an age of suburbanisation.

New York, Manhattan became the poster child of urban renewal, driven by Robert Moses and his urban renewal allies, who saw this an opportunity to remake Manhattan into "a symbol of American power during an age of metropolitan transformation and of a world class city" (ibid). With a booming population growth during the 1850s and limited availability of space in New York's city grid, swift plans had to be made in order to reserve sites that would serve the purpose of public spaces such as parks.

Koolhaas (1994) describes Manhattan as a laboratory, "where the invention and testing of a metropolitan lifestyle and its attendant architecture could be pursued as a collective experiment in which the entire city became a factory of man-made experiences, where the real and the natural ceased to exist." Because of its hyper densities, Manhattan's architecture was and still continues to be seen "a paradigm for the exploitation of congestion (Koolhaas, 1994)." This structural condition of hyper density is similar to that of Hillbrow, the considerations and strategies used to develop Hillbrow in the early stages of its evolution mean that Hillbrow already has the structural makings of a world class city. The conditions of hyper density, mixed use development, community, sociality and vibrancy already exist. Thus the renewal focus should be on making the neighbourhood more liveable.

The ideal behind urban renewal is one of spatial transformation which used modern architecture and urban planning to reshape the city. The process of urban renewal has however come under a lot of scrutiny, with the displacement of poor people from the inner city in order to make room for the more affluent members of society. “The city becomes a mosaic of episodes, each with its own particular life span, that contests each other through the medium of the grid (ibid).”

In her book the death and life of great American cities, Jane Jacobs writes about “a counter narrative of what the city is (Jacobs, 1960).” She believed that the city is like an ecosystem that depends on mixed uses and planning based on community.  She advocated for the creation of diversity, mixed uses, permeability, and variety in the built environment. She examined connections linking safety and activity on the street. Her findings illustrate that the more people there are on the street, the safer it feels. She also identifies the need for cities to offer a “close-grained diversity of uses that give each other constant support, both economically and socially (ibid).” She urges urban planners to unearth the complexities and unique characteristics that shape how places work, in order to enhance them.

“Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody.”

Jacobs






Figure 14: Lower Manhattan expressways

# GENTRIFICATION

Gentrification is a contentious global phenomenon that has been a cause for debate by policy makers and scholars alike. Often perceived as the adaptive reuse of old, rundown urban neighbourhoods usually in city centres that would hopefully bring about wealth, businesses, job creation and vibrancy. On the one hand gentrification is viewed as a sign of healthy economic presence and as the future for cities (Goo, 2018). While on other hand it is viewed as an inappropriate means of displacing disadvantaged communities.

It can be defined as the process of rejuvenating a neighbourhood based on economic, social and physical improvements that results in class transformation and displacement of the people who already lived there (SACN, 2016). These people are usually the disadvantaged poorer communities. Gentrification occurs when there is capital investment into a neighbourhood (investors capitalise on the low property values) leading to demographic changes particularly the increase in higher income earners and the displacement of lower income earners (ibid). This change in demographics is usually accompanied by social, cultural and neighbourhood character change as well.

There is however another view different from the two mentioned above. This view considers gentrification as a 'natural' part of urban development (Goo, 2018). Whereby gentrification becomes "a predicted outcome that can be expected to eventually take place in all cities (ibid)." This approach to gentrification presents opportunities for increase socioeconomic, racial and ethnic integration without displacement. It would also offer new low cost housing investment and stimulates retail and cultural services that would benefit existing residents of the neighbourhood.

In relation to the South African context, gentrification has emerged as part of urban regeneration. Although emphasis must be made that these two processes are not the same, while both processes aim to transform and improve the built environment. Gentrification often results with the displacement of people. South African cities continue to face serious urban planning challenges because of historical spatial divisions particularly the inner cities as a result of the disinvestment, capital and flight of corporate companies from the central business district. In trying to attract capital and middle-class households, city councils have implemented investor-friendly urban policies with the hope of combating inner city decline (SACN, 2016).

In order to alleviate the negative consequences of gentrification, specific steps need to be taken. South African cities network (SACN) proposes that urban development's move beyond gentrification towards a more inclusive approach to development. This approach entails harnessing the benefits of gentrification as well as being conscious of and minimising the negative costs and consequences associated with gentrification. This is crucial in creating inclusive and progressive developments.



"There is a lack of a new imagination – partly a lack of
the beauty of what is already there. If you can't recog
being of worth, then you will always want to build sor
it, it is the eradication of what exists and then someth

Feed









f being able to see
nise something of
mething new over
hing new."
back from Durban workshop




Figure 15: Not in my neighbourhood
Figure 16: Arts on main

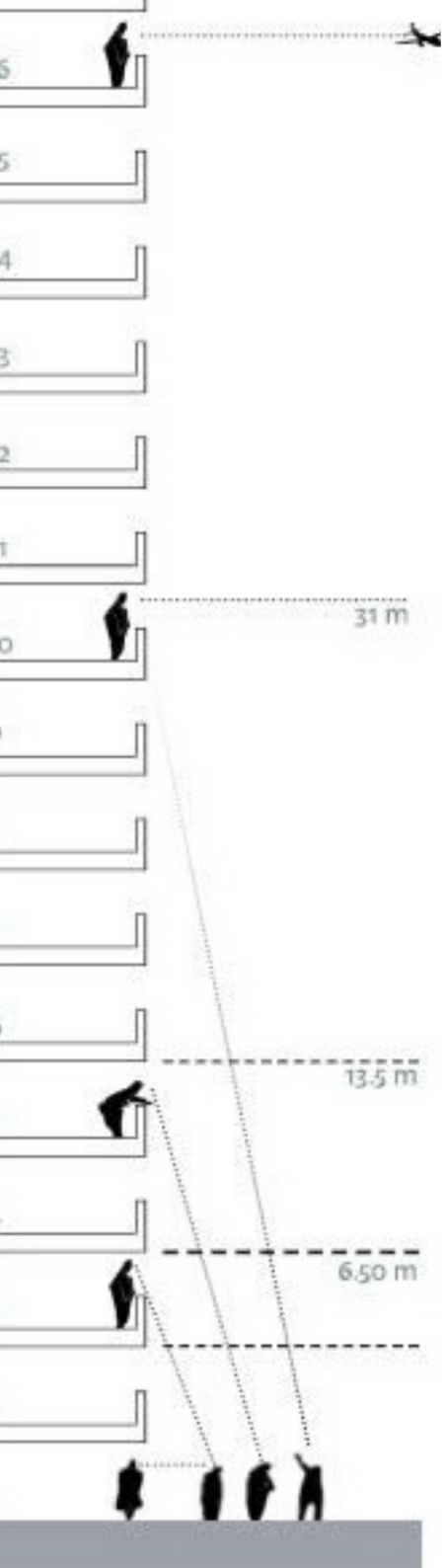



Figure 17: Senses and tall buildings

# DENSIFICATION

Density is often described as a complex concept, this is because of the varied definitions as well as its widespread use in different disciplines. Historically, density was primarily used as a tool for analysis and diagnosis and then used as a method "to prescribe maximum densities in order to ensure certain qualities", and more recently used as an instrument to guide minimum densities to support amenities, public transport and produce more sustainable environments (Pont, 2010). It is often described in terms of physical density and preserved density. Physical density is measured in terms of the number of people in a given area (population density) as well as (building density) being the ratio of building structures in a given area. Building density plays an important role in shaping urban form and must be carefully considered as it influences urban morphology (ibid). When considering physical density, it is critical to relate it to a specified scale of reference, this is how density takes on a real meaning. The latter being perceived density which related to individual perceptions of the number of people present in a given area (ibid). Spatial characteristic and the interaction between individuals is important in the perception of density, it speaks to the relationship individuals and space.

Measures of population density

- Regional density- refers to the area defined by municipal boundary
- Residential density- the ratio of a population to residential land area
- Occupational density- the ratio of the number of occupants the floor area of an individual habitable unit.

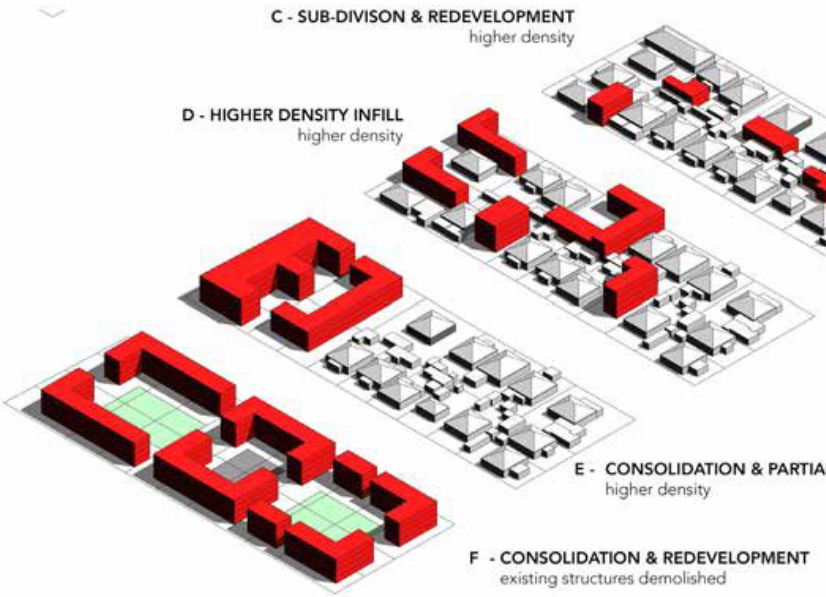



Figure 18: Louis Botha typology and infill

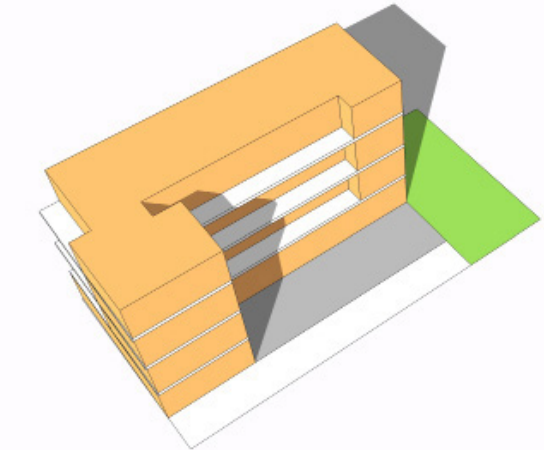
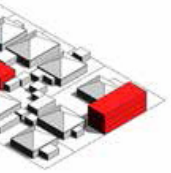


Figure 19: Louis Botha public edge guidline



L REDEVELOPMENT

Measures of building density

- Plot ratio (FAR)- the ratio of the total gross area of a development to the site
- Site coverage- the ratio of the building footprint area to its site area

Measures of perceived density

- Spatial density- relates to perceived density with respect to the relationship between spatial elements such as height, spacing and juxtaposition
- Social density- describes the interaction between people, and the tools for controlling interaction levels such as spacing, physical elements, territorial boundaries, hierarchy and rules for behaviour

Hillbrow can be described “as a typology of densification that resulted from increased occupation without a significant change in built form, with very few new buildings or structures within the suburb (Todes, 2015).” The high population of the neighbourhood has meant that there are greater income-generating opportunities as well as more intense land uses (ibid). Although densification in Hillbrow has resulted in many positive aspects, there are however negative implications as well. Such as the degradation of infrastructure, congestion and conflicts within the urban environment.

74 131

Population

1,08km

Area

68 639km$^2$

People

686/ha

With the phenomenon of rapid urbanisation, densification has become an important agenda for city planning. High densities and the compact city ideals are often seen as prerequisites for sustainable urbanization and economic growth, especially with many cities being confronted with scarcity of land in urban areas. The meaning of high density can be described as a matter of perception as it is highly subjective as it is dependent on people's judgement against specific norms. With opposing notions across different cities and some advocating for high densities and some against this idea. In addressing this notion Ng (2010) argues that "the question is not 'are high densities sustainable' rather, 'what is the optimal density for this city'; the answer depends upon the capacity of, and the constraints in, the supporting social, economic and ecosystems of that city (Ng, 2010)." In short, it is critical for density to coexist with other conditions and approaches in order to achieve the objectives of sustainability. Equally important is the ability for high density developments to be flexible and adaptable in response to changes over time.

A central factor affecting urban performance is the degree in which urban activities and local areas within the city are integrated. Integrated urban systems, are more highly generative, in that they create more opportunities to which people can respond; they are more convenient and equitable, in a sense that people have exposure to a wider range of facilities and activities; and they are more efficient, in the sense that they make better use of infrastructure (ibid).

Factors affecting the urban fabric

- Continuity of the urban fabric
- The way in which connector routes are used as city structuring elements

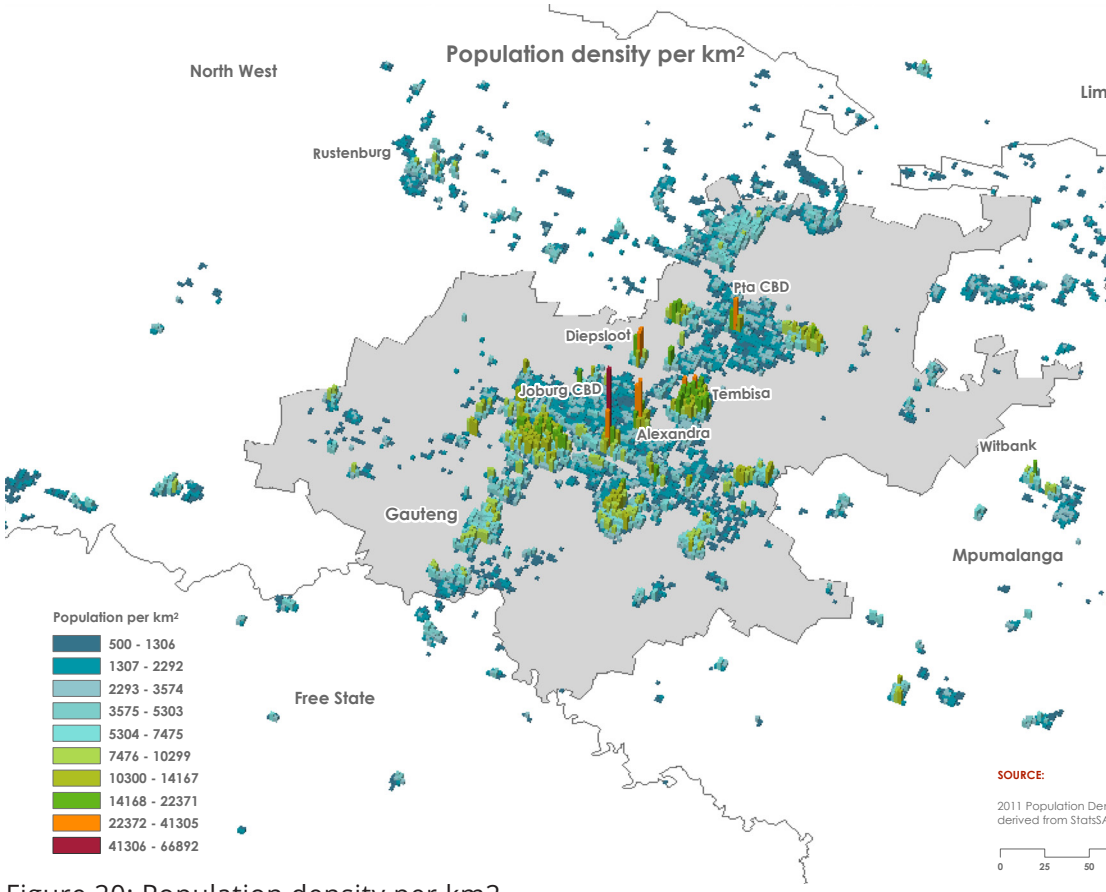



Figure 20: Population density per km2

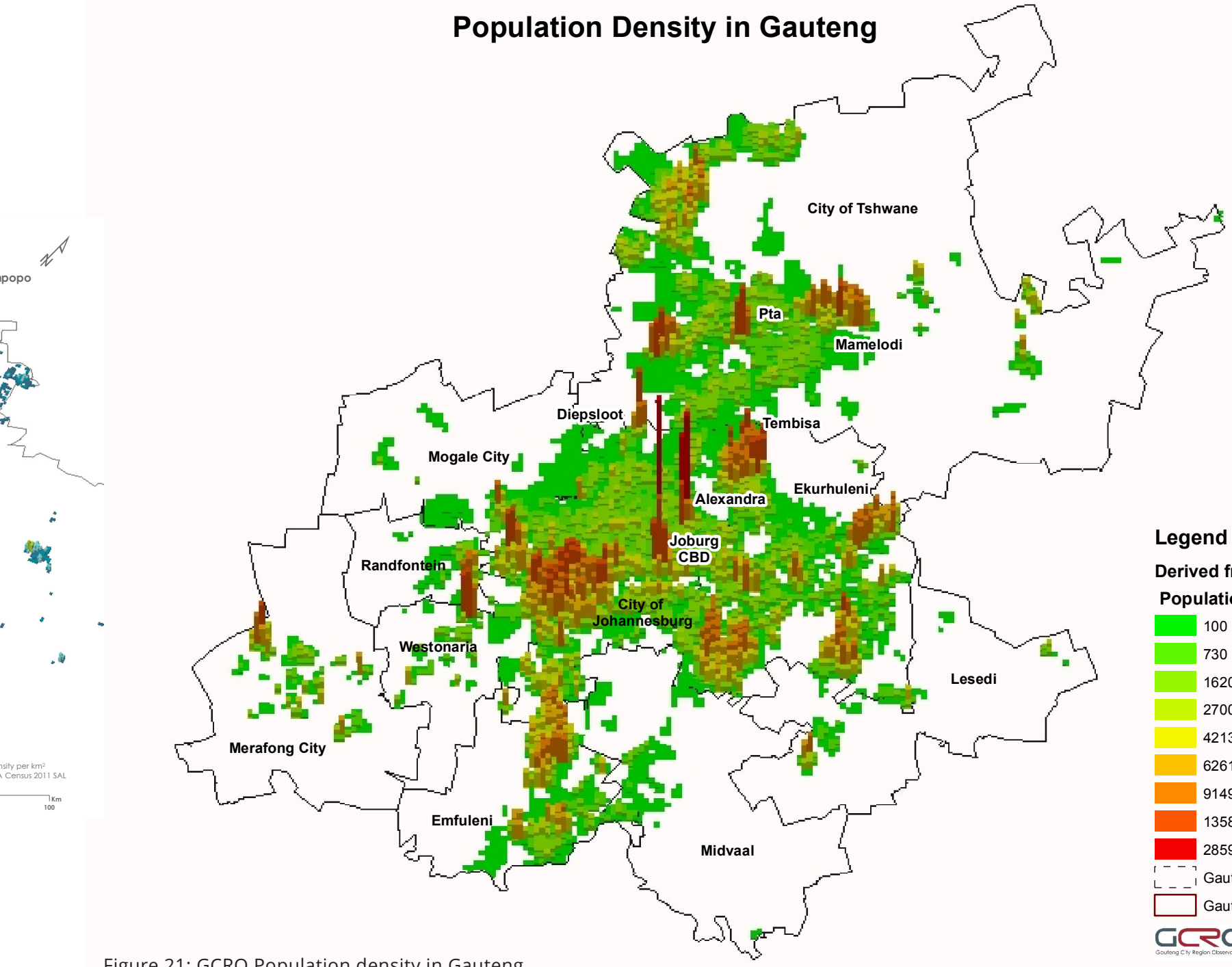



Figure 21: GCRO Population density in Gauteng

# SAFETY IN THE CITY

Oscar Newman writes about alternative ways of restructuring residential environments so as to achieve liveable and controlled neighbourhoods within our cities. Through the New York University project for security design in urban residential areas, he studies the nature, pattern and location of crime in urban residential areas, in essence, how environments affect behaviour.

He proposes defensible space as a model for residential environments which would discourage crime by creating the physical expression of a social fabric that is able to defend itself Newman (1973). With a common goal of creating “safe, productive and well-maintained living spaces” fostered by a sense of community embodied by the people living in these spaces. Newman emphasises that the battle against crime is essentially lost when people fight as individuals instead of fighting as a community.

“The form of buildings and their arrangement can either discourage or encourage people to take an active part in policing while they go about their daily business.” The concept of defensible space aims at formulating an architectural model of corrective prevention and entail the following design elements.

The territorial definition of space, reflecting the areas of influence of inhabitants.

- The positioning of apartment windows to allow residents to naturally survey the exterior and interior public areas.
- Building form
- Enhancement of safety by locating residential developments in functionally sympathetic urban areas

The nature of a light post makes it ideal to be equipped with audio, camera, infrared and other sensors. Such a collection of sensors allows the collection of an interesting array of datasets. A smart light can listen for sounds similar to gunshots in volume and sound quality - the detection of such a sound can trigger immediate dispatch of police to the location the sound was detected (ibid). Using infrared one can employ a technique used by leading retail chains for optimised queue management and count the number of pedestrians and vehicles passing a specific location, alerting the city to trends in traffic and mobility as comprehensively as per hour.

A more interesting use of the smart light was in a known gang area where gang members would congregate in a park after hours. As the smart light can be controlled centrally, when this was seen to occur the light would be remotely switched to a mode that caused the light to flash, only when people were gathered. The consistent recurrence of this phenomenon eventually caused the gang to abandon the park altogether.

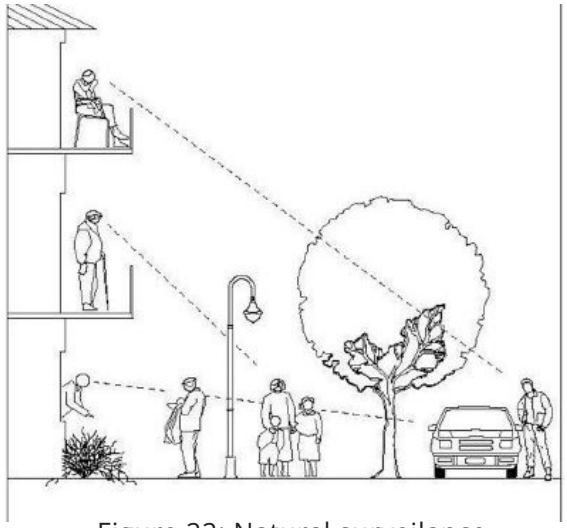


Figure 22: Natural surveilance

SPACES INBETWEEN

Trancik (1986) articulates the concept of antispace as a prominent spatial typology in contemporary urban design. He describes this phenomenon as the isolation of buildings within a landscape, without consideration of the larger urban fabric, which leads to the emergence of unshaped antisapces. In defining lost space he attributes left over, unstructured landscapes to high-rise buildings, surface parking spaces, deteriorating parks, empty spaces along the edges of freeways and marginal housing projects. These spaces become undesirable urban areas with no positive contribution to the surroundings or user (Trancik, 1986). Simultaneously, these spaces provide great opportunity for urban redevelopment and the reshaping of our urban centres with the hope of attracting people back to city centres. He further emphasises the importance of "identifying gaps in spatial continuity, filling them with a framework of buildings and interconnected open space opportunities that will generate new investment (Trancik, 1986)."

Five major factors that contribute to lost space are identified, those being; increased dependence on cars, the modernism movement, and urban renewal, the dominance of private interests as well as zoning and land use policies. In redesigning lost spaces, Trancik proposes three theoretical approaches for effective urban spatial design. The first being the figure ground theory which aims to exploit the relationship between land coverage and solid mass by adding, subtracting or changing the physical geometry of the pattern in order to refine the structure of urban spaces by creating a hierarchy of ordered spaces (Trancik, 1986). The second approach is the linkage theory which is based on lines connecting one element to another.

These lines are structured by linkages elements that physically connect parts of the city such as streets, pedestrian walkways and linear open spaces. The linkage theory is structured around ordering spaces into a system of connections or networks with emphasis on circulation rather than the spatial diagram of the figure ground. The third approach, place theory includes the components of human need and neighbourhood context as critical components to urban design. It attempts to enhance the relationship between new design and existing conditions by taking into consideration social and cultural diversity, as well as historical and natural context.

These three approaches speak to design principles toward an integrated approach. Which "combines the spatial definition of the figure ground with the connective qualities of the linkage theory and the social responsiveness of the place making theory (Trancik, 1986)."

