

Re-Imagining Suburban Public Space

**Along the Kerneels Young Walking Route
in Tshwane, South Africa**

by Megan Boegman

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Index

Chapter 1: Introduction	6
Personal Reflection	8
Terminology	9
Project Synopsis	10 - 11
Chapter 2: South African Context	12
Overview of South Africa Today	14 - 15
Apartheid Governance	16 - 19
South African Spatial Context	20 - 21
Chapter 3: Macro Site Context	22
Pretoria Tshwane	24 - 29
Beyond the Apartheid City	30 - 31
Informal Trade	32 - 33
Existing Open Space Frameworks	33
Kerneels Young Walking Route	34 - 3
Chapter 4: Urban Framework	36
Urban Framework Strategy	38 - 47
Chapter 5: Micro Site Context	48
Suburb of Waterkloof	50 - 57
Domestic Workers	58 - 61
Study of Existing Public Spaces	62 - 65
Site Location	66 - 69
Site Usage and Condition	70 - 75
Chapter 6: Programmatic Intent	76
Programme	78 - 81
Financing and Management	82 - 83
Chapter 7: Architectural Intent	84
Design Informants: Spatial Safety	86 - 87
Design Informants: On-Site Informants	88 - 95
Chapter 8: Influential Projects	96
Bibliography	102

chapter 1: introduction

Personal Reflection

Initial Observations & Intentions

As an architecture student who grew up and spent most of my life in South Africa, I have long held the desire to work within the South African spatial context, on observations made growing up in the city of Pretoria. My research began with two observations or spatial “problems”; the lack of safe and usable public space in the relatively affluent, mostly residential suburb of Waterkloof and the city in general, as well as the lack of infrastructure supporting the pedestrian route of the domestic workforce commuting to suburbia daily. As every suburban environment is unique, this research does not attempt to find an all-encompassing solution, but rather to contribute towards a broader discussion about post-apartheid space, by analyzing a route and then critically considering one site and its related complexities. It is an approach which recognizes the role of architecture in the creation of successful cities – its ability to act as a tool of inclusion, where it has previously been used as a tool of segregation. The investigation is aimed at providing a model for more inclusive public space in an ever-privatizing neighborhood. It hopes to stimulate the creative pursuit of alternatives at a moment in time when many are considering gated communities as the only solution to “problematic public spaces”.

Methodology

In the realm of post-apartheid design, it is extremely important to consider the narratives of all those who will be affected by spatial changes in a given area, as opposed to the historical top-down approach prioritizing and privileging the narrative of one particular group. Owing to time constraints and various other limitations of a student-led project, my investigation was only partially able to simulate a ground-up, community-based design which I view as the most valuable way of working in such a context. Ideally, the intervention would be an extensive process of in-depth stakeholder consultation at the different phases of the project.

I grew up within a hundred meters of the chosen site, and my parents still live there. When I commenced the project I therefore already had the insight of an important stakeholder group: the residential property owners in the suburb of Waterkloof. This is, however, only one group amongst various others of equal importance. It was essential to inform myself of the views of the other stakeholders, many of which use and experience the site in a more intensive and completely different way to the property owners of the surrounding suburb. Between August 2017 and January 2018, I spent roughly six weeks on site, walking, observing and documenting. This extensive series of walking journeys informed my investigation, and was invaluable in terms of offering a direct sense of place. I was able to perceive the pedestrian point-of-view, which was new to me, having previously moved through the area almost exclusively in a motor vehicle, with the exception of occasional exercise walks (often routed to purposefully avoid parks and other open areas). It also provided an opportunity for me to interact with the site users, to gain perspective into how these users experience the area now, and what they would like to experience in the future. I recorded around twenty of my conversations with people that I encountered while walking. I did not have a set list of questions to ask, approaching it as an informal discussion as opposed to an interview. As these discussions did not have a set format, and many of them took place in Afrikaans, they have not been included as a stand-alone transcription. Instead, their content has been included throughout the text.

Photography was used as a medium to visually document the places I walked through and the people I encountered. I have created a series of photographic studies with themes such as informal trade, suburban entryways, spatial security measures and user experience.

Terminology

Ethnic Terminology

'Black African' refers to the descendants of West and Central African populations.

'Indian' refers to the descendants of South Asian populations.

'Coloured' refers to a mixed population including the descendants of the indigenous Khoisan population, imported Malay slaves, and people born out of mixed-race relations.

'White' refers to the descendants of Europe.

Note: Today, the South African population is still officially classified into racial groups. While these terms are applied, the constituent groups should by no means be considered homogeneous.

General Terminology

Tshwane:

Pretoria, the government capital of South Africa, was named after its founder, Marthinus Wessel Pretorius. After the transformation of the local government on 6 December 2000, the local authority was renamed the City of Tshwane Metropolitan Municipality. Since then reference was also made to the City of Tshwane. Within the context of this study, reference is made interchangeably to the City of Tshwane in the present state, or the former City of Pretoria when referring to the old dispensation. The word Tshwane is derived from the word Tswana, which means 'we are the same/we are one because we live together'.

Apartheid:

The Afrikaans word "apartheid" is now universally employed as the term for legally enforced policy to promote the political, social and cultural separation of racially defined communities. The word is derived from Dutch, the parent language of Afrikaans, and originally meant "apartness" or "separateness".

Domestic worker:

The international labour organization defines a domestic worker as "a person who is paid to help with cleaning and other menial tasks in a person's home".

Spaza shop:

A spaza shop is an informal convenience shop business in South Africa which is typically found in a township, that sells everyday small household items.

Project Synopsis

Brief Background

The South African society is both very diverse and extremely unequal, resulting in a poverty trap for many and therefore a particularly high crime rate. The oppressive apartheid governance may have ended in 1994, but its effects are still widely felt today. During the white minority rule (roughly between 1950 and 1994), emphasis was placed on keeping different ethnicities separate, prioritizing the white population and placing the non-white population at a significant disadvantage. This split played out socially, economically and spatially, and as a result truly public spaces which are accessible by all were (and still are) very limited. In addition to this, the public spaces which do exist today are perceived by many to be dangerous and undesirable areas to go to, because of the perceived high crime rate. This separation was formalized by the *Group Areas Act of 1950*, which allocated specific areas based on ethnicity. The white population was located in privileged areas closer to the CBD, and the non-white population was relocated to more remote areas at some distance from the CBD. While this legislation has been absent for over 20 years, it is still largely true that different ethnicities are divided.

In Pretoria, one of South Africa's three capital cities and the former "core" of apartheid legislation, this condition is still particularly prevalent, and it has been chosen as the site of study. The former non-white habitation areas on the outskirts of the city of Pretoria house a large workforce, which commute from their homes into either the CBD, or the former white-only suburbs, to do domestic work. One in five South African women are domestic workers which is defined as "a person who is paid to help with cleaning and other menial tasks in a person's home". These women either commute to work daily, or return home on weekends/holidays. They essentially function as "live-in" hired help, often with additional responsibilities such as babysitting and cooking for a family. Waterkloof is one such affluent suburb which employs a large number of domestic workers. Historically, various apartheid officials were based here, and therefore it has the reputation of being one of the wealthiest and most unequal, and therefore most problematic, suburbs. The suburb has a 76.0% white population, is largely homogeneous in program (residential), is pedestrian unfriendly with a poor streetscape and entertains isolated private lifestyles over shared facilities. There is a lack of public space, as well as a lack of social cohesion between different groups.

KY Walking Route

Through the heart of the city, there is a route of open spaces alongside a water channel and flood plain. It stretches 7,5 km from the CBD to the greater Suburban, former white-only areas. This path, known as the Kerneels Young Walking Route along the Walker Spruit, was created in the 1980s and intended as a leisure walk through the city with the focus on its white citizens. It links some of the city's main attractions including the Pretoria Zoo, The Austin Roberts Bird Sanctuary and the Caledonian and Loftus Versveld Sports Grounds. Today, a completely different user group is making use of the route. The suburb of Waterkloof links directly to the KY Walking Route, and roughly half of the trail is used twice daily by commuting pedestrians, on their way to and from the train stations which connect them to their homes in townships such as Mamelodi, Soshanguve and Atteridgeville. The workers arrive at the Loftus or Park train station after a train journey of between 30 and 45 minutes, and then walk another 40 – 45 minutes to the edge of the suburbs and the households where they work. Other existing users of this leg of the route include those employed in commercial zones such as Muckleneuck, those employed as security guards, gardeners and cleaners in the suburbs, a limited number of homeless individuals and occasionally those living in the surrounding suburbs.

Urban Framework

The broad spatial intentions of this thesis are to reconnect the CBD to the suburbs with nodal catalysts, to formalize and upgrade the commuter path and to develop a nodal point to re-imagine public space in suburbia. Currently, the length of the KY Walking Route's open spaces, which are located next to the water, are generally cut off from their surroundings with fences, walls and privatization, considered unsafe, badly maintained and without attractions. Along the path, the proposed strategy intervenes at selected nodes with catalytic potential. Nodes are located at intersections of different zones such as at the boundary of a residential and commercial, or school/ sport and mixed use. At each of the five proposed locations, there is a proposal to strengthen if what is existing is somewhat functional and its potential could be further exploited, transform if what is existing is not functional and develop if there is nothing existing and the area is in need of development. Throughout the inquiry, the over-arching intention of re-writing an architecture of separation and moving towards an architecture of inclusion is considered. There is a move away from barriers, zoning, the prevention of interaction and spaces which are only accessible by some, towards permeability and continuity, multiple uses, increased interaction and spaces accessible by all.

Focus Site

The intention is for every nodal point to be studied in depth and then to choose a site-specific and appropriate response and intervention. The fifth and final node has been selected as the site of study for this thesis, because its interesting condition at the boundary between the suburb and a commercial zone allows it to be developed as a model for public space in suburbia. It has been selected as a node for areas of development and strengthening. The site is completely cut off from its surrounding buildings as it is viewed as a spatial disadvantage to be located next to an open area which perceivably has an increased safety risk. While there isn't a very high incidence of violent crime, muggings and robberies occur weekly, and criminals are known to hide in certain areas of low visibility, such as below bridges. There is an increased security presence in the area, because it is considered particularly unsafe and the general area is monitored by guards. Currently, the core users are the commuters who pass through it daily. They are largely made up of domestic workers, gardeners and security guards working in suburbia.

What Does the Site Need?

Between August 2017 and January 2018, I spent roughly six weeks on site, walking, observing and documenting. This extensive series of walking journeys informed my investigation, and was invaluable in terms of offering a direct sense of place. I recorded around thirty of my conversations with people that I encountered while walking, and this informed the chosen programme, which is based on needs and desires. In order to weave into the existing fabric in a more holistic way, all users of the park and its surroundings, as well as their potential interactions, are considered. While it is idealistic to aim towards a site which "creates" social cohesion, it remains valuable to have this as an additional level of consideration for creating spaces that may facilitate more interactions, should people want them to take place. The programme consists of:

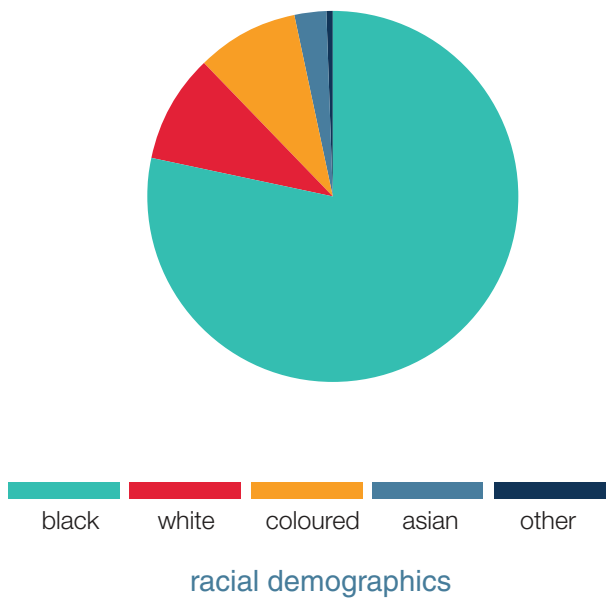
- a) Commuter facilities including an informal trading zone which can function as a weekly market, permanent convenience stores ("spaza shops") a medical clinic and a hairdresser.
- b) An adult skills development centre teaching literacy, language, business and technological skills, aimed at giving domestic workers living in suburbia a possible alternative career trajectory.
- c) A kindergarten and daycare facilities for both the children of domestic workers which typically remain behind in the townships, and the children of property owners in suburbia. This links to both the nearby school facilities and to the Austin Roberts Bird Sancturay which can offer after school programs. These activities take place in the same building as the skills development center, and as there is often limited overlap of usage times, many of the spaces can be used for different purposes, according to need. There is a communal lunch facility for the building to be used by different groups.
- d) A general park upgrade including the introduction of maintenance cottages, landscaping, lighting and seating.

How Can This be Achieved?

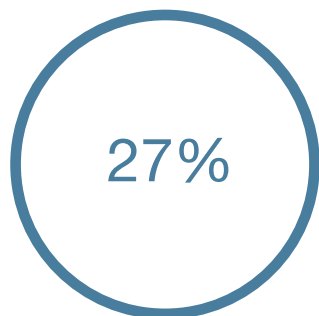
The on-site design informants include respecting the existing commuter movement path and maintaining as many trees as possible. In the South African suburb a natural piece of land is a valuable asset to draw people to the site. Ideally the space would remain as an undeveloped park, but it is clear that activity is not enough to ensure safety. The design proposal is not based on aesthetics, but rather on realizing several spatial safety strategies. Passive surveillance is increased through rounding building corners for clearer sight-lines and designing structures to look out onto public spaces and landscaping in a ways that increase visibility. The materiality of structures is also considered in order to avoid the creation of areas of entrapment. By placing activities along whole path, there is constant activity and the site does not become polarized in terms of safety. The edges of both the buildings and the site walls are designed for interaction: green walls, climbing walls and furniture built into the facades encourages pedestrians to linger on site instead of just passing through.

This research does not attempt to propose an all-encompassing solution, but rather to contribute towards a broader discussion about post-apartheid space, by analyzing a route and then critically considering one site and its related complexities. It provides a potential model for more inclusive public space in an ever-privatizing neighborhood. It hopes to stimulate the creative pursuit of alternatives at a moment in time when many are considering gated communities as the only solution to "problematic public spaces". This approach is an attempt at re-imagining the socially cohesive future development of an area, rather than allowing this suburban environment to evolve without architectural consideration. Overall, the proposal on this site and the greater area to which it is connected, is a way to demonstrate how to move beyond the effects of segregated space.

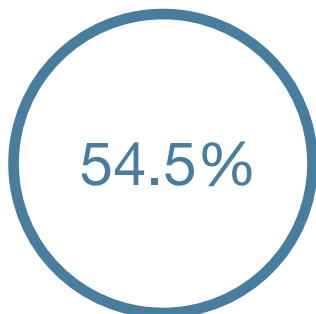
chapter 2: South African Context



11 official languages



unemployment 2017



youth unemployment 2017

Most Ethnically / Culturally Diverse Countries

-  1. Papua New Guinea
-  2. Tanzania
-  3. DRC
-  4. Uganda
-  5. Liberia
-  6. Cameroon
-  7. Togo
-  8. South Africa
-  9. Congo
-  10. Madagascar

Fig. 1 Diverse and Unequal South Africa

Overview of South Africa Today

South Africa is a country known for its diversity. In 2012 it was ranked as the 8th most ethnically and culturally diverse country in the world (*Fig. 1*), according to the Fearon List (Fearon, 2012). With a population of 56 million, roughly 80 percent of the population is of Sub-Saharan African ancestry, made up of a variety of different groups speaking different languages. The rest of the population consists of European, Asian and multiracial ancestors. There are eleven official languages; Afrikaans, English, Ndebele, Northern Sotho, Sotho, Swazi, Tswana, Tsonga, Venda, Xhosa and Zulu. While all languages are formally equal, according to the 2011 census, the three most spoken first languages are Zulu, Xhosa and Afrikaans - yet English is recognized as the language of commerce. Since becoming a democracy in 1994, all the country's ethnic and linguistic groups have held political representation in a parliamentary republic.

On the other hand, South Africa is often described as one of the most unequal society in the world. With a Gini coefficient of between 0.6 and 0.7, the top 10% of the population earns about 60% of all income (*Fig. 2*) and owns 95% of all assets (Webster, 2017). While there is much to be optimistic about today, the country's unemployment rate is over 25%, more than half of which is youth unemployment. This interacts with other economic and social problems, namely inadequate education, poor health outcomes and crime. In essence, the poor have little or no access to basic services and economic opportunities (Kumwenda-Mtambo, 2017).

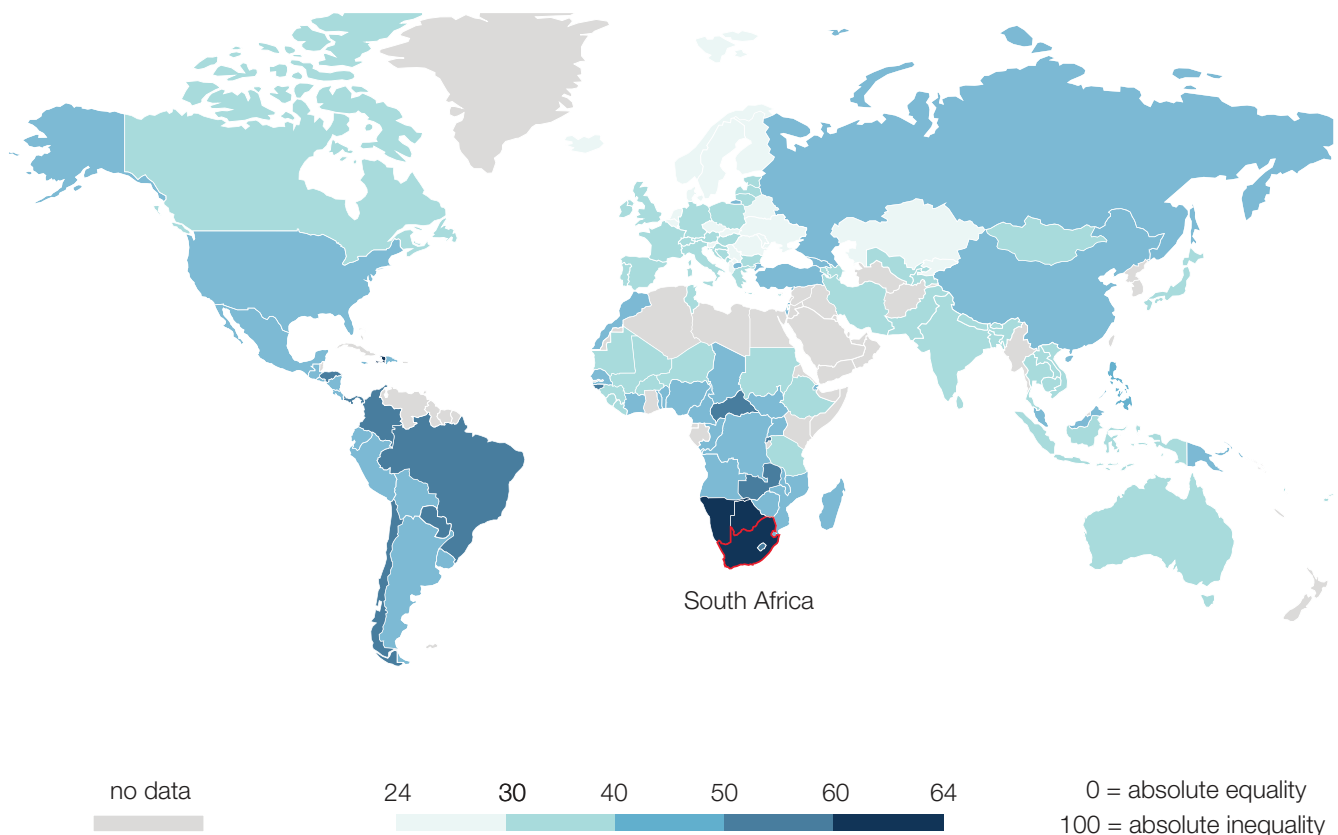


Fig. 2 GINI Index for Income Inequality Range

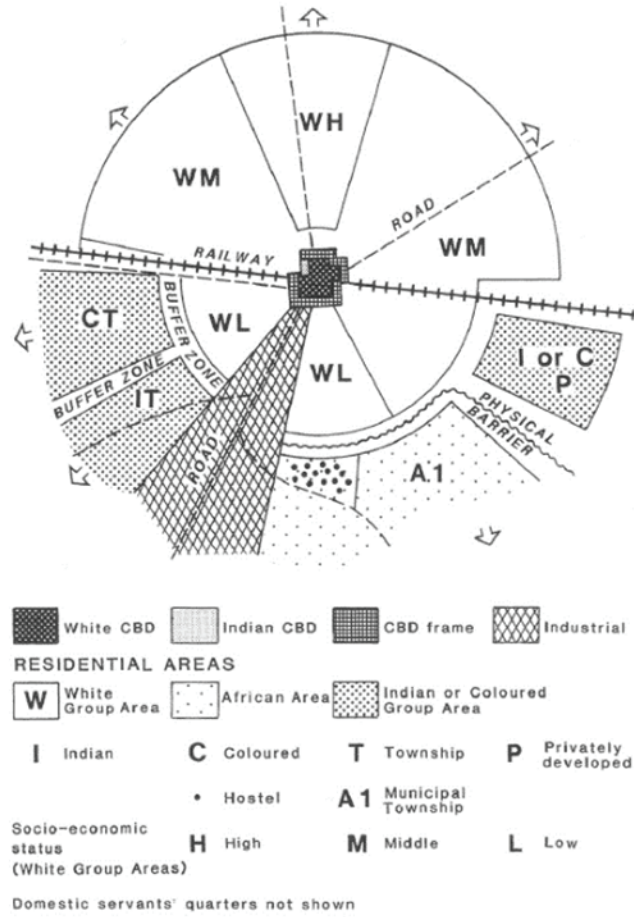


Fig. 3 Layout of Apartheid Cities, Christopher (2001)

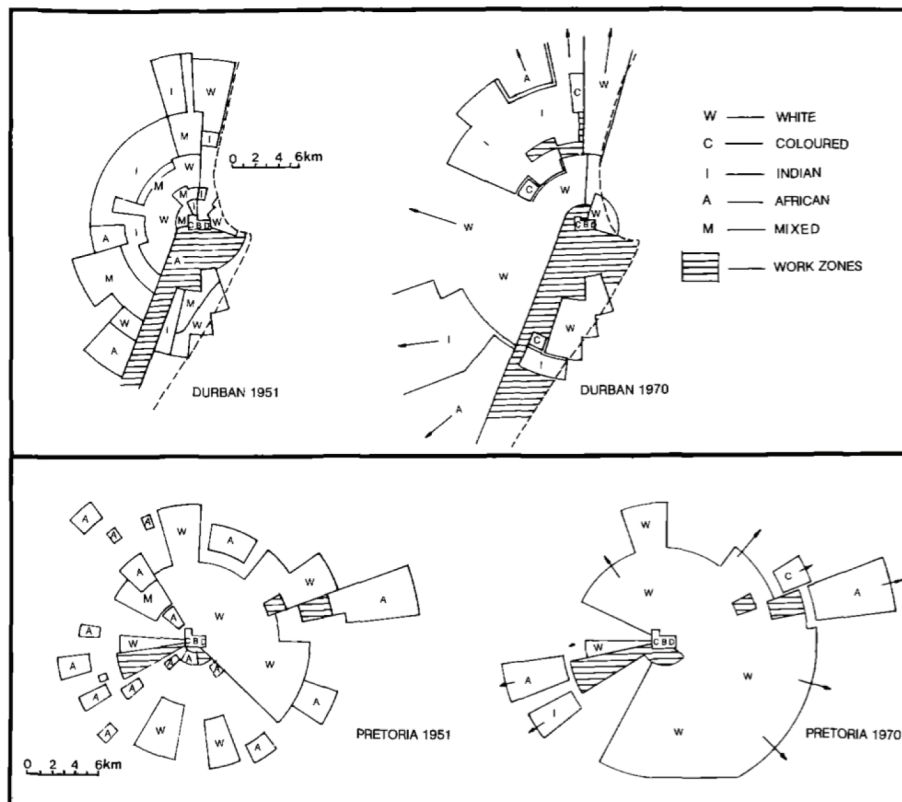


Fig. 4 Diagram of Segregation City vs Apartheid City, Davies (1981)

Apartheid Governance

History

South Africa, previously a colony of the United Kingdom, has a history intertwined with racial and ethnic separation. Pre-apartheid South African cities had a complex colonial heritage and their varying mixture of racial integration and enforced segregation could be described as “segregation cities” (*Fig. 4*). In 1948, the National Party came into power in a country that was already deeply immersed in colonial segregation, and proceeded to implement the principles of Apartheid. The state-driven administrative reconstruction in this post-Second World War era was guided by White South African ideas of town planning and racial order (Christopher, 1994). Under the apartheid government, which ruled between 1948 and 1994, the population’s political and legal rights were predominantly determined by race. There was a redrawing of the map of South Africa’s towns and cities based on racial lines – zones were allocated to different groups of people who had different rights. Within cities, racial zoning was inspired by modernist urban design principles of functional segregation, such as E. Howard’s Garden Cities and Le Corbusier’s Ville Radieuse (Wainwright, 2014). The *Groups Areas Act of 1950* legally enforced this spatial segregation of races (*Fig 3*). As a result, many residential areas were demolished and between 1960 and 1983 over 3,5 million non-white residents were forcibly removed from newly allocated “white areas”. This is known as one of the biggest forced removals in modern history (Jacobs, 2006). As can be seen in *figure 3*, “buffer zones” were introduced inbetween zones - these manmade or natural division lines served to further isolate racial populations (Christopher, 1994).

