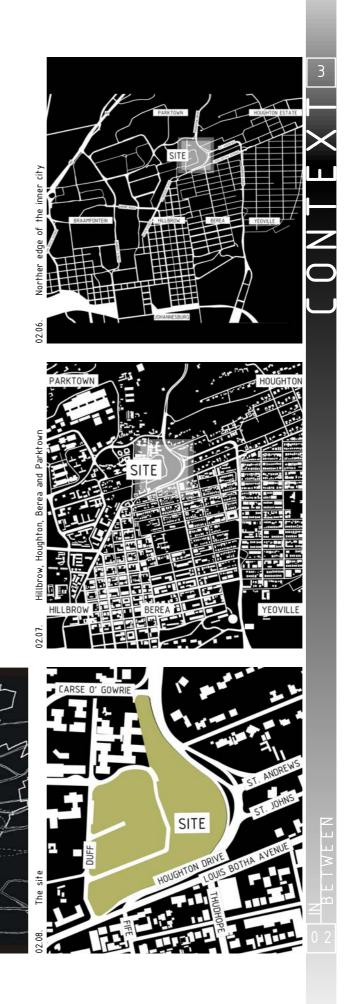


4. Johannesburg

02.0







J O H A N N E S B U R G



Situated at the heart of Gauteng, the Johannesburg inner city is considered to be the economic heart of Southern Africa. With a population estimated to grow from the current 211 000 to 256 000 in 2010, it is the golden city people flock to for opportunities and wealth. (City of Johannesburg 2001: 1).

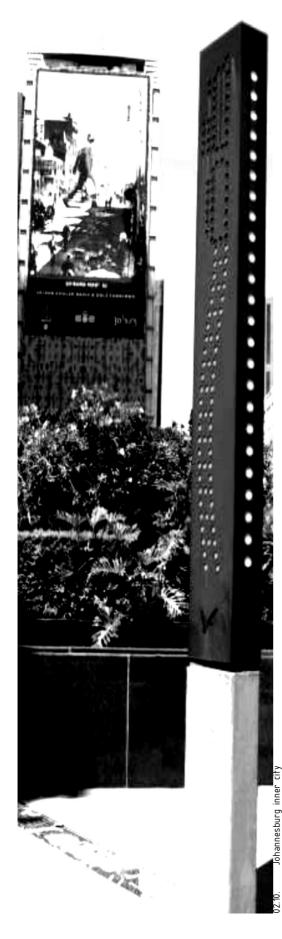
At the moment, Johannesburg is a city in transition, scarred by the imprint apartheid left on its urban fabric and people. It is a city with an intricate history and a bright future. It is a city marked by dualisms.

Beall (2002: 1) explains that Johannesburg has been provided with the extraordinary opportunity of reinventing itself in the wake of South Africa's transition from an apartheid regime to a liberal democracy in 1994. This reinvention includes the reformation of its policies and planning practises, and the reformation of its

social and political institutions.

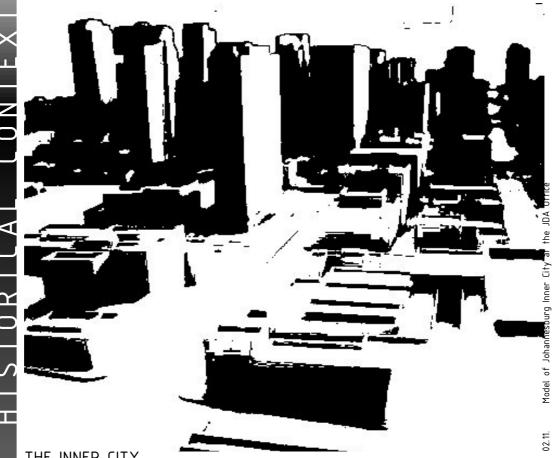
Contemporary Johannesburg is described by Bremmer (2004: 8) as 'a witness to both the intractable geographies of apartheid and the radical reassembling, re-mixing and re-visioning that have reshaped it. Johannesburg is a city of colliding worlds, moving in many directions at once.'