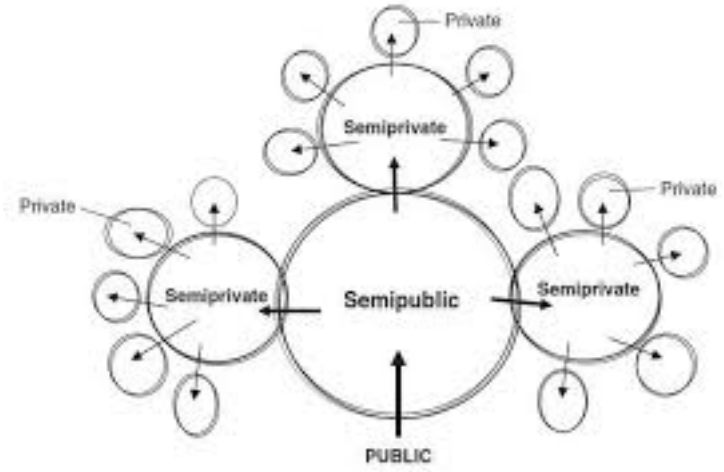



Figure 23: Crime prevention through urban design

SMART CITY

Hillbrow presents an exciting opportunity as the ideal ground for prototyping hypotheses that relate to safety in the city. This research has already highlighted the current and perceived state of Hillbrow as not inspiring descriptions with positive connotations. Words like drugs, crime, grime, decay, dirt, prostitution and other similar terms cloud the reputation of the neighbourhood. An analysis of Hillbrow reveals that this well-known reputation is set against the backdrop of a neighbourhood in need of intervention. A liveable area this small means relative ease of rollout of interventions, monitoring of interventions and a decreased financial barrier to implementation in a neighbourhood.

The concept of the smart city comes to mind with a focus on 2 elements:

Social listening
Social listening is a concept that has been used at scale in the media and advertising sectors for years. In essence it allows an agency to gain insight into things like brand sentiment, brand popularity and areas where a brand may be falling short. Social media monitoring tools allow the extraction of insights from the billions of conversations happening daily worldwide around a keyword, location or search term. This allows a real-time look into the very thoughts of customers and enables a brand to solve problems as they emerge. This technology can be used to listen for community sentiment about a neighbourhood. Insights about dangerous areas, suspicious activity, and poor service delivery can quickly be gathered, analysed and acted upon - with further social listening to assess the success or failure of the implemented solution.

Smart lighting
Although the success of interventions around lighting are varied, ignoring the obvious energy efficiency related benefits of led powered smart lighting, there are multiple other areas that smart lighting can be applied in. A smart light is essentially an IOT (internet of things) enabled device that can take in data via sensors, transmit data via a cellular/Wi-Fi networks and be controlled remotely (SCC, 2017).

The nature of a light post makes it ideal to be equipped with audio, camera, infrared and other sensors. Such a collection of sensors allows the collection of an interesting array of datasets. A smart light can listen for sounds similar to gunshots in volume and sound quality - the detection of such a sound can trigger immediate dispatch of police to the location the sound was detected (ibid). Using infrared one can employ a technique used by leading retail chains for optimised queue management and count the number of pedestrians and vehicles passing a specific location, alerting the city to trends in traffic and mobility as comprehensively as per hour.





Figure 24: Smart City

# PUBLIC SPACES

The city is complex spatial phenomenon often compared to a living organism, which adapts to different environmental conditions in order to survive. Gehl (2010) describes living cities as "ones in which people can interact with one another, are always stimulating because they are rich in experiences, in contrast to lifeless cities." He emphasises that it is critical to strengthen the social functions of city spaces in order to achieve the goals of social sustainability, an open and democratic society. He further emphasises the fact that cities need to be inviting to pedestrians by offering short walking distances, elements of activities that increase the feeling of security and safety around city spaces, by creating cohesive structure that offer attractive public spaces and a variation of urban functions (Gehl, 2010). Moreover he highlights that opportunities to see, hear and meet others can be shown to be one of the most important attractions in a city. Therefore, just as the city is continually evolving, so should we as urban planners, architects and designers in trying to build quality urban environments.

In his book life between buildings, Gehl (2011) speaks about factors that influence the physical environment, in particular outdoor activities. He highlights three main categories of activities, namely necessary activities, optional activities and social activities and their dependencies. Necessary activities, he explains take place regardless of the quality of the physical environment whereas optional and social activities depend largely on what a place has to offer, and how it makes people feel or behave. He emphasises that life between buildings encompasses a range of activities, which combine to make meaningful and attractive spaces in cities.

Gehl (2011) highlights the critical links between outdoor activities and the quality of outdoor space, and how recreational functions and social activities are reinforced through quality outdoor spaces. Gehl shows a great concern for the human scale, this is the ability to view the city at eye level, giving greater focus to the people who actually use the city. He suggests that attractive places with a variety of activities create a good basis for development, "big events evolve from the many small ones (ibid)."

William Whyte (1980) writes about the social life of small urban spaces, where he studies what makes good urban spaces using time-lapse films of the use of plazas in New York City. He believes good new space builds new constituencies and stimulates people into new habits, by providing new paths to and from work and new places to pause.

In the article city life and difference, Young argues against the ideal of community, she writes it off as exclusionary as it fails to offer appropriate alternatives of a representative society. She feels that this ideal denies and represses social difference (Young, 2005). Young's argument speaks to a component of the isolation that is created between different neighbourhoods within a city as in the case of Hillbrow, Johannesburg. The historic evolution of Hillbrow naturally created separate city life spaces where different communities occupy distinct areas. This phenomenon is then exacerbated by the sociology of apartheid which was designed to segregate, thereby preventing social cohesion. According to Young, the ideal advanced by community is one where "people feel affirmed because those with whom they share experiences, perceptions, and goals recognize and are recognized by them are found within the same city space." Where one sees oneself reflected in others.

She proposes an alternative normative ideal of city life as a vision of social relations affirming group difference (ibid). This ideal would see different groups living alongside one another in close social relations, overcoming exclusion. She describes this ideal as "a form of social relations which can be defined as the being together of strangers (ibid)." She describes a good city as one where distinctions between neighbourhoods are blurred, where one is not able to distinguish a difference between the two, where borders become seamless. Urban spaces are meant to lure people out into the public, proving a diversity of activities which bring about excitement, pleasure and comfort.

City life, as Young would have it, is expressed as a "vast, even infinite, economic network of production, distribution, transportation, exchange, communication, service provision and amusement (ibid)." This brings into play the element of creating safe spaces through multifunctional use of streets and parks where people are out on the streets during most of the day.

- Variety- speaks to what makes urban spaces interesting, draws people out to the public, and gives people pleasure and excitement, differentiation of social spaces giving more diversity.
- Exoticism- comes from the beauty of its material being, the bright coloured lights, the grandeur of its buildings, the juxtaposition of architecture of different times, styles and purposes.
- Publicity- the group diversity of the city is most often seen in public spaces. This helps account for their vitality and excitement.

"One takes pleasure in being drawn out of oneself to understand that there are other meanings, practices, perspectives on the city, and that one could learn or experience something more different by interacting with them."

Paddison (2009) also speaks to social differences and diversity in the handbook for urban studies, noting that these are the very substance of cities. He argues that "the very social differences of the city have tended to be imagined as potentially the cause of social disorganisation, the response to which has been the emergence of sorting devices, in particular different forms of segregation, which contribute to the spatial and social distancing of different groups within the city (Paddison, 2001)."

# PLACE MAKING

Placemaking is a hands-on approach towards community driven neighbourhood improvements. Whereby the people in the communities gets involved in the process of reimagining and redefining their public spaces (PPS, 2018). It is the collaborative effort of shaping and reshaping the public realm and connecting people and the places they share.

Place making focuses on the different ways in which physical, social, cultural, ecological and even spiritual qualities define a place and supports its ongoing development. It does this by trying to understand the needs and aspirations of the community by observing, listening and asking questions from the people who live, work and play in a particular space (ibid). Based on community participation, the placemaking process makes use of the local community assets in order to plan, design and manage good quality public spaces that promote people's health, happiness and well-being. Critical in this process is finding a collective vision for the community (ibid).

[Placemaking in action]
"When people of all ages, abilities and socioeconomic backgrounds can not only access and enjoy a place, but also play a key role in its identity, creation and maintenance that is when we see genuine place making in action."
[Placemaking is?]
Community driven_ Visionary function before form_ Adaptable_ Inclusive_ Focuses on creating destinations_ Context specific_ Dynamic_ Trans-disciplinary_ Transformative_ Flexible_ Collaborative Sociable

"Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody"
Jane Jacobs

Public spaces are intricate spaces, used by a variety of people at different times for different reasons (PPS, 2018). Successful places provide identity and interest that attracts investment, businesses and residents. Project for public spaces (pps) identifies four elements that contribute towards making great places, and these are;

1. Accessibility- well connected to surrounding context
2. Comfort- projecting a good image
3. Attractiveness- allow people to participate in activities
4. Sociability- interactive environments

PPS has identified 11 key principles for creating successful public spaces, these principles include the following:

1. Views the community is the expert
2. Concerned with creating places rather than design
3. Focuses on partnerships
4. "It always seems impossible until its done"
5. Having a community vision give insight on the communities aspirations
6. Community observation goes a long a way
7. Form follows function
8. Triangulate
9. Experimentation is encouraged, as a means of testing ideas
10. Money shouldn't compromise progress
11. "You are never finished"

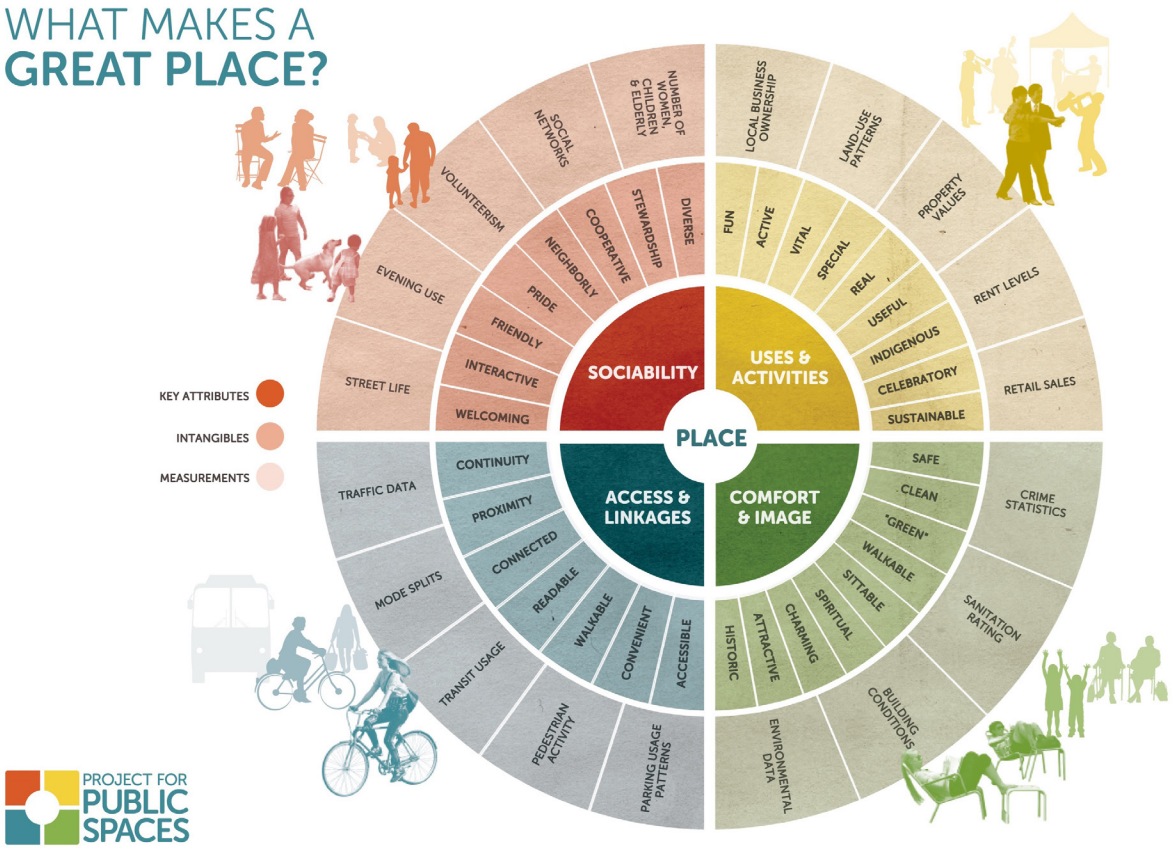



Figure 25: What makes a great place

The place making approach appears to be the most appropriate response to revitalising declining neighbourhoods such as Hillbrow. Particularly important is the active role which the community plays is reimaging and reinventing their neighbourhoods based on their dreams and ambitions. This approach is the most fitting for Hillbrow in addressing the problems identified in the neighbourhood, especially when it comes to shaping the public realm and "strengthening the connections between people and the places they share (PPS, 2018)."

This approach can however also be linked to the integrated approach discussed under spaces in-between, taking into consideration the figure ground, linkage as well as place theory. Both these approaches speak to incremental steps towards achieving effective redevelopment through redesigning lost spaces, creating practical linkages between spaces and gradual infill development.

The primary objective of the proposed intervention will rely greatly on ensuring good connectivity and reinventing public open spaces for the community. The interventions will look at ways of creating better linkages on the edge of the neighbourhood, it will also focus on the neighbourhoods internal improvements through public space improvement as well as the redevelopment of derelict building, low density buildings and single dwelling properties that still exist.

# PRECEDENT STUDY

The following precedent studies look at how public spaces can be renewed and reinvented into interesting and attractive places that can be enjoyed by all. This speaks to the ideal of city life as a form of social integration and the opportunity to overcome exclusion with good quality public spaces that are able to draw people out in public, giving people pleasure and excitement (Young, 1995).

# BRYANT PARK

Bryant Park is known to be one of the best public space renewal projects in the world, with more than 12 million visitors annually. It is located next to the New York public library and surrounded by iconic skyscrapers. The history of Bryant Park provides critical lessons on how to turn a place around. This was a restoration project guided by close observation of how the space was being used and misused in order to diagnose the issues and come up with solutions (PPS, 2018). In the early 80's the park was overrun with dealers and other dingy activities. It was characterised as gloomy with untidy hedges concealing activities within the park, uninviting and unsafe. In understanding the problems of the space, it was important to distinguish reality from perceptions, and this where Project for public spaces came in with the study on how the park was actually being used (ibid).

Central to the success of Bryant Park was not a redesign of the physical infrastructure, rather small incremental changes. These changes included, ambitious landscaping, new lighting both in the park and from nearby rooftops, increasing the sense of safety and security, a creative line-up of events and activities, and high quality management of the space (ibid). Although a number of physical recommendations were made to make the park more accessible and welcoming. The renewal of the park emerged from the management's flexibility in allowing outsiders access to the park. This resulted in a variety of interesting events at the park which were able to generate a source of earned income. This is one of the great examples of the placemaking principle that "you are never finished (ibid)." The strategy for the space is under constant review and refinement.



Figure 26: Pipes & drums on the fountain terrace

The Bryant park power of ten refers to a variety of unique activities offered by the park. These activities include lunchtime performances, outdoor movies, chess, ping-pong, an outdoor reading room, a restaurant and an outdoor café, a skating rink, holiday craft markets and food kiosks. The activities continually change seasonally and with the time of the day. Critical to the restoration of the park came from a creative line-up of events and high quality management of the space.

Lessons from Bryant Park that can be applied in Hillbrow:

• Observation of how spaces are used in order to diagnose the issues and come up with appropriate solutions.

• Small incremental changes can make a huge difference to an area.

• High quality management of public spaces.

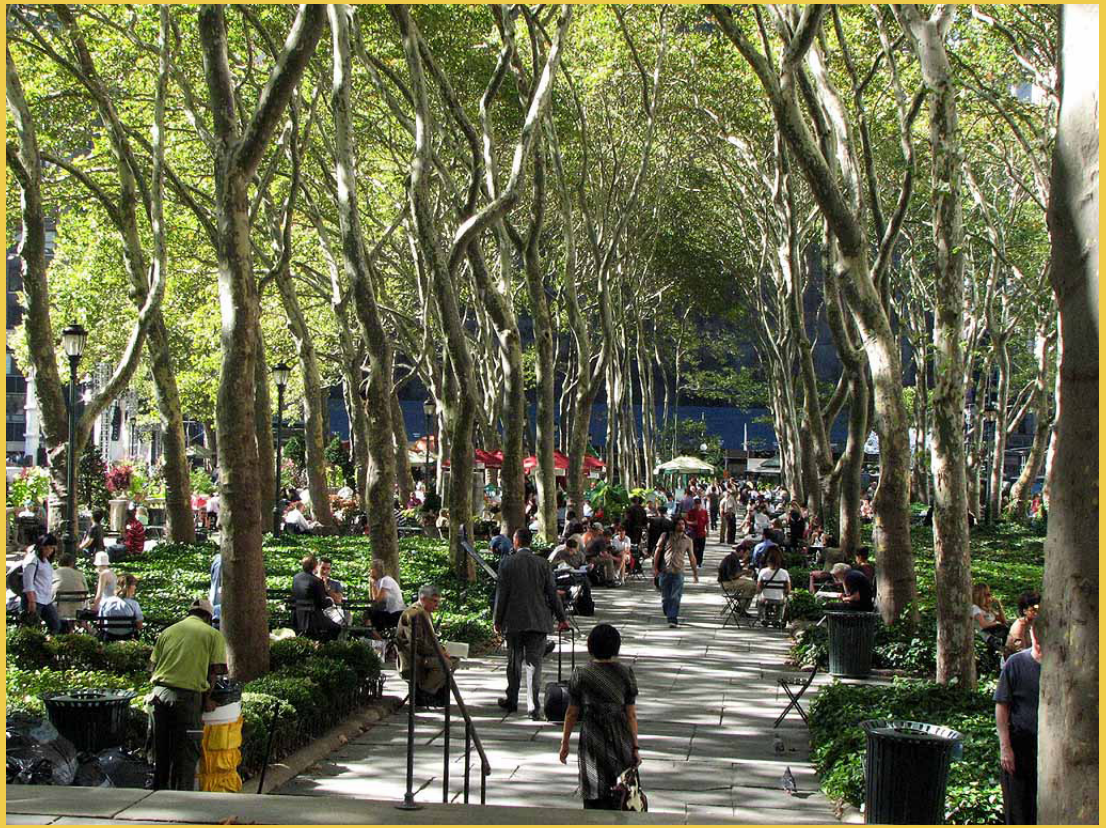


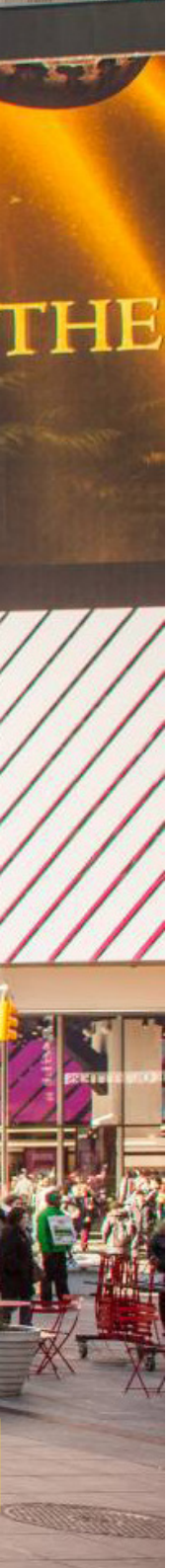
Figure 27: Bryant park, New York




Figure 28: Bryant park power of 10 summer




Figure 29: Times square, New York City




# TIMES SQUARE

Commissioned by the time square alliance, project for public spaces (pps) was also involved in re-imaging how effective time square was as a public space. In order to better understand the issues of the district, they undertook “systematic observation techniques such as time-lapse analysis, activity mapping, and tracking and user surveys (PPS, 2018).” The following issues and opportunities were identified as part of the analysis:

- Ground floors- most of the building fabric did not support sidewalk activities.
- No square there”- high demand for use and activities yet there are no amenities in the square to support activities.
- Movement and circulation- the street design does not support pedestrian movement, there is a lack of sidewalks, crosswalks and the crossing times are inadequate.
- Flexible space- the district needs flexibility and close side streets and even broadway at various times to facilitate planned events.
- Reach out like an octopus- not perceived as a district, side streets are underperforming as destinations in their own rights.

Recommendations made included the reconfiguration of streets to better accommodate foot traffic and minimise the negative impact of vehicular traffic , improvement of the pedestrian experience through architectural and amenity improvements, retail strategy to diversify the district attraction, and new public space programming such as performances and markets (ibid).

Lessons from Times Square that can be applied in Hillbrow:
• The redesign of streets to better accommodate pedestrian traffic.
• Ground floor of building to support sidewalk activities.
• Re-imagining the effectiveness of public spaces.

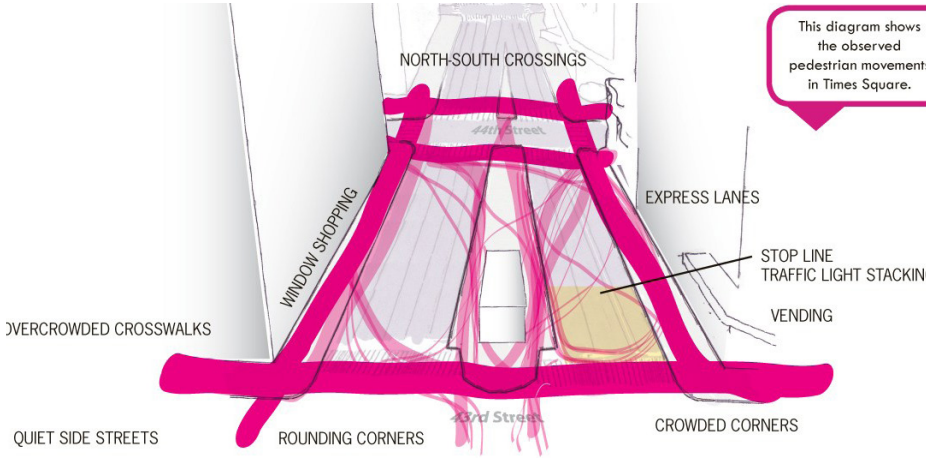



Figure 30: Pedestrian tracking diagram




Figure 31: Map of the High Line



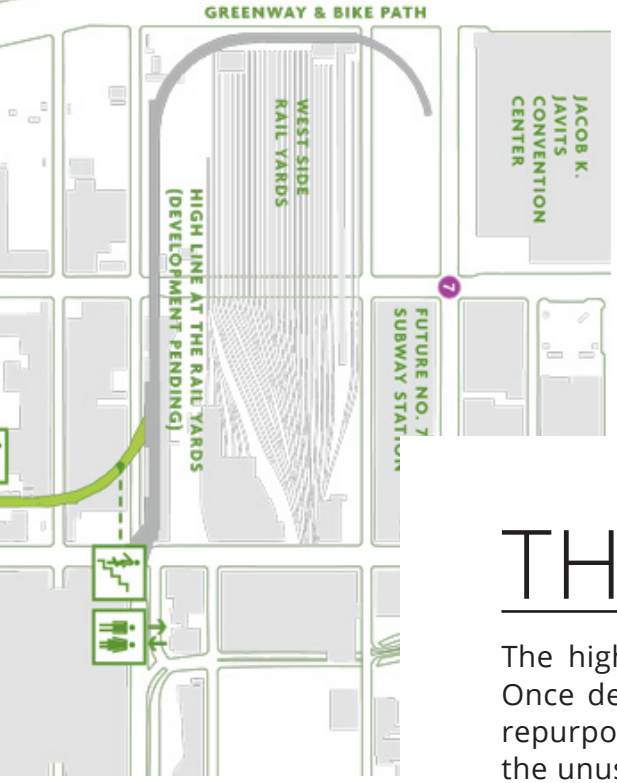





Figure 32: The High Line, New York City

# THE HIGH LINE

The high line is a public space built on a historic elevated freight line. Once destined for demolition, the community rallied together to have it repurposed instead. An open competition was held in 2003 to transform the unused industrial infrastructure into a dynamic public space. The high line runs along a 2,3km elevated space with a continuous view of the city skyline and the Hudson River.

The park offers various activities such as walking through gardens, experiencing performances, viewing art, tasting delicious foods or just connecting with friends and family. It offers a captivating break from the chaotic city. The park is maintained and operated by the Friends of the high line, a non-profit organization responsible for the High Line in partnership with New York City parks.

The concept of an elevated public space would work well in transforming unused spaces such as that of Hillbrow alleyways. This idea forms part of the strategic interventions in creating a safer public realm for everyone to enjoy. This idea will be explored further as part of my design interventions.