Some of the largest settlements (known as “Townships”) that exist in South Africa today are a result of extensive non-white township development that occurred after the Group Areas Act. Township residents were not entitled to own land or homes, and had to exist with limited infrastructure and very poor public spaces. The apartheid government aimed to create a submissive black labour force. Control and “security” was achieved by military-style fenced-off settlements with designated access points. Access to city centres was largely limited and movement was restricted by government-issued passbooks that had to be produced whenever a non-white person wanted to enter a white area. The *Population Registration Act of 1950*, instituted this system of the identification cards which were colloquially referred to as a ‘dompas’ (*Fig. 5*) which translates to ‘stupid pass’ (Christopher, 2001). The *Reservation of Separate Amenities Act of 1953* legalized the racial segregation of public areas, vehicles and services. It also stated that the facilities for different races did not need to be equal, and in practise the best facilities were reserved for the white population, is is evident in (*Fig. 6*). Mr. C.R. Swart, the Minister of Justice infamously said;

“in our country we have civilized people, we have semi-civilized people and we have uncivilized people. The Government of the country gives each section facilities according to the circumstances of each”(1953).

In essence, the formation of the apartheid city served to perpetuate and extend the dominant-dependent relationships created by colonisation (Christopher, 1994).

Spatial Legacy

Though Apartheid legally ended over 20 years ago, with the release of Nelson Mandela in 1990 and the first democratic elections in 1994, the legacy of apartheid’s spatial policies is still widely reflected in South Africa’s cities. Most notably, the country’s contemporary fabric still contains racially segregated suburbs and townships. Many areas are still unofficially segregated along racial (and occasionally class) lines. Inner city suburbs house mostly white citizens while townships or peripheral suburbs house non-white citizens. In most cases, the inner city suburbs are privileged locations. In addition, there is a widespread public space deficit. During apartheid the open spaces in peripheral lower income neighborhoods, townships and informal settlements were often left in disarray, polluted and avoided ie. not functioning as public spaces. In many settlements, this is still the case. Throughout the country in general, there is also a lack of public space for communities of different backgrounds to interact, as this was by no means a priority during the Apartheid years. The consequences of Apartheid cities also include the extensive transportation systems needed for people to travel to work and the lack of access to good quality schools and community services and general bad service delivery.



Fig. 5 A passbook or “dompas”, Photographer: David Turnley



Fig. 6 "Whites Only" bench in Johannesburg, 1982, Photographer: United Nations



Fig. 7 Spatial Reactions to Safety Threats

South African Spatial Context

Crime and Space

South Africa has a notably high rate of violent crimes, compared with most countries. Almost a third of all South Africa's recorded crime is classified as violent (SAPS, 2011). Naturally, large sectors of South Africa's population are therefore fearful of crime and there is a widespread public perception that the country is not safe. This is made clear by an increasing dependence on private security. There is a widespread perception that the country's crime rate spiked significantly after 1994 and the argument was made that crime is a natural occurrence in "transitional societies" (Breetzke, 2014). Whether or not the rate is related to the governmental change, it remains extremely high. South Africa has very high levels of fatal violence; in 2016/17, an average of 52 people were murdered every day. The current murder rate in South Africa is 37.3 murders per 100,000 people, nearly five times the global murder rate of 7.6 murders per 100,000 (Kriegler & Shaw, 2016). Attitudinal surveys conducted by the Human Science Research Council in 2011 revealed that approximately 34 percent of South Africans felt personally unsafe on most days. In addition, 71 percent were fearful of walking alone in their own residential areas after dark, and 15 percent were fearful of walking alone during the day.

There are several notable spatial effects of South Africa's high crime rate and the resulting threat experienced by its residents (*Fig. 7*). There is an ever-increasing target hardening of individual properties by using locks, burglar alarms, fences, walls and burglar bars. In 2011 there was an estimated 26,000 gated communities in South Africa (AfriGIS). These enclosures serve to define and fortify territory and ensure a sense of privacy and community inside. Public spaces are considered unsafe and parks and other public spaces are avoided or left in disarray. There is also an increasing privatization of public space, which results in controlled, quasi-public spaces. This is achieved by fencing off parks and controlling entry. As a result, shopping malls become some of the only physical spaces where people gather, mostly without interaction (Landman, 2016). A number of these features will be studied in more detail in chapter 5 and chapter 6.

Public Space in (South) Africa

Public space has always been integral to the individual and the collective experience of the built environment (Burger, 2012). The definition of "public space", however, varies from culture to culture. In the traditional African village, public space constituted of a central open piece of land under a large shady tree. This is where the community gathered for discussions, celebrations and debates, placing mats and benches to mark the space more permanently. Francis Kere notes that "normally, in the village, public space is an open space. People gather under a large tree and talk (Picchi, 2010). An important difference between the public space in an African village, and the public space in the centre of the city today, is the sense of ownership. In the former, the space under the tree belonged to the community and their specific culture. In the latter, the CBD of a city such as Tshwane, the public space "belongs" to whoever is occupying it at that moment. It is still a community resource, but this community is not limited to the site's immediate neighbours. Therefore, the space has to provide a place for meeting, gathering and socializing for a number of different groups. For those crossing it daily, for those working in the surrounding buildings, for those living or studying nearby and even for those who may visit it occasionally. However, as will be discussed in the following chapters, the public spaces in question in this research are currently struggling to serve anyone.

It is important to note that public spaces were traditionally associated with the formation of cultures, as well as political participation. Today, this is no longer tied to a physical space as the media fulfils this role to a large degree (Amin, 2006). The meaning has evolved, and public spaces now become the locations where social responses to others are developed. This is particularly important in the growth of a new society which is trying to move beyond segregation imposed by years of oppressive, divisive governance.

chapter 3:

Macro Site Context

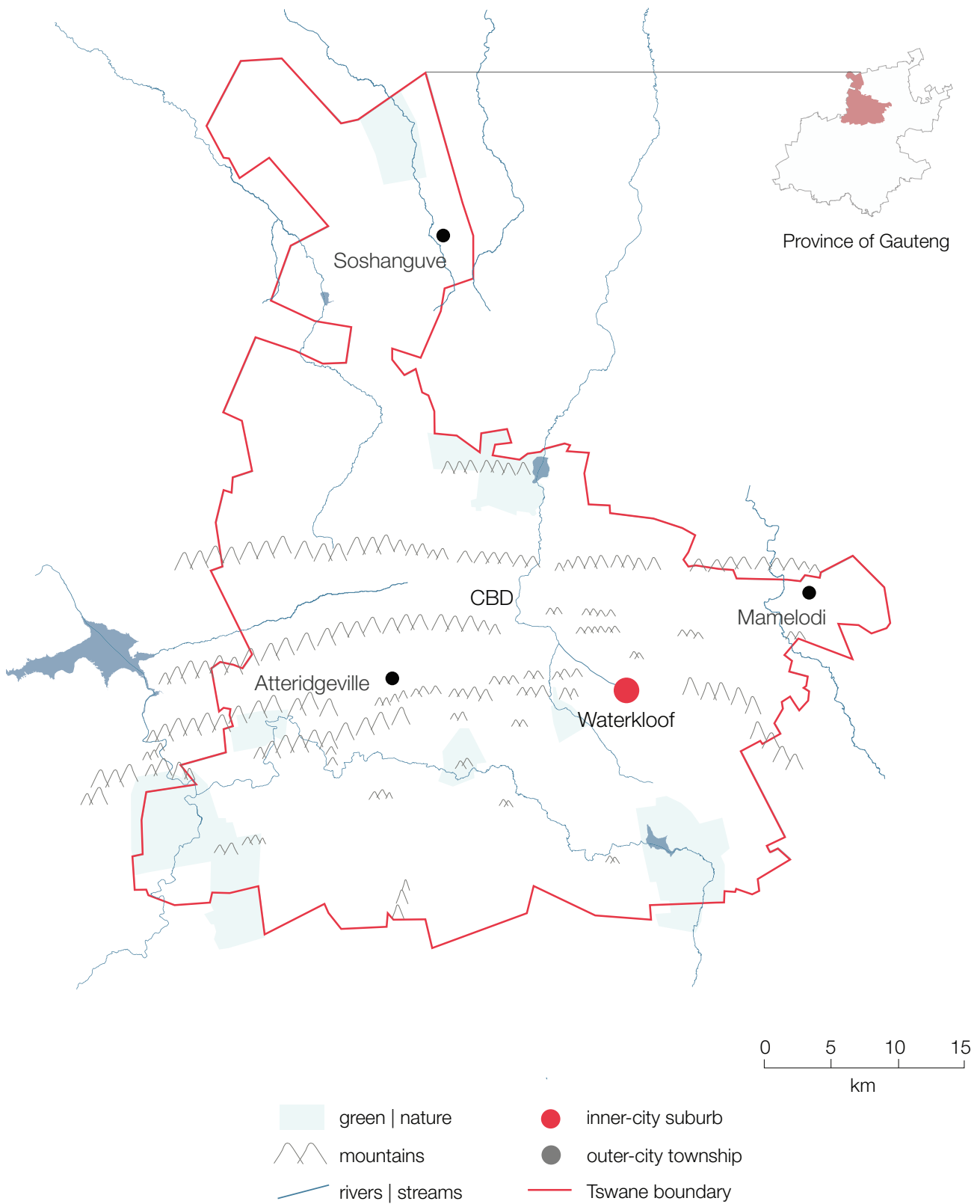


Fig. 8 Geography of Tswane

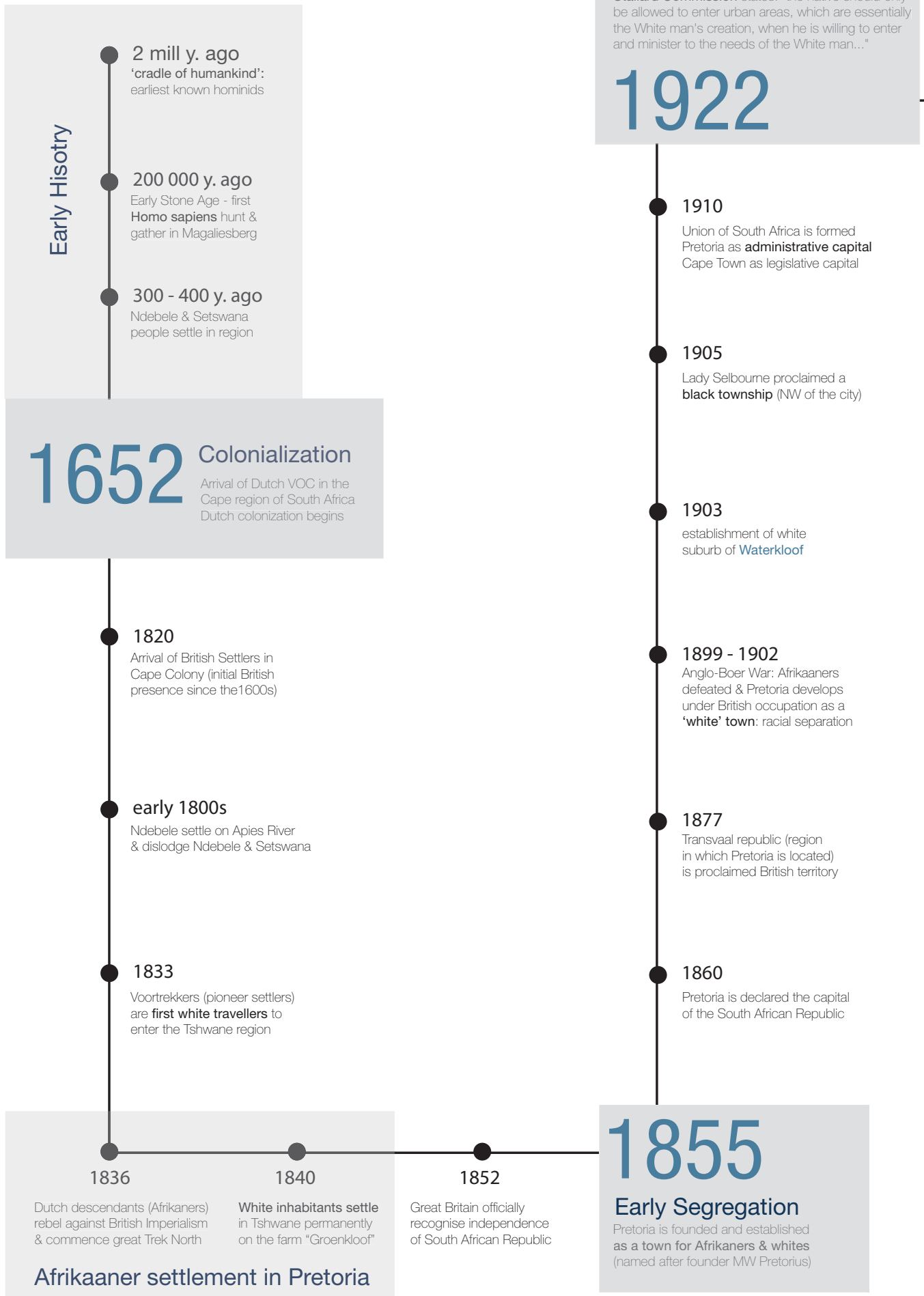
Pretoria | Tshwane

South Africa has nine provinces, of which Gauteng is the smallest. Pretoria is located here, and it is the executive and administrative capital of South Africa (*Fig. 9*). The judicial capital, Bloemfontein, is located in the Free State and the legislative capital, Cape Town, is located in the Western Cape. Pretoria was declared the capital of the South African Republic in 1860 and started as a small rural settlement. With a population of 2.9 million inhabitants, it is now one of the largest metropolitan areas in South Africa (Coetzee, 2005). Though “Pretoria” is still the title of the capital city, after the transformation of the local government 2000, the local authority was renamed the City of Tshwane Metropolitan Municipality. The word Tshwane is derived from the local language called “Tshwana”, meaning ‘we are the same/we are one because we live together’ (Tindall 2000). There are countless contrasts and contradictions within the Municipality of Tshwane. It is well known for having a strong economic base with excellent living conditions and diverse cultures, state-of-the-art educational and research institutions and a “bushveld” environment unique to the region. It also had the reputation of being the apartheid capital which led Afrikaner dominion. Nelson Mandela was tried here for treason in the early 1960s. Following 27 years in jail, the inauguration of Mandela as the first President of the ‘new South Africa’, however, also took place in Pretoria, in 1994 (Coetzee, 2005). *Figure 10* shows a timeline of development of the greater Pretoria / Tshwane region.

Pretoria evolved around three rivers: the Apies River originating at the Fountains Valley, the Walker Spruit running from the Waterkloof koppies through the eastern suburbs and the Moreletta Spruit further east. The research conducted takes project takes place along the Walker Spruit, which reaches the suburb of Waterkloof (*Fig. 8*). The general landscape contains a series of koppies (outcrops) which are an important characteristic in the geography of the city. Several historically and politically significant buildings are founded upon them (van der klashorst, 2013).



Fig. 9 Pretoria in the Province of Gauteng



The Natives (Urban Act) passed:
creation of locations to house Black
workers within White urban areas

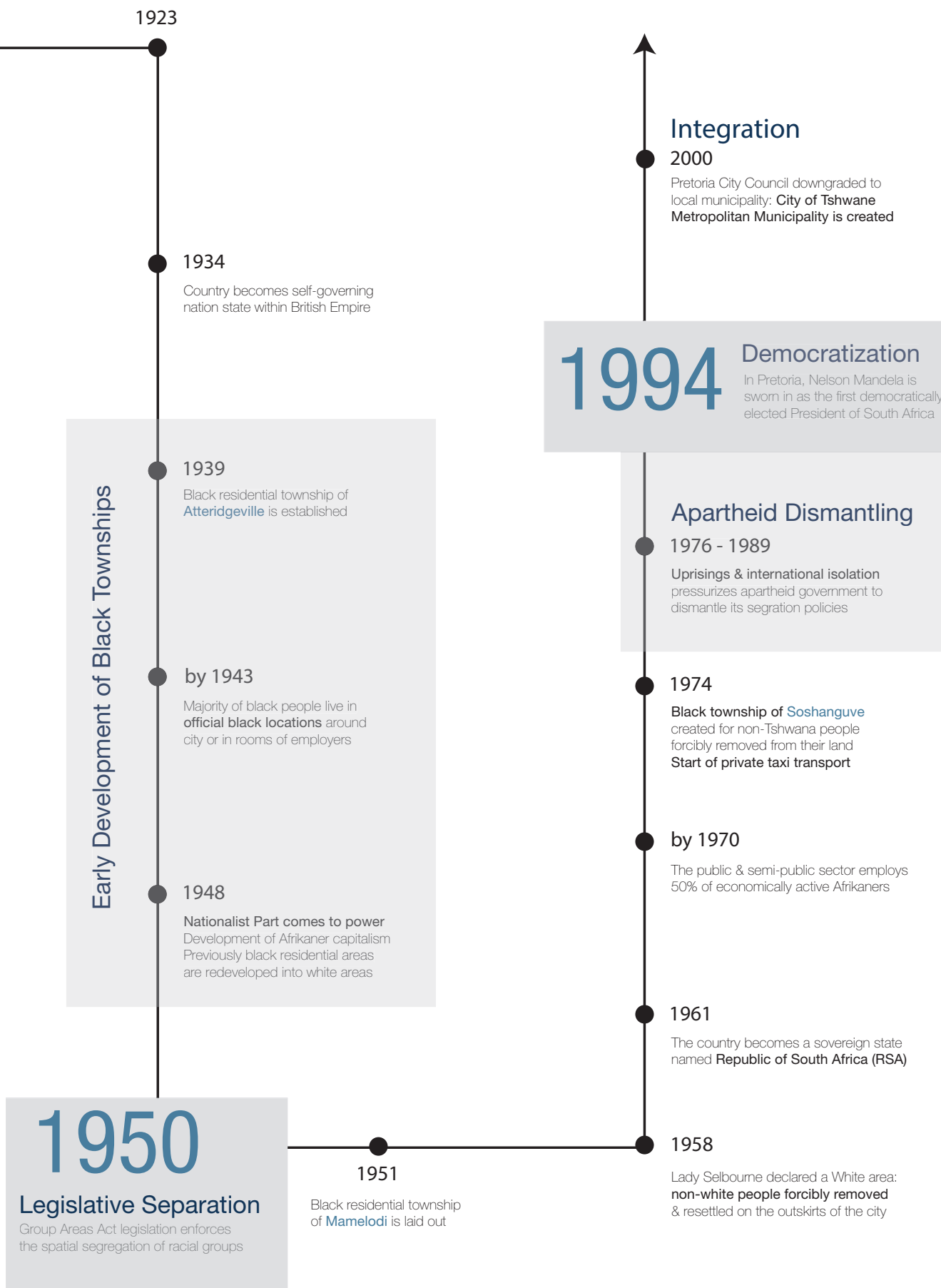
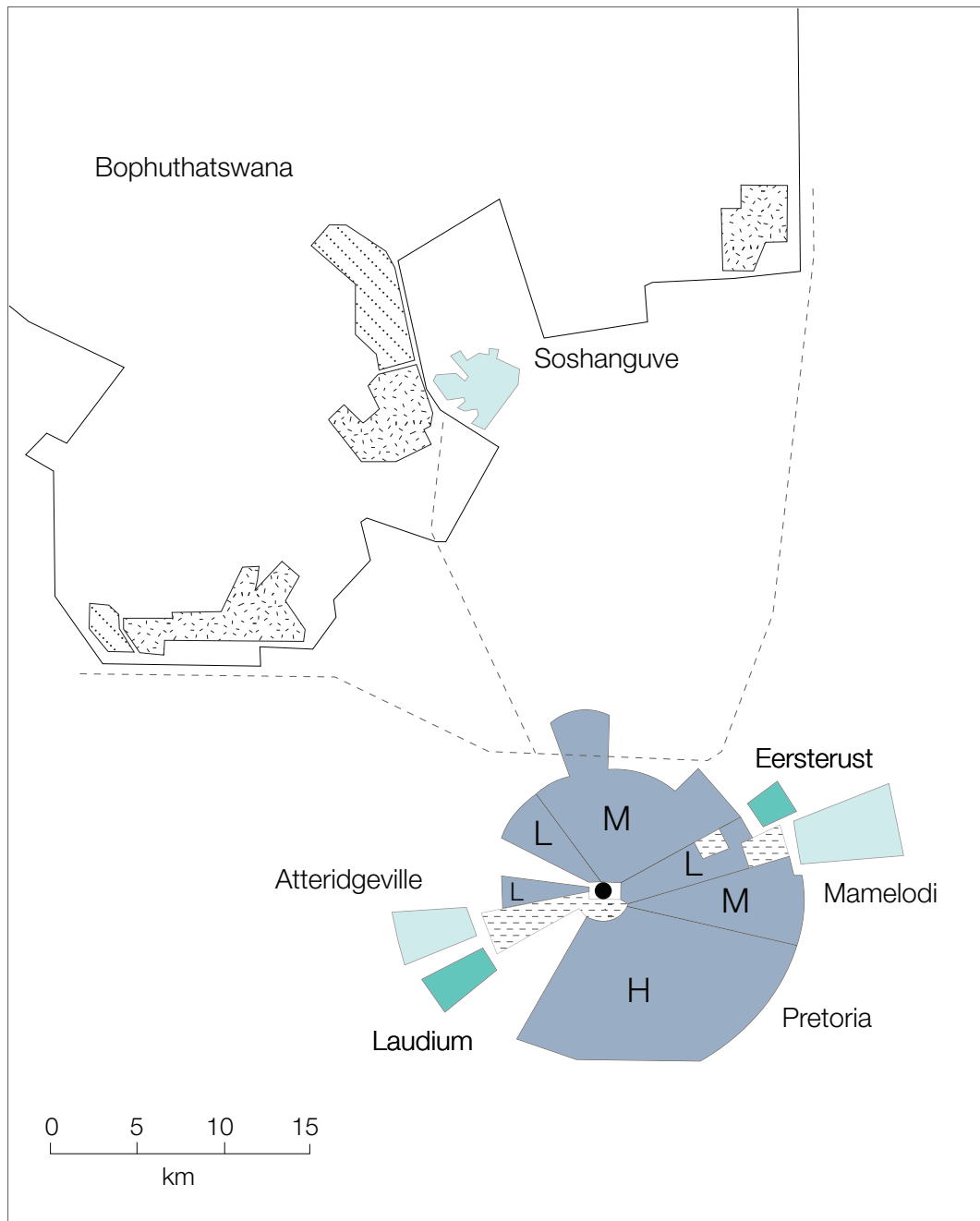