The vision for Johannesburg is: The Golden Heartbeat of Africa A dynamic city that works ... Livable, safe, well-managed and welcoming People centered, accessible and celebrating cultural diversity A vibrant 24 hour city A city for residents, workers, tourists, entrepreneurs and learners Focused on the 21st century, Respecting its heritage and capitalizing on its position in South Africa, Africa and the whole world, A truly global city The trading hub of Africa thriving Through participation, partnerships And the spirit of UBUNTU! (Inner city position paper: 2001)



"Cities were invented to facilitate exchange of information, friendship, material goods, culture, knowledge, insight, skills and also exchange of emotional, psychological and spiritual support. For a truly sustainable environment, we need to maximize this exchange whilst minimizing the travel necessary to do it." Engwicht: 1992

N N T F X



THE INNER CITY

Before the discovery of diamonds and gold, the spatial fabric of settler towns in South Africa was generated by the church and market, which became the social space. For the Afrikaner, the church was the symbolic, functional and visual center of the settlement and its shared communality (Holm 1998: 66).

The 1880s

The discovery of gold on the Witwatersrand brought a new dynamism, a new form of existence, a cosmopolitan society with a new ethic and a contrasting modern way of urban settlement. Consequently, the search for wealth brought shaping factors such as commerce and trade which took the place of church and government. In a landscape where the rhythm of the seasons dictated time, the time value of money suddenly set the pace.

According to Holm (1998: 67) the original layout of what was to become Johannesburg was done by a state-registered surveyor on tender and it is suggested that the layout might have been orientated towards Pretoria rather than towards solar coordinates. Unlike Pretoria, which was clearly defined by mountain ranges and watercourses, Johannesburg largely lacked natural or artificial definition. The streets were traffic routes in the modern sense and did not serve as live-in urban spaces. Since Johannesburg was largely perceived and planned as a temporary settlement, the need for planting trees along traffic channels was not perceived as necessary.

The difference between farmers and gold diggers is evident in the way they perceive themselves within the environment. A farmer sees himself as custodian of a piece of earth to be handed down through the generations; it is the source of his or her survival. He relates to the earth in an intimate way, through dependence on the rain, sun and land for survival. The gold digger, on the other hand, owes nothing to the earth and takes from it without investing in it. He does not have to relate to it in a caring manner because fertilization, planting, and irrigation will not improve his harvest; only destruction pays. Therefore, mankind's relationship with the landscape dictates

its reconstruction of the urban landscape. The Johannesburg inner city is a clear example of this phenomenon.

Holm (1998: 69) explains that the layout soon developed along rational and functional lines. The area was subdivided into mining and living areas, which were again subdivided into the land of the living and the land of the dead (cemetery), and beyond these that of the 'kaffirs'. The Johannesburg plan of 1891 indicates that the subdivision of erven was not dimensioned to support the inhabitants but was designed to accommodate buildings.

The 1890s

Johannesburg did not go away as predicted; in fact, it prospered. Suddenly the mining settlement turned into a high-rise urban environment. 'After 1890, Johannesburg, a town without history and an inland town without a river, was transformed into the "most important town in South Africa" (Holm 1998: 68).

Driven by the energies of individual entrepreneurship in the modern sense, and curbing its ventures only in the interest of public health and safety, the mining camp soon developed into a city showing all the typical traits of the times: 'functionality and segregation of functional zones, resultant streets as traffic channels; the abandonment of urban form, meaning and hierarchy; withdrawal from civic life and privatization of living' (Holm 1998: 68).

The 1960s

The process of inner-city decline was driven by decentralisation with businesses fleeing to the northern suburbs. Contributing factors were the following:

High land values and rentals in the CBD, congestion, lack of parking, and a restructuring in the office market that saw demand for office parks grow, and the subsequent