Figure 33: New York City High Line

# MABONENG PRECINCT

As mentioned in the background of this report, the inner city decline that took place in Johannesburg was unprecedented and multifaceted, marked by political uncertainty, economic instability as well as suburbanisation. This together with the lack of oversight in the property sector and the "ineffective management of the urban environment" lead to a large number of private properties being abandoned or destroyed (Bethlehem, 2013) .Decades later this destruction has aided a drive towards major urban regeneration projects within the inner city creating opportunity for the conversion of inner city buildings into attractive vibrant places where people can live, work and play.

The maboneng precinct is a mixed use creative hub located on the eastern side of the Johannesburg CBD. It is an urban regeneration model designed to bring life back into the deserted downtown neighbourhood. The neighbourhood has become the centre of creative energy for Johannesburg's urban artists, with a mix of art galleries, retail and studio space, restaurants, coffee shops, urban squares and parks. The precinct attracts a range of users from the inner city residents to crowds from the city's northern suburbs. The neighbourhood brings to life the developers vision of creating an innovative hub that encourages diversity in use, race, income and age (Daffonchio, 2019).

The transformation that has taken place in maboneng has seen conversions of dilapidated and abandoned industrial warehouses and office buildings into creative retail spaces, residential apartments and office buildings, "anchored by the arts offering which includes artists, workshops, markets and other creative spaces (Bethlehem, 2013)."

The development of the precinct initially started on one street (Fox Street) which became the main activity street and has continued to grow along Main Street. The building form reinforces the relationship between the buildings and the streets, creating opportunities for greater engagement between the private and public realm. The streetscape saw improvements with better lightings, the provision of rubbish bins as well as trees and paving adding to the visual appeal.

There has been a lot of debate regarding the success and sustainability of the maboneng precinct as an urban regeneration model. With questions around the socio-economic impact of the project, racial and governmental issues that make the project unattractive and unsustainable. Although the precinct has successfully branded itself as inclusive and integrated, it has come under a lot of criticisms for being exclusive, catering to middle and upper income residents, thereby displacing low income residents and ultimately functioning as a "fortified enclave within the inner city (Vejby, 2015)."

Although there still remains many challenges facing Johannesburg's inner city, it has seen great strides towards revitalisation. With a growing investment in the property sector and improvement of infrastructure as well as increase in tourism activities within the CBD.

Lessons from Maboneng that can be applied in Hillbrow:
- The conversion of dilapidated and abandoned building to office, retail and residential land uses.
- The development of one street initially and the expansion of development thereafter.
- Building form to reinforce the relationship between the building and street life.



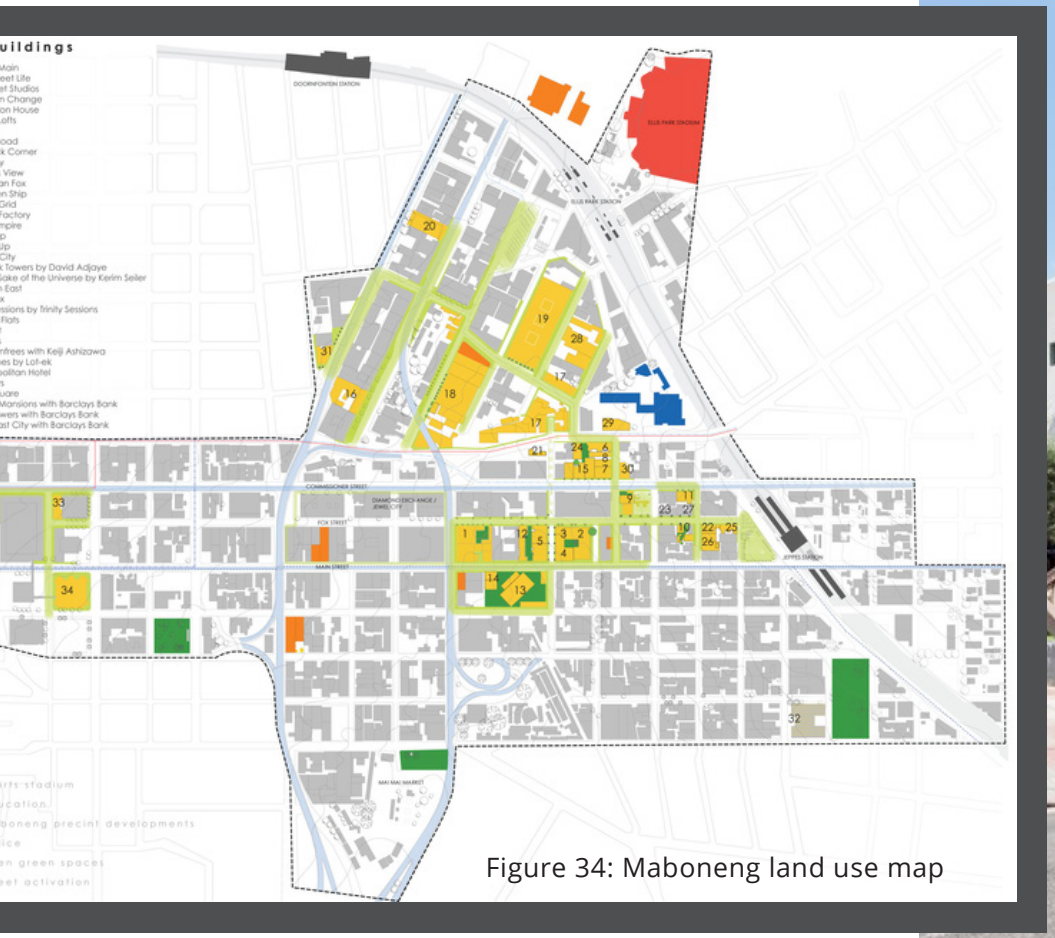
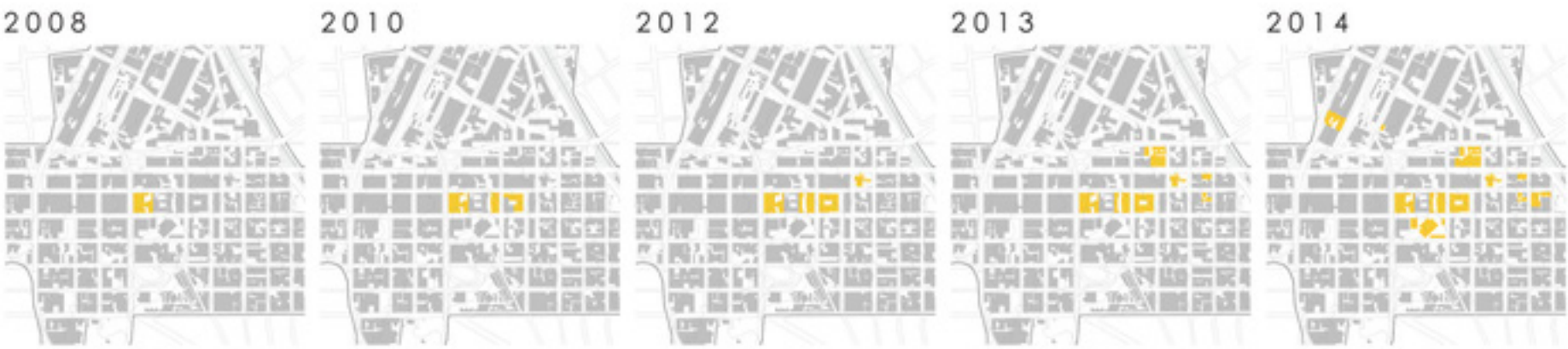



Figure 34: Maboneng land use map




Figure 35: Maverick corner, Maboneng

Figure 36: Maboneng development 2008-2014



# CHINATOWN SAN FRANCISCO

Chinatown is one of the popular tourist attractions in San Francisco, but also one of the poorest areas in San Francisco (ref). It is said to be the oldest Chinatown in North America spanning over 24 city blocks with 41 alleys within the block. It is also the most densely populated neighbourhood west of Manhattan, with mostly Chinese residents.
In the early 1800's, the alleys of Chinatown were known for gambling, brothels and prostitution, nowadays, "these alleyways show that Chinatown is more than just restaurants and souvenir shops. They are the front doors of homes, the playgrounds of children, and the gathering spots for residents (Keeling, 2019)."

Ross alley, is the oldest alleyway in San Francisco, now the location of the golden gate fortune cookie previously known as the street of gamblers. The alley is used by many local residents to cut through the neighbourhood without having to walk through the busy streets. The alley serves an active role to public space with dynamic storefronts and shops selling food, spices, tea, electronic goods and barbershops as illustrated on figure 39.

Lessons from Chinatown that can be applied in Hillbrow:
The use of alleyways as:
- Doors to homes.
- Playgrounds for children.
- Gathering spots for residents.
- Alternative throughways through the neighbourhood.
- Dynamic storefronts.



Figure 37: Ross alley




Figure 38: Barber shop in Ross alley





Figure 39: Chinatown

# CHAPTER THREE

03

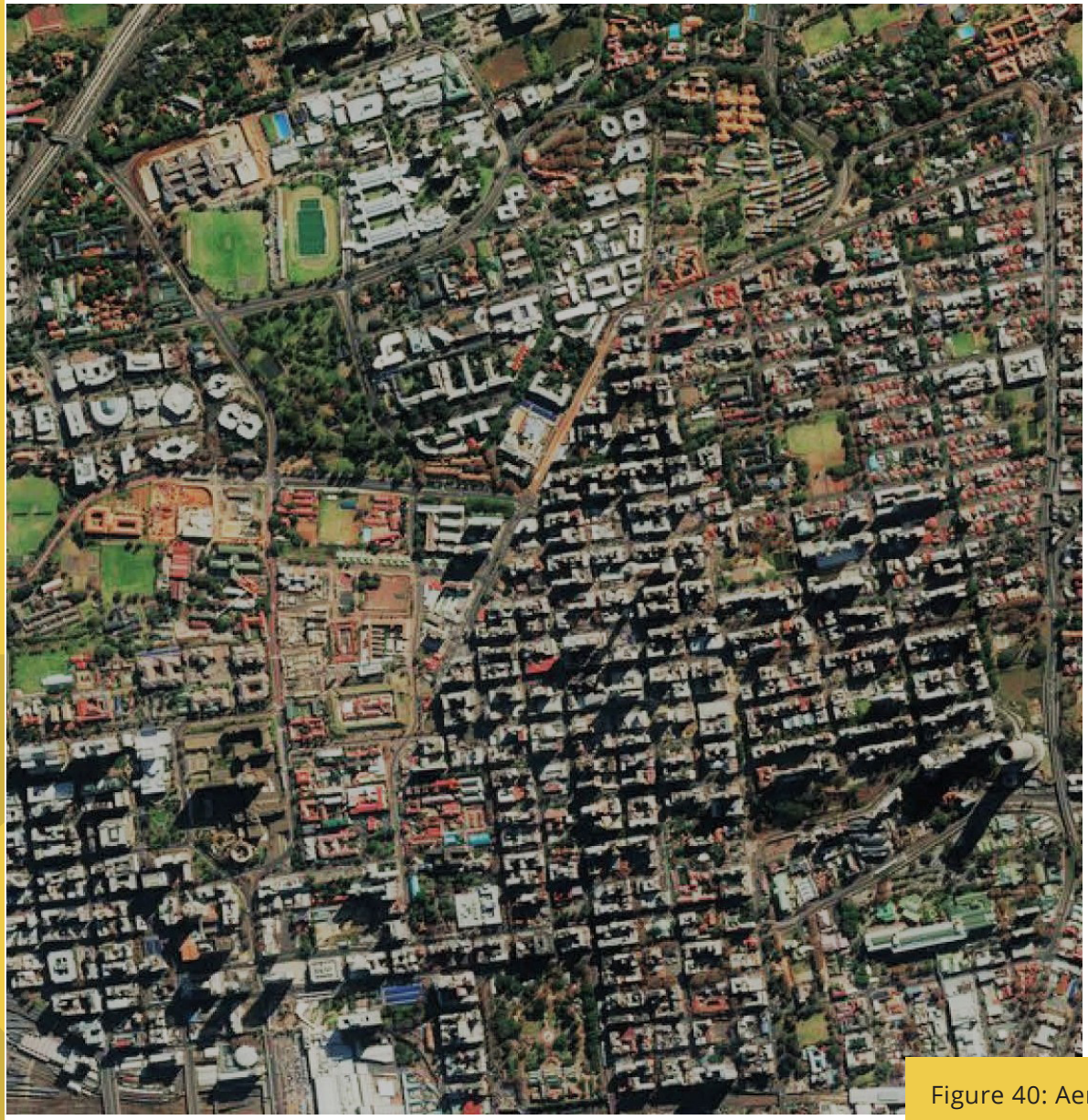


Figure 40: Aerial view of Hillbrow

# 03 THE SITE

Hillbrow lies between Park town which is towards its northern edge, Berea on its eastern edge, Braamfontein on its western edge and the Johannesburg CBD on its southern edge. The boundaries of the neighbourhood were determined according to the municipal boundary. The neighbourhood is surrounded by a number of institutional facilities such as the Hillbrow police station, Hospital Hill, Constitutional Hill as well as the civic centre most of which are located on the western edge of Hillbrow. Because of its key positioning which lies between the city centre and the northern suburbs, Hillbrow plays a critical linkage role between these areas (Silverman, 2007). It falls under region F on the city of Johannesburg metropolitan region forming part of Johannesburg inner city.

Hillbrow falls within the Johannesburg CBD urban development zone which is a scheme aimed at encouraging inner city renewal through tax incentives. It is bounded by a number of strategic transport networks by rail links and roads networks that facilitate movement in and out of the city these include park station, Johannesburg main railway station, MTN taxi rank, reya vaya BRT system, Smit street, Louis Botha, Clarendon place, Joe Slovo drive, and Empire road. This strategic location makes Hillbrow desirable to newcomers seeking opportunities and economic security in the city










Figure 41: Parked taxis on Claim street , Hillbrow
Figure 42: Parked taxis on Hospital street, Hillbrow
Figure 43: Construction of BRT stop on Clarendon place
Figure 44: Aerial view of new BRT stop

# BARRIERS


Life Brenthurst Hospital
24 HOUR EMERGENCY UNIT
Entrance in Park Lane
via Queens Road & Princess Place

Figure 44


mazda
Constitution Hill

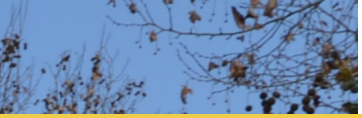




Figure 46

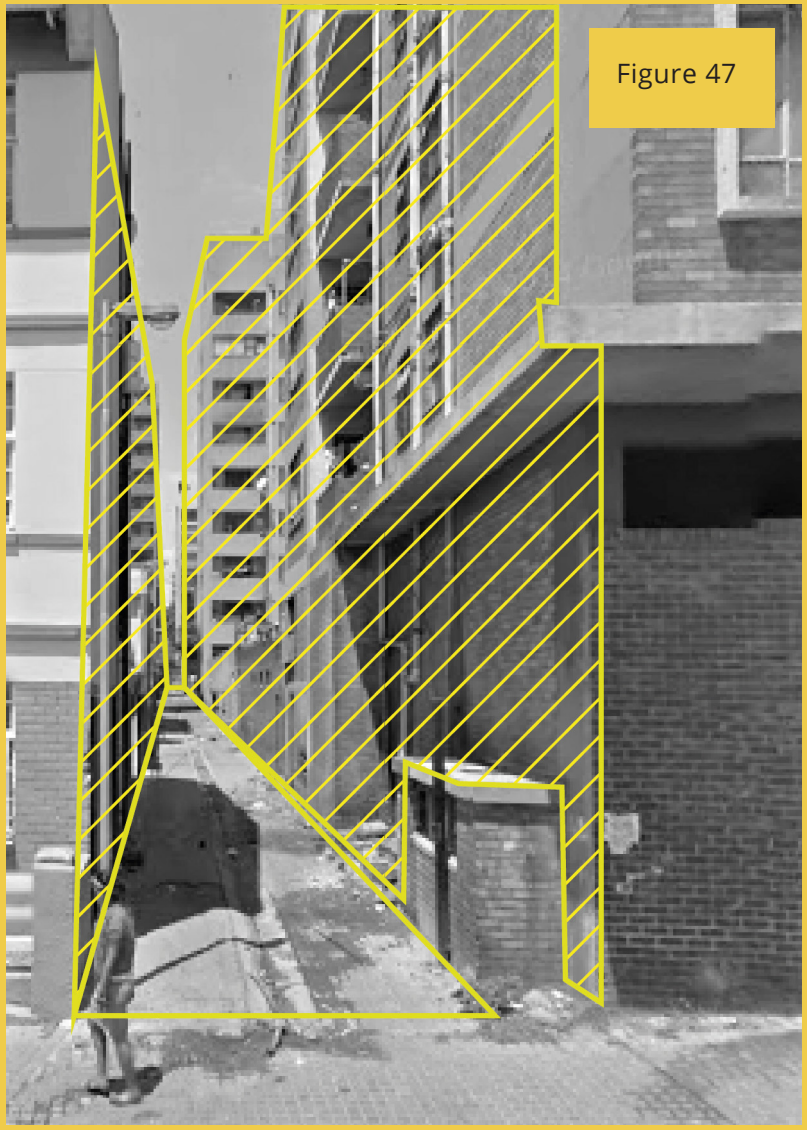


Figure 47



Figure 48



Figure 45

# BARRIERS

Figure 45: Institutional barriers on the western edge of Hillbrow
Figure 46: Motor vehicle and pedestrian barricade on Park Lane
Figure 47: Alleyway in Hillbrow
Figure 48: Motor vehicle and pedestrian barricade on Esselen Street

# REGIONAL AND LOCAL CONNECTIONS

1 Louis Botha Avenue Development Corridor
2. Empire Perth Development Corridor
3. Turffontein Development Corridor

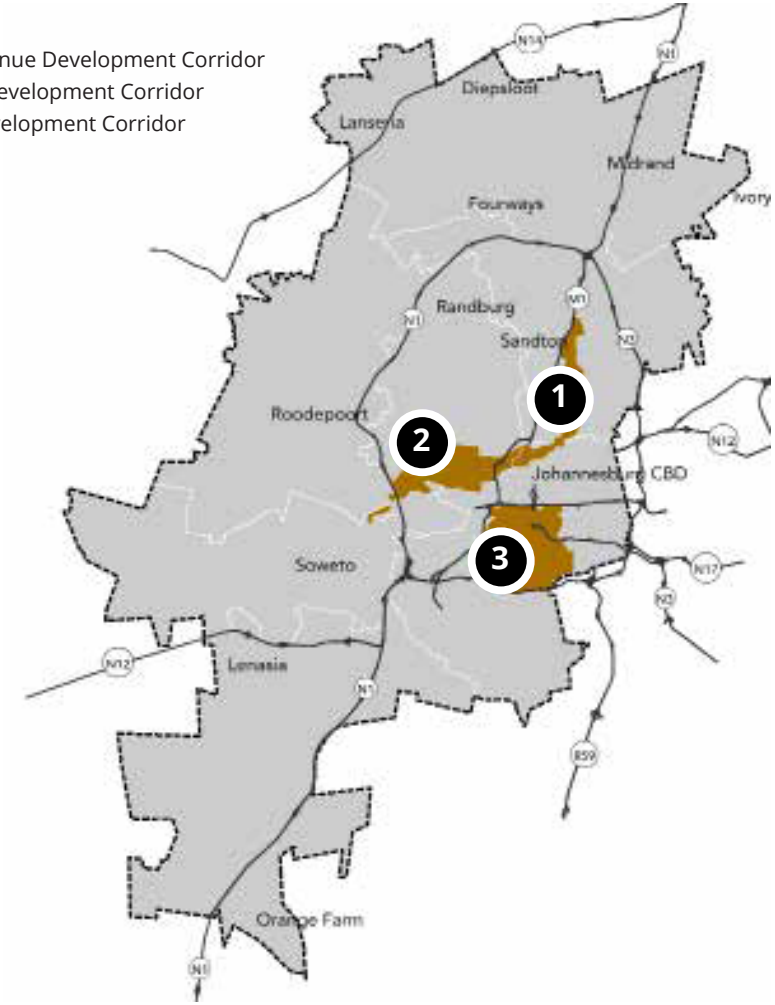



Figure 49: Medium term corridor priorities

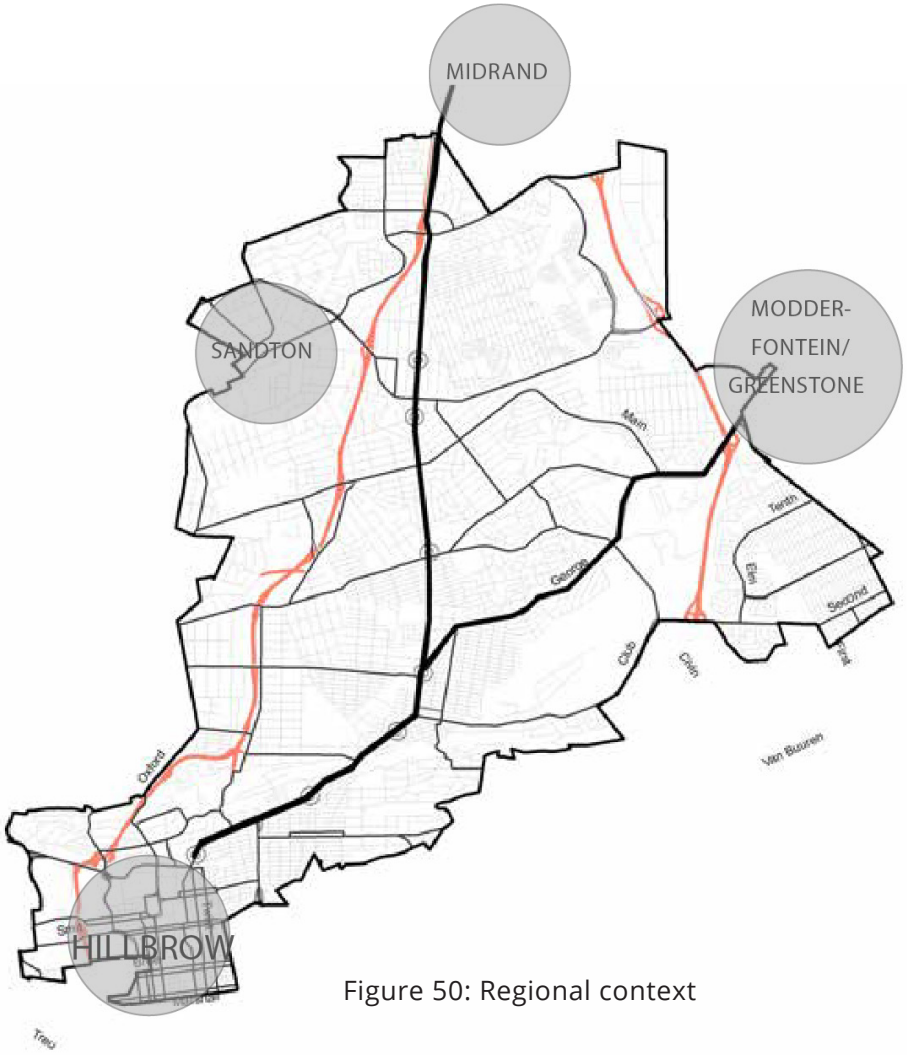



Figure 50: Regional context

Hillbrow is well connected to key economic nodes that offer employment opportunities and potential for growth. These nodes include Sandton, Midrand, Modderfontein and Greenstone as illustrated on figure 50. It also lies between two corridors of freedom, those being the Empire Perth development corridor along the western edge and the Louis Both Avenue corridor to the north. The long term plan for the corridors of freedom is to extend the corridors to include links between Sandton, Randburg and Diepsloot, and between Alexandre and Ivory park (CoJ, 2018).