Fig. 10 Timeline of Greater Tshwane Region



Bophuthatswana:

-  Township
-  Informal Settlement
-  Bophuthatswana Boundary

Pretoria:

-  White
-  Indian / Coloured
-  Black

Residential Status:




- H High
- M Medium
- L Low
-  Industry
-  CBD
-  Railway

Fig. 11 Apartheid Group Areas Act Planning Module (1950 - 1994)

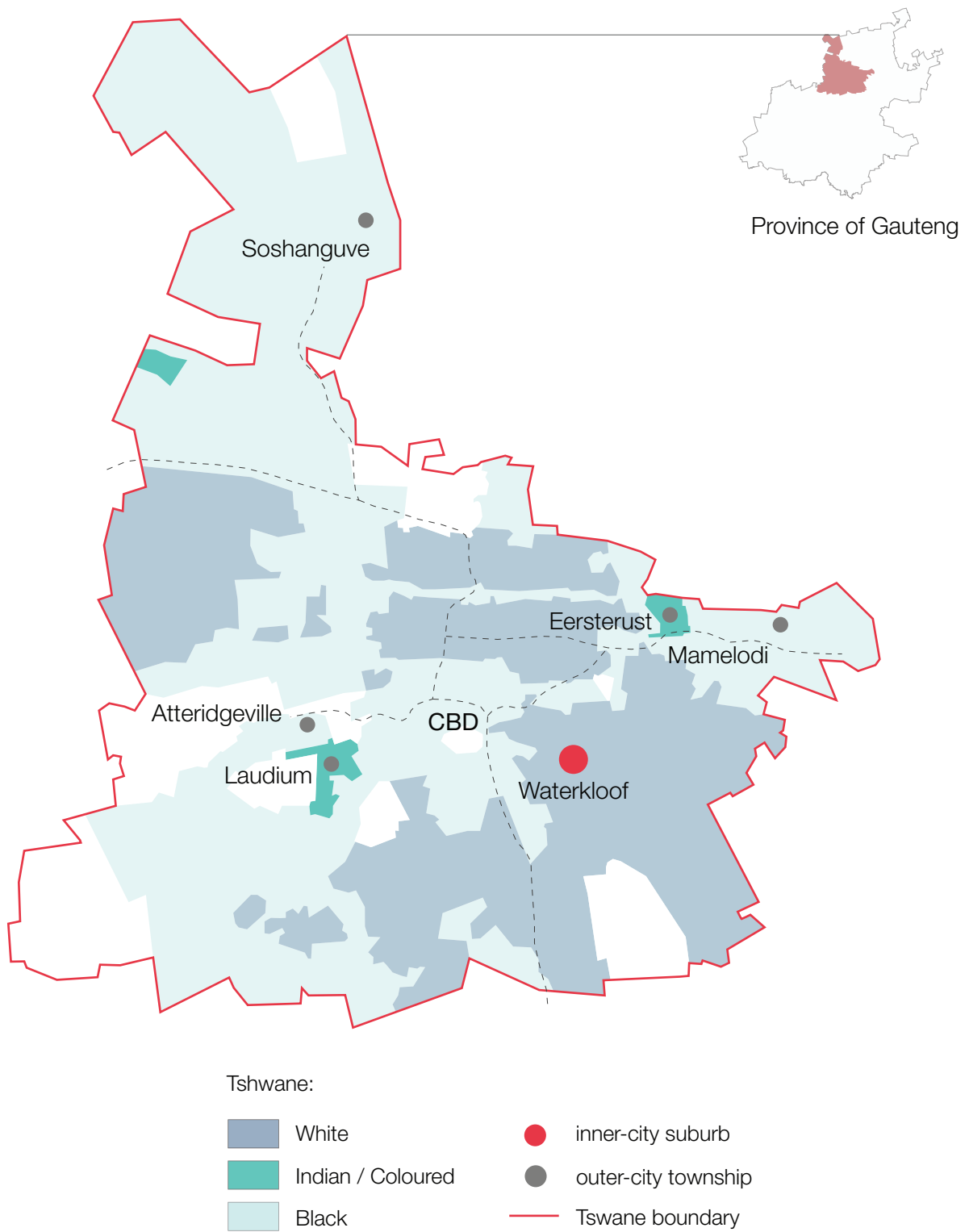


Fig. 12 Predominant Ethnic Distribution in Tshwane (2018)

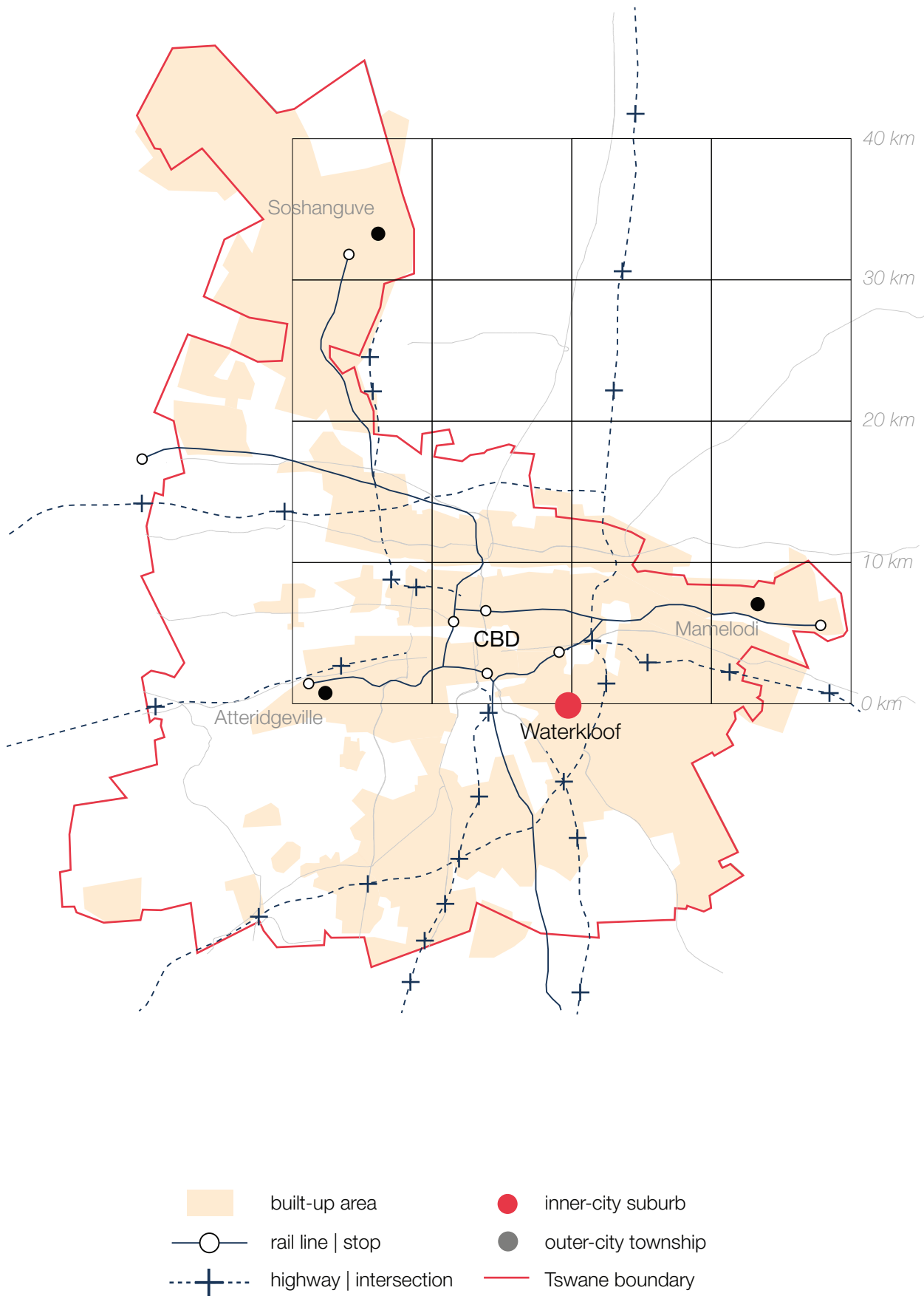


Fig. 13 Spatial Layout of Tshwane

Beyond the Apartheid City

Spatial Layout

Today, Tshwane consists of several spatial categories, the first being formerly white-only neighbourhoods immediately surrounding the central business district. Secondly, there are former apartheid-era townships lying on the periphery of the city eg. Atteridgeville (Black African) and Laudium (Indian) on the western edge; Eersterus (Coloured) and Mamelodi (Black African) on the eastern edge (*Fig. 12*). The third category is made up of late-apartheid black African townships on the border of the former Tswana homeland in the northern periphery of the city eg. Ga-Rankuwa, Mabopane, Soshanguve, Winterveld and Temba (Breetzke, 2014). The transition to democracy in 1994 resulted in access to the city by African people from all over the continent, but the spatial structure remains largely unchanged. For the most part, this resembles apartheid structure that existed before 1994 (*Fig. 11*).

Spatially, notable exceptions include a near-complete replacement of white by black African (emerging middle class) population in large parts of the inner city and the expansion of black African townships with informal housing. Two further exceptions are the establishment of a few informal settlements amidst previously whites-only neighbourhoods and an eastward shift of business and residential typologies (Peres, 2005). There have also been changes in the naming of places and streets, the organisation of taxi routes and ranks and informal traders on sidewalks.

Suburban Pretoria

Within the former white-designated areas, Pretoria currently houses the largest white population in Sub-Saharan Africa. However, when considering Tshwane (which includes the geographically separate former non-white townships), the black African population is the majority. Due to the historical development of South African cities during the early 1900s, a great deal of the South African cities such as Pretoria, now comprise of suburban environments. Currently, the South African suburban condition is densifying, and this means that the suburban form is in the process of changing (Vervoort, 2014).

“...in the suburbs, streets are lifeless. They are merely channels for vehicular movement. Cars dominate urban functions through the linkages created by these channels. They determine the layout, growth, activities and appearance of the city. The city is viewed through the car, resulting in high speed blurs, which supports an avoidance of physical interaction with the city” (Koolhaas, 1995).

While this vision of Rem Koolhaas' Generic City is somewhat dramatic, and mainly captures the experience of one population group, the suburban car-owner, it does somehow relate to Tshwane's lack of coherent identity. There are many conflicting elements: parking lots and parks, shopping centres and informal trade, gated communities and informal housing. The city no longer has a core or center but stretches out linearly with on-going sprawl in the eastern direction (Peres, 2005).

The Commuting Workforce

While many South Africans live in the suburban conditions described above, more than 40 % of the urban populations live in townships – with more than 20% living in informal settlements and low income housing estates. The townships, which are generally located further from the central business districts, and historically placed far away from places of economic activity and employment, can be classified as formal or informal (Godehart & Pernegger, 2007). Despite historical racial segregation, townships can be socially, culturally and economically diverse. It is common amongst larger townships to have middle to lower income households. However, the majority of township residents are poor with very high unemployment rates. Households in the suburban contexts described, employ workers from geographically distant township areas such as Soshanguve, Atteridgeville and Mamelodi (*Fig. 13*). The domestic workforce therefore either commutes to the inner-city suburbs daily, or lives in Suburbia and returns home for weekends. An example of this daily commute will be discussed in chapter 4.

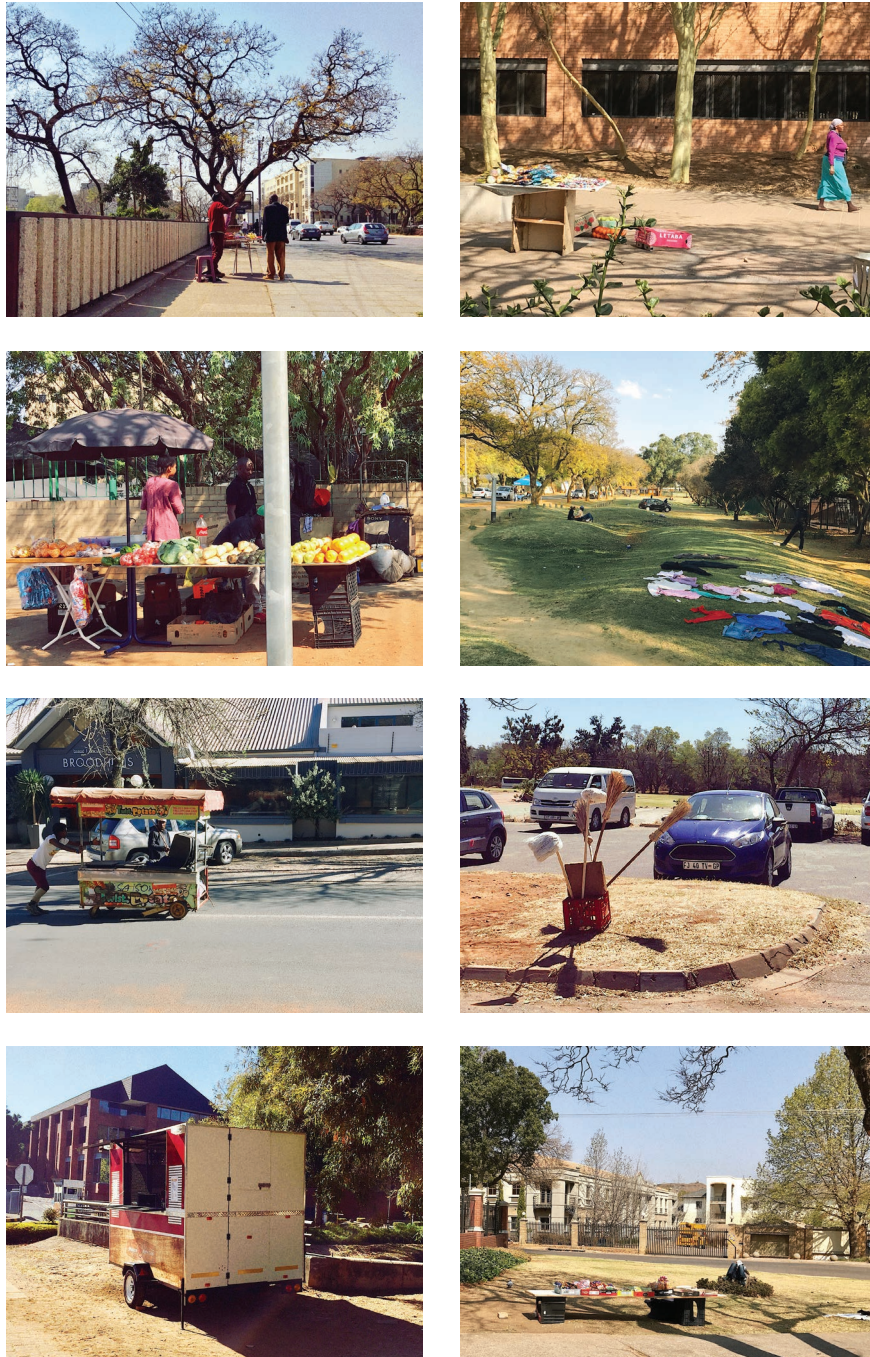


Fig. 14 Informal Trade along the Kerneels Young Walking Route

Informal Street Trade

An important economic and societal phenomenon in democratic South Africa (and Tshwane) is the ever-increasing street trade. The influx of adults from rural areas into urban areas, and the consequent unemployment rate, has resulted in a higher degree of informal trade occurring in the city streets (van der Klashorst, 2013). In city centres, areas are being dedicated to street trading by closing off traffic. Here the street trading is formalized since only licensed stalls are allowed. In many other areas, stalls appear and disappear on pavements in a much more informal way. Stalls are often placed along pedestrian routes to cater for workers on the move. Stalls may appear during rush hour in the early morning, lunch times, and early evenings as workers are heading home. Pavement markets sell merchandise and offer services, becoming part of the social space of everyday life. These items form colourful displays on the street, but are not aimed at selling tourist mementoes. Rather, they are addressing a need created by the frequent users of the city. The key features of these informal urban structures include impermeance, flexibility and adaptability. The stalls have minimal infrastructure and can therefore utilize sidewalks or building edges as locations. A photographic study in Tshwane (*Fig. 14*) revealed that the selling of street food is particularly prominent. Chips, sweets and drinks are most commonly sold, as well as fresh fruit and vegetables at reasonable prices. The latter are not necessarily for immediate consumption, and are often taken home on public transport. There are certain locations which tend to sell larger meals, and these are typically correlated to commuter activity. Goods are sold from structures which often consist of no more than two stacked cardboard boxes. In some cases, stalls on wheels are used, and they are carted into position on a daily basis. Another form of this trade consists of vendors without any physical selling space; they move by foot and carry their goods.

Due to the reliance on pedestrian movement, there are often close links to transport hubs such as taxi ranks. The modes of transport in Tshwane include cars, busses and trains – but the most interactive mode of transport is the minibus taxi which can transport up to 60% of South Africa's commuters. They have a crucial role to play in post-apartheid cities, as they cater for the growing need for people to be transported long distances at affordable prices. These 16-seater vehicles are also infamous for disregarding road rules, regularly double-parking and ignoring red traffic lights (Fourie, 2013).

Existing Open Space Frameworks

Like the nearby city of Johannesburg, Pretoria is currently being reorganized spatially as a result of market-lead real estate redevelopment and is starting to introduce public-private management models such as City Improvement Districts (CID). These are defined geographical areas within which property owners agree to pay for additional services to enhance the physical and social environment of the area (<http://city-improvement-districts-south-africa/>). In addition, various pedestrian-based city frameworks are being developed in Tshwane – such as the ISDF (Inner City Spatial Development Framework), MDCUDF (Mandela Development Corridor Urban Design Framework) and the ARUDF (Apies River Urban Design Framework). According to the Tshwane Open Space Framework, Tshwane has a large variety of open space resources, from protected areas, ecological and conservation areas, to recreational parks, resorts, sporting facilities, and cultural historical open spaces. The director of the city's Parks and Horticultural Services, stated that the TOSF has three primary aims (Puling, 2011). Firstly, to protect and develop open spaces within the Inner City. Secondly, to consider the innovative funding approaches required to enhance development of the landscape and the streetscape developments within the City. The final aim is to access alternative service delivery in the form of CID's, partnerships with private and NGO organizations - that is the key to funding. The number of promising initiatives and interventions that aim at reclaiming public open spaces is growing, and many of these frameworks (including that which is proposed in chapter 5) can and should work hand in hand.



Fig. 15 The Kerneels Young Walking Route

Kerneels Young Walking Route

Route and Origin

An important element in both the TOSF and the ISDF, is the Kerneels Young Walking Route, a route through the city which is made up of open space along the Walker Spruit (a spruit is defined as a small watercourse, typically dry except during the rainy season). The trail, which is named after a former Mayor of Pretoria, was introduced in 1984 as a walking route to grant access to green space to the rising number of (mostly white) residents in the inner city of Pretoria (Meiring & Jonker, 1980). It starts at the edge of the suburb of Waterkloof, directly opposite high-end Brooklyn Mall shopping centre, where the Walker Spruit originates, and eventually connects to the Apies River at the Caledonian Sports Grounds in the center of the CBD. The KY trail passes through various landmarks of Pretoria; the Austin Roberts Bird Sanctuary, Nieuw Muckleneuk Trim Park and Magnolia Dell Public Park. Interestingly, it also passes below Brooklyn Mall, right through the parking lot. The mall was opened in 1989, and the existing route had to be accommodated. The trail strategically intersects the region containing both Loftus Rugby Field and the University of Pretoria, the city's most important sport and cultural areas. There is an unusually high percentage of schools in its vicinity, and it connects the most populated area of the city, known as Sunnyside. This trail has the unique potential to connect various parts of the city to the central business district, but for various reasons it is not currently utilized as such.

The route fulfills two roles - improvement of storm water control and acting as a link or route which connects various districts. Given this technical role, the portion of the Walker Spruit north of the railway was channelized in 1925 (Beeld, 1984). This turned a once naturally meandering river into an urban storm water channel which has little to no positive impact on the adjacent areas. After severe flooding in 1996, city engineers recommended several improvements which have not been consistently implemented. This included widening the channel, using erosion preventative measures and using indigenous vegetation. Sadly, the concrete channels of the Walker Spruit are not aesthetically pleasing. This is worsened by the fact that they are collapsing at certain points, resulting in erosive damage (Fourie, 1997).