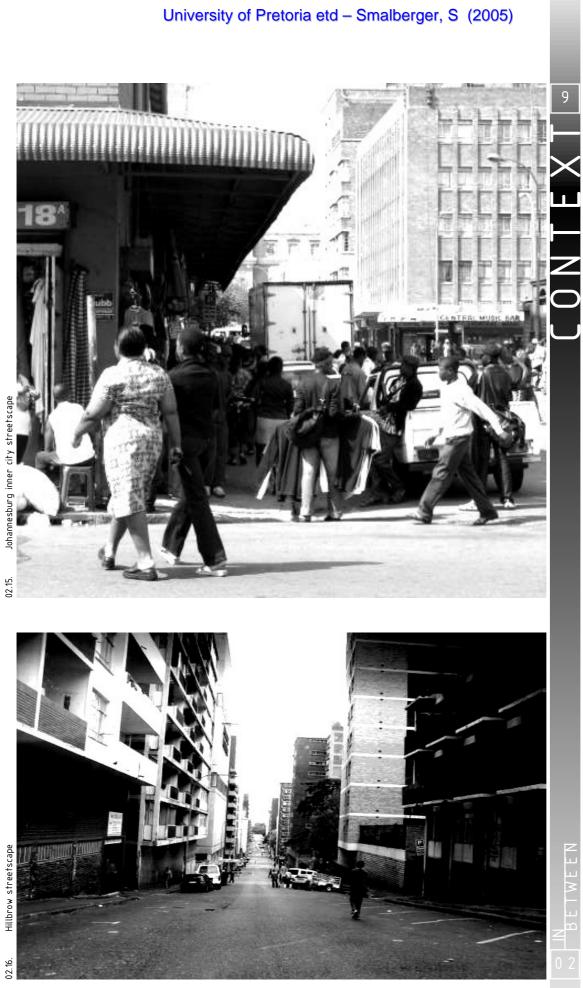
development of suburban shopping malls. The process of decentralisation was intensified by problems of crime and grime, unregulated street trading, and inadequate facilities for taxis. In turn, these factors lead to further symptoms of urban decay in the inner city: vacant buildings, badly maintained buildings, squatting, illegal conversions and overcrowding and poorly serviced, maintained and managed public areas. (City of Johannesburg 2001: 1)

The 1980s-1990s

Bernstein (2002: 94) explains that until the late 1980s Johannesburg was regarded as a fairly small colonial city centred on its CBD. 'Apartheid laws and residential segregation kept most black people away from the main commercial and residential areas.' She denotes the transformation of the image and the reality of the city to the desegregation of the midto late 1980s and the political democratisation of the 1990s. Johannesburg changed from an ordered and orderly city segregated colonial city into a much larger, bustling and disordered, developing world city. According to Bernstein (2002: 89) the focus is on the racial and symbolical integration of the city.

02.14. Johannesburg logo etched on a steel plate at Constitution Hill





JOHANNESBURG DEVELOPMENT AGENCY

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The Johannesburg Development Agency (JDA) was established in April 2001 by the City of Johannesburg as an economic development agency to initiate, stimulate and support development projects aimed at rejuvenating economic activity throughout the vast Johannesburg metropolitan area. JDA's ultimate aim is to create an environment that will attract new investment opportunities to increase occupancy levels within the inner city. Improved cultural activities are envisioned to attract 'business tourism' to designated areas (JDA 2005).

Important nodes with development potential were identified around the inner city. Within these nodes, catalyst projects were identified for construction with the aim of

- stimulating regeneration in surrounding areas
- creating short-term construction jobs
- creating sustainable long-term jobs
- promoting tourism to the city



REGENERATION NODES AROUND BRAAMFONTEIN AND HILLBROW

CONSTITUTION HILL

Redevelopment of an existing prison complex including the building of a new constitutional court building for South Africa, the upgrade of existing heritage buildings, the construction of a new super basement-parking structure, the upgrade of all surrounding streets and the construction of new buildings on top of the super basement structure. *Under construction* (OMM 2003:2)

BRAAMFONTEIN

Public environment upgrade including streets and public open spaces; the construction of the Nelson Mandela Bridge linking Braamfontein and Newtown; and private sector developments to the value of approximately R150 million. *Under construction* (OMM 2003:2)

PARK STATION

Refurbishment of the central transport facility including the train station, bus station and taxi facilities. *Completed* (OMM 2003: 2)

HILLBROW REGENERATION

Public environment upgrades including streens and public open provide and market developments. Under construction and planning (OMM 200-2

JOUBERT PARK

Park upgrade and development of an environmental centre. Completed OMM 2003: 2) ----

burg Development Agency

JOHANNESBURG INNER CITY

Whether read from the macro, meso or micro scales, cities are not only sites of economic development, vibrant centers of social and cultural creativity or sites of political innovation. They are also places of disadvantage and division and can be divided along a range of axes, including class, race, ethnicity, gender, generation and length of urban residence. (Beall 2002: 24)

Beall (2002: 26) claims that migrants to cities are predominantly young and that this phenomenon inevitably contributes to the high rate of natural increase in numbers within urban centers. He also constitutes high rates of unemployment to youthful populations.