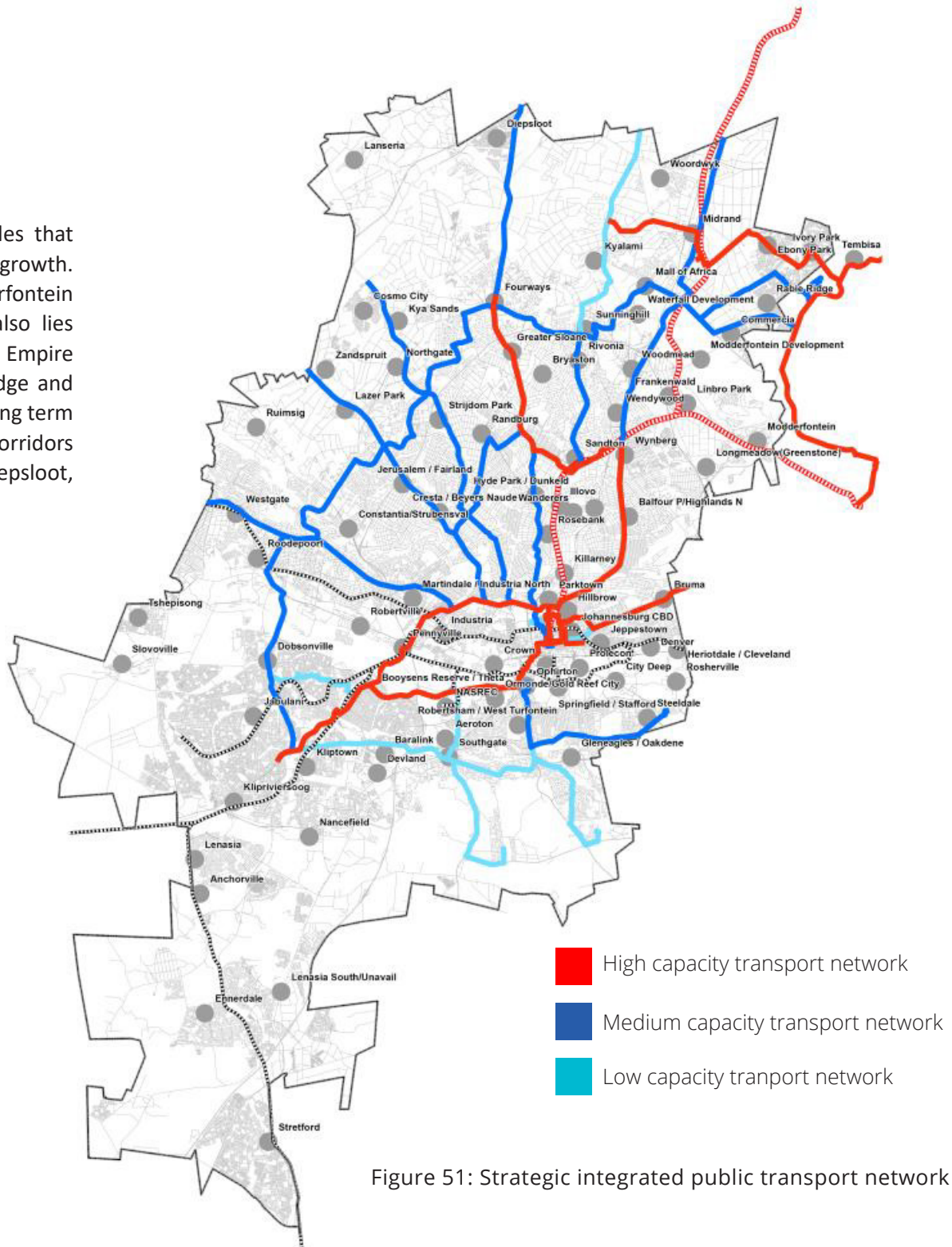
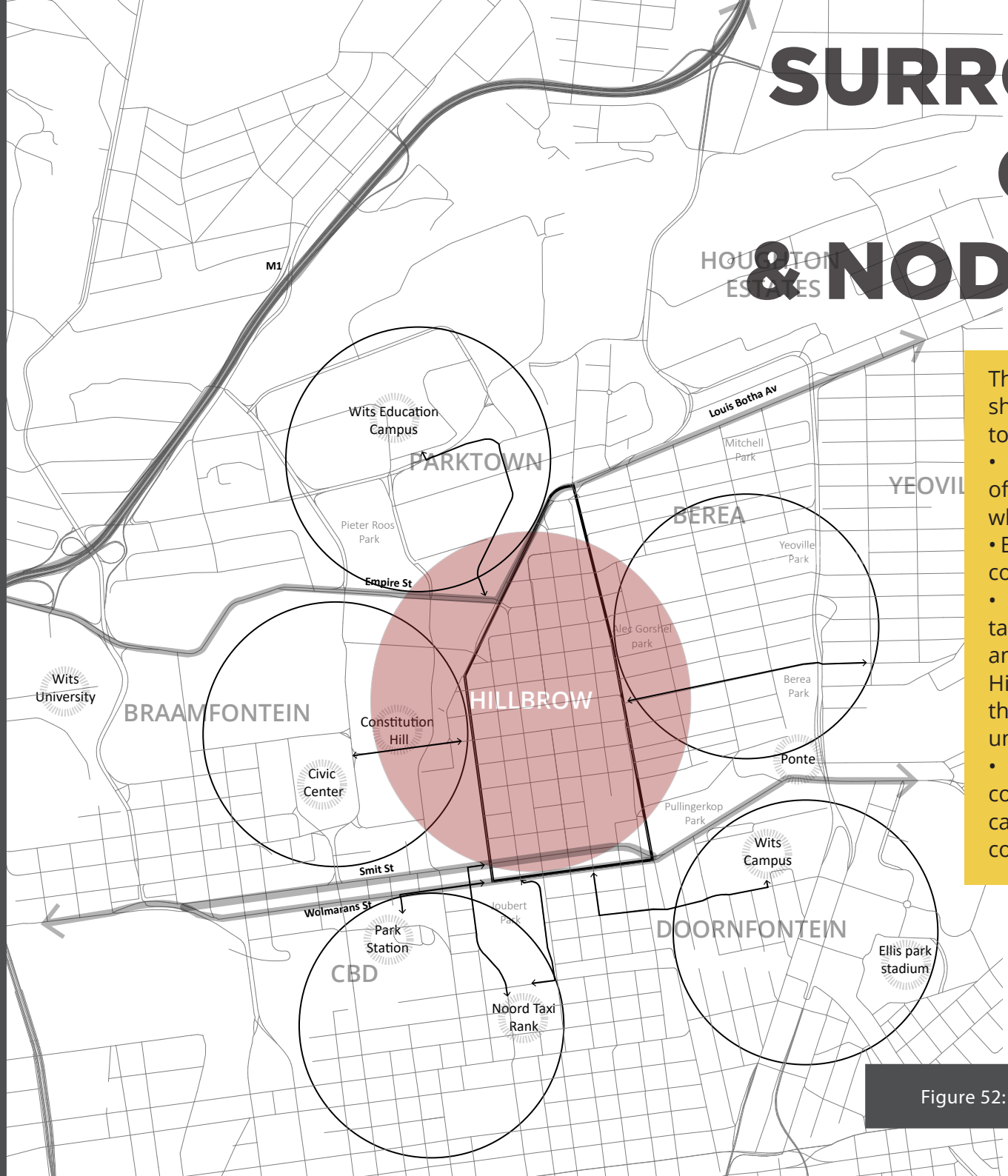



Figure 51: Strategic integrated public transport network

# SURROUNDING CONTEXT & NODAL LINKS



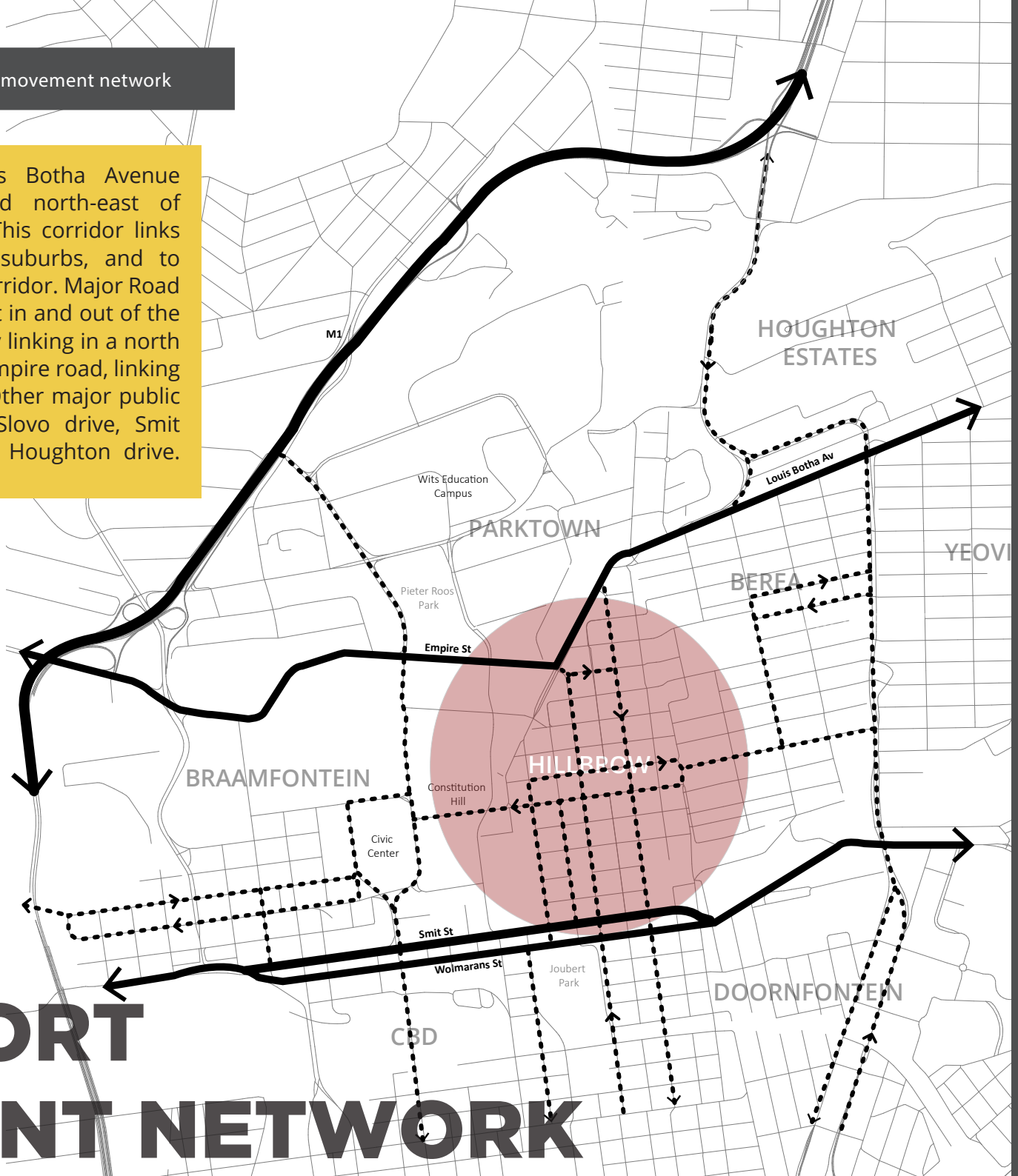

The nodal links indicated on this map show key places that people would want to go to or vice versa. These places include:

- Wits education campus to the north of Hillbrow, connecting students who live in Hillbrow to the university.
- Berea and Yeoville to the east of Hillbrow, connecting residents who work in Hillbrow.
- Johannesburg park station, Noord taxi rank, Wits Doornfontein campus and Ellis park stadium to the south of Hillbrow, connecting commuters to the transport nodes, students to the university and sport lovers to the stadium.
- Johannesburg civic centre, constitution hill and Wits main campus to the west of Hillbrow, connecting students to the university

Figure 52: Nodal connections

Figure 53: Johannesburg Inner City movement network

Hillbrow sit along the Louis Botha Avenue development corridor located north-east of the Johannesburg inner city. This corridor links to Alexander and Northern suburbs, and to Soweto via the Empire Perth corridor. Major Road networks facilitating movement in and out of the city include the M1 carriageway linking in a north southerly direction as well as Empire road, linking in an east westerly direction. Other major public transport roads include Joe Slovo drive, Smit street, Wolmarans street and Houghton drive.




# TRANSPORT MOVEMENT NETWORK

# FIGURE GROUND

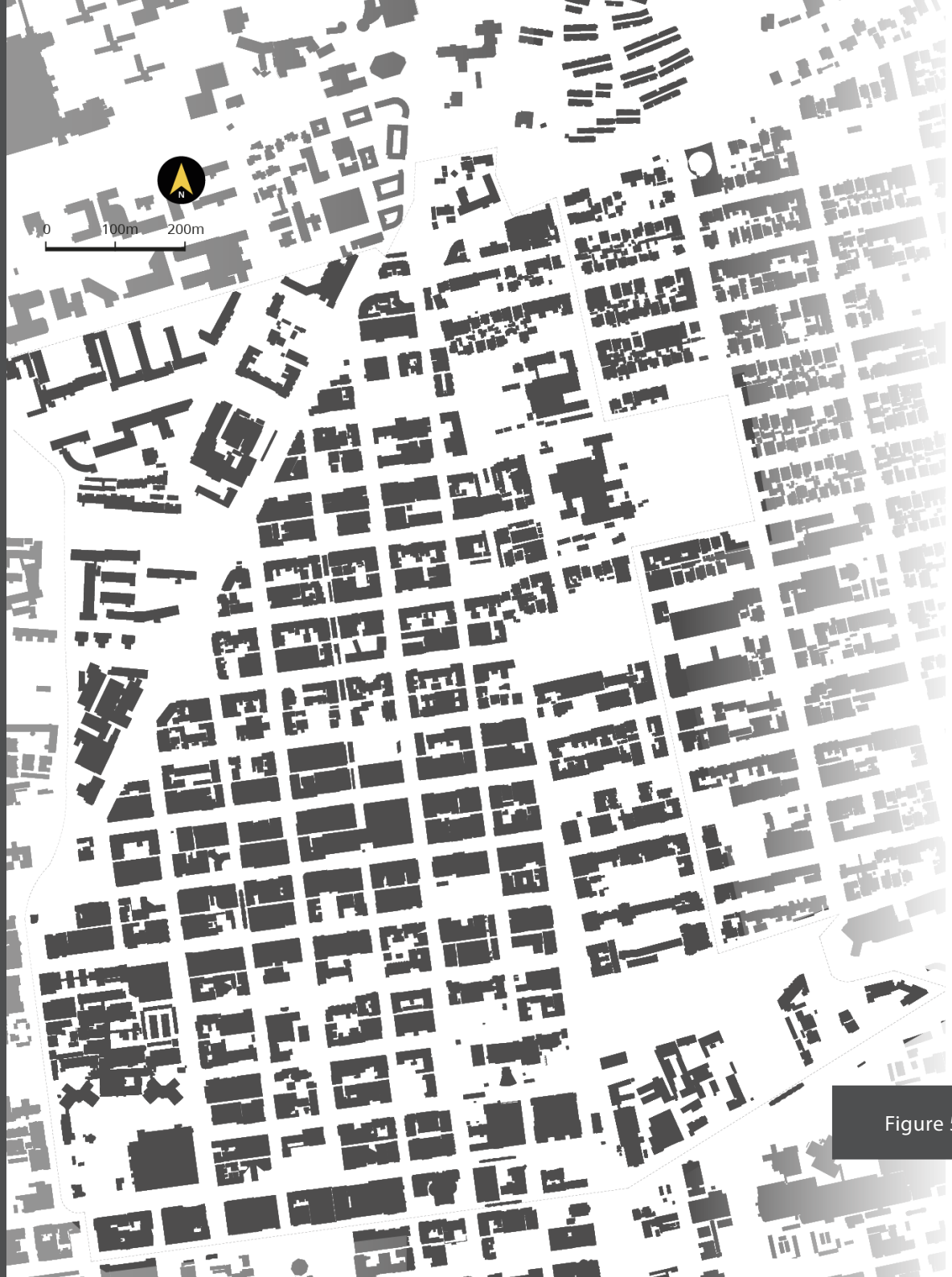



Figure 54: Hillbrow figure ground

Figure 55: Hillbrow contour map

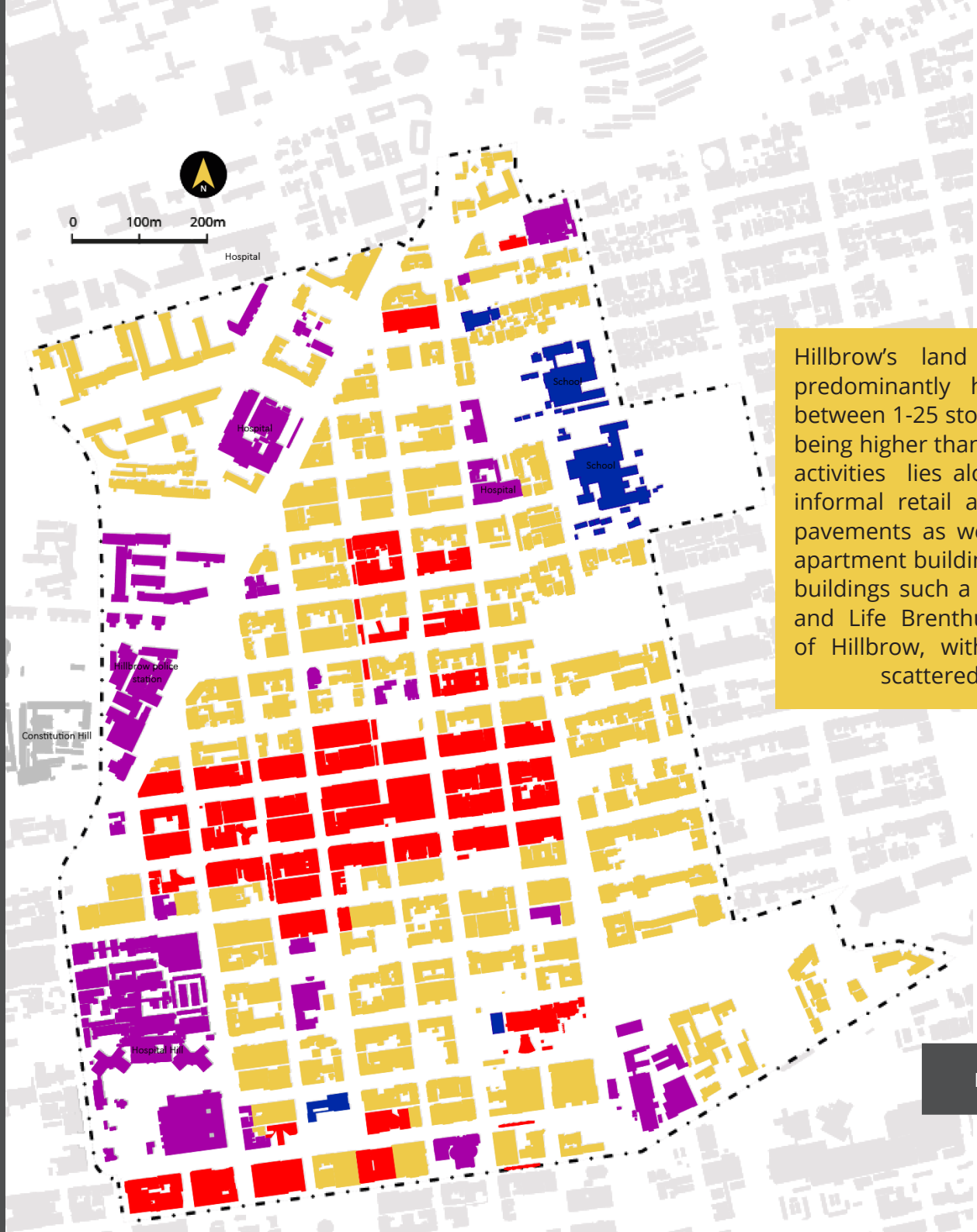



5mm Contours

Hillbrow sits on a gradually inclining terrain, with its highest point being towards the centre of the neighbourhood along Pretoria Street. The topography of the neighbourhood reinforces the strength of urban elements such as Hillbrow's iconic landmark (Hillbrow tower) which defines the region as a whole through its distinctiveness. The urban fabric is organised by a grid pattern which is mostly covered by the building envelope leaving no room for public space.

# CONTOUR MAP

# LAND USE MAP




Hillbrow's land use pattern is characterised by predominantly high-rise residential buildings ranging between 1-25 storeys in height, with most of the buildings being higher than 4 storey's. A high concentration of retail activities lies along Pretoria and Kotze street, although informal retail activity does take place on the street pavements as well as on ground floors of some of the apartment building, it is not as intense. Large institutional buildings such a Hospital Hill, the Hillbrow police station and Life Brenthurst Clinic lie along the western edge of Hillbrow, with smaller community facility buildings scattered throughout the neighbourhood.

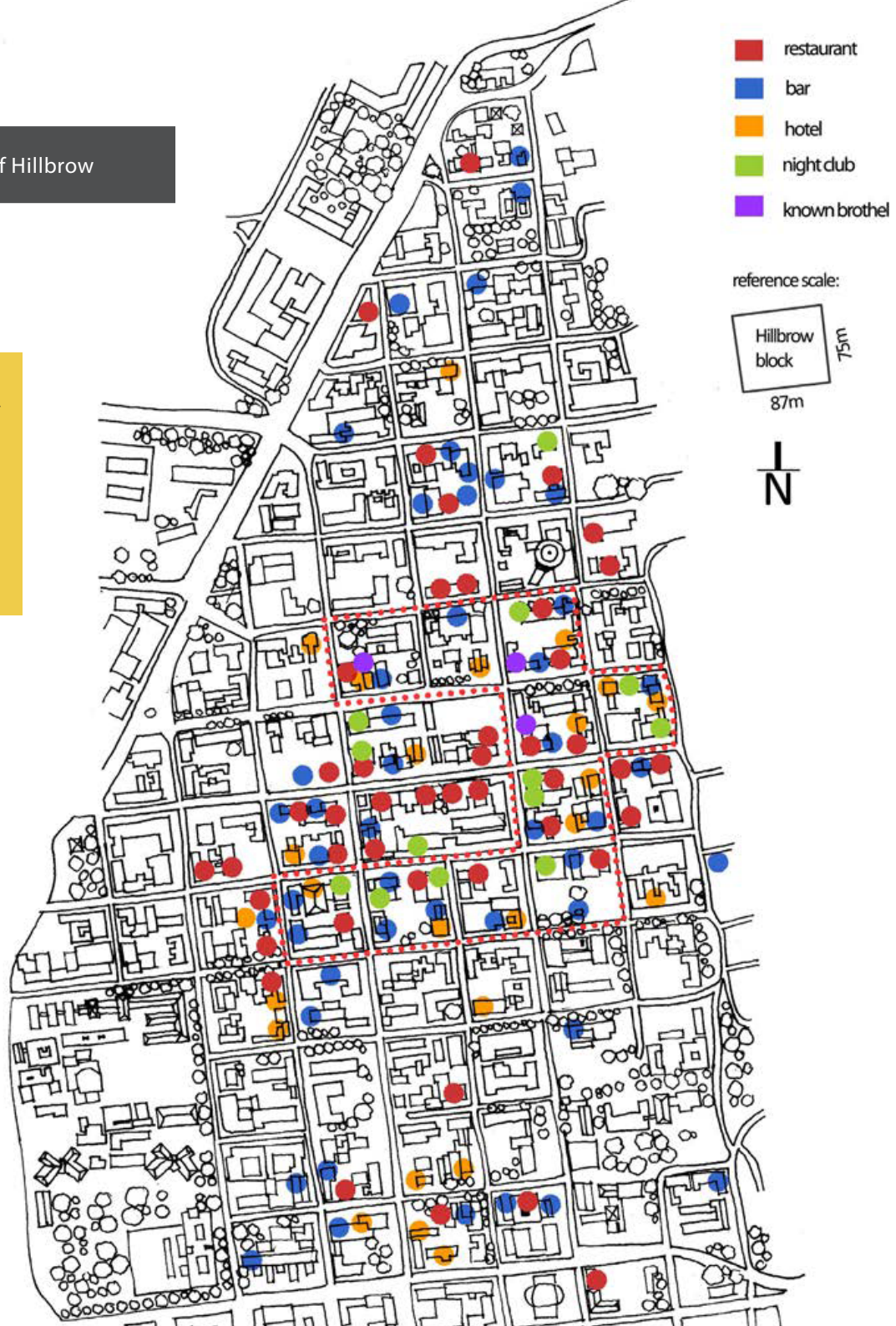
- Residential
- Mixed Use/Commercial
- Community Facilities
- Education