Current Condition and Users

The observed condition of long stretches of the route (but not necessarily the public parks) is the following: There are several homeless individuals which live along the route permanently and sleep on existing street furniture. They use the Walker Spruit for personal hygiene and washing their laundry. There are some points where children use the existing play equipment, and where people gather under trees to have lunch. The spruit sometimes acts as a barrier between different users of the site: homeless people using one side, lunch-goers and some children using the other. Along the edges closest to the streets, there are occasional, non-permanent street vendors. While the KY Walking Route does function as a key movement corridor through this area, to a large degree people prefer to walk next to the open spaces as opposed to through them. Despite its strategic location amongst schools, and important sport and cultural centers, not to mention its proximity to the suburb of Sunnyside, the open spaces of the KY Trail are underutilized.

Underutilization of the open (public) space is as a result of a number of factors including the degraded aesthetics of the storm water channel. There are walls, fences and backs of buildings cutting it off from surroundings, worsened by the privatization of properties (largely residential) along the route. Pedestrian pathways are poorly designed, and the open areas are generally neglected and miskept. There is a perceived and actual lack of safety in open areas without surveillance as well as a lack of attractions or usable facilities (*Fig. 15*).

It was revealed, through a series of interviews and city walks over several months, that a portion (roughly half of the 7,5 km path) is being used as a pedestrian commuter route. The domestic workforce of the suburb of Waterkloof (as well as many other former white-only suburbs) commutes from geographically separate townships such as Mamelodi (in the East) and Atteridgeville and Soshanguve in the South West and North respectively.

chapter 4: Urban Framework

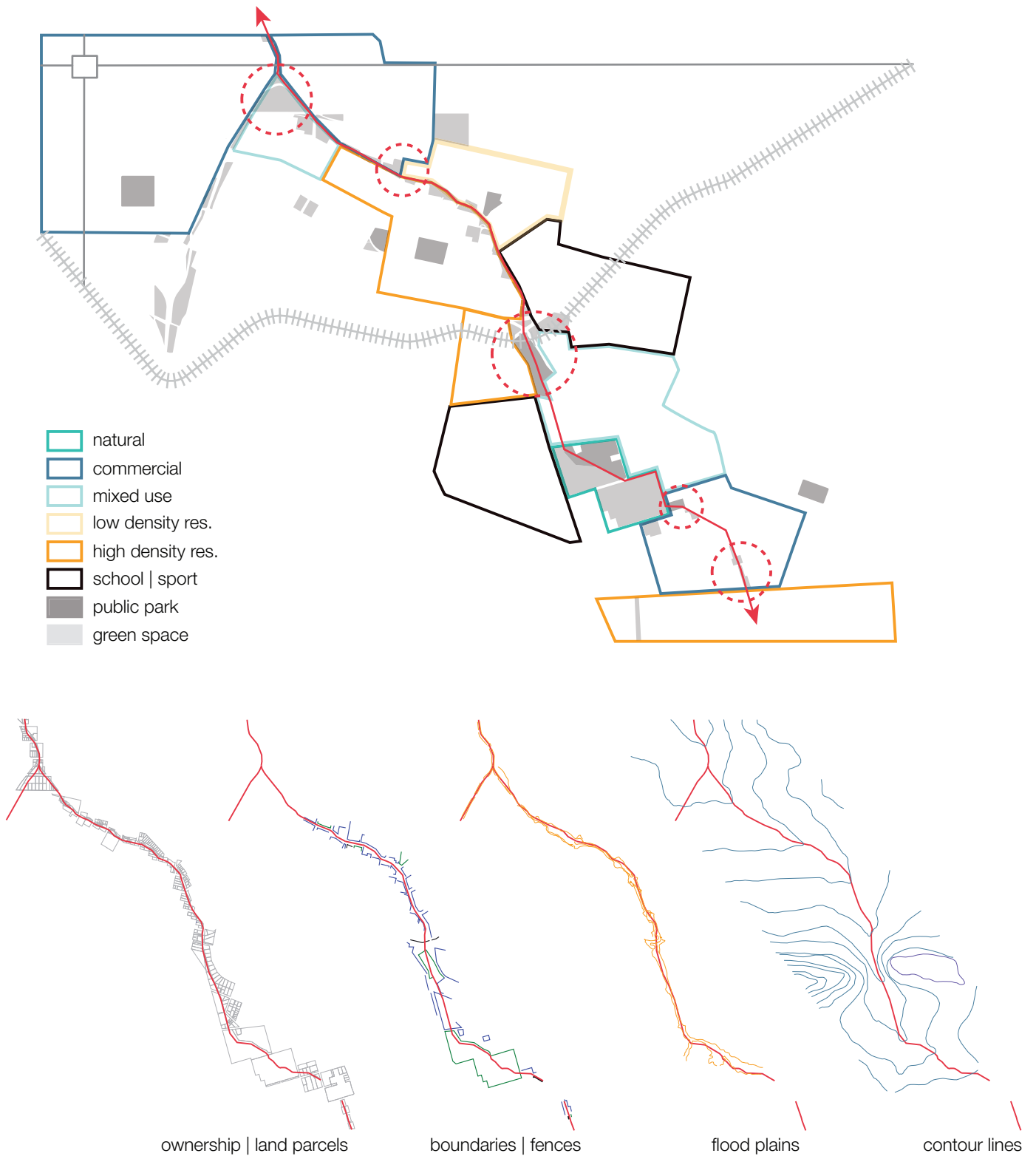


Fig. 16 Analysis of Kerneels Young Hiking Trail

Urban Framework Strategy

Spatial Intentions

The proposed urban framework considers the open space along the so-called Kerneels Young Walking Route. As mentioned above, the green route intended as a leisure walk through the city is in a state of disrepair. Currently, its strategic location is by no means optimized, it is actually more of a separating factor than a connector. It has the potential to become a linear urban park with a vibrant pedestrian spine that runs through the heart of the city. Elements from existing frameworks, particularly the TOSF, have been used to inform the proposed pedestrian-based spatial organization. The development takes place within the green open spaces that are one of the city's main ordering devices. The over-arching spatial intentions operate at three scales (*Fig 18*). At the macro scale the CBD is re-connected to the suburbs with nodal catalysts, at the meso scale the commuter path is formalized and upgraded and at the micro scale a nodal point is developed to re-imagine public space in suburbia.

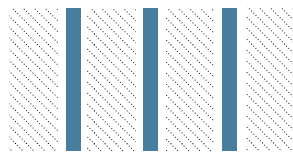
The current route; polluted, cut-off from the surrounding city fabric and largely deserted, is re-imagined. The proposal involves enhancing the existing character and spatial qualities of the open spaces. In addition, regular maintenance and lighting are introduced. Visual access to the open space is maximized, as well as physical access to surrounding buildings. This involves and activation of the edges along route through second dwellings, rental units and shops. There is a focus on pedestrian crossing and commuter facilities, and the introduction of appropriate facilities for community use. All of these factors will contribute towards changing the perceived and actual lack of safety in open areas and allow the creation of a sense of place that can connect rather than separate the distinct neighbourhoods.

Nodal Catalyst Intervention

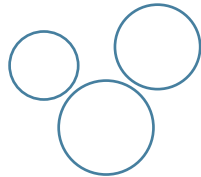
Instead of specifying what is to happen where at every point along the 7,5 km KY Walking Route, five intervention nodes have been identified (*Fig. 19*). The concept of Catalyst Culture (Kotze et al, 2012) is employed. A catalyst is defined as “a person or thing that precipitates an event”, and in the built environment this is comparable with terms such as “magnet” or “anchor” or “activity generator”. The increased activity could then encourage the development of the surrounding area (Sternberg, 2002). The focus areas have been selected because of their position at the intersection of different zones such as residential and commercial or residential, school / sport and mixed use (*Fig. 16*). Not only does this make for a point of interest in terms of the meeting of two conditions, but it encourages a move away from an architecture of barriers and strict zoning, and towards a succession of porous public spaces. These nodes are to act as catalysts which will activate the remainder of the route in time. One or more of the following general spatial strategy is proposed at each node; to develop where there is no existing function on the site, to transform when the existing function is problematic or limiting and to strengthen when the existing function is partially successful but needs reinforcement. The intention is for every nodal point to be studied in depth and to choose a site-specific and appropriate response and intervention.

In the case of the final three nodes, (including the site) from Walker or Loftus train station to the entrance of the Waterkloof suburb, there is an existing pedestrian commuter path (*Fig. 21*). At these nodes, there is a focus on commuter facilities which play in integral role in the proposed design strategy for the final node which is developed more comprehensively. While the minibus taxis described above may deliver passengers to the final destinations more directly, in Tshwane, the metrorail train system is somewhat cheaper for a daily commute between township and city center / suburb. While a single taxi trip could cost R10 (1 Euro), and two or three different taxis may be necessary to arrive at the correct destination, a monthly train ticket costs R160 (11 Euros). The time and distance for three journeys are shown below:

Atteridgeville to Waterkloof:	Soshanguve to Waterkloof:	Mamelodi to Waterkloof:
dwelling - Atteridgeville station (1/2 km : 10 – 20 min walk)	dwelling - Soshanguve station (1/2 km : 10 – 20 min walk)	dwelling - Mamelodi station (1/2 km : 10 – 20 min walk)
Atteridgeville station - Pretoria station (14 km : 20 min train)	Soshanguve station - Pretoria station (37 km : 30 min train)	Mamelodi station - Loftus station (27 km : 30 min train)
Pretoria station - Walker station (2.8 km : 5 min train)	Pretoria station - Walker station (2.8 km : 5 min train)	Loftus station - Waterkloof Suburb (3,5 km : 40 min walk)
Walker station - Waterkloof Suburb (3,3 km : 35 min walk)	Walker station - Waterkloof Suburb (3,3 km : 35 min walk)	



barriers



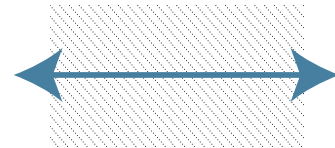
zoning



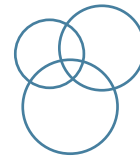
prevent interaction



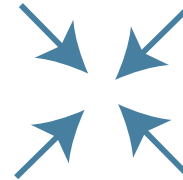
accessible by some



permeability / continuity



multiple uses

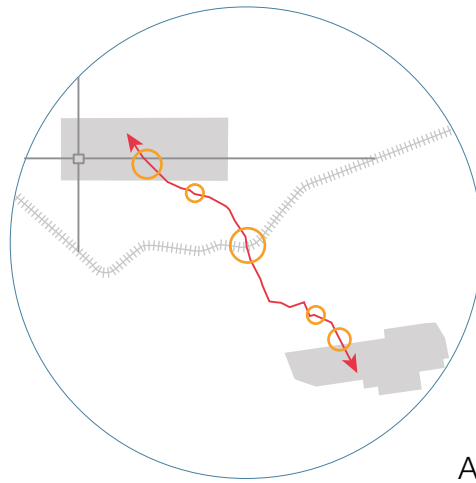


increase interaction

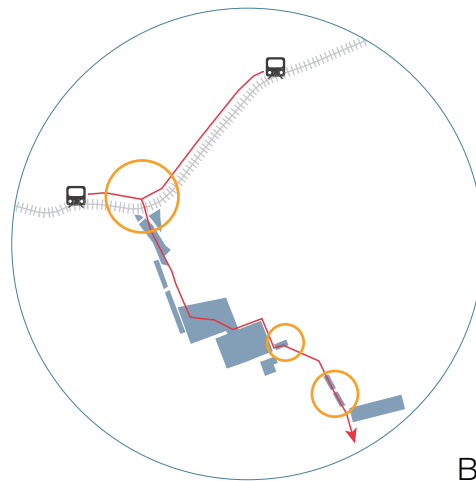


accessible by all

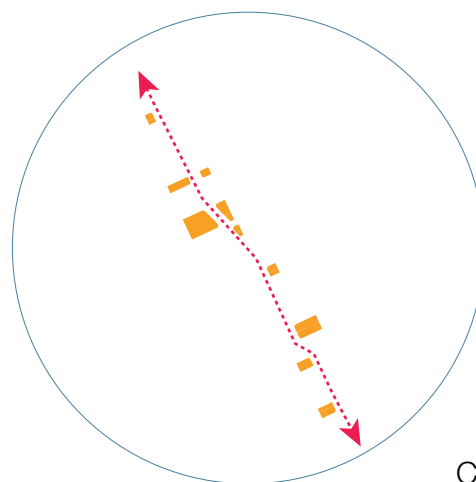
Fig. 17 Architecture of Separation vs Architecture of Inclusion (Böhmer, 2017)



A.



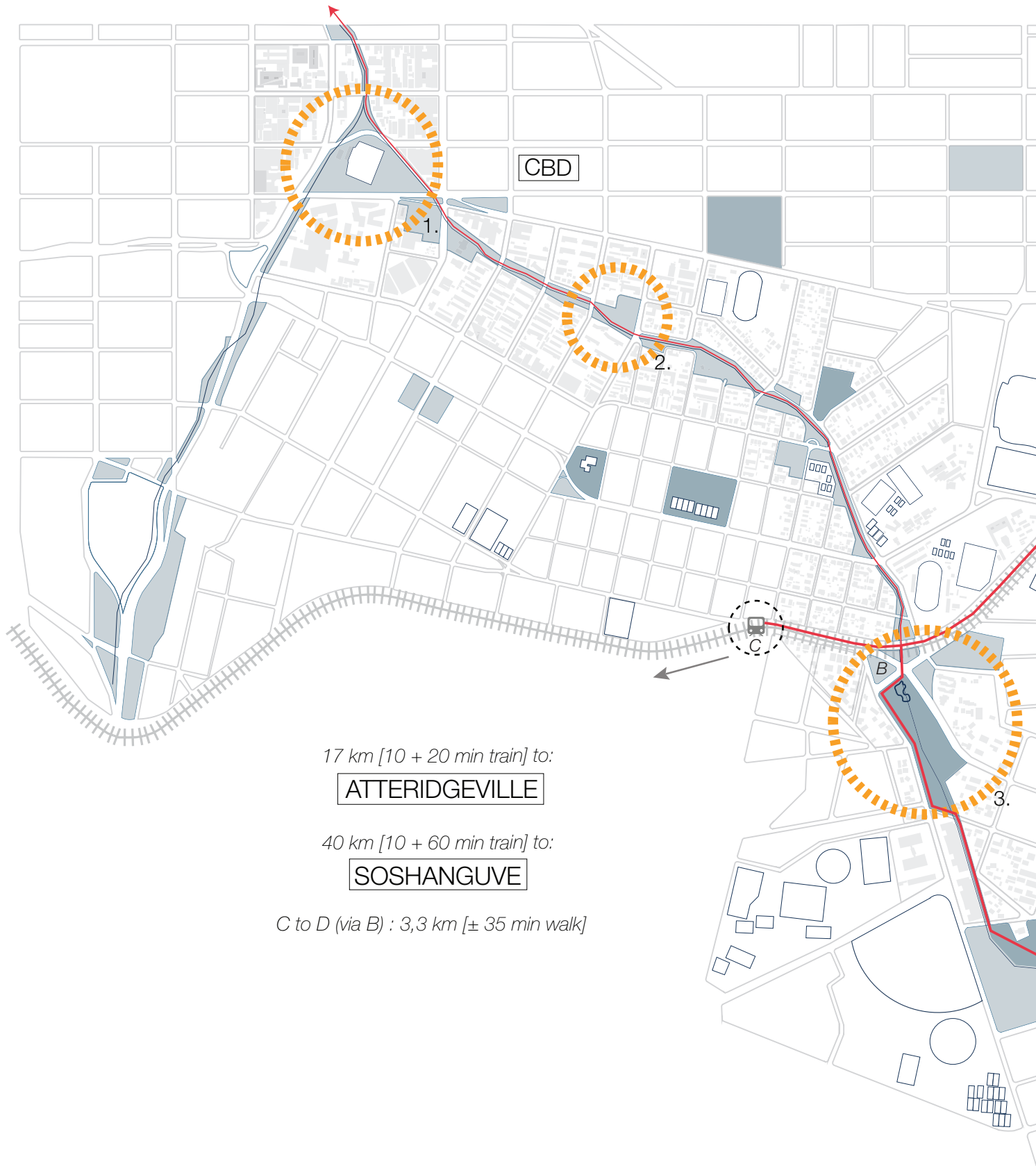
B.



C.

- A. connect suburbia to CBD
- B. formalize commuter path
- C. define suburban public space

Fig. 18 Spatial Intentions At Three Scales



17 km [10 + 20 min train] to:

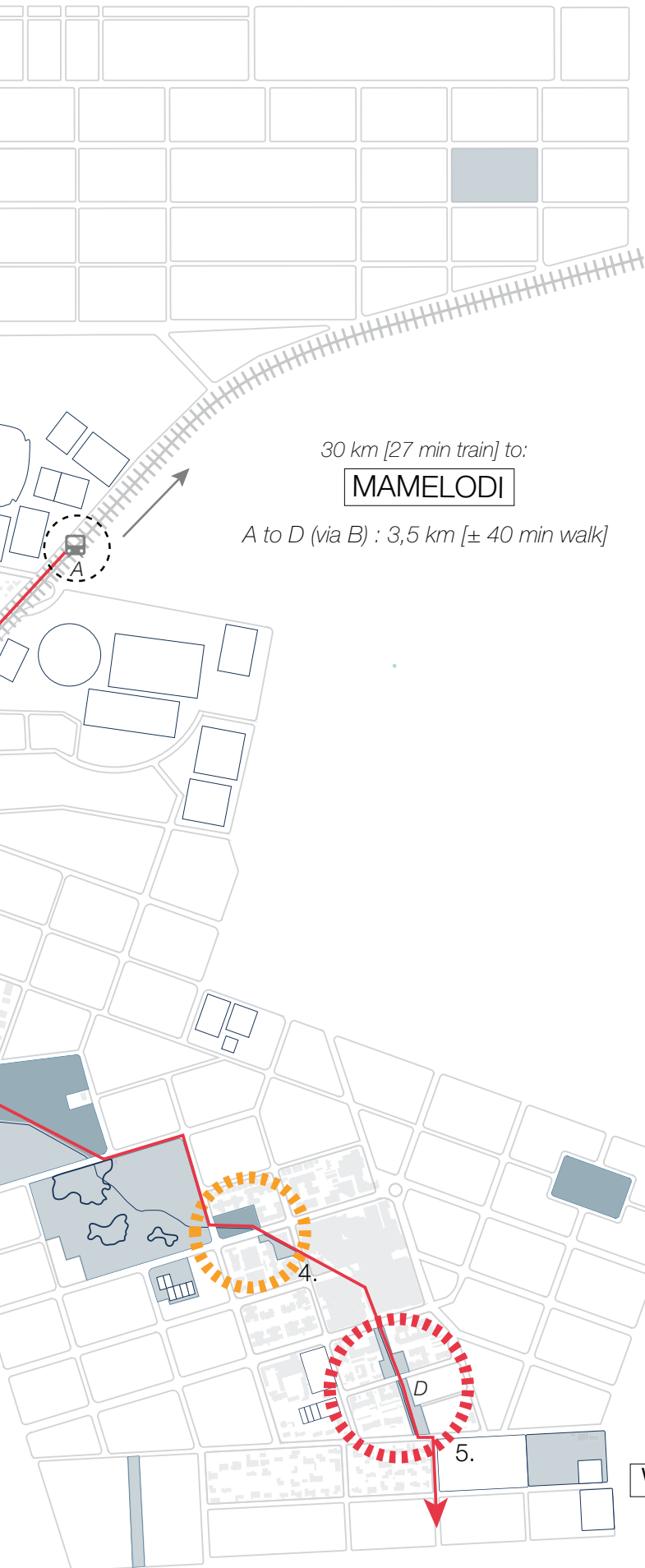
ATTERIDGEVILLE











40 km [10 + 60 min train] to:

SOSHANGUVE

C to D (via B) : 3,3 km [± 35 min walk]

Fig. 19 Nodal Intervention Points in Urban Framework



-  intervention nodes
-  project site
-  train station
-  Walker Spruit
-  railway line
-  built areas
-  public green
-  public parks
-  sport facilities
-  KY walking route

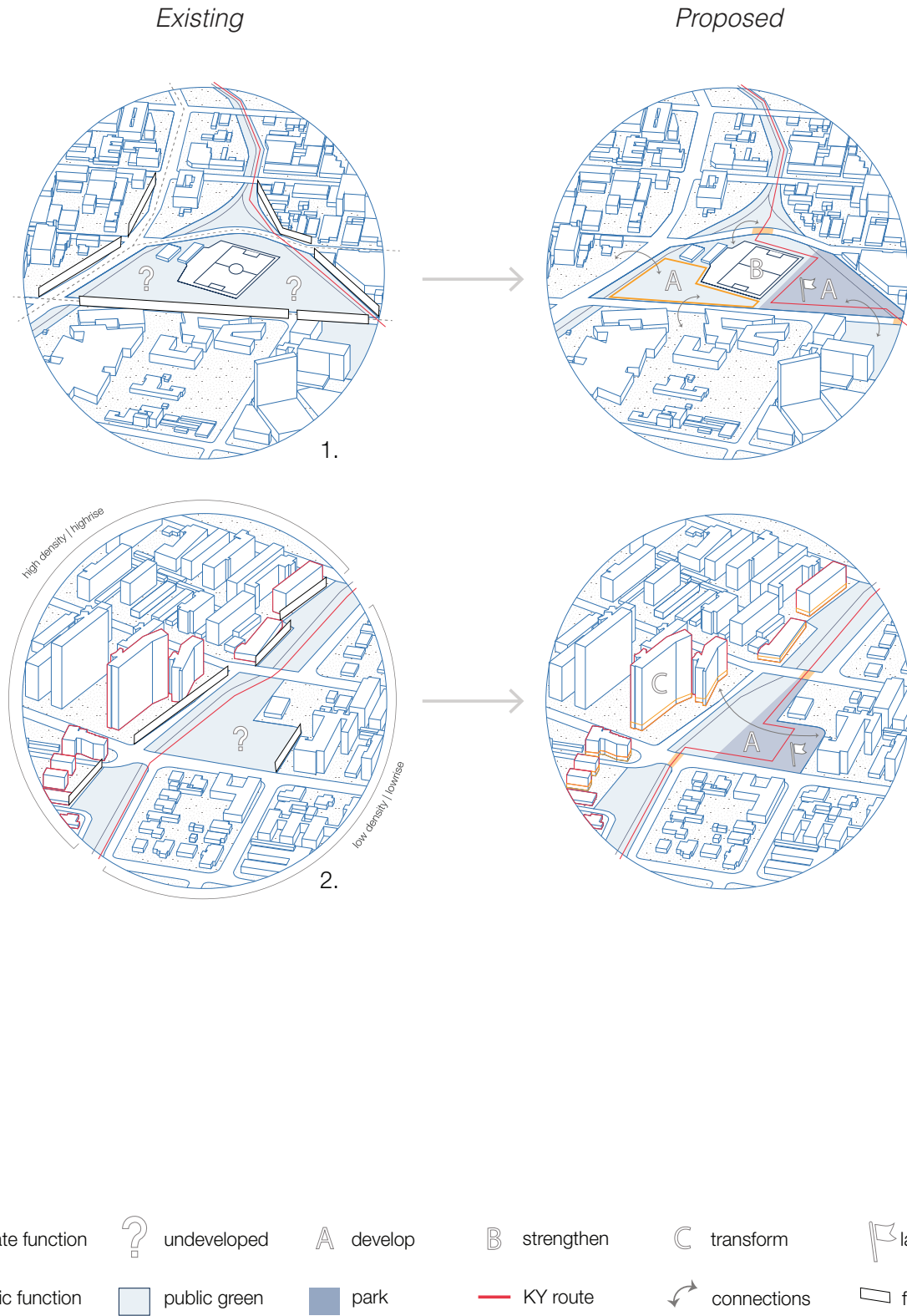


Fig. 20 Nodal Intervention Points 1 & 2

NODE 1: Caledonian Sports Ground

Existing:

|open unused land surrounding soccer field
|high traffic route cuts site off to surroundings
|surrounding buildings fenced off from site
|high-density suburb lacking public space