13

The social dysfunctionality in the inner-city residential areas is, according to Fraser (2004), due to the loss of control over increasingly crowded buildings. Factors that contribute to the current state of Hillbrow and Berea are said to be the increase in crime and the decline of the urban fabric and an increasing emotional detachment from context. The degradation of urban fabric is amplified by the absence of police presence and the greed of some landlords (or 'building highjackers') that saw an opportunity to maximize profit without delivering services and safety standards.

Neil Fraser, executive director of the Central Johannesburg Partnership (CJP), a non-profit organization dedicated to the revitalization of the inner city of Johannesburg, discloses that apartheid cities were built on spatial dislocation, social dysfunction, and economic inefficiency. This legacy remains deeply embedded not only in the physical imprint of the post-apartheid city but also in the mindset of those who live and work there.

Statue at Constitution Hill 02.20.

Therefore, the regeneration of the inner city can only be sustained when it is implemented on all levels. The upgrading of the urban environment should go hand in hand with the upliftment of those using these environments. The view of the Johannesburg inner city as dangerous and deteriorating can only be effectively counteracted by prevention rather than cure.

At the moment, these residential areas are, according to Inspector Naidoo (personal communication 2005) infested with crime, drug dealing and prostitution; the fight against crime leads to overcrowded prisons' releasing more dangerous criminals than they admit.

Bernstein (2002: 199) suggests the strengthening of neighbourhoods for the social upliftment of the city. This will be achieved by setting up sustainable job criteria, enhancing environmental quality, reducing neighbourhood crime and improving local enterprise skills.

Projects could range from labour intensive road maintenance projects through the establishment of neighbourhood youth enterprise / IT centres and area based crime reduction programmes to rehabilitation of degraded streams, and community maintenance of local parks and open spaces. (Bernstein 2002: 199)

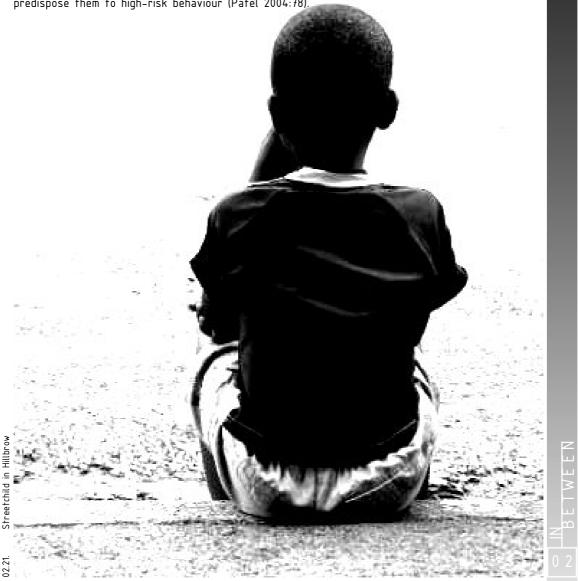
To create the healthy urban street culture envisioned for the future Johannesburg, crime and other issues should be confronted at grassroots level, the most effective point of intervention. Therefore, the children and youth of the inner city should be the point of interception.

INNER CITY CHILDREN AND YOUTH

According to Patel (2004:78), young people are generally experiencing grave difficulties in making the transition from adolescence to adulthood and from school to work. Some are faced with having to accept premature responsibility for their families because of the HIV/AIDS pandemic. Teenage pregnancy is a significant barrier to the development and advancement of young women, and many are victims of sexual assault at an early age. Patel (Ibid.) explains that a lack of skills and work opportunities for the youth of the City is of grave concern, and for those who are unemployed for more than a year, the future is bleak as it could lead to long-term unemployment.

Unoccupied youth who lead unstructured lives tend to become involved with high-risk behaviour such as alcohol and drug abuse. Reddy (2003:15) reveals that the high-risk behaviours adopted by the youth during formative years often have a significant influence on their future.

These high-risk behaviours are strongly linked to crime. Youth are susceptible to pressure from their peers, and in communities where they are exposed to ongoing violence in the home and the community, many turn to crime and become involved with gangs and end up in the criminal justice system. Patel explains that the scenario outlined may sound simplistic, but many of the discussed risk factors pertaining to the social and economic situation of the City of Johannesburg's youth predispose them to high-risk behaviour (Patel 2004:78).