Figure 56: Hillbrow land use map

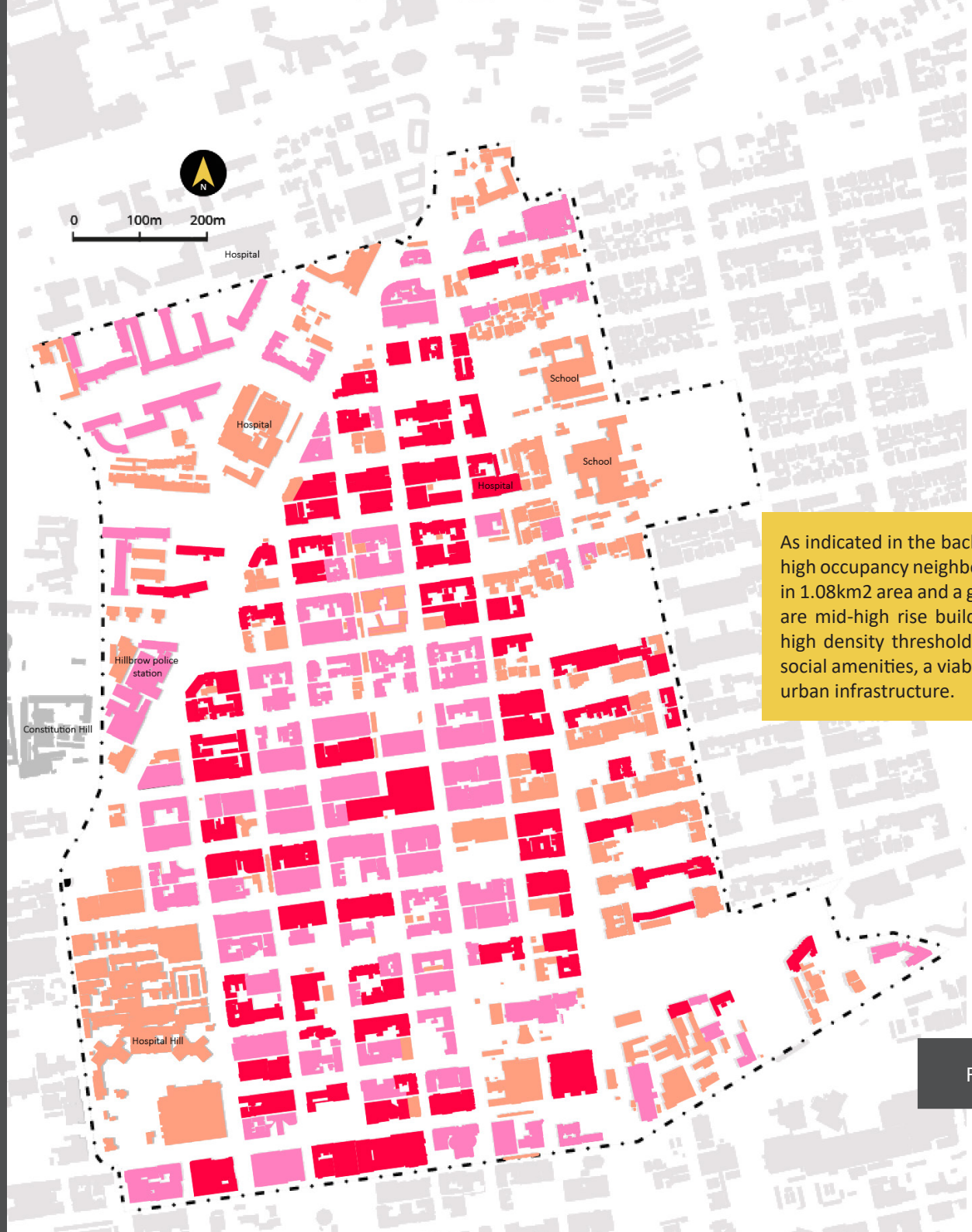
# LAND USE ACTIVITIES

Figure 57: Red-light district of Hillbrow

Map showing restaurants, bars, night clubs, strip clubs hotels and brothels. With a high intensity of these uses along the commercial hub on Pretoria Street and Kotze Street, and lower intensity stretching towards Goldreich Street. These land use activities help define the character of the alleyway activation in the design section.



# DENSITY MAP




As indicated in the background of this research, Hillbrow is a high density, high occupancy neighbourhood with a population density of 74 131 people in 1.08km2 area and a gross density of 686 people/ha. Most of the building are mid-high rise building ranging between 4-25 storeys in height. This high density threshold offers enough support for an active retail sector, social amenities, a viable public transport system and efficient provision of urban infrastructure.

1 - 3 Storey Buildings: Low Density

4 - 10 Storey Buildings: Medium Density

11 - 25 Storey Buildings: High Density

Figure 58: Hillbrow density map

# SPACES IN-BETWEEN

Figure 59: Hillbrow spaces in-between




Spaces in Between Buildings

There is a significant amount of left over spaces dedicated to surface parking as well as unused alleyways which form part of the spaces in-between which constitute 12.5% of the overall neighbourhood area.

# MASSING STUDY

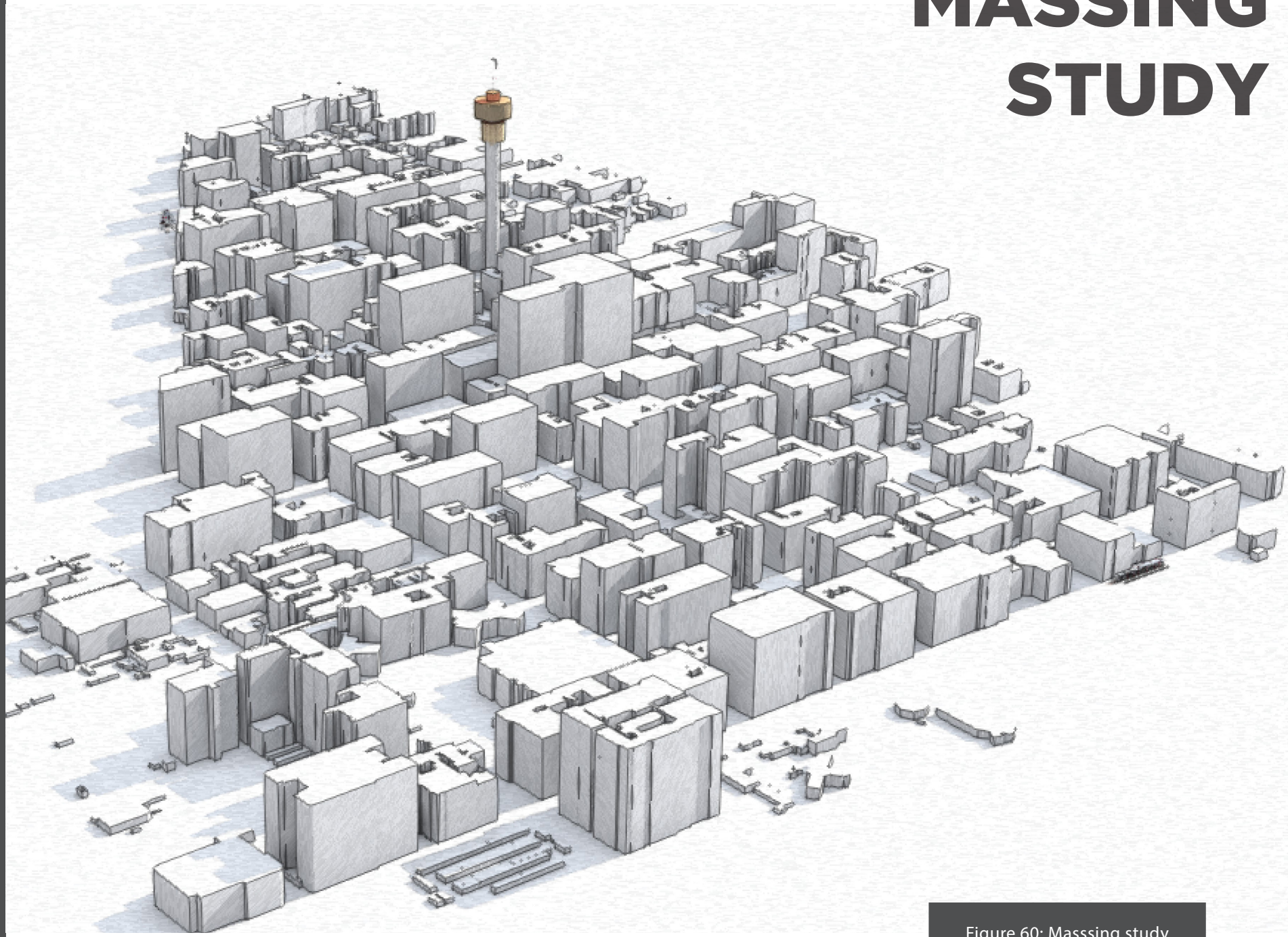


Figure 60: Masssing study



Figure 61: Hillbrow tower

# GREEN NETWORK



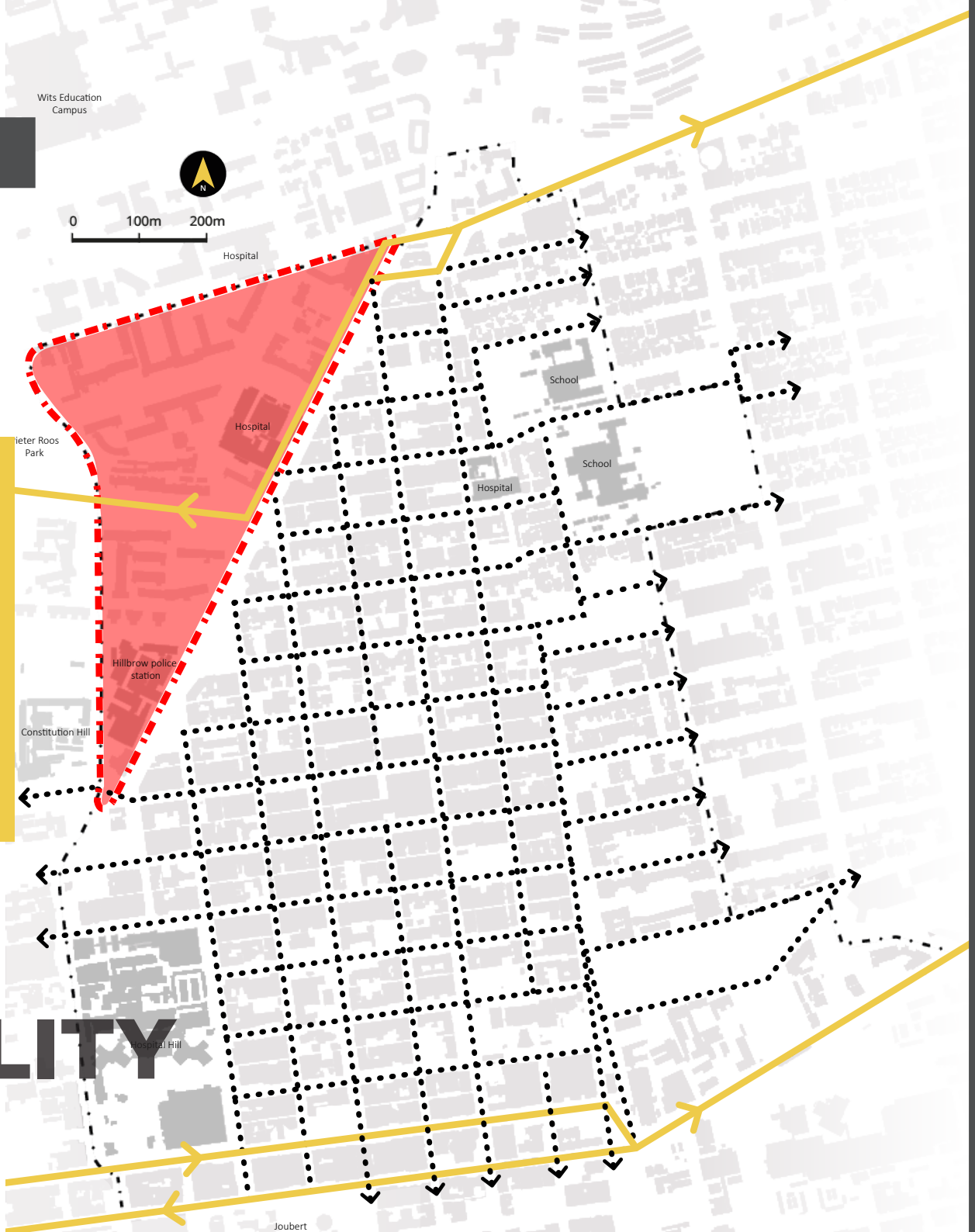

There is only a few notable public open spaces in the neighbourhood, these being the Alec Gorshel Park, Ekhaya Park and Jager Park. There is no clear distinction between private, semi-public spaces in the neighbourhood, this is mainly because of the subdivision of the land parcels and undefined building forms.

Parks

Trees

Figure 62: Hillbrow green netwrok

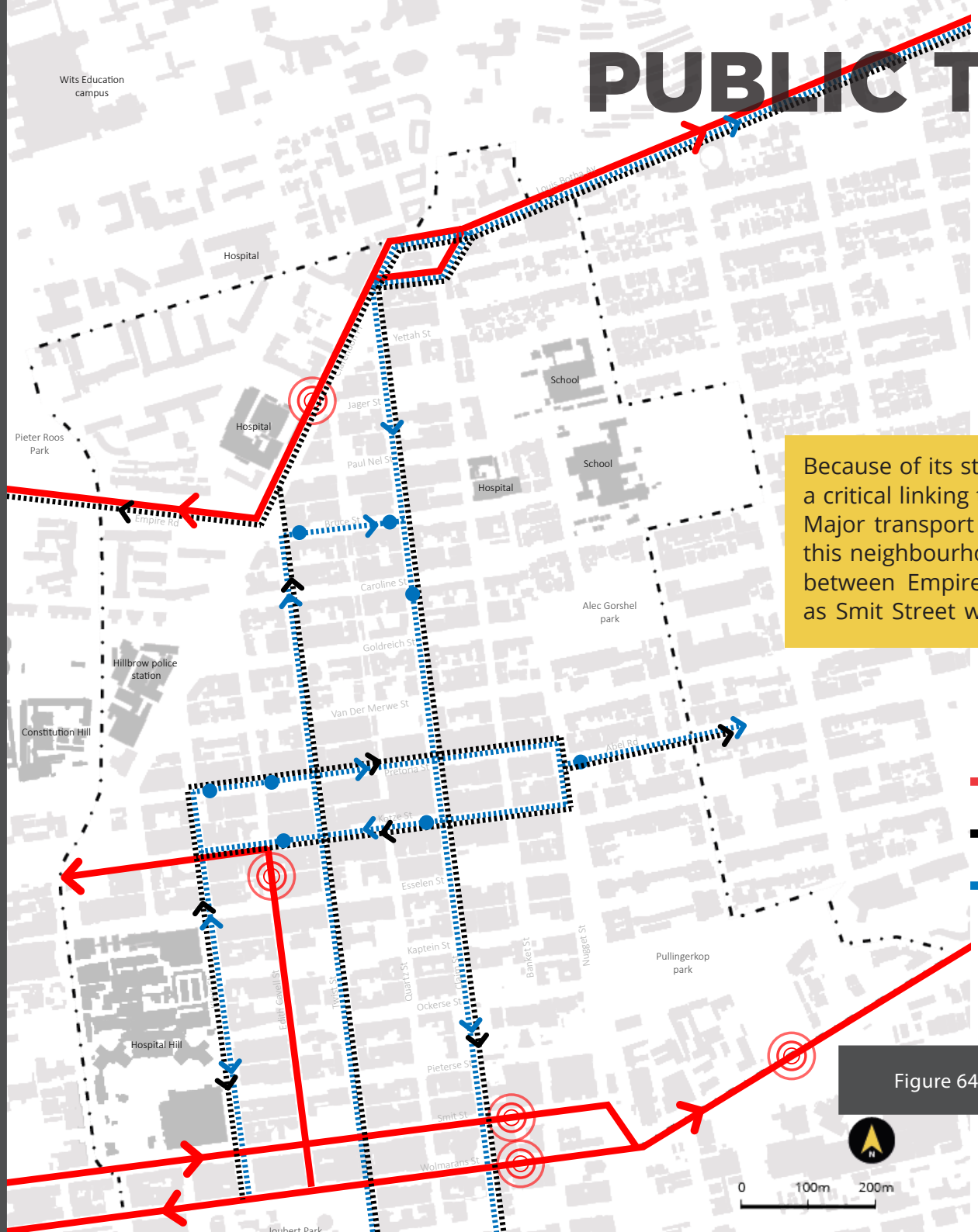
Figure 63: Hillbrow permeability map




The permeability of a place speaks to the level of accessibility to people moving in and out of the place as well as the number of alternative routes through an environment. Hillbrow offers a greater choice of routes through its eastern and southern edges (Berea and the CBD) rather than its western and northern edges (Parktown and Braamfontein). This means that the eastern and southern edges of Hillbrow are more permeable and have more alternative linkages connecting Hillbrow to its surrounding neighbourhoods.

# PERMEABILITY MAP

# PUBLIC TRANSPORT NETWORK




Because of its strategic central positioning, Hillbrow plays a critical linking the city centre and the northern suburbs. Major transport routes that facilitate movement through this neighbourhood include the BRT Louis Botha corridor between Empire road and Louis Botha Avenue as well as Smit Street which links to park station. Major internal

BRT stop

BRT route

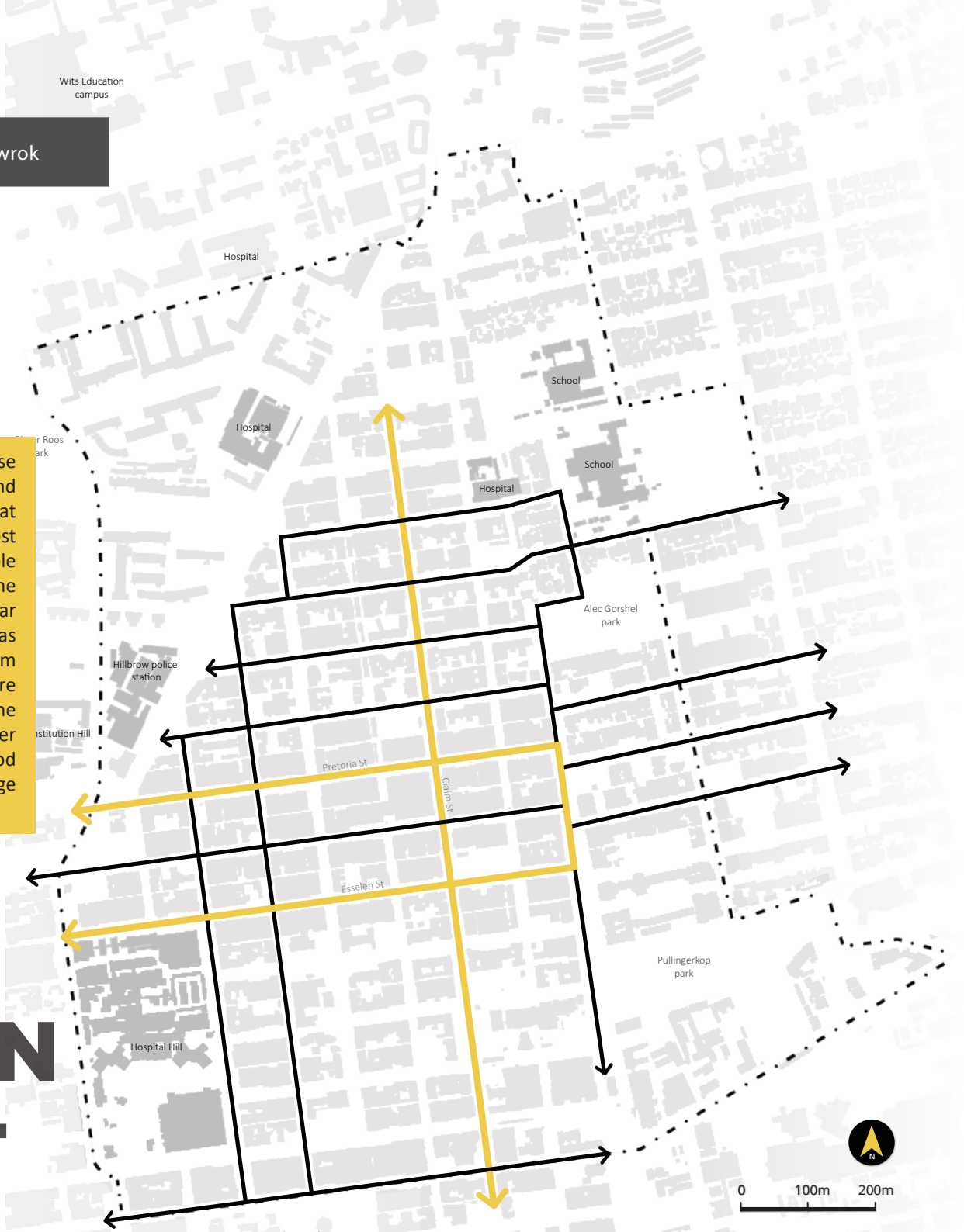
Mini-bus taxi route

Metro bus route

Figure 64: Hillbrow public transport netwrok

# PEDESTRIAN MOVEMENT

Figure 65: Pedestrian movement netwrok

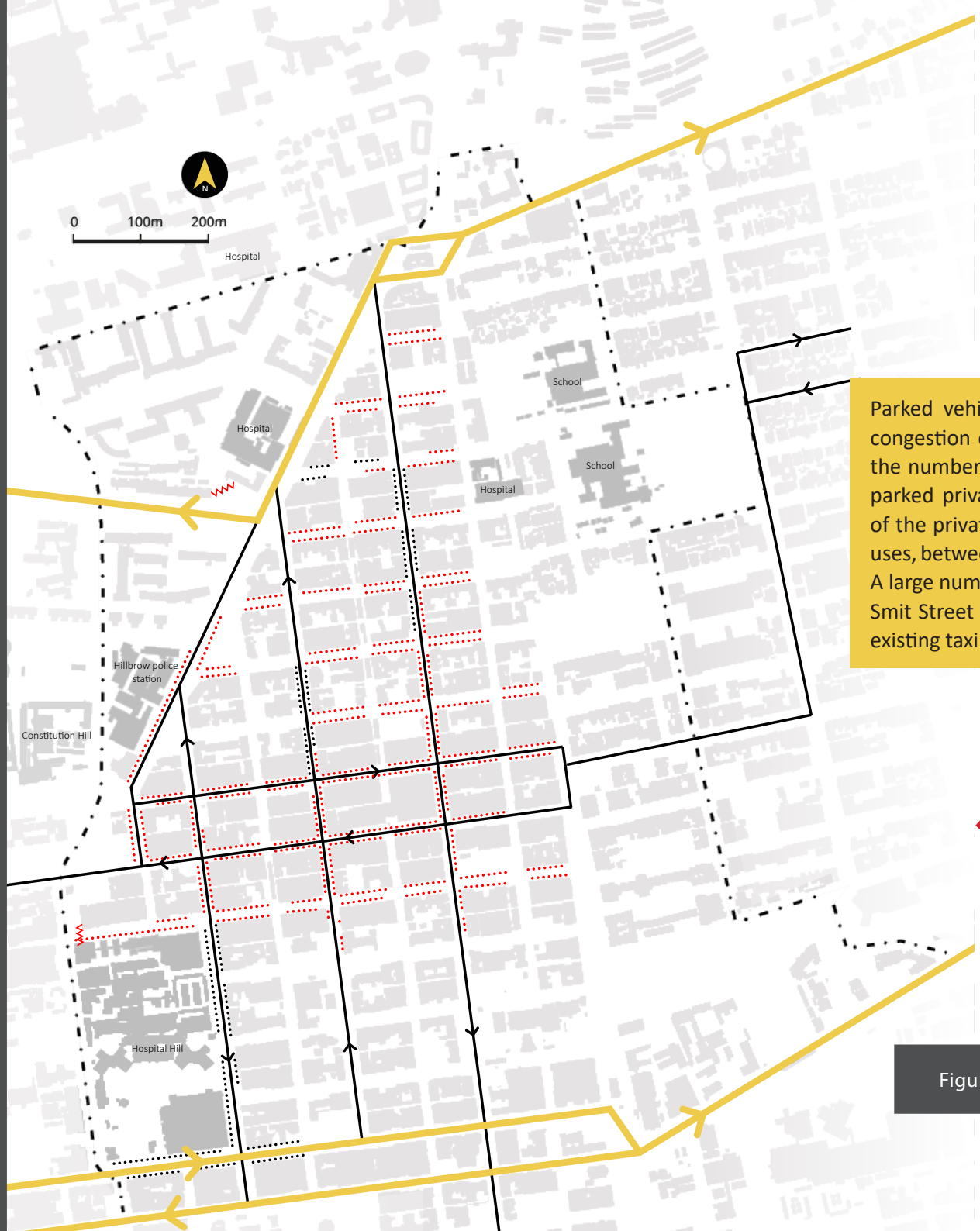



Primary Movement Network

Secondary Movement Network

Hillbrow is a vibrant neighbourhood with land use activities that provide a wide range of goods and services within a relatively small area. This means that the neighbourhood is fairly self-contained with almost everything residents need on a daily basis is available within walking distance. This is evident with the primary pedestrian movement patterns which appear to strong along the east westerly retail hub, as well as along the main taxi north southerly taxi route on Claim Street. The secondary movement flow shows that there is better permeability along the eastern edge of the neighbourhood linking Hillbrow to Berea, with fewer linkages along the western edge of the neighbourhood because of large institutional buildings and the large road service lane along Clarendon place.