Proposed:

Develop edge along CBD
|multipurpose public structure
Strengthen sports facilities
|kept intact & upgraded
Develop edge along Arcadia
|park with public swimming pool

NODE 2: Sunnyside & Clydesdale

Existing:

|disconnect of low & high density residential
|vacant piece of land next to Walker Spruit
|buildings surrounding site fenced-off & private
|land zoned as servitude for floodplain

Proposed:

Transfrom ground floor of towers
|public & commercial activity to activate
Develop vacant site as connector
|floodplain-sensitive function & public park

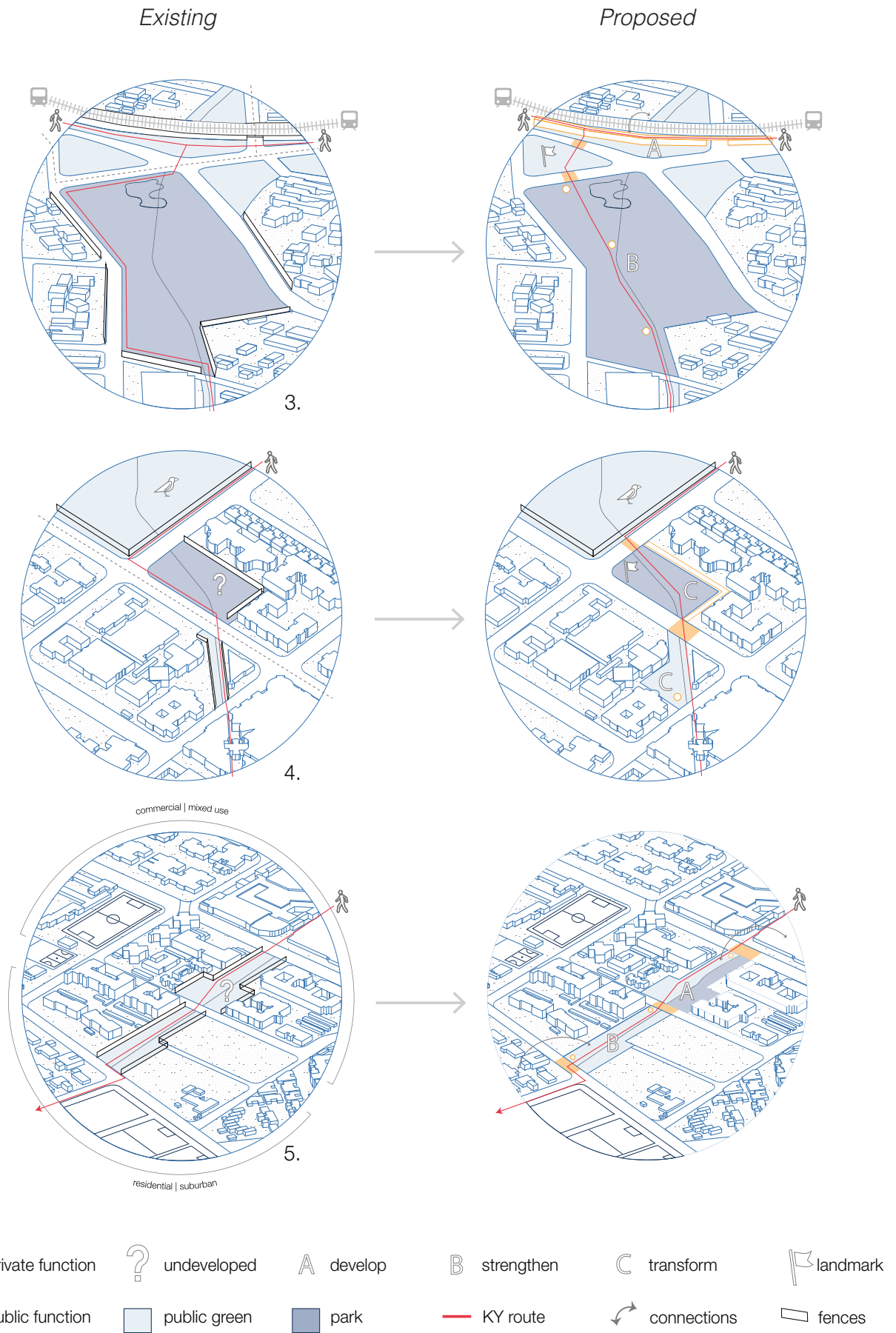


Fig. 21 Nodal Interventions Points 3, 4 & 5

NODE 3: Magnolia Dell

Existing:

- |convergence of two commuter routes
- |pedestrian-unfriendly walking route
- |generally well-kept public park
- |no facilities for pedestrian commuter

Proposed:

- Develop** raised walkway along train track
- |include bridge accross rail
- Strengthen** existing park character
- |introduce landmark & commuter facilities

NODE 4: Middel Street Park

Existing:

- |public park considered unsafe
- |bought by neighbour & privatized
- |illegal informal trade on edges of park
- |increasing privatization of open land

Proposed:

- Transform** informal trade into formal
- |legal trade zone acts as site surveillance
- Transform** private to semi-private
- |surveillance & safety as as leverage

NODE 5: Chosen Site

Existing:

- |existing commuter path for domestic workers
- |considered unsafe & cut off from surroundings
- |limited informal trading activity on open site
- |park in a state of disrepair & highly polluted

Proposed:

- Develop** & activate centre point of site
- |re-imagine public space in suburbia
- Strengthen** green public park space
- |upgrade & add commuter facilities

chapter 5: **Micro Site Context**

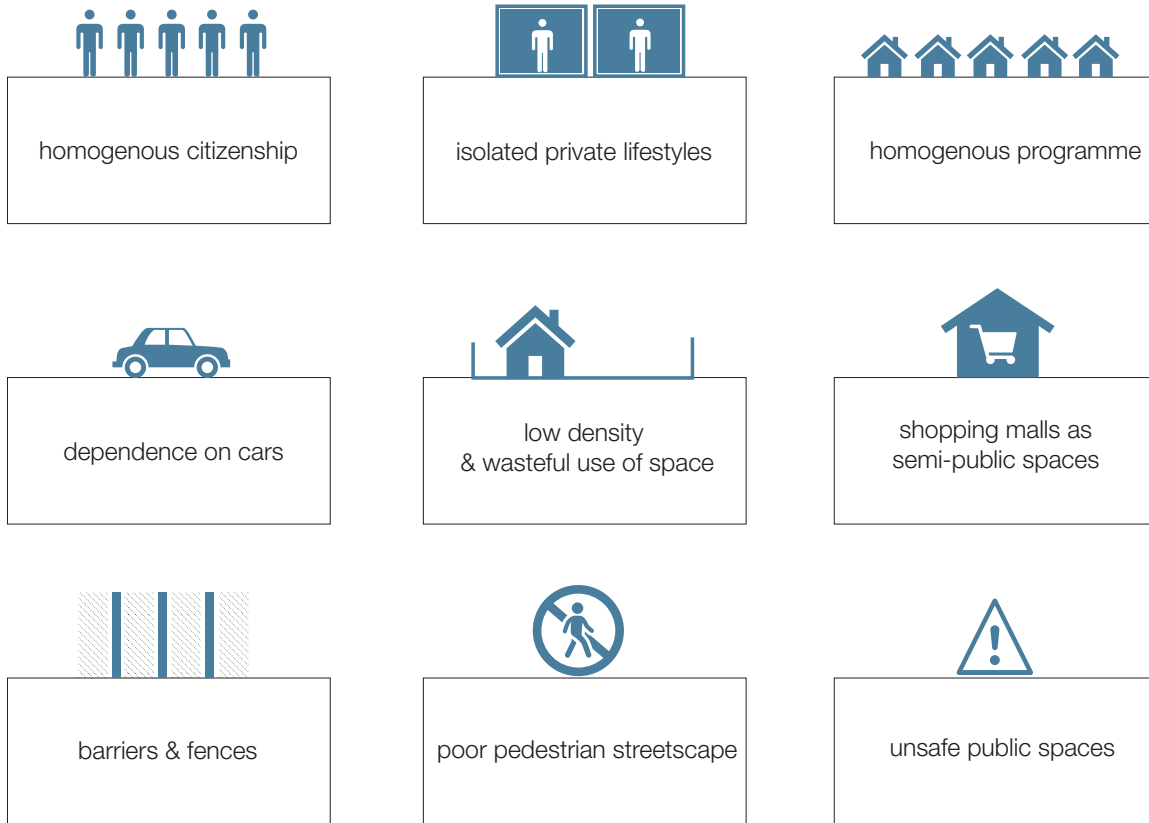


Fig. 22 Suburban Characteristics of Waterkloof

The Suburb of Waterkloof

The fifth intervention node is located on a site at the edge of the suburb of Waterkloof (Afrikaans for “Water Ravine”) , which has a 76.0% white population and has a largely residential program (Frith, 2011). According to the South African National Census of 2001 (the most recent), in a 3.73 km² area there are 2018 households, with a population of 4820.

Waterkloof is named after the original farm that stood there when the city was founded in the 19th Century. It bears the imprint of the British Empire as many of its streets are named after British royalty. The affluent suburb was previously home to numerous high-ranking apartheid officials, and was therefore associated with the White elite during the apartheid regime. Today it is well-established, with an 18-hole golf course and country club, several embassies and expensive real estate. It has been chosen as a study area representative of the suburban condition in Pretoria (and to a large degree the rest of suburban South Africa) as it reveals extreme inequality as well as a seeming resistance to move beyond the existing state.

In *Figure 23*, a brief study of the security signage in the suburb reveals that there is a privatizing and fortifying of individual properties, and a heavy reliance on private security companies. The study of the entryways in *Figure 25* depicts the various ways that property owners have interpreted this “fortification”, personalizing their properties with creative uses of burglar bars and electric fencing. In accordance with this, a citizen-driven initiative named “Safe Waterkloof” is attempting to make the whole suburb a gated community, and is raising funds within the suburb to do so. The photographs in *Figure 26* reveal that the suburban streets are somewhat lifeless, with mostly vehicular traffic and limited provision for pedestrians. The suburban characteristics depicted (*Fig. 22*), such as “unsafe public spaces” and “isolated private lifestyles”, are to be addressed in the site proposal.

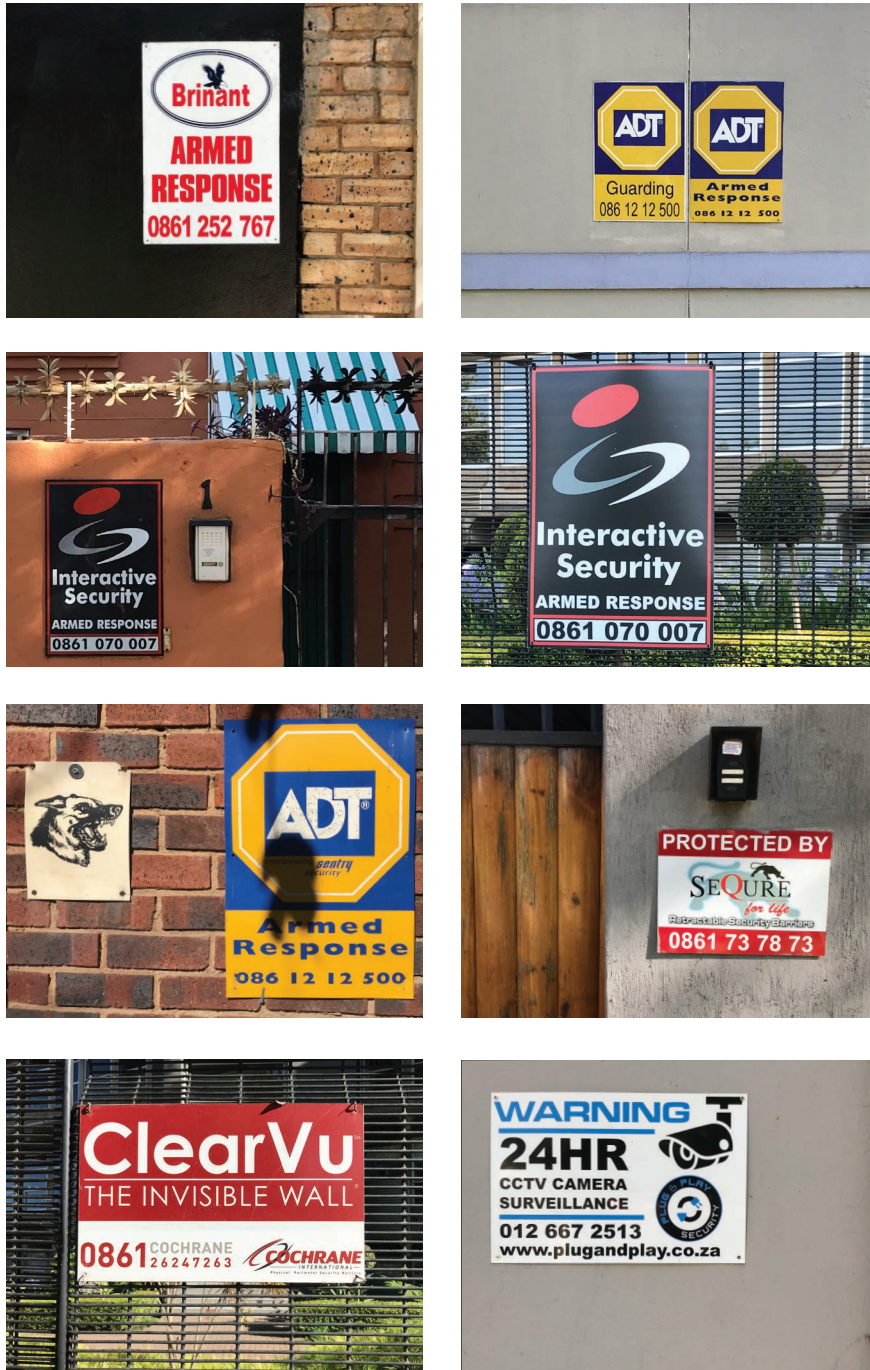


Fig. 23 Security Signage in Waterkloof

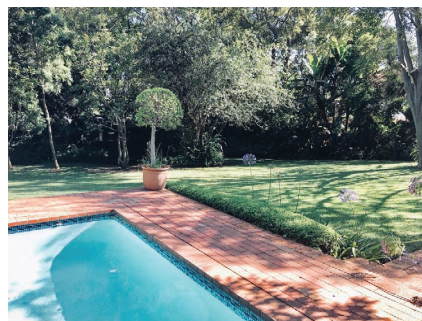


Fig. 24 A Suburban Property





Fig. 25 Private Entryways in Waterkloof





Fig. 26 Suburban Streets in Waterkloof

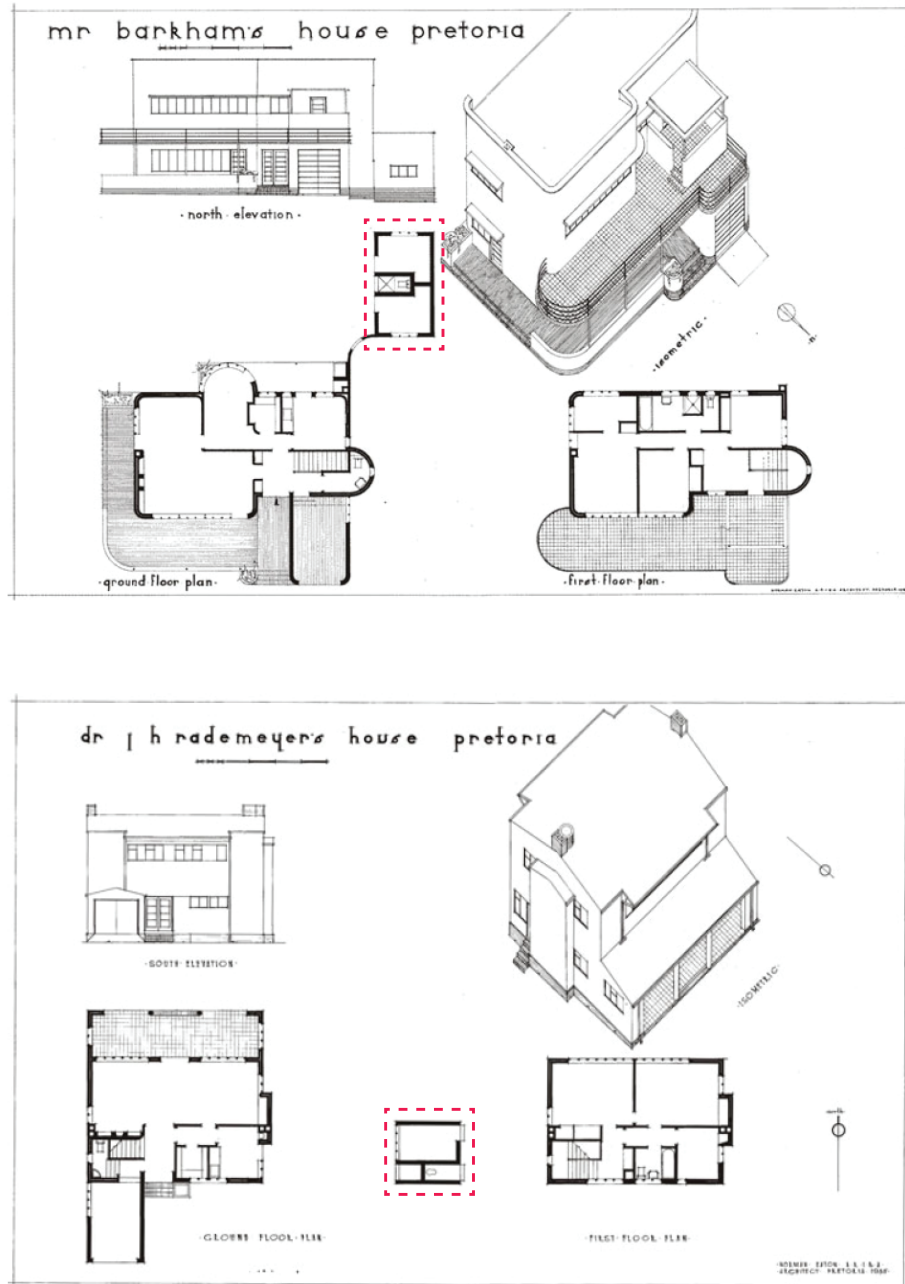


Fig. 27 Floor Plan of Domestic Worker Accommodation (indicated in red)

Domestic Workers

During apartheid, the National Party attempted to create a highly ordered and closed system, but the existence of dependencies and proximities between racial groups contradicted this order. This was primarily in the form of Black domestic workers occupying crucial roles in white households as house-keepers, nannies and gardeners (*Fig. 28 & Fig. 29*). The *Groups Areas Act of 1950* deemed the co-habitation of different races illegal, and Black workers and their White employers were no longer permitted to live under the same roof (Christopher, 1994). To accommodate live-in domestic workers, small outbuildings with little more than a bed and toilet were created (*Fig. 27*). In many cases, the design principles applied to the primary residential structure were disregarded when designing this outbuilding, which typically had small windows and an unfavourable orientation or location. The domestic workers inhabited in-between spaces, “toiling alone inside White homes, and occasionally meeting on the pavements outside.” (Nuttall, 2008). Today, this condition remains largely unchanged, though in many cases the dwellings have been upgraded and employer-employee relationships are not exploitative.

The international labour organization defines a domestic worker as “a person who is paid to help with cleaning and other menial tasks in a person’s home”. South Africa has in excess of one million domestic workers which account for more than 8% of the total workforce of the country. One in five South African women work as domestic workers and four out of five domestic workers work full-time (more than 28 hours a week). These women are predominantly Black and Coloured women with an average of 6 to 7 years of education (Ally, 2008). Domestic workers either commute to work daily, or return home on weekends/holidays, in which case they essentially function as “live-in” hired help, often with additional responsibilities such as babysitting and cooking for a family. The lifestyles of workers with these two types of living arrangements clearly differ significantly – the one group has to dedicate an excessive amount of time to a daily commute, while the other has a significant amount of free time without many options of where to spend it.

From discussions with 15 different women living as domestic workers, a picture was painted of the life they lead. Regular work hours are from 7 or 8AM until 4 or 5PM, with a break for tea at 10AM and a hour lunch break at 2AM. During tea, the majority of the women preferred to stay on the property, enjoying tea in the kitchen or within their rooms. For lunch, almost all of them left the property to meet their friends and fellow domestic workers, or gardeners, outside on the grass or pavement of the property. Wednesday or Thursday afternoons are generally “free afternoons”, which are also spent in these peripheral spaces socializing. Many of the women, particularly those who are live-in domestic workers, noted that they do not meet their friends after work, but stay in rooms after dark as the sidewalks are then unsafe. A small group noted that they liked to walk to the shops, or to Brooklyn mall, on their off afternoons, while others gathered on the edge of an open piece of land to play a betting game called “Zama Zama”. For the most part, their on-site accommodation still consists of a small room and a single bed with little or no socialization space. Within these rooms, activities include reading (often the bible), cooking, listening to the radio, watching television, resting and sewing.