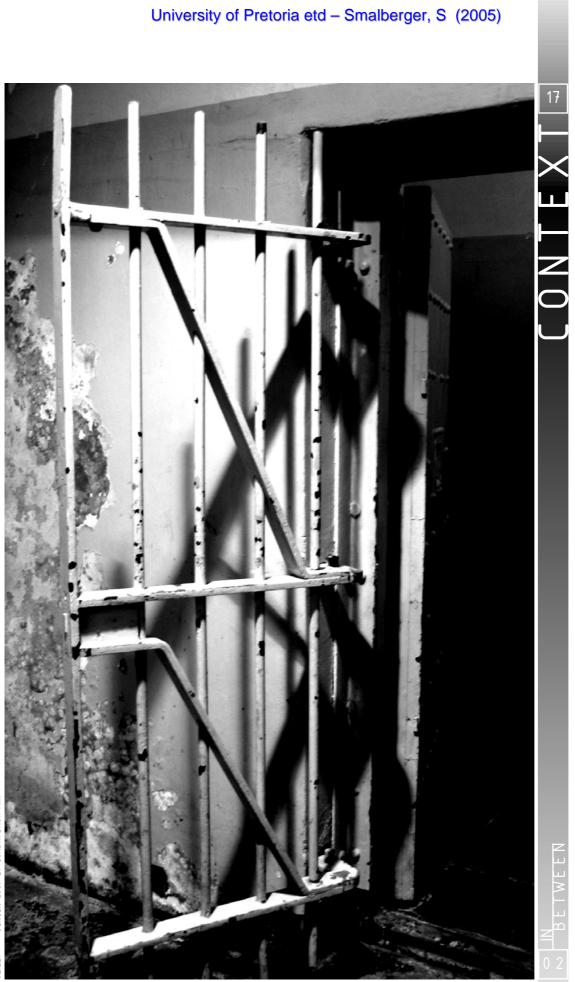
CURRENT SITUATION

According to Statistics SA (1999), 15.1% of the population of the City of Johannesburg consists of youth between 18 and 24. The racial composition of this age cohort is African: 79%; Coloured: 6.4%; and Indian: 3.9%. White youth make up 10.3% of the city's population. 12.5% of the City of Johannesburg's youth population live in the inner city, also known as Region 8.

Life in a dilapidating urban environment with overcrowded flats and unsafe streets provides very little opportunity for growth. Abuse at home leads to youth taking to the street where drugs, prostitution and gangs await them. When abused, they have nowhere to turn; going to the police is not an option, and running away leads to worse living conditions. A need exists for facilities that will provide a safe, vibrant environment for the youth to socialize, exercise, learn skills, study and play (Van Wyk personal communication 2005).

In addition to the problem of children living in Hillbrow with parents or relatives, there is the very real one of children coming to the city in search of a better life and work and who end up living on the street. These children, usually between the ages of 11 and 18, run away from home because of poverty or abuse. They expect Johannesburg to be the city of gold, but the harsh reality of having to live on the street soon takes its toll. They usually end up living in worse conditions than at home and resort to crime, prostitution, gangs, drug dealing and abuse. According to Mrs. Delene van Wyk of the Uthandweni shelter for street children in Hillbrow, the AIDS pandemic will result in even more children ending up on the street at an even earlier age.

The problems surrounding street children and children living in terrible conditions have to be addressed to uplift and educate them and to create a better society. To prevent them from being sucked into a life of crime, the government needs to take a proactive approach of upliftment, education and motivation.



02.22. Jailcell door at Constitution Hill

INTERVENTION

"Umthente Uhlaba Usamila"

Umthente is an indigenous grass with a sharp, pointed apex. *Uhlaba usamila* means that this grass prickles one while it is in the early stages of development. *Umthente uhlaba usamila* is an Nguni idiom that means that engaging in high risk behaviour while still in the youthful stages of life does have consequences and is dangerous. These consequences have an impact on health, social roles, personal development and preparation for adulthood (Reddy 2003:7).

The United Nations Children's Fund (UNICEF) declares that 'cities have to commit themselves to become healthy and safe environments nurturing the development of children; guarantee them secure lives; provided access to quality basic services; and that pay special attention to street kids and traumatized children' (Russouw 2002).

Therefore, the City of Johannesburg and UNICEF are joining efforts through the implementation of the Child Friendly City Initiative (CFCI). According to Wandile Zwane, project coordinator of the CFCI, the initiative strives towards the building of communities or cities that offer healthy and safe environments to children and their families. These must be environments that nurture the development of all children. Zwane adds that the government is accountable for how it treats its children; Because more of the world's citizens are moving to cities, it is essential that cities be transformed into child-friendly domains. Evidence of urbanization is that Africa is believed to have the highest rate of urbanization in the world, and UNICEF estimates that by 2006, six out of ten children in developing countries will live in cities, and more than half of them will be poor and plagued by urban violence and social ailments (Zwane 2001).