# PARKED VEHICLES




Parked vehicles in Hillbrow contribute to the conflict and congestion of space in the neighbourhood. This map shows the number of parked vehicles in Hillbrow which consists of parked private motor vehicles and mini-bus taxis. The bulk of the private motor vehicles sits along the commercial land uses, between Pretoria Street, Kotze Street and Esselen Street. A large number of mini-bus taxis sit along Hospital Street and Smit Street and along Claim Street, in close proximity to the existing taxi rank, as well as along Twist Street.

- Parked motor vehicles
- Parked mini-bus taxis
- Palisade barricades

Figure 66: Hillbrow parked vehicles

Figure 67: Hillbrow edge condition




# EDGE CONDITION

# ABANDONED BUILDINGS & CRIME HOTSPOTS

According to the City of Johannesburg, ‘bad buildings’ are classified as buildings that have been abandoned by its owners, hijacked by slumlords and squatters, in a dilapidated state, with criminal elements and in arrears in rates and taxes . The identified ‘bad buildings’ are spread all over the neighbourhood having negative effects on adjoining buildings and the neighbourhood as a whole.

Although there is no evidence of direct correlation between the bad buildings and the crime hotspots, crime statistics show that Hillbrow is one of the most dangerous neighbourhoods to live in. Crime in the neighbourhood is related to business robberies and illegal businesses at the core of the retail hub, armed robberies and muggings along the informal street traders market on Quartz Street, motor vehicle theft, drug abuse and prostitution towards the southerly edge of the neighbourhood.

Part of my design intervention seeks to demolish some of these bad buildings with intention of developing new mixed use building that will serve as affordable housing within the neighbourhood.




Abandoned Building

Crime Hotspot






Figure 68: Bad buildings & crime hotspots
Figure 69: Hyjacked building in Hillbrow
Figure 70: Joburg's condemned buildings

# CHAPTER FOUR

04

# 04 GUIDING PRINCIPLES

Design approach

The future vision for Hillbrow is largely based on the idea of its existing diverse and vibrant cosmopolitan character, with the aim of broadening its vibrancy to the surrounding neighbourhoods.

The design approach includes a multilevel system in addressing the issues identified in Hillbrow with the aim of attracting more investment and creating quality public environments.

A set of key guiding principles have been developed taking into consideration the unique characteristics of the neighbourhood. These principles adopt the placemaking process in an attempt to transform the neighbourhood.

## Improving connectivity along the edges

- By creating more linkages to the western end of Hillbrow, thereby improving accessibility
- Creating internal linkages through activating the alleyways

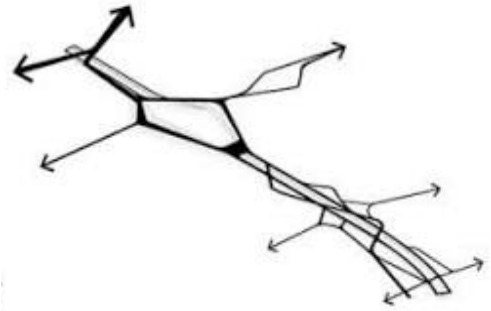


Figure 71: Connectivity

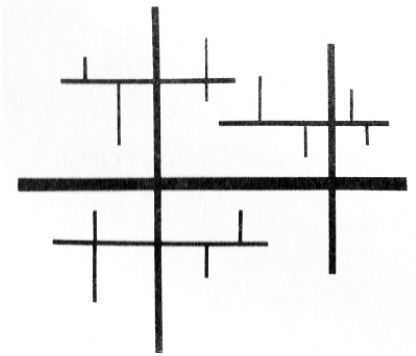


Figure 72: Hierarchal structure of link theory

## Improving the public space network

- Activating strategic alleyways as public open spaces
- Using hard surface rooftops as public open space
- Green roofs





Figure 73: Life space design strategy

## Improving surveillance in the neighbourhood

- Mitigating darkness between buildings by using permeable facades and taking advantage of natural light
- Creating new entrances through the existing buildings allowing for more accessibility
- Creating a safe and secure public realm through the use of digital intelligence and artificial lighting
- Repurposing 'bad buildings' for potential mixed use developments



Figure 74: Natural surveilance

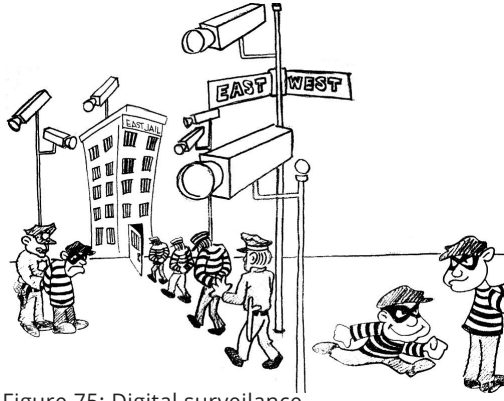



Figure 75: Digital surveilance

## Relieving traffic congestion

- Relieving traffic congestion by redistributing traffic flows
- Creating priority bus and taxi lanes
- Creating a central transport orientated node (vertical parkade)
- Incorporate traffic calming devices

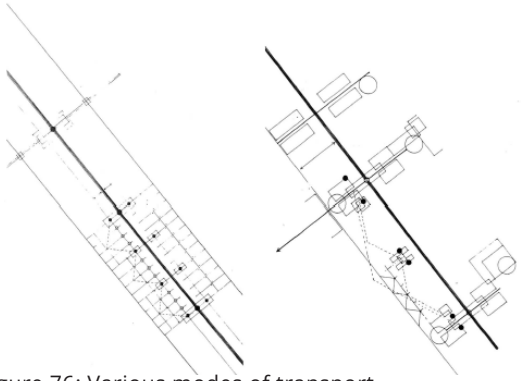


Figure 76: Various modes of transport



Figure 77: Vertival parking spaces

## Densification

- Optimising opportunities for densification within Hillbrow
- Taking advantage of infill opportunities on the western edge of Hillbrow
- Creating diversity through the reconfiguration of existing land uses
- Repurposing surface parking spaces for new mixed use development

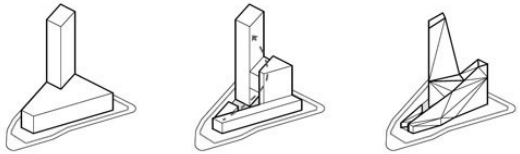


Figure 78: Variety

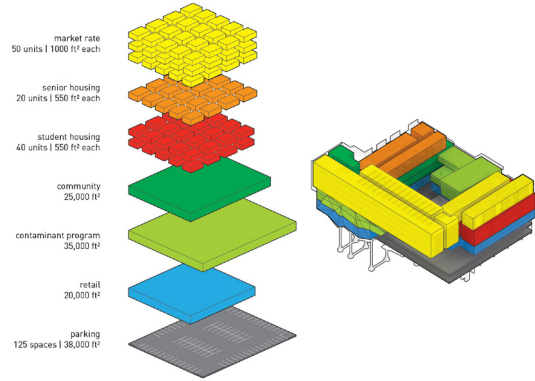



Figure 79: Building land uses

# CHAPTER FIVE

05

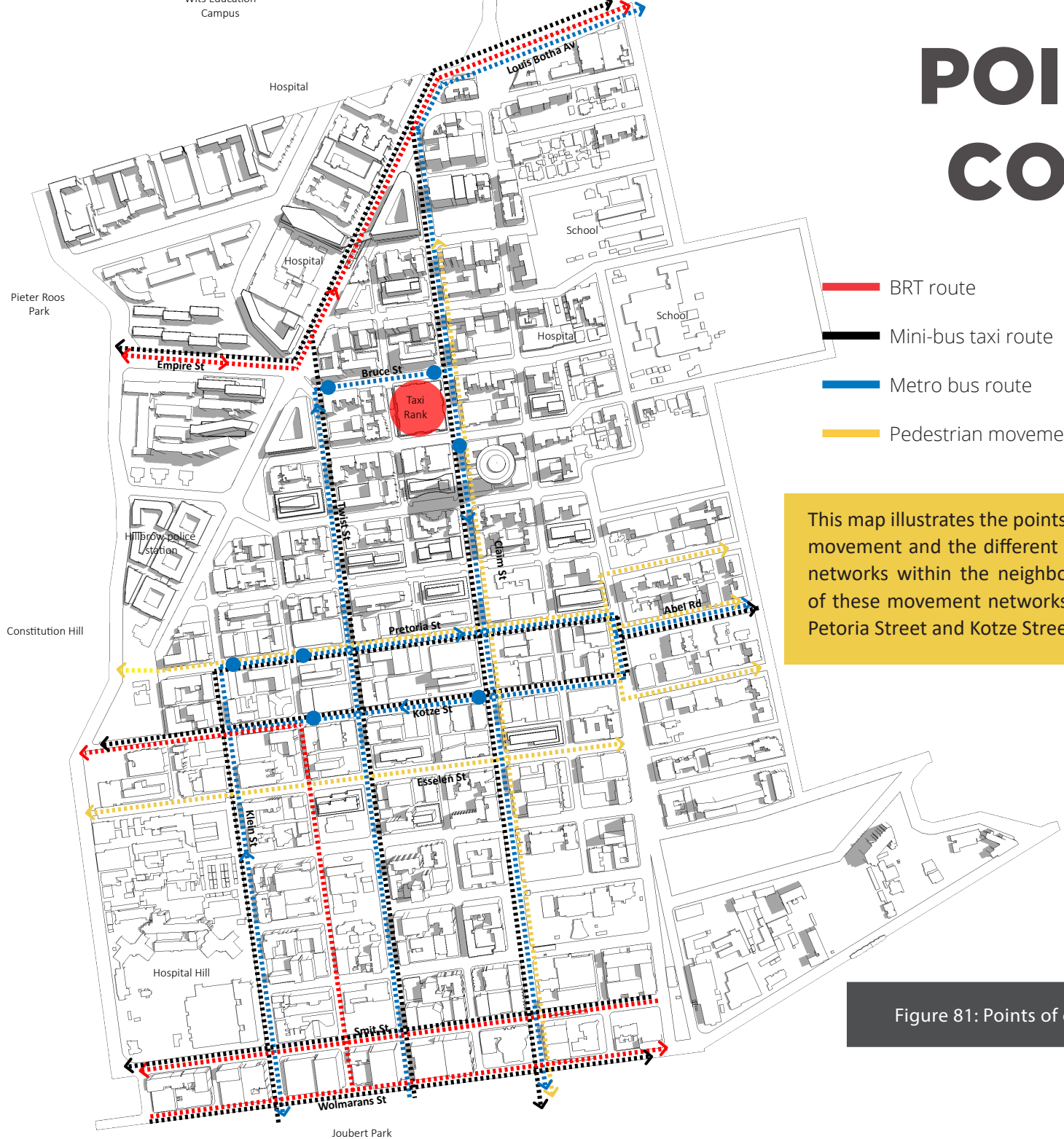
# DESIGN DEVELOPMENT




The design approach entails a multilevel strategy to addressing the issues in Hillbrow, with the purpose of finding a holistic solution for the neighbourhood and its surrounding context. The approach involves creating quality public environments and improving the safety in the neighbourhood by rethinking the use of strategic alleyways and using them to add variety to the public realm in the neighbourhood. Opening up the alleyways to have more connections by creating new circulation points, with small businesses on the ground floor to strengthen active participation. It also includes improving the movement systems within the neighbourhood by redistributing traffic flows, with the purpose of relieving traffic congestion. Creating a central transport node to serve as a new taxi rank as well as prioritising public transport by creating bus and taxi lanes only thereby relieving congestion and conflict between vehicular movement and pedestrian movement. The approach also includes taking advantage of densification opportunities through urban infill where possible and through the diversification of land uses through the reconfiguration of existing land uses within and around the neighbourhood. Creating the opportunity for more public amenities, retail opportunities and recreational spaces. Internal opportunities for redevelopment within Hillbrow would look at the repurposing of bad buildings and surface parking areas into mixed used developments which will include affordable housing.

Figure 80: Design development

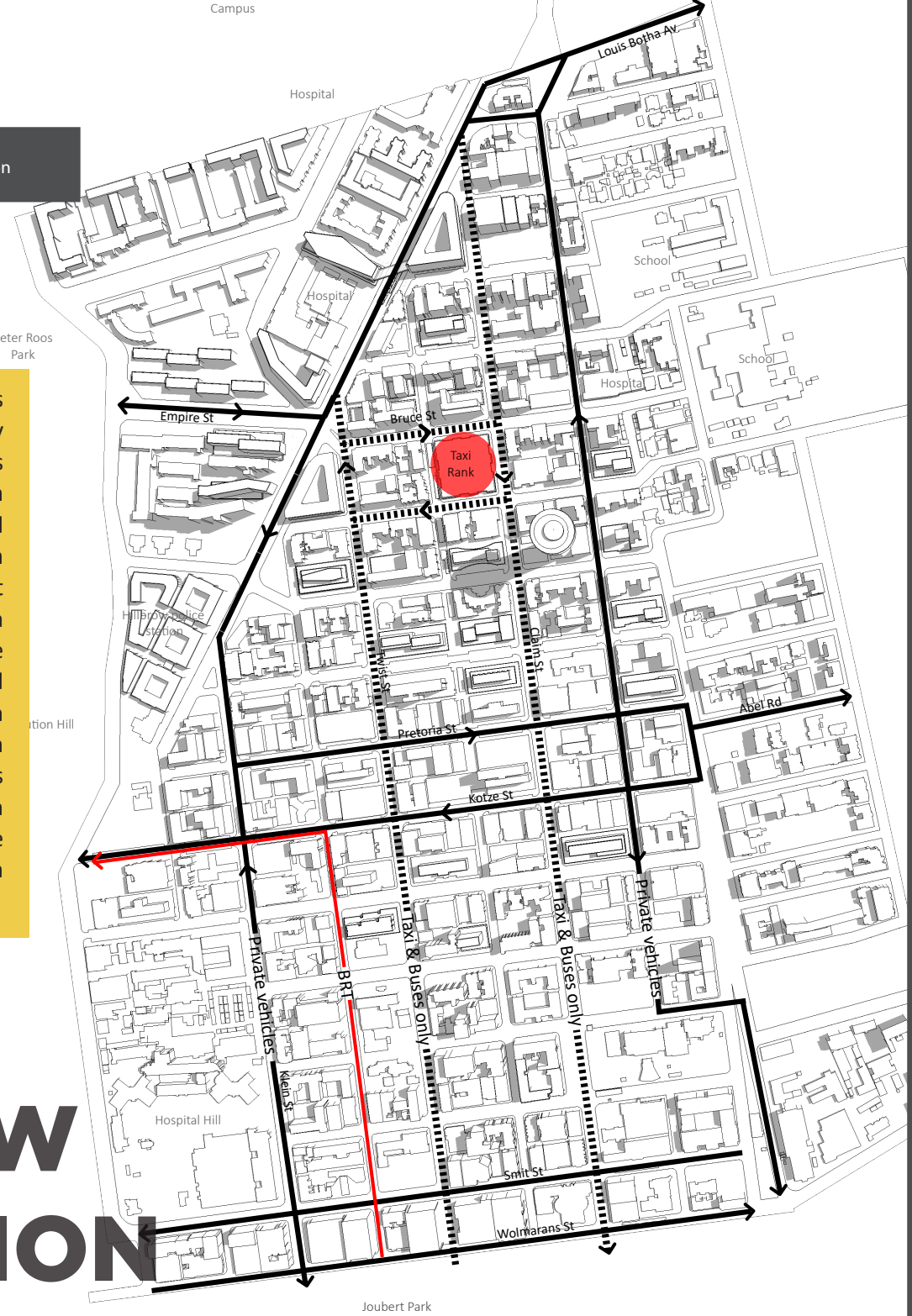
# POINTS OF CONFLICT




This map illustrates the points of conflict between pedestrian movement and the different modes of transport movement networks within the neighbourhood. With a high intensity of these movement networks running through Claim street, Petoria Street and Kotze Street.

Figure 81: Points of conflict

Figure 82: Proposed transport distribution




The approach behind the traffic flow redistribution seeks to declutter traffic congestion within the neighbourhood by creating different movement modes. The strategy entails creating priority bus and mini-bus taxi lanes through Claim Street linking southerly towards the Johannesburg cbd and along Twist Street towards the northerly direction. With a central loop between Bruce Street and Caroline Street accessing the proposed new taxi rank, which will serve as a central transport orientated node with retail shops on the ground floor, and multi-level parking above. The reason behind this design decision is because most of the traffic congestion sits along these two Streets. This structural configuration provides great opportunities for small businesses to thrive as it allows for more foot traffic and prioritisation of pedestrian movement. Private motor vehicle use will be pushed to the border of the neighbourhood along Banket Street and Klein Street.

# TRAFFIC FLOW REDISTRIBUTION

# PROPOSED TAXI RANK

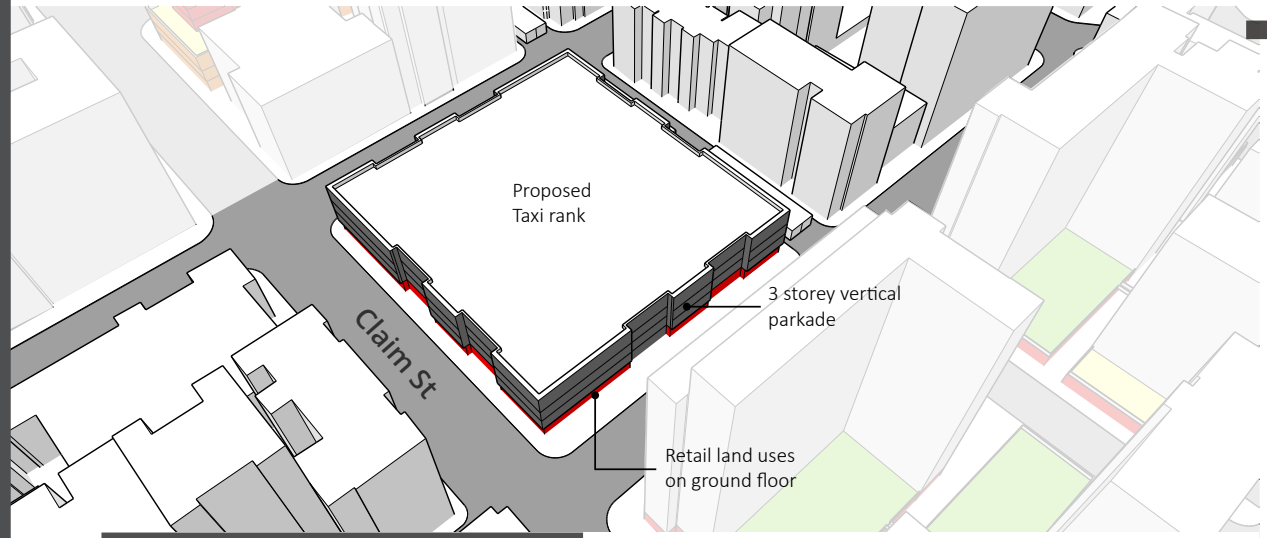
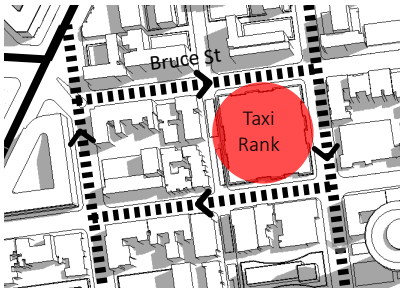



Figure 83: Proposed taxi rank



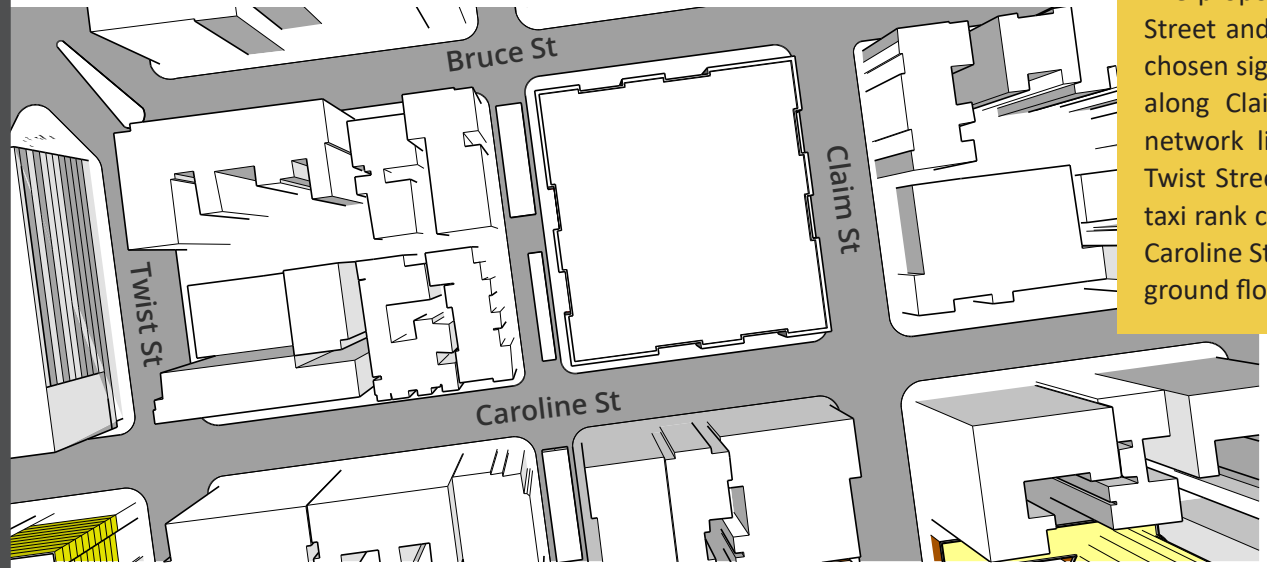




Figure 84: Aerial view of proposed taxi rank

The proposed new taxi rank sits on a loop between Bruce Street and Caroline Street, edging along Claim Street. The chosen sight is located where direct accessibility is greatest along Claim Street, one of the high capacity transport network linking Hillbrow to the Johannesburg CDB. And Twist Street linking Hillbrow to the northern suburbs. The taxi rank can be accessed via Bruce Street, with the exit on Caroline Street. The taxi rank can has retail land uses on the ground floor with a three storey multilevel parking above.