Fig. 28 Domestic Workers in Johannesburg, Photographer: David Goldblatt, 1972



Fig. 29 Photographer: Ernest Cole

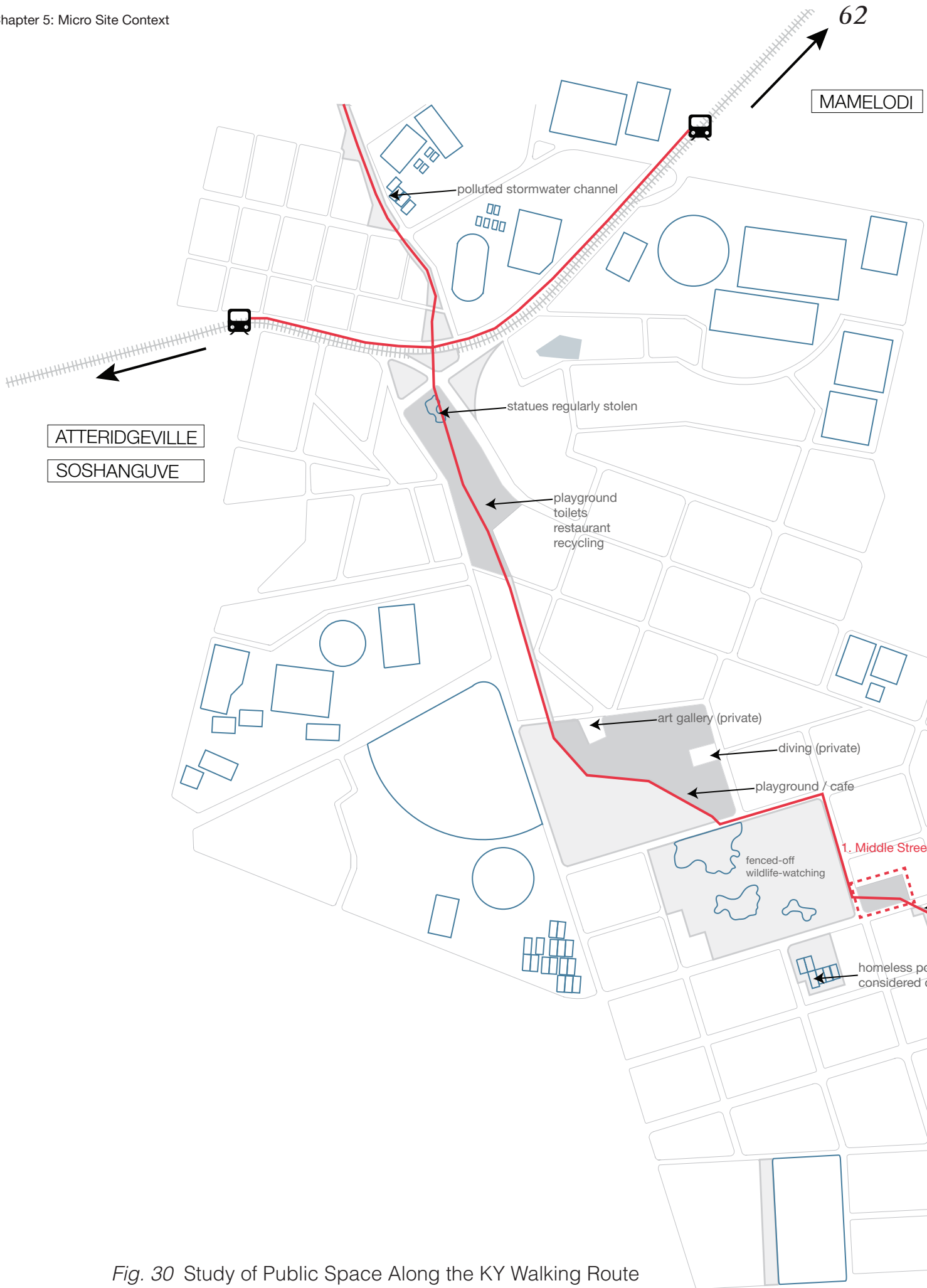
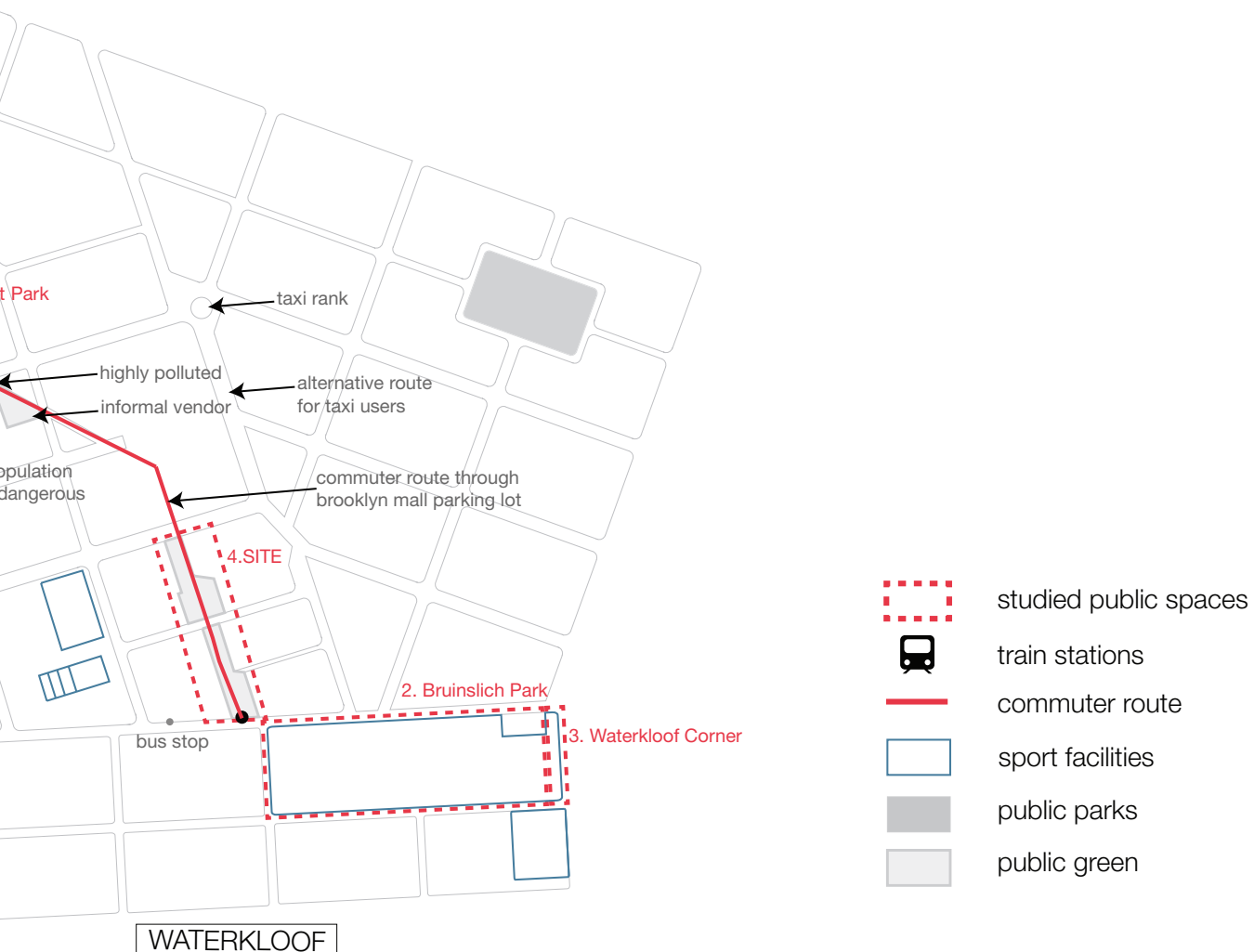


Fig. 30 Study of Public Space Along the KY Walking Route

Study of Existing Public Spaces

The study of existing public spaces reveal different conditions: sport's fields which have been fenced and are managed by the school next door, a public park which has been "purchased" by the business next door in order to safeguard and keep people away and an area next to fenced off sport's fields which has been left open. These conditions point to various steps of privatization, and suggest that the reason for this is largely security-based, a reaction to perceived and actual "danger" (TOSF, 2011). It could be argued that the move towards privatizing is contributing to the separated society. The only public spaces that exist where people may be able to interact, are being controlled to a degree where they no longer retain their "public" function. In *Figure 30* the locations of the studied public spaces are indicated, and further observations of the surrounding area are shown on the map. The four public spaces, the views expressed during discussions with users and observations, have been summarized and included in *Figure 31*.



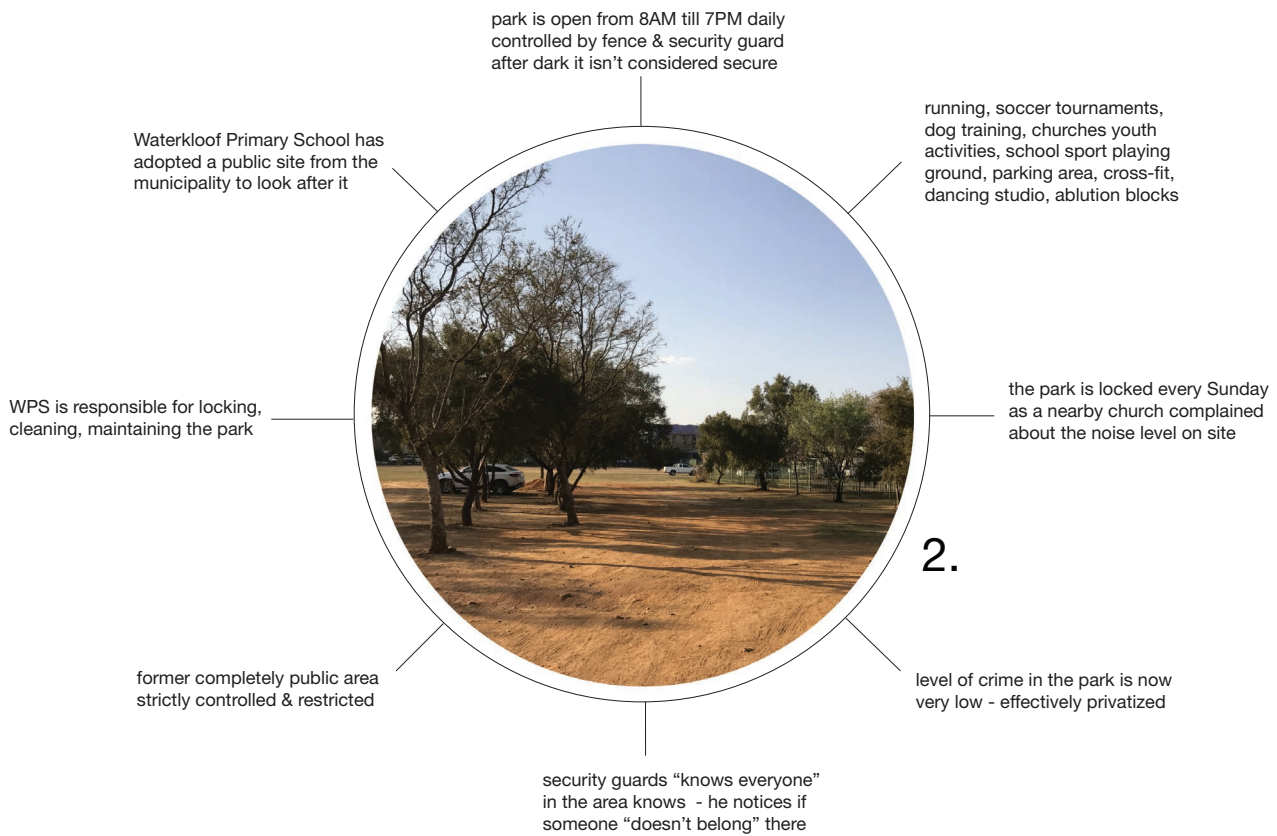
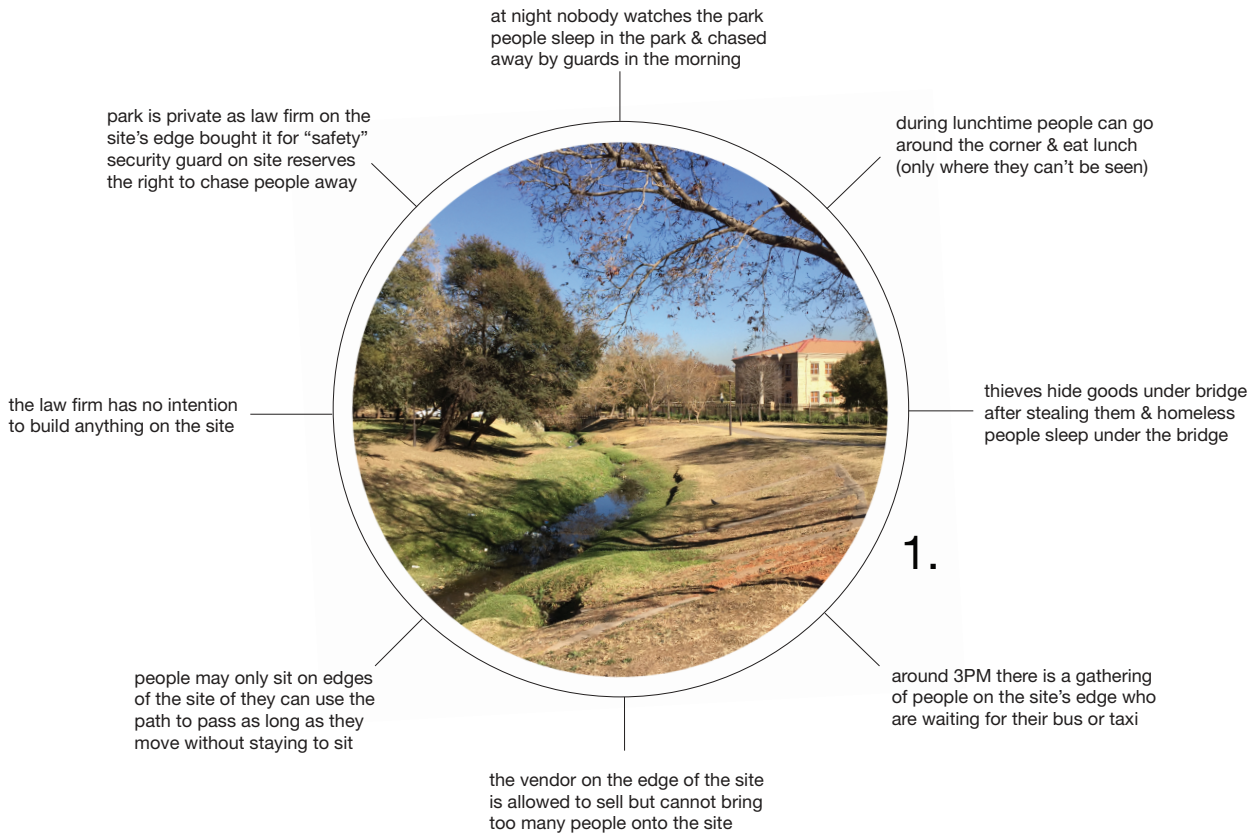




Fig. 31 Study of Four Existing Public Spaces

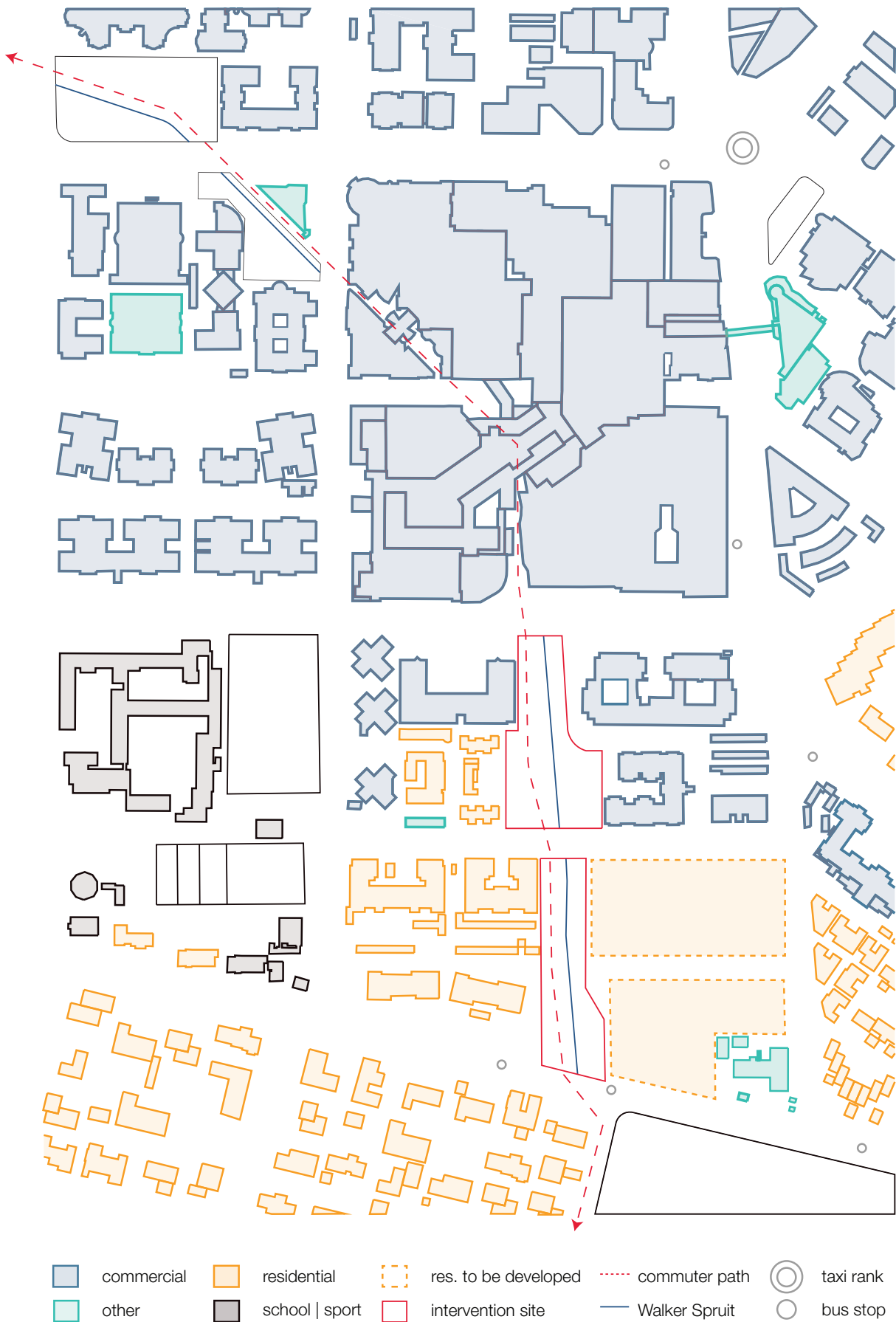


Fig. 32 Functional Mapping of Site Surrounding Area

Site Location

The fifth and final nodal intervention point is located at the edge of the suburb of Waterkloof, has roughly 6000 square metres of “buildable” land. When viewing the aerial photography of the site, it is clear that the suburban texture has undergone a transformation (*Fig. 33*). The shift away from single private residential properties towards apartment blocks began around 2005, with the demolition of the residential block to the South West of the site. By 2008 four apartment blocks had been built on this piece of land, replacing twelve former residential properties. In 2009 the residential properties on the South East of the site had also been demolished, by as of yet they have not been redeveloped. These two blocks are in the process of being sold to developers who aim to build modern four to five storey apartments blocks, similar to those on the South West of the site. Property owners in the area commented that this was a reaction to the growing commercial nature of Brooklyn, and the demand to suit accommodation needs of those employed in the area. The site is located at the intersection of a residential and commercial zone containing Brooklyn Mall (*Fig. 32*). It is clear that the lines between these two areas have already been blurred, and will continue to do so. Throughout Pretoria, suburbia is changing and densifying as accommodation needs are increasing, and the one-man-island lifestyle of a suburban home is being challenged.



2004



2005



2008



2009

Fig. 33 Aerial Photography of Changes on Site Area (Indicated in Red)



Fig. 34 Chosen Site

Site Usage and Condition

The site (*Fig. 34*), which was never officially named a public park but generally accepted as the starting point of the Kerneels Young Walking Route and the origin of the Walker Spruit, has fortunately not had the spruit channelized, as is the case with other large portions of it. This makes it a unique part of the KY Trail, as it retains a lot of the water's natural beauty and maintains a presence of water birds. Unfortunately the spruit is polluted, at some areas more heavily than others. As Tshwane falls within the temperate eastern plateau, the site enjoys a comfortable climate with summer rainfall (mostly during thunderstorms). The open area is fenced off from its surroundings. The apartment blocks on the Western edge have high walls with barbed wire and electrical alarm systems separating them from the park, and there is minimal visual permeability at the ground level. On the Eastern side of the lower portion of the park, where two street blocks are currently empty, there is a high barbed wire fence, but it is visually permeable. It is likely that this would not be the case if the apartment blocks were developed. Though maintenance efforts are made, mostly by private companies hiring cleaners to sweep and cut grass, the open piece of land is by no means in an optimal state. There are three or four benches and public dustbins, of which more than half are broken, and there is no functional lighting. The paved walkway which is used by commuters is disintegrating at various parts and the natural vegetation has started to encroach on the footpath. The site has many large, leafy trees which provide shade, as well as shrubbery at the water's edge.

Observation of the movements, interactions and exchanges between people is the best platform from which to understand how the site works. The site is busiest in the morning between 6 and 8AM, during lunch hour between 12 and 2PM, and in the late afternoon or early evening before it gets dark. The main users of the site (*Fig. 35*) are pedestrian commuters, domestic workers and others employed in the suburb, who make use of the paved route on the Western edge of the site, dilapidated as it may be. Along this edge, one or two informal traders sometimes set up small shops selling sweets, chips, drinks and other goods. These structures are often no more than a chair to sit on and a cardboard box upon which the items are displayed. There is also evidence of a secondary route being used, on the Eastern edge of the site. There is an informal "hair salon" which occasionally appears, as well as small groupings of people around various betting games. For the most part, there did not appear to be large gathering of people, rather groups of two or three. On the Northern edge of the site, opposite Brooklyn Mall, there is a semi-permanent food truck known as "Monate Nate Foods", which is open Monday to Friday. They sell variations of porridge with meat (known as "pap en vleis") to commuters which pass by the truck before walking through the park. The trader revealed that at times they have "competition" in the form of other traders, but that these often come and go without any consistency. He also made note of the fact that because they are the only semi-permanent presence, they do feel threatened and have invested in a metal "cage" around the open selling point of the truck, to make them feel more secure.

During lunchtime, the main users are employees of Brooklyn Mall who come to the park to sit on the grass and eat, or domestic workers working in residences near the park. A discussion with an employee who was sitting on a bench in the park during his lunch break, revealed that he thought the park had potential, but that the state of the grass and the benches is discouraging. There is a presence of homeless people who make use of the Southern part of the site as a place to sleep— their fires and sleeping areas as usually still evident in the morning. Some of the commuters and security guards near the site commented that this was only common in summer, when it is warm enough to sleep next to the water. It is also the general perception that those sleeping on the site were not South African, but rather Zimbabwean. At times, some of the residents from the adjacent apartment blocks were viewed cycling or walking through a portion of the site, but this was highly infrequent. As mentioned above, private companies do hire park cleaners and sweepers to do basic maintenance, but their presence on site is somewhat sporadic. There is a perceived threat of criminal activity, but generally non-violent crimes such as pickpocketing.