The future of the world is unavoidably urban, and the well-being of the children will continue to be inextricably tied to that of the cities. Children who live in the midst of chronic urban violence are confronted by multiple risks. The absence of learning, play and recreation; inadequate social services; poor economic growth; and high unemployment rates are just a few of the risk factors. All these problems have serious implications for society as well as for the individuals affected. Thus the social context in which children are growing up, with violence and poverty being the two major factors, has been influenced by historical decisions, social and political policies, and economic realities that have compromised the quality of life for many of these children (Zwane 2000).

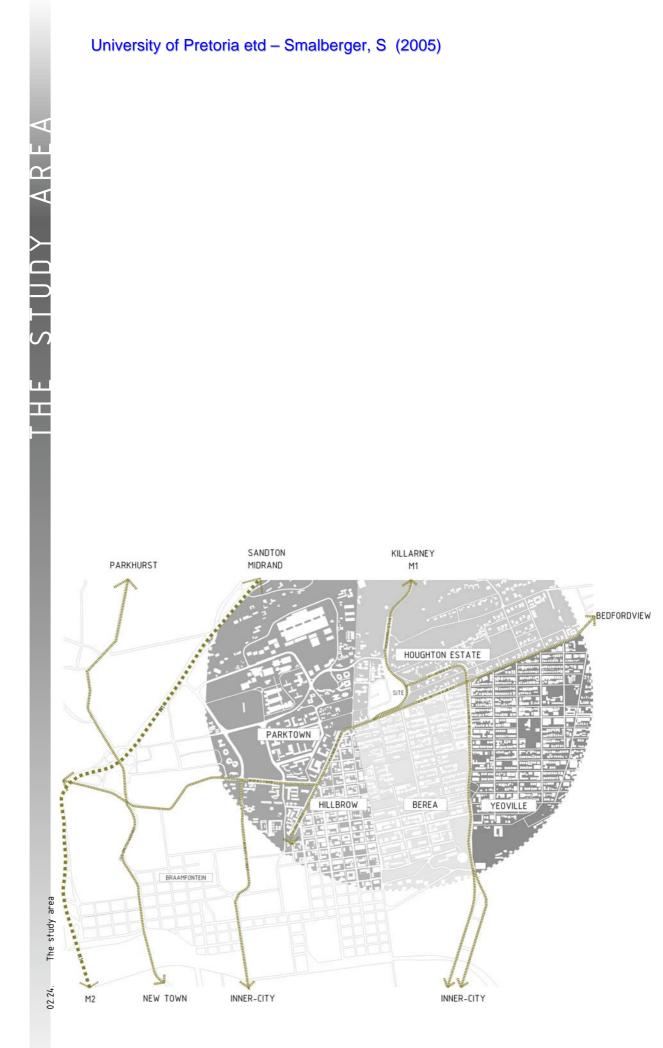
Patel (2004:25) explains that special focus needs to be given to targeting interventions for youth at risk of becoming chronically unemployable and says that co-operation between NGOs and communitybased organizations and the youth is vital. The strategy should have a multi-pronged approach and should support labour-market skills, socialization and enterprise-based training; it should stress vocational skills and experience (not focusing on high skills only); apprenticeships, learnerships, self-employment and entrepreneurship; and the creation of direct employment. Enabling policies and programmes are needed to support community-based micro-development initiatives.



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02.23. Steetchild in Hillbrow



The city of Johannesburg is landscape marked by the separation and contradictions imposed by political history. An urban environment where physical and psychological barriers keep communities on their side of the 'track'. The study area is at the convergence point of four urban realms; very different in their attitude towards public space, urban fabric, grain, scale, connectivity, socio-economic status and the creation of public space.

Berea Houghton Hillbrow Parktown

Namely

The site is within a mixed-use belt, buffering the suburban residential areas to the north from the inner city to the south. Typically, this zone has an institutional flavour with a mixture of residential, medical, educational, office and light industrial functions.