Figure 85: Vertical parkade

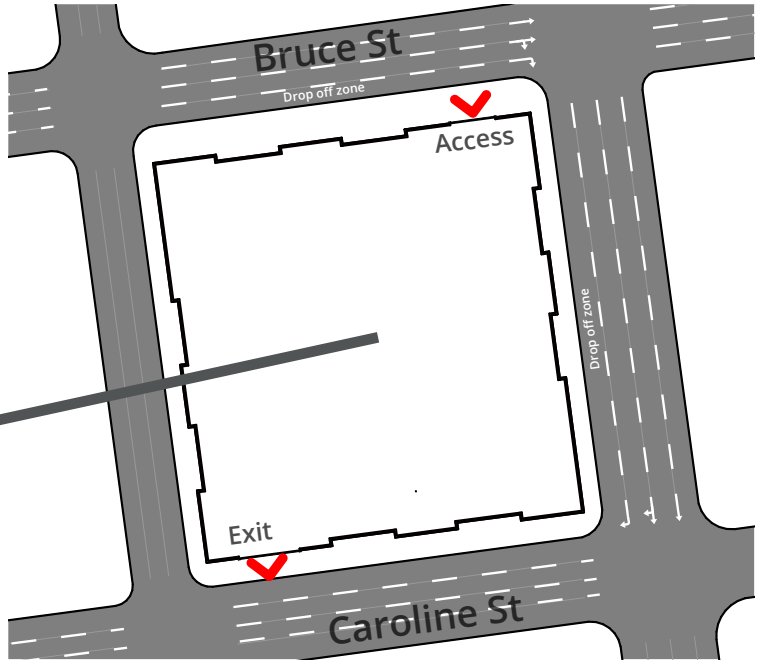



Figure 86: Taxi rank entrance and exit

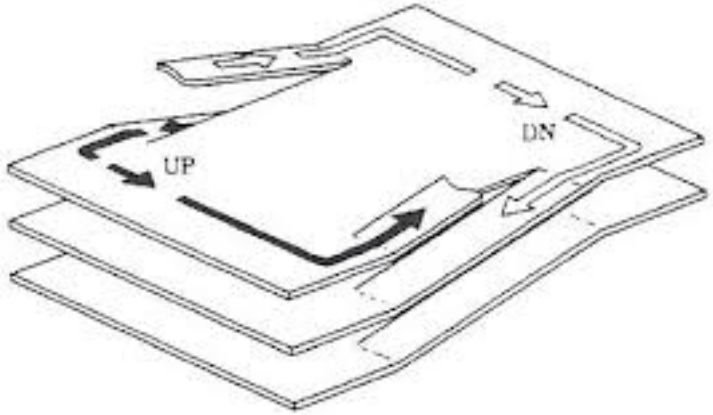



Figure 87: Multi storey parking

# ALLEYWAY ACTIVATION




"Alleys possess compellin
secondary public realm th
ecological performance o

Figure 88: Alleyway intervention

Alleys have the potential to become secondary circulation networks for pedestrians and cyclists proving alternative linkages through a network of green open spaces, and creating safe social spaces. Activating alleys provides a great opportunity to integrate public spaces with the existing urban environment and improving the experience of the neighbourhood. Alleys can provide invaluable public space that can stimulate public life and encourage human interactions. The creative reuse of alleys can strengthen public life and the economy of a neighbourhood. If implemented correctly, Hillbrow alleys can increase public space by 10%, these alleys can become an extension of the existing public space, providing a secondary route for pedestrians.

Because of the variety of alley types within Hillbrow, each alleyway project will require a strategic approach in relation to the assessment of problems and the improvements that would be applicable in order to promote more vibrant alleys. This approach will look at categorising the different types of alleys based on their character, land uses and intended functionality, giving an identity to each alleyway.

g potential to produce a vibrant
nat might also help to repair the
f our cities."

Nancy Rottle

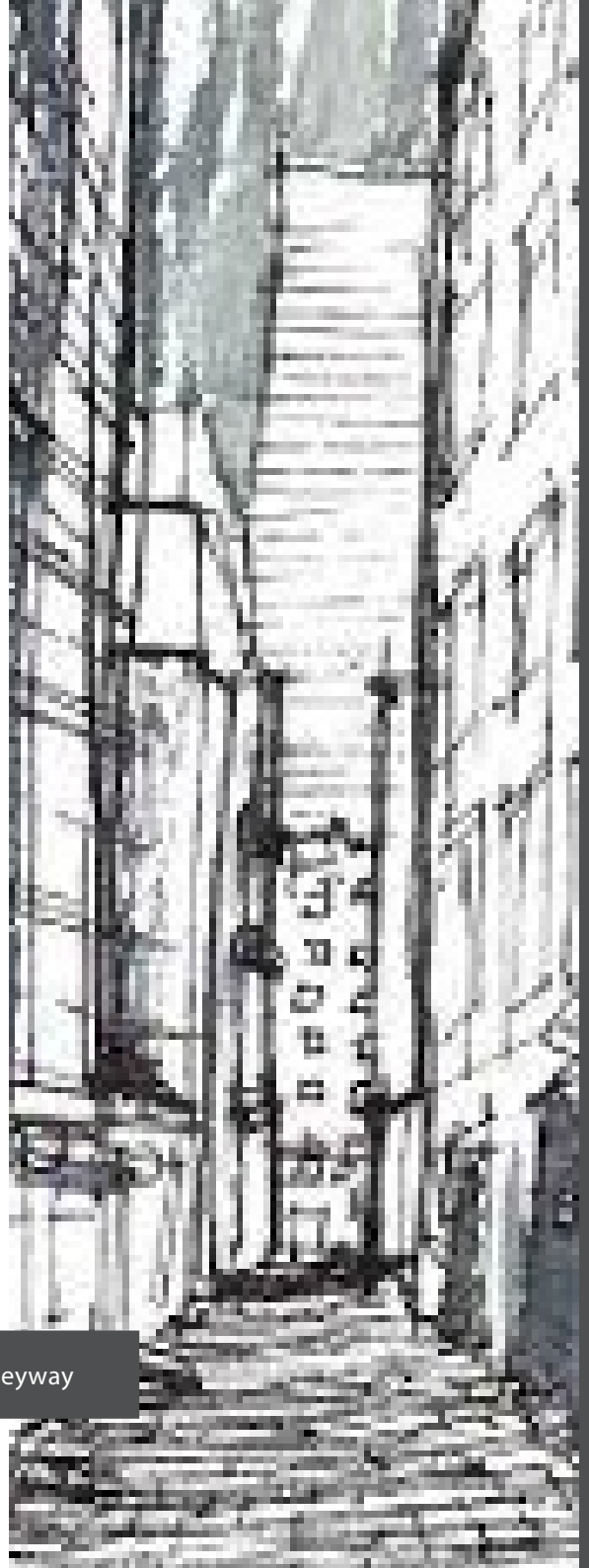


Figure 89: Seattle alleyway




The design intervention includes the reconfiguration of existing land uses that cater to community services such as educational facilities, clinics and crèches. New entrances through the alleyway allowing for more foot traffic and better accessibility. Permeable facades enabling natural sunlight to bounce onto the alleyway thereby improved lighting and safety. The alleyway becomes a micro community through the creation of a block park with small links connecting one block to the other.

# NEIGHBOURHOOD ALLEYWAY

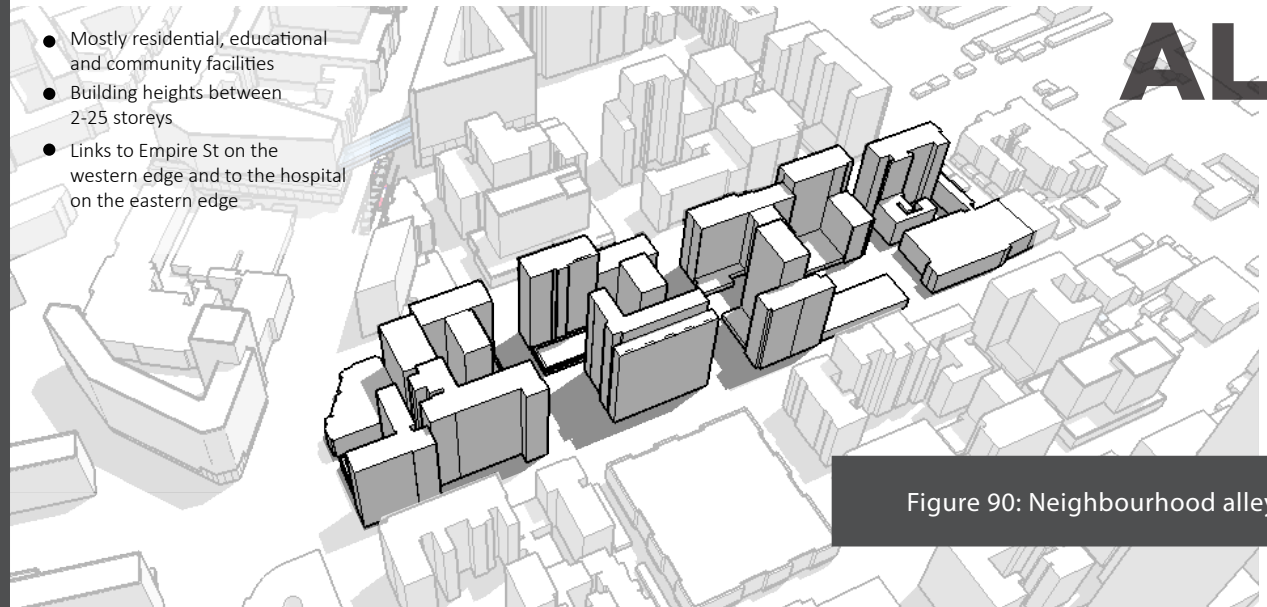



Figure 90: Neighbourhood alleyway-North

# HERITAGE ALLEYWAY

The Heritage alleyway design intervention includes the demolition of existing low rise buildings with proposed mixed use buildings. The reconfiguration of existing land uses that cater for recreational amenities such as restaurants, galleries, art studios, cafes, museums, bookshops and small businesses. The intervention also includes new entrances through the alleyway allowing for more foot traffic and better accessibility. Permeable facades enabling natural sunlight to bounce onto the alleyway thereby improved lighting and safety. This alleyway offers a unique experience of the neighbourhood.

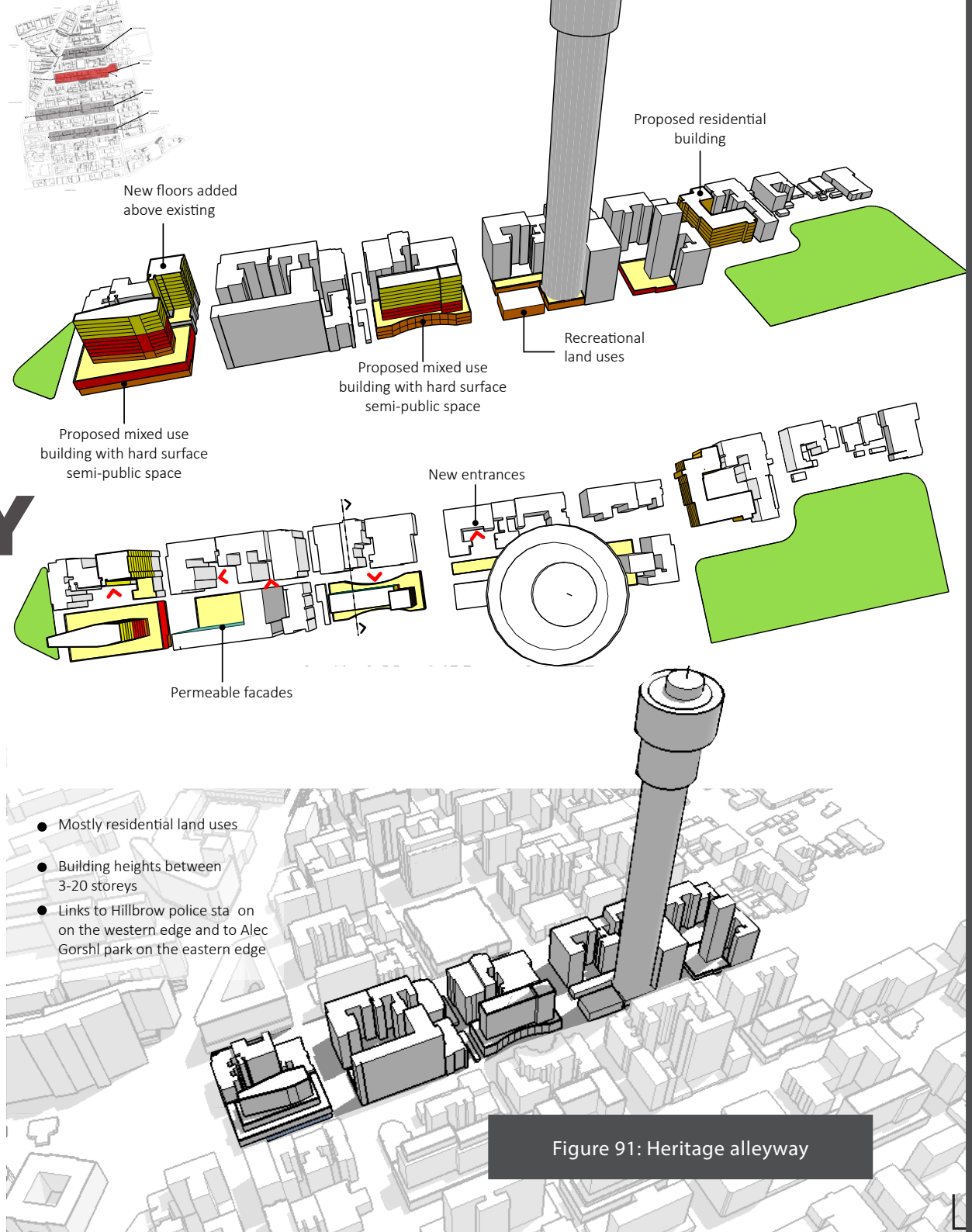
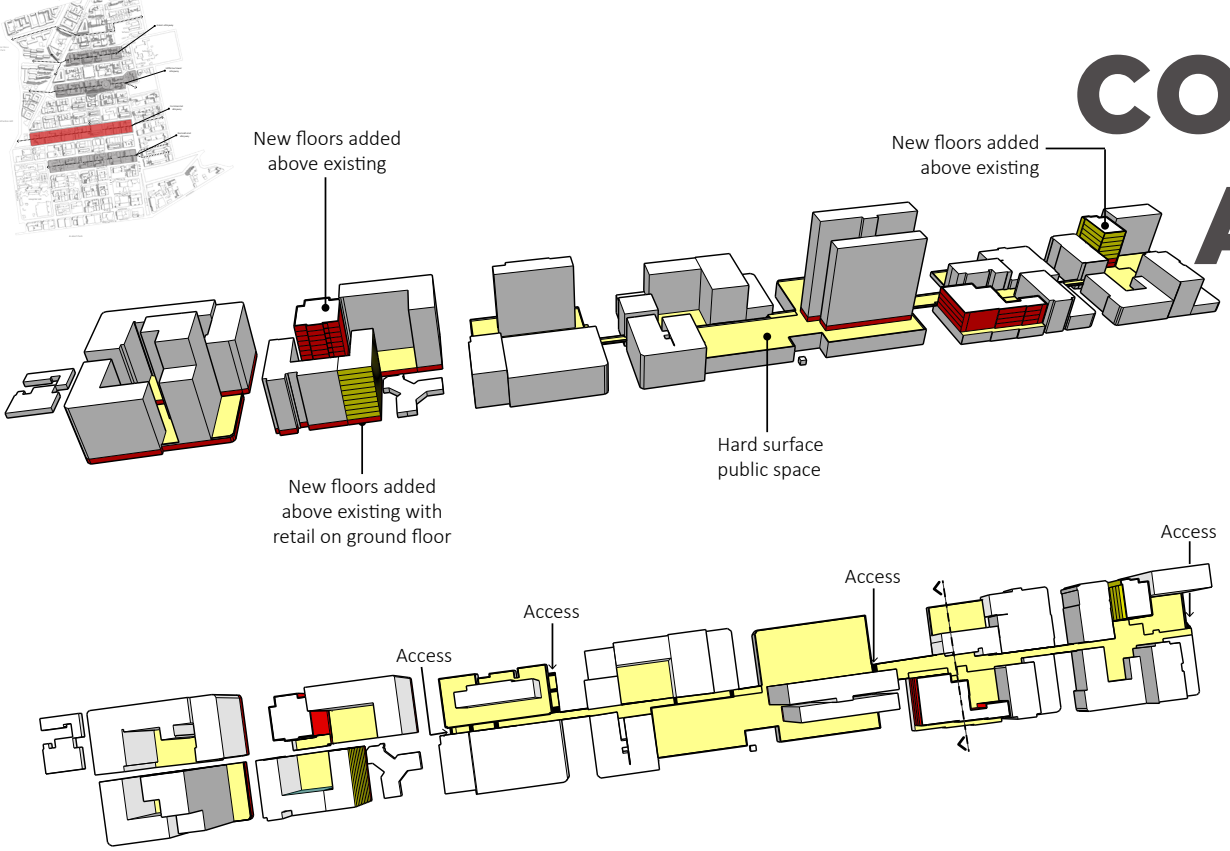



Figure 91: Heritage alleyway

# COMMERCIAL ALLEYWAY




The Commercial alleyway design intervention includes the addition of new floors to existing building. The reconfiguration of existing land uses to cater for mixed uses such as retail, office space, residential and small businesses. The intervention also includes a raised public realm linking the different blocks with a retail/office spill out onto the public space. It also includes a delivery service tunnel on the ground floor and private parking spaces on the basement.

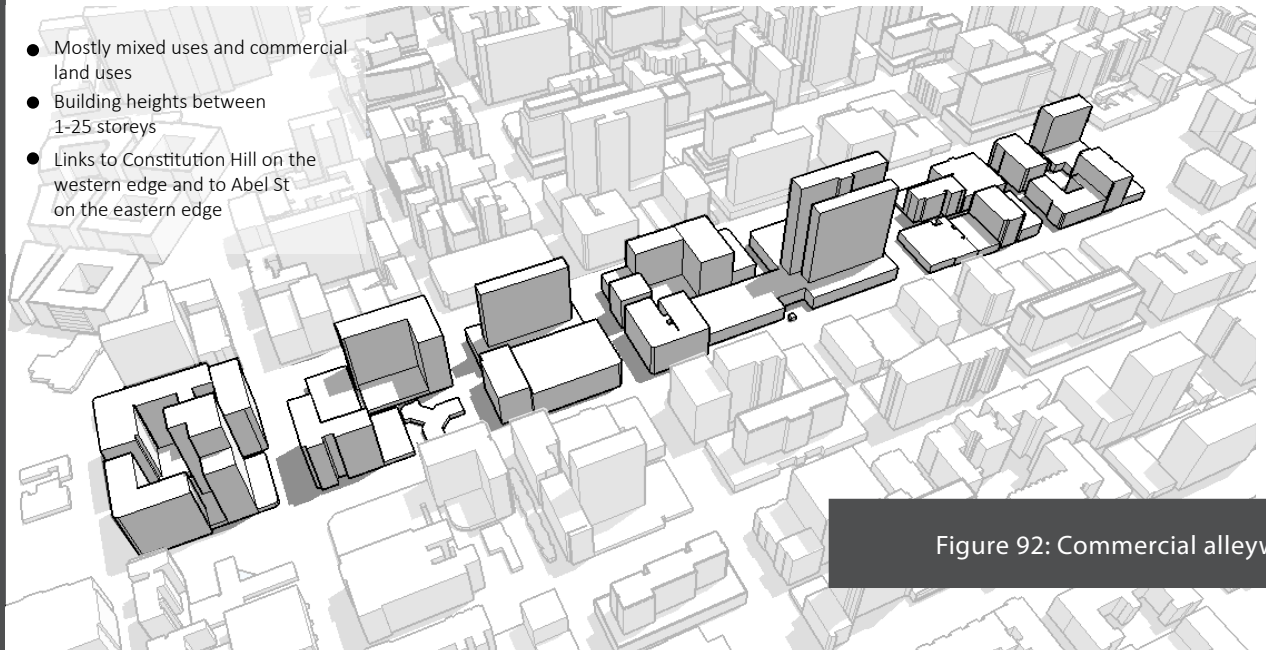



Figure 92: Commercial alleyway

# NEIGHBOURHOOD ALLEYWAY

This design intervention includes the addition of new floors to existing building as well as some proposed new mixed use buildings with community services such as educational facilities, clinics and crèches. New entrances through the alleyway allowing for more foot traffic and better accessibility. Permeable facades enabling natural sunlight to bounce onto the alleyway thereby improved lighting and safety. Similar to the neighbourhood alleyway to the North of Hillbrow, This alleyway becomes a micro community through the creation of a block park with small links connecting one block to the other.

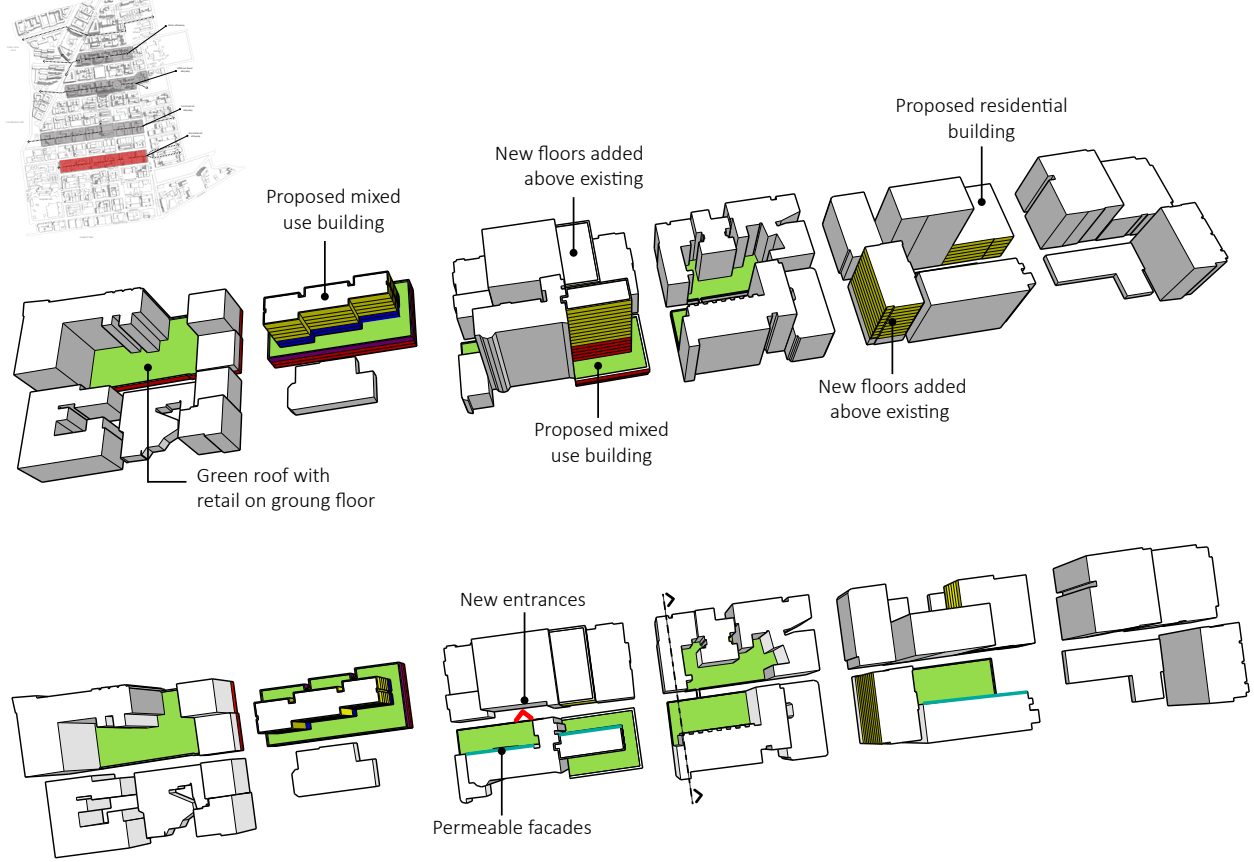
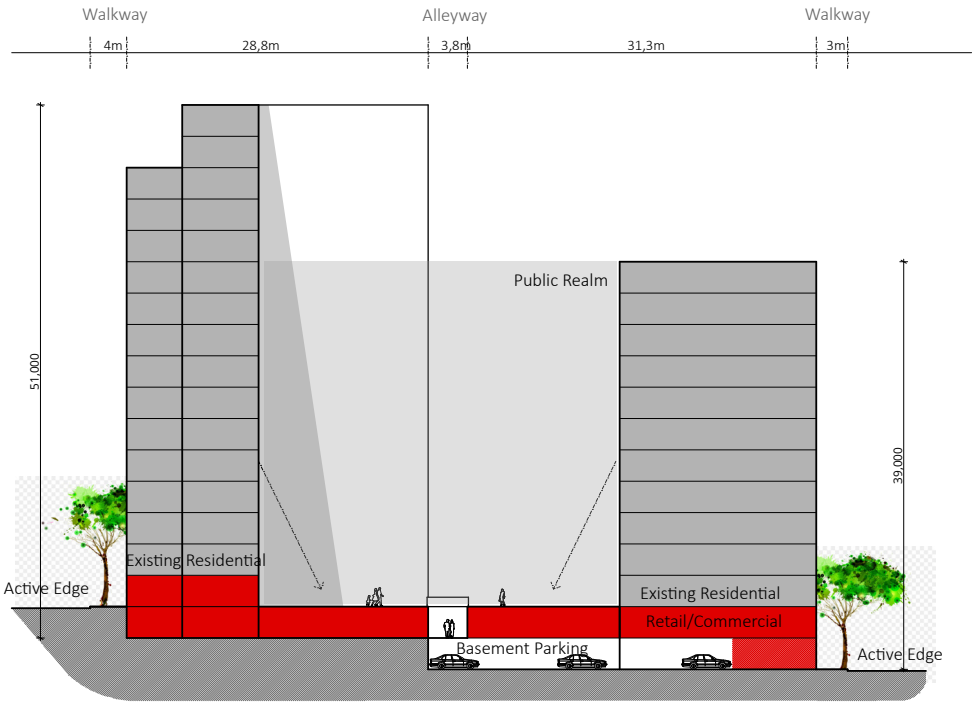




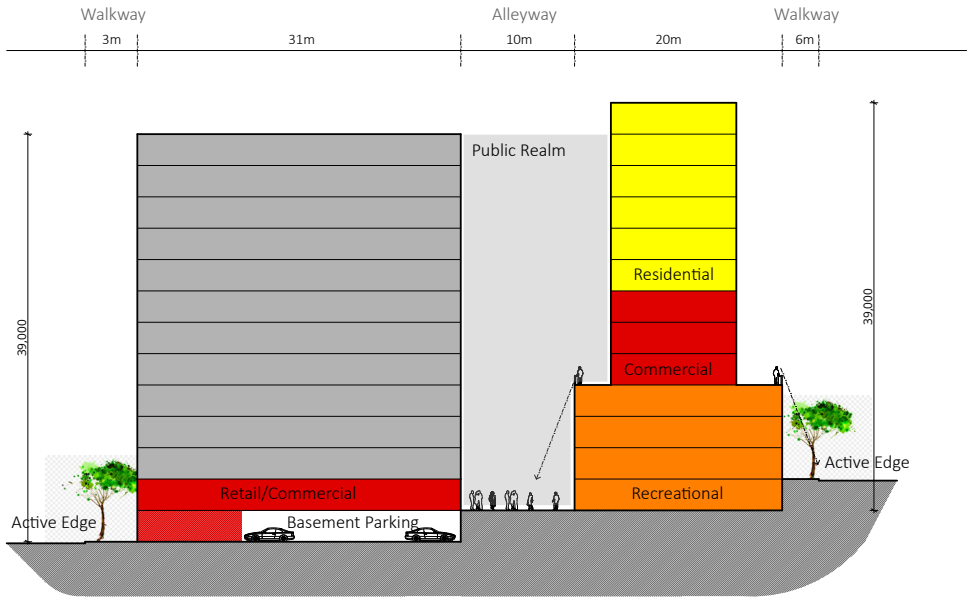


Figure 93: Neighbourhood alleyway-South

# SECTIONS




SECTION A-A




SECTION B-B

Section A-A sits along the Neighbourhood alley- North of Hillbrow. It lies between Paul Nel Street and Bruce Street, with building heights between 2-25 storeys. Most of the building footprints sit on the property boundaries towards the street interface, with pedestrian sidewalks ranging between 3-4 meters. The alleyway servitude is 3,8 meters wide, with private parking spaces provided for on the basement of the buildings with a small retail active edge interface. The alleyway has a small pedestrian bridge linking one block to another through the community block park.