Fig. 35 Users of Site



Fig. 36 Users of Suburb of Waterkloof



Fig. 37 Users of Surrounding Area



Fig. 38 Users of Surrounding Area

chapter 6: Programmatic Intent

Programme

Functional Overview

The investigation deals with an open piece of land intended to be public, the gateway to a suburb, which is by no means being used optimally. The proposal of a public space with a civic function that is considered usable and safe, pre-empts potential privatization where there is potential to create a public resource. In an area where there is a lack of open, natural, public space, this condition is to be maintained as far as possible, while changing it from a “risk” zone into a public amenity. Through selective spatial intervention and the introduction of appropriate functions, the current user experience can be enhanced significantly. As this intervention stems from the observation of urban activity in the form of domestic and other workers using the route daily, any proposed functions cannot contradict their presence on the site. In fact, it aims to incorporate other elements of their lives, such as introducing facilities that cater for the presence of their children, on site, and providing opportunities for skills development. There is, however, the possibility to draw in a much wider range of users. A multifunctional programme is necessary in order to attract other potential users and to ensure a space of value for more people. Considering South Africa’s history of segregation, there is a need for physical spaces for citizens and communities of different backgrounds to interact. In general, and in Pretoria to a large degree, there has been a lack of provision for such spaces where individuals of different classes, races, cultures and traditions can mingle.

In order to intervene in a way that will stand the test of time, one has to slot into the existing condition, and draw from the surroundings. By incorporating the nearby schools, as well as the parents of the children attending the schools, the proposal is rooted more deeply in the existing context. It also allows for interactions between user groups which cannot occur elsewhere. There is potential for those operating in the neighbourhood to encounter one another through use of a shared resource and an overlapping of movement paths. To a large degree, the proposed programme is informed by the conversations held with the site and surrounding users (as seen in chapter 5), with regards to their daily lives, needs and desires. Twenty conversations were recorded with six domestic workers, five security guards, two gardeners, four employers and property owners in suburbia, two city cleaners, one on-site vendor and one employee of Brooklyn mall.

Commuter Facilities

The commuter facilities to be introduced include: public bathrooms, retail and food zones in the form of both permanent spaza shops and informal trade, seating and relaxation areas, transport ticket sales, hairdresser facilities, a medical clinic and child day-care and kindergarten. These functions occur along the whole length of the site and are spread across different buildings. The goods and services in the informal trade zone will primarily be used by commuters. The principles of flexibility and impermanence are considered: the area can function independently of the trade facilities that come and go as and when needed. A series of platforms are proposed, upon which traders can install themselves, with good lighting, water sources and electrical connections. The step in the platform doubles as a seating areas and this makes the area usable at all times.

General Park Upgrade

Maintenance cottages with live-in caretakers are introduced on both the northern and southern part of the site. This not only ensures a constant presence on site, but also prioritizes the on-going care of the area. The general upgrade of the park through landscaping, lighting and seating contributes towards creating a pleasant setting where people may community may gather and engage in recreational activities. The surfaces throughout the site are treated to cater for the flow of pedestrian movement and the road crossings are treated accordingly to slow traffic.

Adult Skills Development Center

Through discussions with various domestic workers, gardeners and cleaners in Waterkloof, it is clear that there is both adequate time for and interest in a skills development centre. For the majority of domestic workers living and working in Waterkloof, street corners and sidewalks are currently the only areas in which socialisation or enrichment can take place after work. An architectural space to facilitate skills development within the suburb can therefore be of great value. Literacy, language, business, technological and other skills could be taught in the centre, which could provide an alternative career trajectory for many of the workers in the suburb, should they wish to pursue this. Skills development for individuals not only provides better economic opportunities, but also enhances the individual's sense of accomplishment. In addition to catering for the primary user group of workers in Waterkloof, this space provides an asset to the community as a whole. The skills center is housed in a three-storey building, with an adjacent two-storey reading centre and library. The architectural identity of this building could also contribute to shape investors perception and become a landmark that contributes to the area's identity. The central building contains a double-volume canteen which serves meals for the skills development centre, the day care and the kindergarten. While the meal times of different user groups do not necessarily coincide, there is an over-lapping of usage. The shared lunch area, as well as the joint use of facilities, may lead to interactions between those who may otherwise not come in contact with each other. By having different functions which cater for different uses at different times of the day, a staggered crowd and constant activity is ensured.

Kindergarten / Daycare / Afterschool Care

In many cases, the children of domestic workers have limited interaction with their mothers. This is because they remain behind in their townships homes during the day when their mothers commute to work, or they live with their grandparents or other family members if their mothers are live-in domestic workers. Discussions reveal that there is often no reliable form of day care provided for these children. By introducing a kindergarten and a day care facility, children could travel with their mothers daily, and remain at the day care centre for the duration of the working day. Lunch hours could potentially be shared with their mothers in the lunch area discussed above. The need for child day care is not only experienced by domestic workers, but also by their employers in suburbia. The day care centre could link to existing kindergartens and primary schools near the site; the children attending these schools could also make use of the day care facilities. The concept of "Commonality in a Place of Learning", as discussed by Herman Hertzberger, suggests that a learning's space should be "a space that offers the greatest variety of interaction between people of different age, race and class" and that it should function as a "training ground" for how to act in society". The kindergarten and day care center proposed could fulfil this role, which is invaluable in the current South African society (Hertzberger, 2008).

The 11.8 hectare Austin Roberts bird sanctuary lies in close proximity to the site, a part of the Urban Framework which falls on the Walker Spruit Hiking Trail. It is renowned for its water birds such as the Blue Crane, and its wetlands attract over 170 different bird species. It was declared a National Monument in the 1970's, and has a small bird hide from where birds can be viewed. In addition to the wetland, the sanctuary also houses various other animals such as antelope. Given that the project site also lies on the Walker Spruit, there is a link between these two areas. The introduction of after school or weekend programs involving conservation and ecology provide a unique educational possibility. The (supervised) movement of children to the Bird Sanctuary, introduces an alternative use of the route, creating an over-lapping of movement paths.

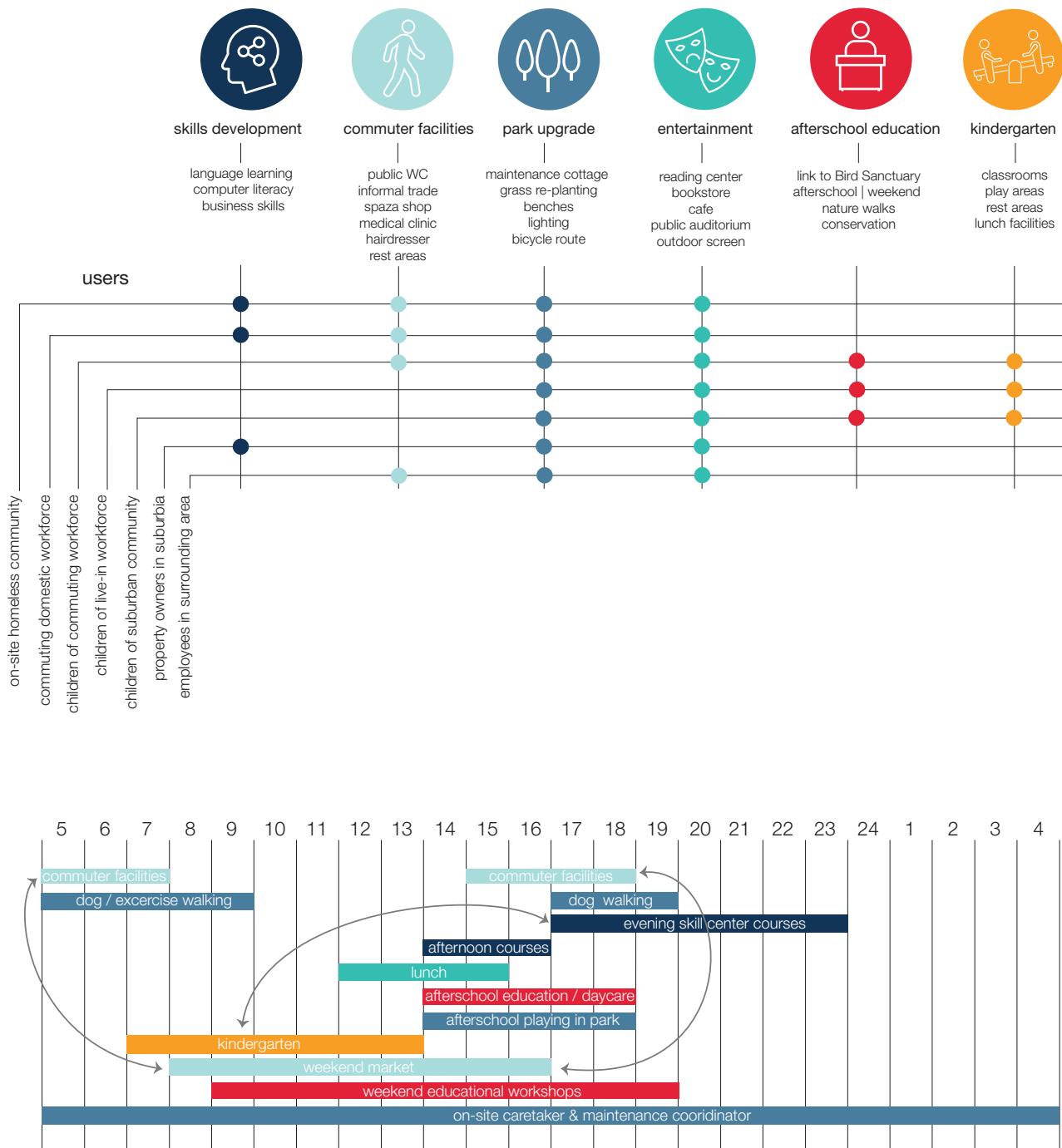


Fig. 39 Site Programme and Daily Schedule

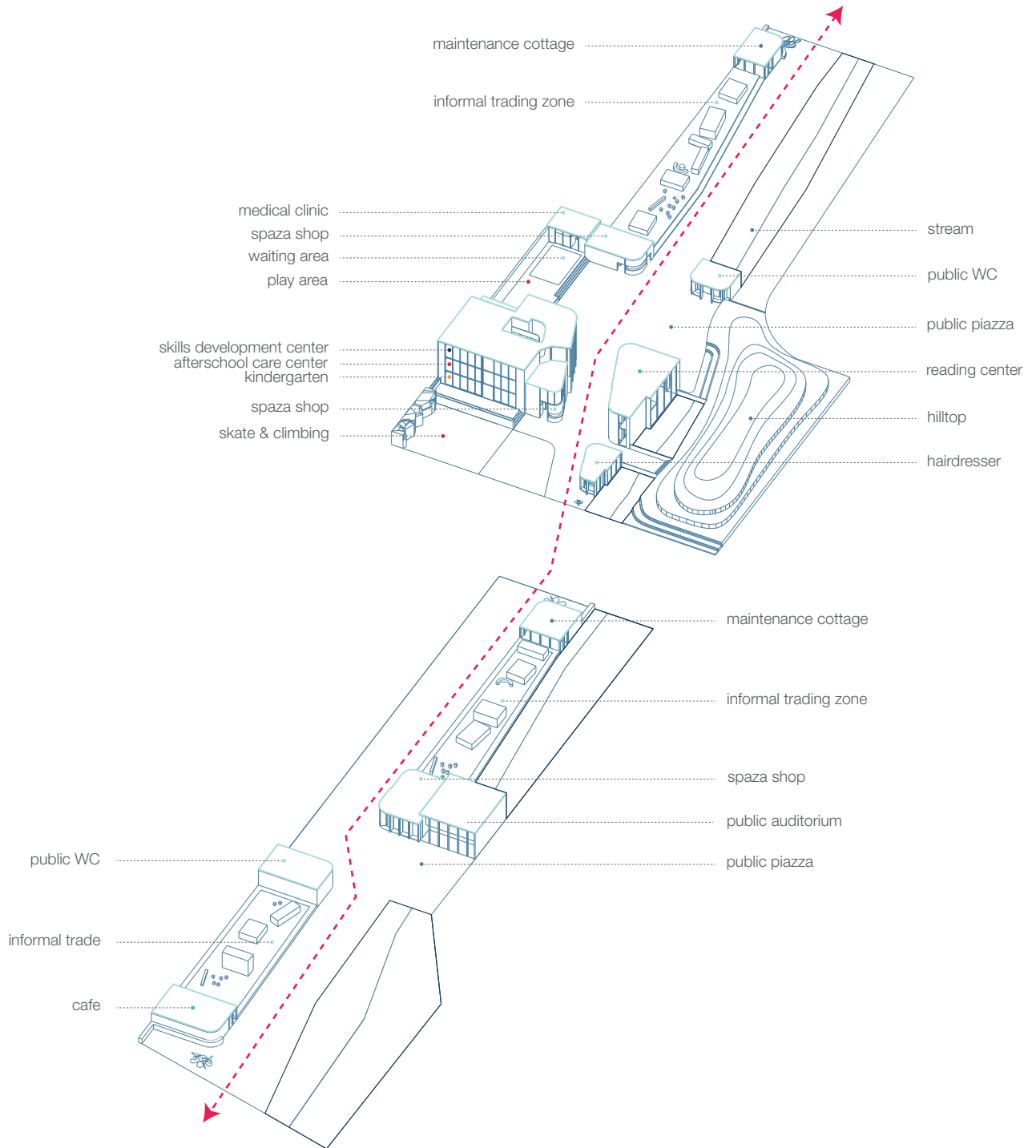


Fig. 40 Functional Axonometric

Financing and Management

It is proposed that a “client” be identified to occupy the two main buildings (kindergarten / day care / skill centre and reading centre), and that this would be a primary organization responsible for the running and management of all activities. The spaza shops and café areas could then be rented out for income. Various spaces used for children during the week, could also be rented for events or over weekends, to accommodate parties, performances or weekend markets. This organization would ideally be supported by a combination of private and government agencies. The National Youth Development Agency (NYDA) has been identified as a potential supporting client. This agency supports initiatives that empower and advance the development of young people through functions such as research and development, information services and the National Youth Fund. The existence of initiatives such as the TOSF and ISDF (discussed in chapter 4) show that the government, in the form of the Tshwane Municipality, has a vested interest in the upgrade of open spaces in Tshwane. There is also a clear citizen-driven interest in the betterment of the city, visible through the City Improvement Districts (CID) along the Walker Spruit. These non-profit organizations operate within a defined geographic area within which the property owners agree to pay a levy for supplementary and complimentary services to enhance the general environment and safety.

By upgrading the site, the promise of safer green spaces could encourage participation from surrounding residents/ businesses, who are currently at a perceived disadvantage because of their location near an area of risk/crime hotspot. Contributions from the business sector will likely come from the growing commercial district in Brooklyn. An example of willingness of business involvement:

To refer back to chapter 5, Middle Park is an example where offices next to an open piece of land leased it from the government, with the sole purpose of employing a security guard to limit and monitor activity on site. This indicates that the level of concern about being located next to such an area is high. Another example of neighbourhood willingness to invest in safety measures, is the “Safe Waterkloof” initiative which proposes the closure of the whole suburb, turning it into a gated community. This requires a financial contribution by at least 70% of the suburb, and has received a fair amount of interest. The majority of the property owners which were consulted, noted that they had a good employer-employee relationship with their domestic workers. They also shared that they were happy to contribute financially to assist in matters such as childcare, education and health for their domestic workers, and in many cases were already doing this. There was positive feedback when presented with an outline of the proposed intervention, and hypothetical willingness to participate financially.

The City of Tshwane Department of Environment Affairs notes that the following approvals/ assessments would be necessary for the proposal to be realized:

1. Tshwane Open Space Framework (TOSF) approval in terms of fitting in with the city's open space plan
2. Tshwane Department of Water Affairs approval in terms of water license for developing along the Walker Spruit
3. An Environmental Impact Assessment (EIA) of the area South African City Planning and Development Division approval of plans

chapter 7: Architectural Intent

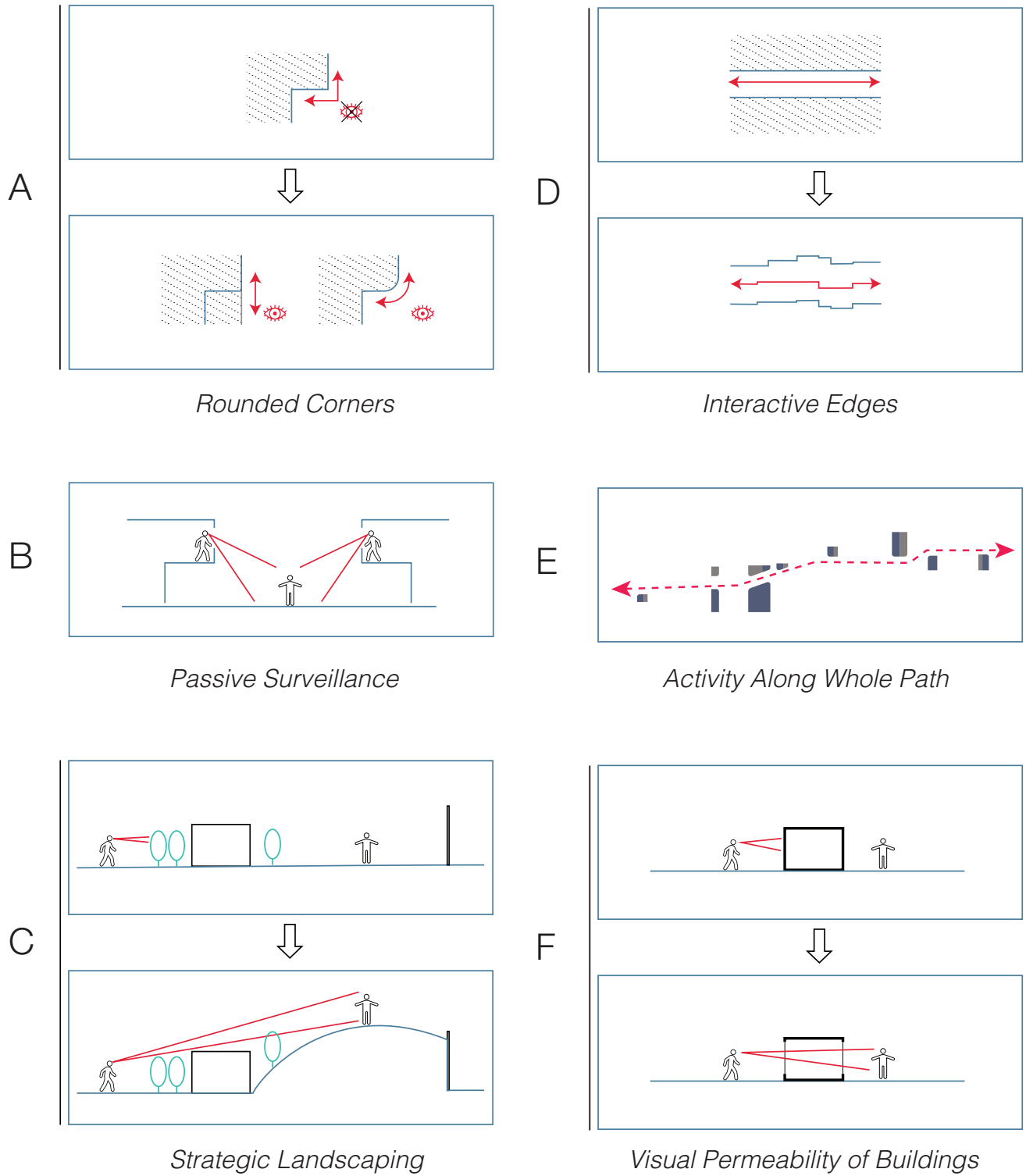


Fig. 41 Proposed Spatial Safety Alphabet

Design Informants

Spatial Safety Alphabet

A. Rounded Corners

In order to achieve natural surveillance, unobstructed views and clear sightlines need to be created. It is important to allow users to see what is ahead and what is around them. This contributes towards perceived and actual safety. Whereas sharp corners tend to inhibit sightlines, rounding the corners of the edges of buildings serves to limit the perception that people have of being out-of-sight, and therefore at risk.

B. Passive Surveillance Structures

Passive surveillance relies on the design of spaces and buildings which provide opportunities for users to clearly see and survey their surrounds while they go about their day. This encourages residents to “police” the area. Would-be offenders are often therefore deterred from committing crime in these areas where there is a high chance of interruption or detection. The piazza on site is surrounded by buildings with second and third storeys designed to look out onto the public space below. The outdoor area of the kindergarten is located at the point of maximum passive surveillance (in addition to formal supervision).

C. Strategic Landscaping

As previously mentioned, the natural state of the park is to be preserved as far as possible because it is a valuable resource for the area. In order to leave a piece of the site “undeveloped” and therefore potentially free of on-going activity at all hours of the day, this area has to be clearly visible and easily reachable. A secondary movement route currently passes through the North Western part of the site. By gradually raising the ground level of this portion, it remains within full view of those occupying the structures on the North Western part of the site. This hill is both a vantage point and a landmark element, while maintaining a zone free of built structures.

D. Interactive Edges

Even though the residential structures in the suburb of Waterkloof may have interesting floor plans and cleverly designed facades, their bounding walls render all these edges equal to the pedestrian passing through the suburb. Though there is an impressive gardening culture which is displayed on the perimeter of many properties, the outer walls of the suburban properties are effectively “dead edges” to the passer-by. The tunnel-like suburban streets do not promote the presence of pedestrians. The proposed intervention considers ways of activating its edges such as a planted green wall, a climbing wall and furniture incorporated into façades of several buildings. These active edges encourage users to linger and occupy them, acting as eyes on site, rather than passing through them.

E. Activities along Whole Path

Strategically placed architecture along the whole length of the site ensures the scattering of activities, and a widespread presence of people acting as informal surveillance. The constant crossing of movement paths serves to deter criminals seeking to commit crimes without being observed. This placement also avoids the possibility of the site become polarized with a “safe” and an “unsafe” side, which, as previously mentioned, is currently occurring at some points along the KY Hiking Trail. The clearly marked path that connects all of these structures is lit by lamp posts with their own integrated solar panels that switch on via light sensor, remains on all night and switch off at dawn. The maintenance cottages on either side of the site also ensure a constant form of formal surveillance.

F. Visual Permeability of Buildings

The materiality of the buildings along the water is carefully considered. In order to avoid an “area of entrapment” in between buildings, visually permeable structures are employed. The design aims to eliminate potential hiding places, and takes care not to block sightlines and therefore impair a sense of safety.