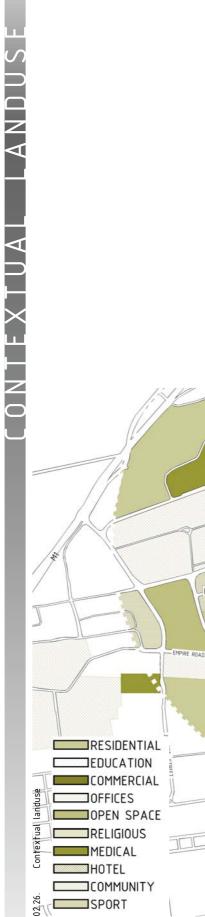
SANDTON

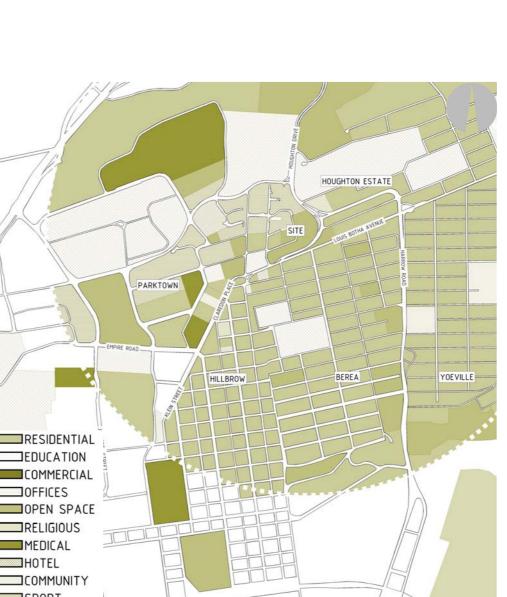
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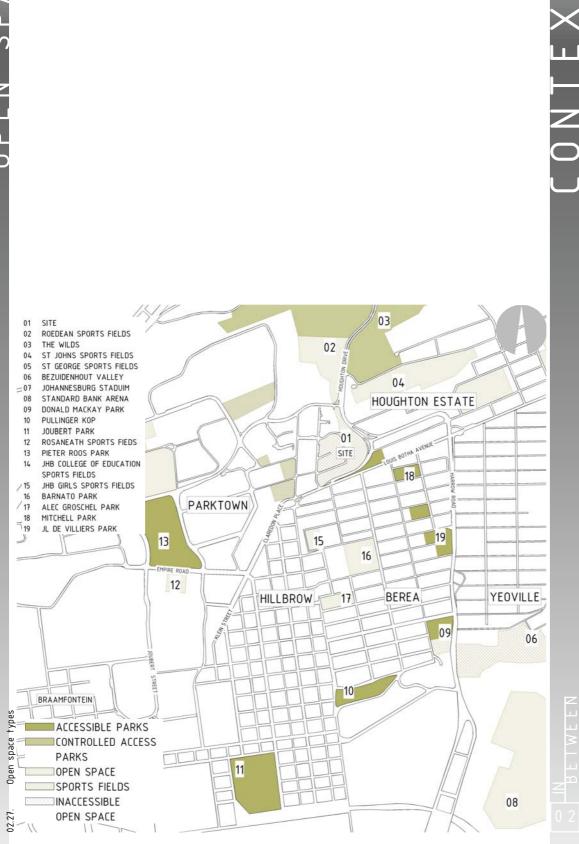