Section B-B sits along the Heritage alley in Hillbrow. This alley lies between Caroline Street and Goldreich Street, with building heights ranging between 3-20 storeys. Building footprints sit on the property boundaries towards the street interface, with pedestrian sidewalks ranging between 3-6 meters. The alleyway servitude is 10 meters wide, with private parking spaces provided for on the basement of the buildings with a small retail active edge interface.

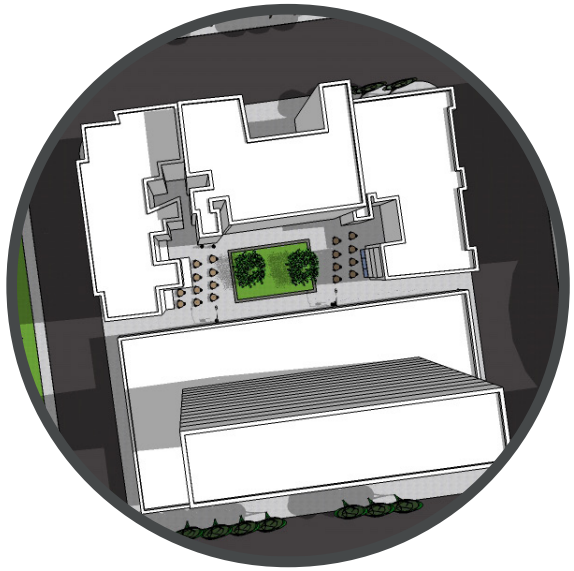


Figure 94: Aerial view, Heritage alley

Section C-C sits along the Commercial alley in Hillbrow. This alley lies between Pretoria Street and Kotze Street, with building heights ranging between 1-25 storeys. Building footprints sit along the property boundaries towards the street interface, with 5meter pedestrian sidewalks. The alleyway servitude which serves as a delivery tunnel is 11,5 meters wide, with a raises public realm above.

Section D-D sits along the neighbourhood alley- South of Hillbrow. This alley lies between Esselen Street and Kapteijn Street, with building heights ranging between 1-18 storeys. This alleyway is similar to that of Section A-A serving as a community block park with similar characteristics.

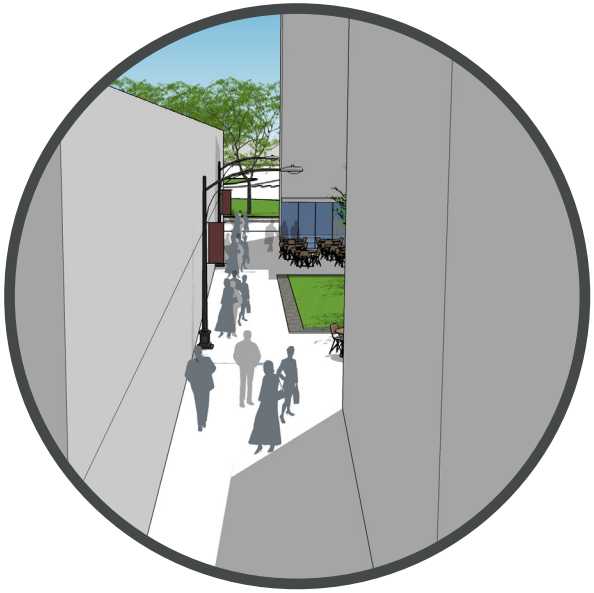
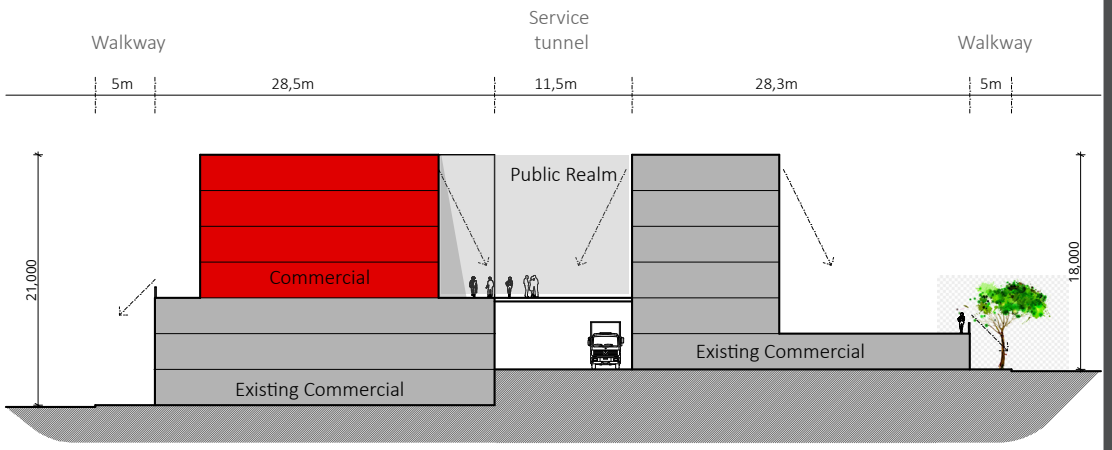
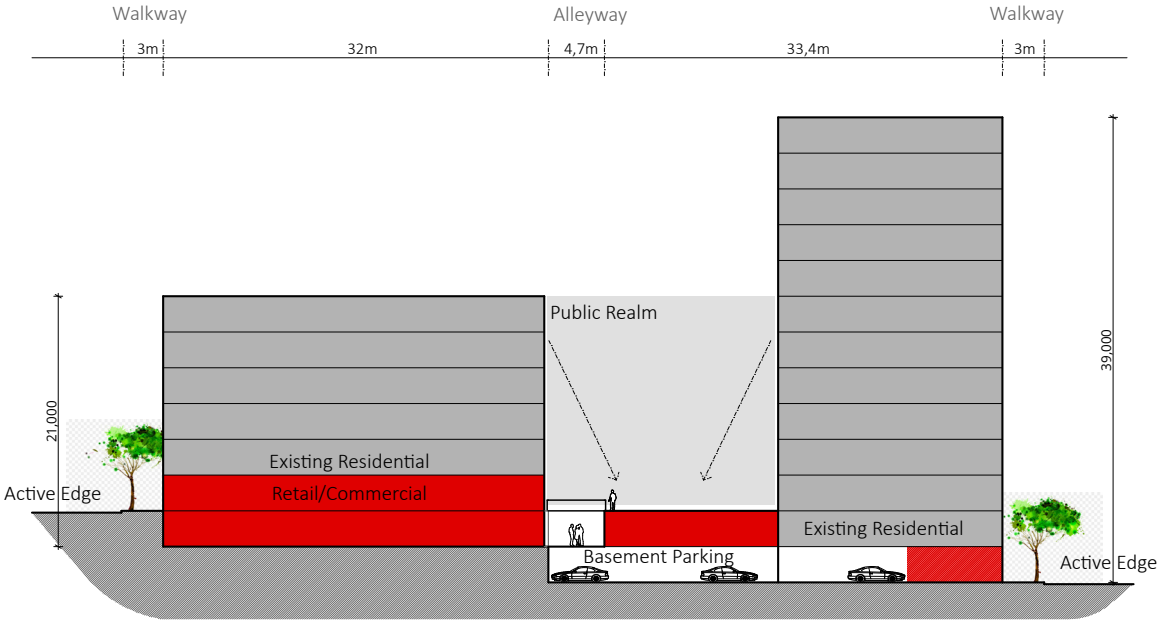


Figure 95: Elevated view, Heritage alley

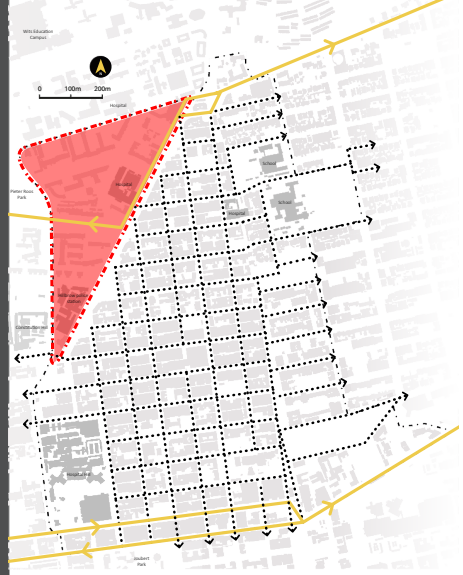



SECTION C-C




SECTION D-D

# TRANSITIONAL ZONE



The transitional zone represents the change in characteristics between Hillbrow and its surrounding context, specifically the western edge of Hillbrow along Parktown and Braamfontein. The transitional zone sits along the western edge of Hillbrow, bordering Clarendon Place, Queen Street and Junction Avenue. The precinct is in close proximity to Wits education campus, and to community facilities such as Netcare Parklane hospital, Life Brenthurst clinic a well as the Hillbrow police station. It boasts a number of tertiary students and working class individuals.

The design proposal for the precinct entails taking advantage of densification through urban infill, allowing for more housing opportunities particularly student accommodation as well as affordable housing. It would also include new mixed use developments, the redevelopment of the Hillbrow police station as well as some heritage sites.

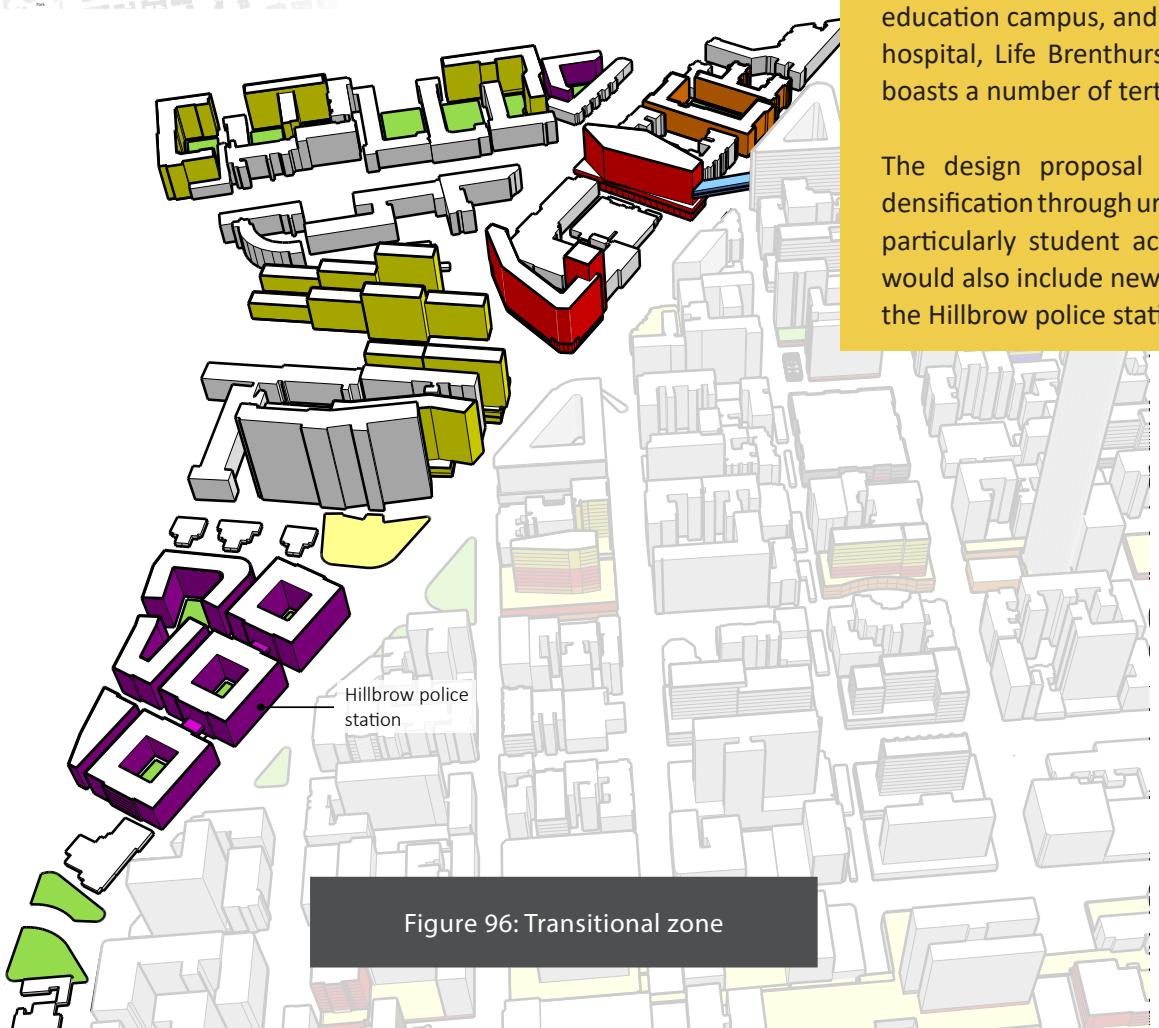



Figure 96: Transitional zone

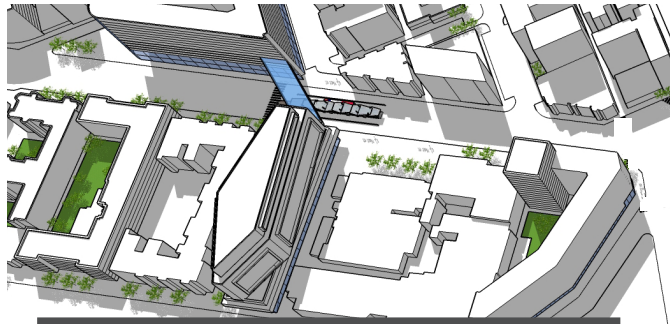


Figure 97: Western edge connectivity
Figure 98: Public space

Figure 99: Elevated view of western edge

The western edge design intervention will see the development of a new pedestrian bridge running over the BRT stop on Clarendon place connecting Hillbrow to Parktown. This pedestrian bridge will provide a much safer way of crossing this intimidating, highly congested street. It will also see the development of mixed use building through urban infill, promoting more intensified densities that would be appropriate to the existing structure and context, and meet the current housing needs of the neighbourhood.



# CHAPTER SIX

06

# IMPLEMENTATION STRATEGY

The implementation strategy will require a flexible framework which is able to respond to changes over time. A collaborative effort will be require in order to realise the future vision for Hillbrow. This process will include the coming together of different stakeholders such a public participants, government, private sector and community organisation. The process will take form in incremental stages so as to provide greater fluidity for growth and change, this approach also proves more efficient than complete redevelopment. Trancik (1986) highlights the fact that urban designers should work as surgeons or mechanics in trying to repairing the various broken parts of the city, rather than trying to manufacture completely new urban machines ( Trancik, 1986).

A range of interventions have been developed as part of urban framework. The primary intervention required to initiate the future vision for Hillbrow entails the creation of quality public space as detailed in the place making framework. The aim of this would be to attract more investment to the rest of the neighbourhood through improvement the public real. Crucial to the success of these public spaces would be the level of accessibility, and linkages that connect the public spaces, the uses and activities that take place within these spaces, the level of comfort and the impression these spaces have on people as well as the sense of sociability the place has in attracting different kinds of people into it.

The implementation strategy entails the demolition of dilapidated structures, and there reconfiguration and modification of existing land uses and structures , using the building form to define public spaces while at the same time transforming the building fabric within the neighbourhood. The strategy will also look at opportunities for infill through optimising building densities by adding new floors to existing buildings and new developments in spaces where there is opportunity ie. Suface parking spaces, low rise buildings, dilapidated buildings.

# PHASING & IMPLEMENTATION

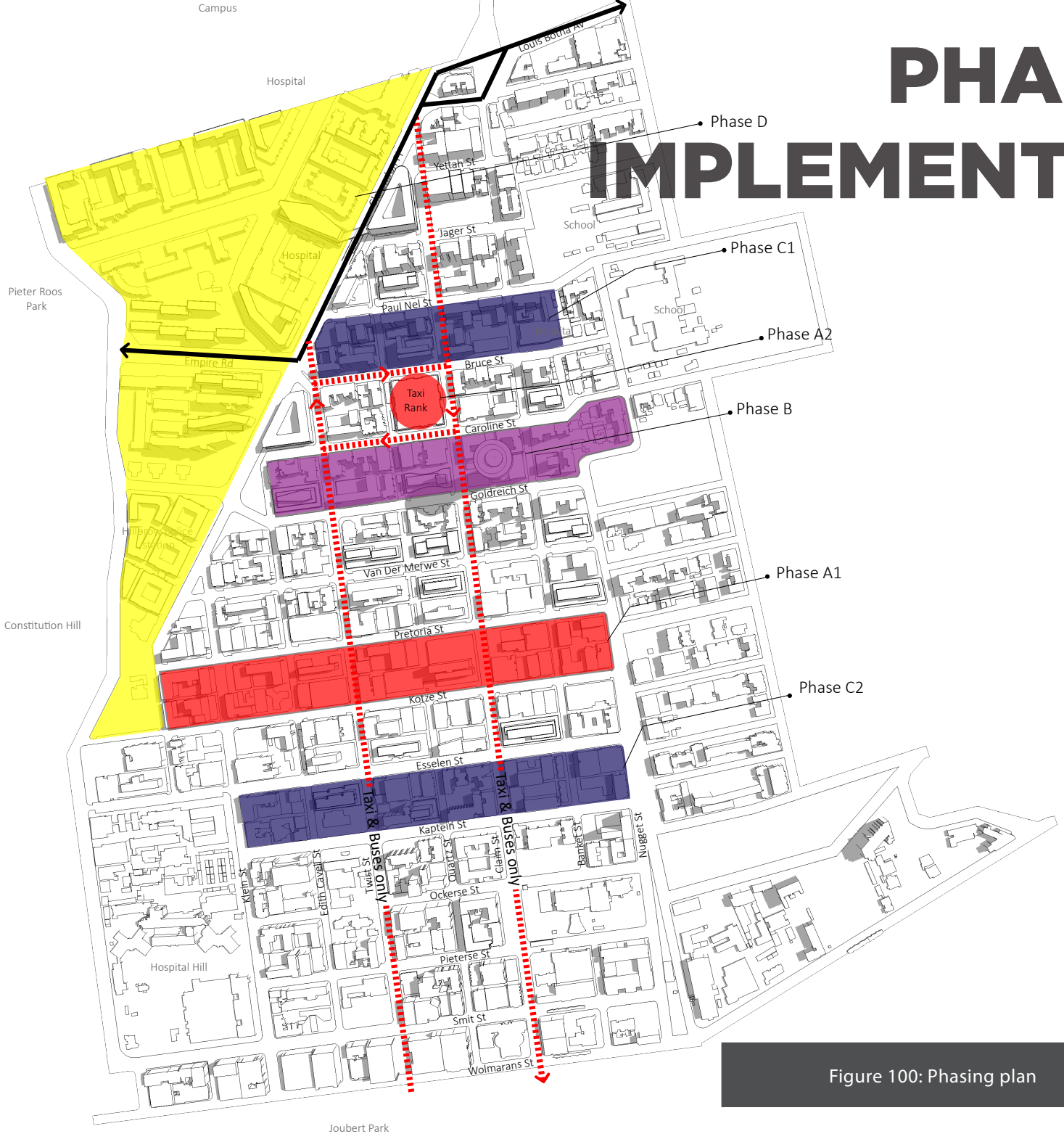



Figure 100: Phasing plan

# Phasing and implementation

The implementation strategy will require a flexible framework which is able to respond to changes over time. The process will take form in incremental stages.

Phase A1: Looks at activating the commercial alleyway and creating a quality public real that will attract investors and big business into the neighbourhood. This alleyway is positioned to drive new investment into the neighbourhood.

Phase A2: Will look the development of the new taxi rank and the redistribution of traffic flow. This is to allow for better flow of movement networks and prioritising pedestrian movement over vehicular movement, with private vehicles being moved to the boundary of the neighbourhood.

Phase B: Will look at activating the heritage alleyway and providing a variety of income generating activities that will meet that needs of the residents, employees and tourists. This alleyway will require high quality management and planning. Activities will include food markets, festival and performances, restaurants, galleries and small businesses.

Phase C1 & C2: Will look at activating the neighbourhood alleyways and providing a safe and accessible public realm for the community. This phase will also look at the demolition of bad building within the neighbourhood with intention of developing new mixed use buildings that will serve as affordable housing.

Phase D: Will look at creating connectivity along the western edge of Hillbrow, as well as development and infill opportunities of the transitional zone. This phase will look at the connectivity along Clarendon Street, with a proposed pedestrian bridge linking Hillbrow to Parktown.




Figure 101: Overall development

# CONCLUSION

Hillbrow as a neighbourhood has gone through various stages of transition that have been closely related to the densification experienced in the neighbourhood. The physical conditions of the neighbourhood have resulted from a number of issues as identified in the background of the research. In order to address these issues, it is important to develop strategic interventions to assist in reshaping and reimaging the neighbourhood. Enabling innovative use patterns that encourage greater social, cultural and physical character of the neighbourhood that would continue to support the neighbourhood's transformation.

In order for high density developments such as Hillbrow to work more efficiently, it is important to consider other conditions such as connectivity to the surrounding context, the optimum use of public spaces, mixed use opportunities and built form, safety in the neighbourhood as well as ease of movement in and around the neighbourhood. This will assist in creating greater levels of integration, public environment improvement and spatial connections through the neighbourhood, ensuring that development contributes positively to the urban structure of the neighbourhood. In order for this to be achieved, a flexible framework which responds to changes over time needs to be applied. One that is easily adaptable and inclusive, with the aim of achieving sustainability. Another important element in the success of the neighbourhood would be community participation. "Public must take part in shaping their surroundings (Gehl, 2010)."

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All unreferenced images are authors own
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