Fig. 42 Site Plan

Spatial Safety Continued

Currently, the following cycle is occurring: open spaces with limited surveillance are perceived as dangerous and vulnerable to criminal activity and are therefore avoided. The lack of people on site perpetuates the occurrence of criminal activity and the lack of surveillance. Careful intervention is necessary in order to break this cycle, without resorting to total enclosure or privatization. *Figure 1* includes design techniques which form part of a proposed spatial safety alphabet. A to D deal with visibility while E and F deal with activity-based safety. In 2011, the City of Tshwane's Metro Police Department drafted the "Tshwane Safer City Policy", and the proposal for dealing with safety within public spaces concurs with the design principles suggested above.

The author is of the opinion that a design strategy needs to be part of a holistic approach to crime prevention, incorporating social, environment and community development strategies. The application of proactive design guidelines does not solve the crime problem, but it has the ability to make an area safer from opportunistic crime. It does so largely through addressing the perception of crime, thus encouraging more people to make use an area, increasing the amount of natural and passive surveillance and thus acting as a deterrent against committing a crime.

On-Site Informants

As design informants, the existing conditions (namely the riverine running through the site, the commuter path and the existing site trees) have been given priority. The existing commuter movement path on site is an indication of the most convenient and direct route as decided by the commuters who cross it every day. The design does not undermine or overwrite this intuitive path-making choice. Regarding the trees on site, there is a severe lack of undeveloped, natural, public space in the suburb, and the green, tree-covered character of the site is to be maintained and strengthened. The intention is not to cover the whole site with buildings, as this would return to a mall-like public space, which inevitably becomes semi-public. In order for the public space to give value and contribute positively to the environment, it follows that the existing trees should be considered and preserved where possible. The proposed intervention considers ways of activating its edges such as a planted green wall, a climbing wall and furniture incorporated into façades of several buildings. These active edges encourage users to linger and occupy them, acting as eyes on site, rather than passing through them.

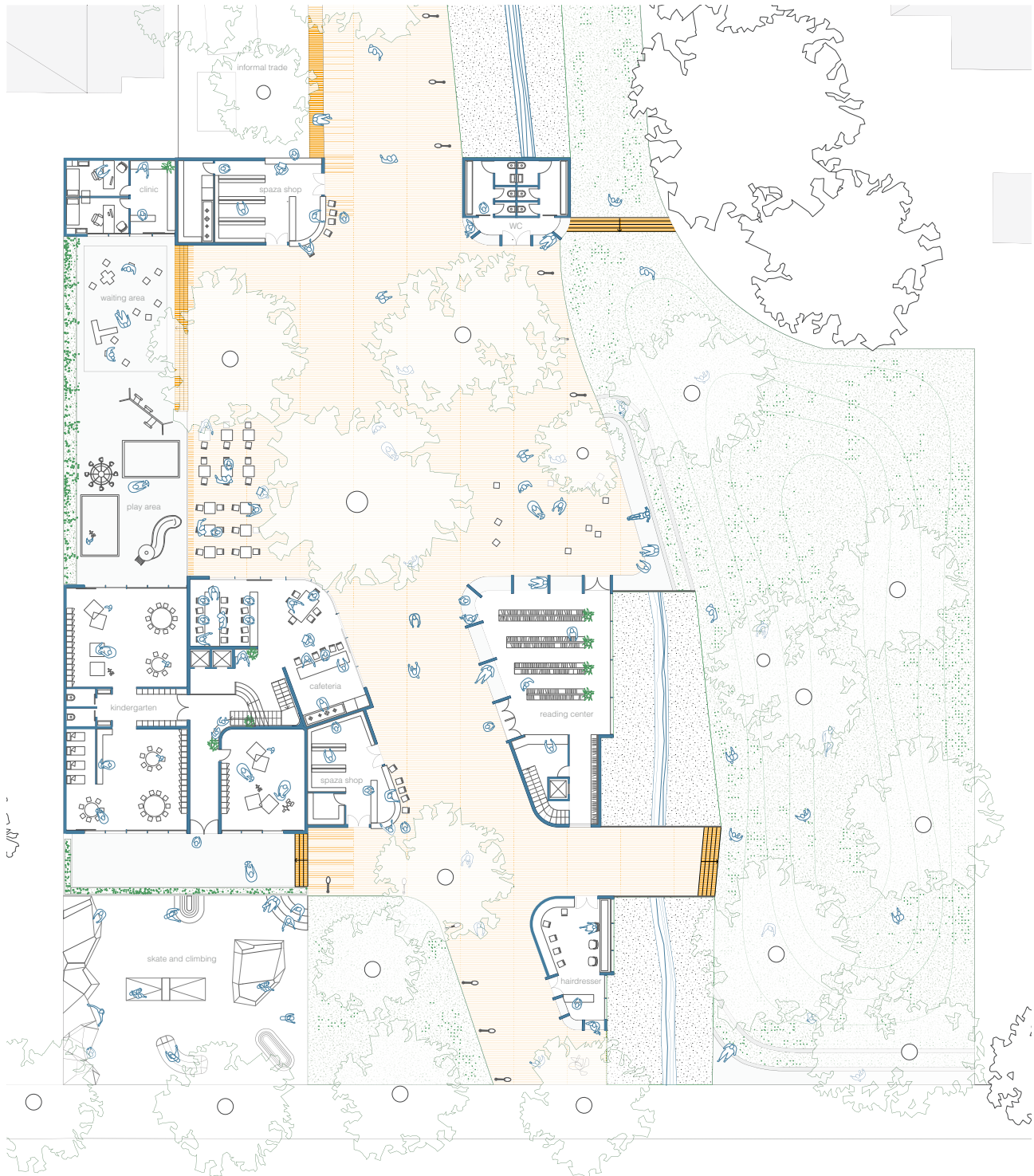


Fig. 43 Ground Floor Plan of Piazza and Surroundings



Fig. 44 View from raised platform looking onto piazza, kindergarten and cafeteria

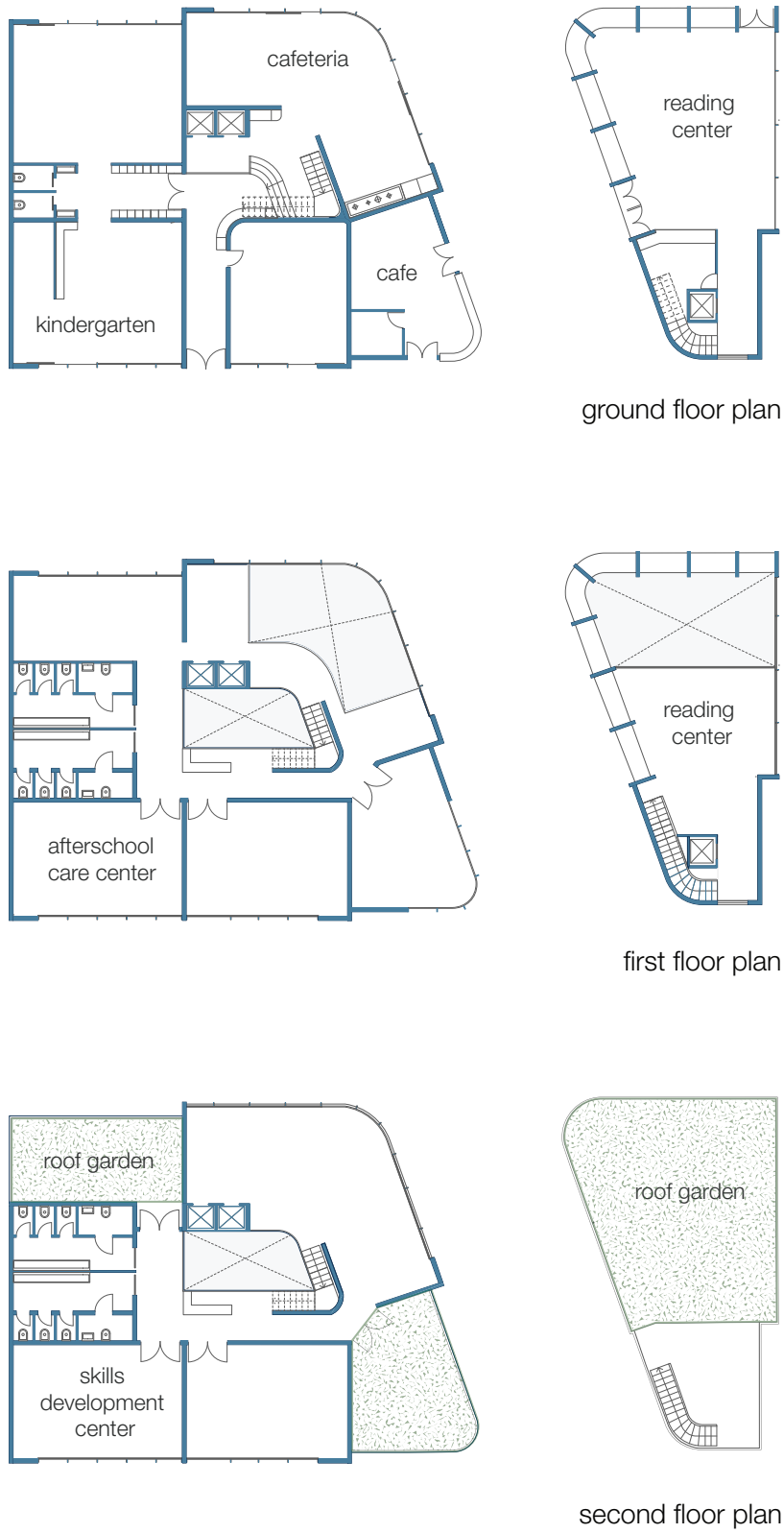


Fig. 45 Ground, First and Second Floor Plans

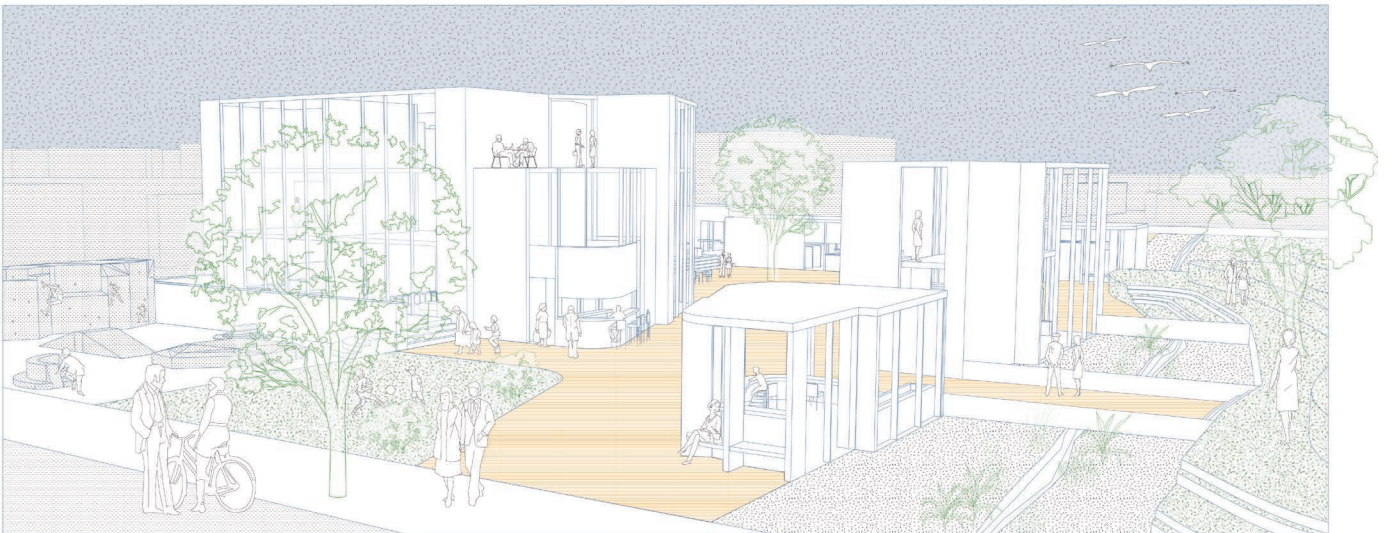


Fig. 46 View showing two walking routes and the crossing of the spruit

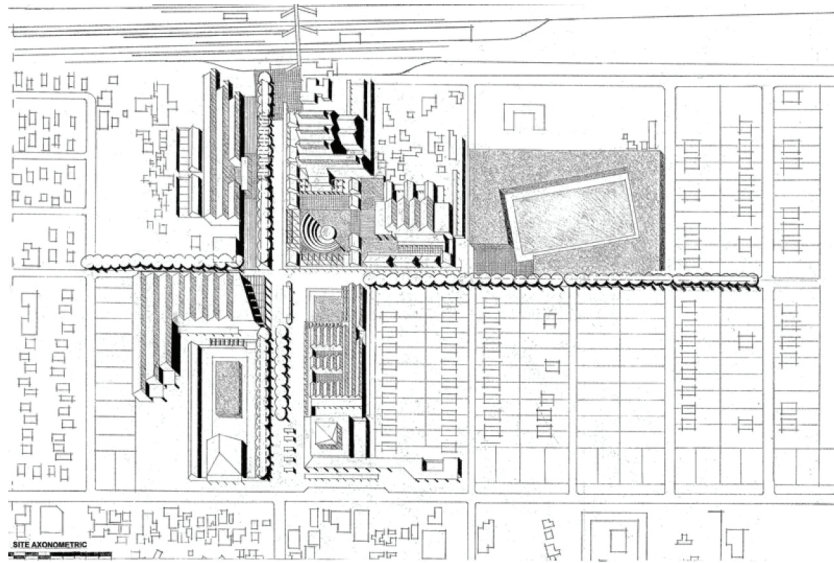


Fig. 47 View of commuter route from street edge



Fig. 48 View of informal trading and spruit

chapter 8: Influential Projects

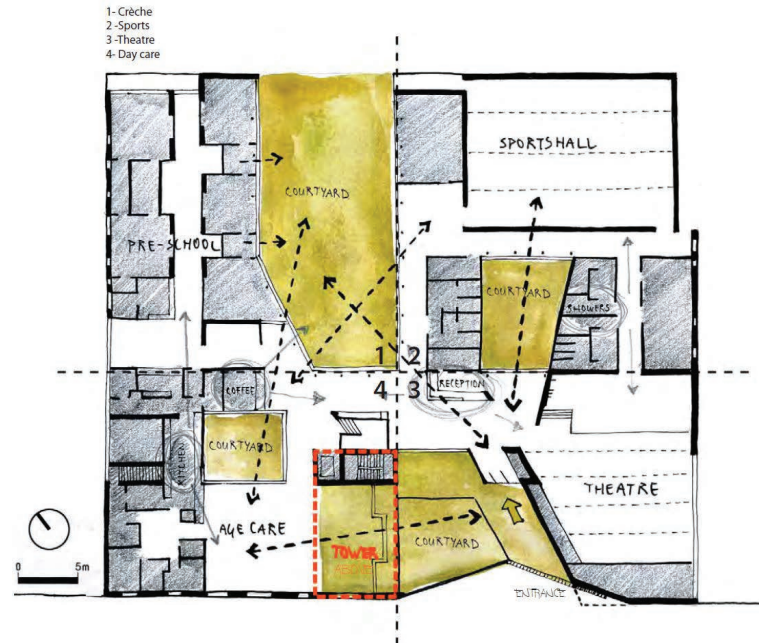


Red Location Cultural Precinct

Noero Wolff Architects, Port Elizabeth, South Africa, since 1998

- | contextually considerate approach
- | mixes informal and formal successfully
- | use of facade for “street furniture”
- | social architecture within a complex community

*Fig. 49 (above) Precinct Site Axonometric
Fig. 50 (below) Street view of Red Location Museum*

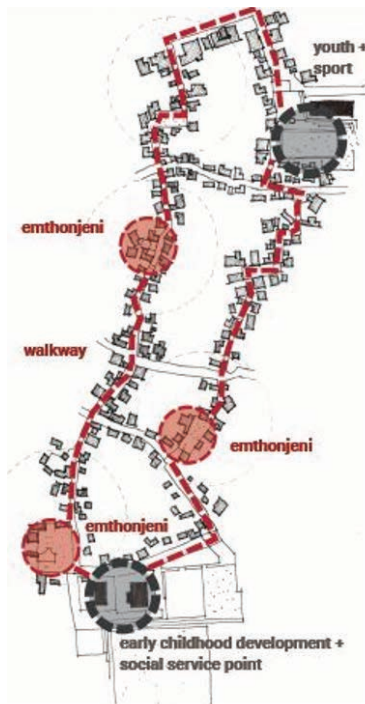


Sean O'Casey Community Center

O'Donnell & Tuomey, Dublin, Ireland, 2009

- | floor plan encourages social interaction
- | different uses groups interact but
- | contributes identity to a neighbourhood
- | local residents consulted for design process

Fig. 51 (above) Diagram of Community Center
Fig. 52 (below) View of lobby space and external connection

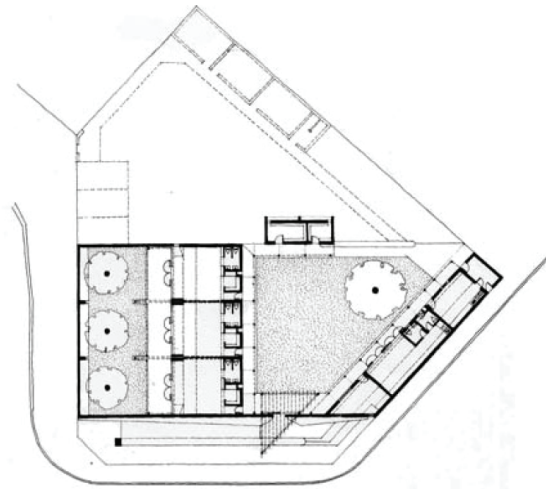


Violence Prevention Through Urban Upgrade (VPUU)

Various Projects in Cape Town, South Africa, since 2005

- |aim: safe and integrated communities
- |situational crime prevention
- |upgrading existing movement paths
- |involvement of community stakeholders

Fig. 53 (above) Existing public spaces mapped and activated positively
Fig. 54 (below) Designed “active box” (red tower) to create surveillance



Delft Daycare Center

Noero Architects, Delft, South Africa, 2002

|daycare centers addressing a need in the community
 |mediates between private and public
 |a landmark within the community
 |street edge lined with seats - an interactive edge

*Fig. 55 (above) Site plan drawing by Noero Architects
 Fig. 56 (below) Daycare entrance photography by Noero Architects*

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List of Figures

Chapter 2

Figure 1. Diverse and Unequal South Africa, Author (2018)

Figure 2. GINI Index for Income Inequality Range, Author (2018)

Figure 3. Layout of Apartheid Cities, Christopher, A in "The Atlas of a Changing South Africa", Routledge (2001)

Figure 4. Diagram of Segregation City vs Apartheid City, Davies, R.J. in "The Spatial Formation of the South African City." Geo Journal Supplementary, Issue 2 (1981)

Figure 5. A passbook or "dompas", photographer: David Turnley, available at: <http://digitaljournalist.org/issue0811/turnley-bp.html>

Figure 6. "Whites Only" bench in Johannesburg, Photographer: United Nations Multimedia(1982), available at: <http://www.unmultimedia.org/photo/detail.jsp?id=528/528&key=0&query=south%20africa>

Figure 7. Spatial Reactions to Safety Threats, Author (2018)

Chapter 3

Figure 8. Geography of Tshwane, Author (2018)

Figure 9. Pretoria in the Province of Gauteng, Author (2018)

Figure 10. Timeline of Greater Tshwane Region, Author (2018)

Figure 11. Apartheid Group Areas Act Planning Module (1950 - 1994), Author (2018)

Figure 12. Predominant Ethnic Distribution in Tshwane (2018), Author (2018)

Figure 13. Spatial Layout of Tshwane, Author (2018)

Figure 14. Informal Trade along the Kerneels Young Walking Route, Author (2018)

Figure 15. The Kerneels Young Walking Route, Author (2018)

Chapter 4

Figure 16. Analysis of Kerneels Young Hiking Trail, Author (2018)

Figure 17. Architecture of Separation vs Architecture of Inclusion, Alexandra Böhmer, (2017)

Figure 18. Spatial Intentions At Three Scales, Author (2018)

Figure 19. Nodal Intervention Points in Urban Framework, Author (2018)

Figure 20. Nodal Intervention Points 1 & 2, Author (2018)

Figure 21. Nodal Interventions Points 3, 4 & 5, Author (2018)

Chapter 5

Figure 22. Suburban Characteristics of Waterkloof, Author (2018)

Figure 23. Security Signage in Waterkloof, Author (2018)

Figure 24. A Suburban Property, Author (2018)

Figure 25. Private Entryways in Waterkloof, Author (2018)

Figure 26. Suburban Streets in Waterkloof, Author (2018)

Figure 27. Floor Plan of Domestic Worker Accommodation, Thesis Project by Marguerite Pienaar (2013)

Figure 28. Domestic Workers in Johannesburg, Photographer: David Goldblatt (1972)

Figure 29. Photographer: Ernest Cole

Figure 30. Study of Public Space Along the KY Walking Route, Author (2018)

Figure 31. Study of Four Existing Public Spaces, Author (2018)

Figure 32. Functional Mapping of Site Surrounding Area, Author (2018)

Figure 33. Aerial Photography of Site Area, Google Earth (2002 - 2009)

Figure 34. Chosen Site, Author (2018)

Figure 35. Users of Site, Author (2018)

Figure 36. Users of Suburb of Waterkloof, Author (2018)

Figure 37. Users of Surrounding Area, Author (2018)

Figure 38. Users of Surrounding Area, Author (2018)

Chapter 6

Figure 39. Site Programme and Daily Schedule, Author (2018)

Figure 40. Functional Axonometric, Author (2018)

Chapter 7

Figure 41. Proposed Spatial Safety Alphabet, Author (2018)

Figure 42. Site Plan, Author (2018)

Figure 43. Ground Floor Plan of Piazza and Surroundings (2018)

Figure 44. View from raised platform looking onto piazza, kindergaten and cafeteria (2018)

Figure 45. Ground, first and second floor plans, Author (2018)

Figure 46. View showing two walking routes and the crossing of the spruit, Author (2018)

Figure 47. View of commuter route from street edge, Author (2018)

Figure 48. View of informal trade and spruit, Author (2018)

Chapter 8

Figure 49 Precint Site Axonometric by Noero Architects (2005)

Figure 50 Street view of Red Location Museum by Architectural Record (2012)

Figure 51 Diagram of Community Center by Elzbeth Petsch (2013)

Figure 52 View of lobby space and external connection

Figure 53 Existing public spaces mapped and activated postitively

Figure 54 Designed "active box" (red tower) to create surveilliance

Figure 55 Site plan drawing by Noero Architects (2002)

Figure 56 Daycare entrance photography by Noero Architects (2002)

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