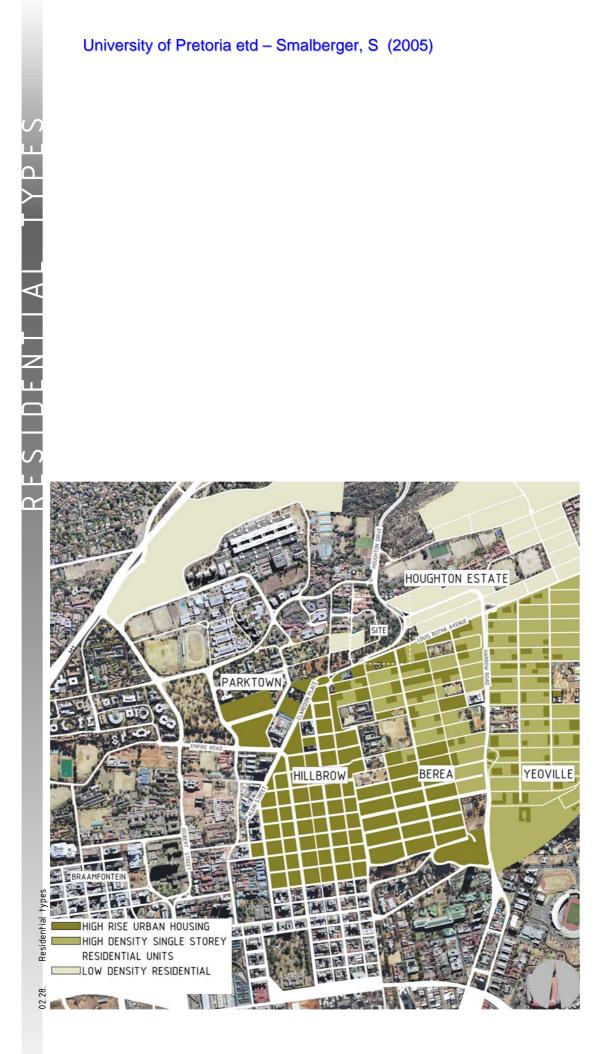


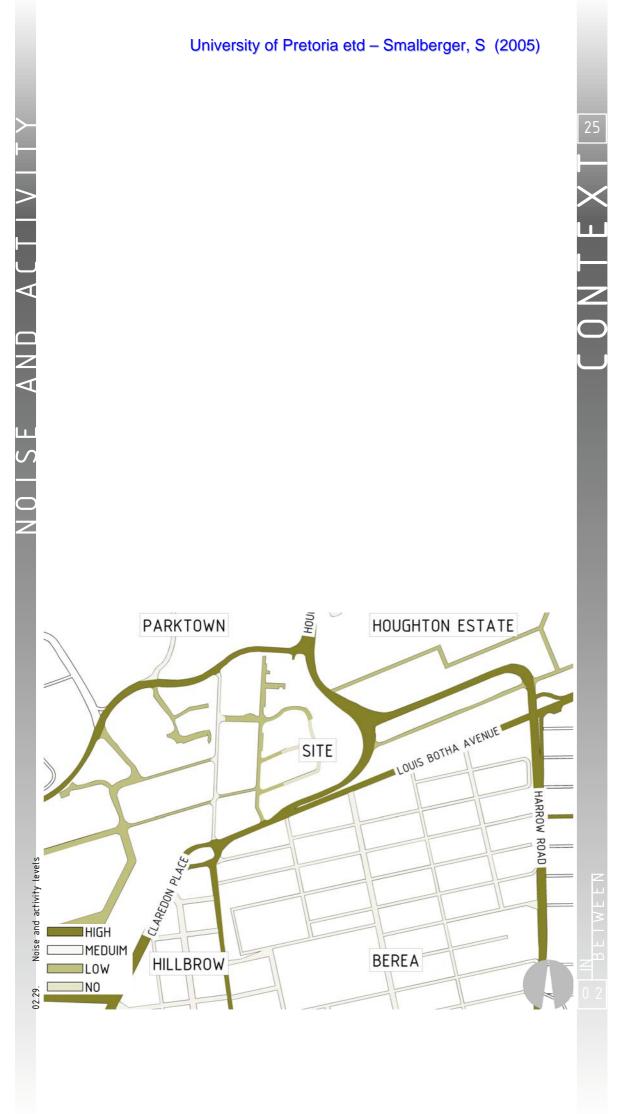


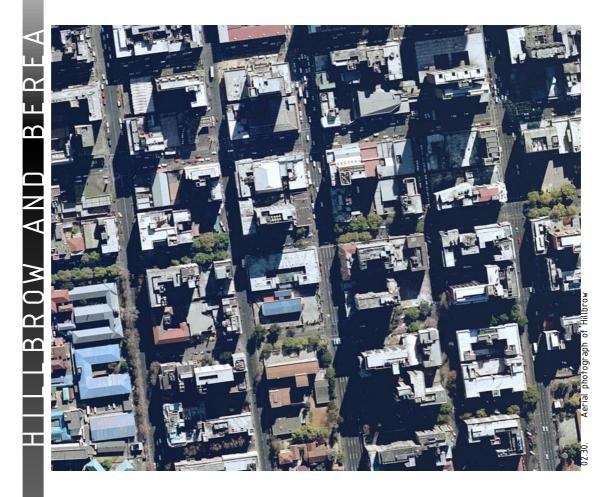












PUBLIC LOUD ACTIVE STREET LIVING CONTROL NO OWNERSHIP CHAOS MULTI RACIAL MULTI LINGUAL MULTI LAYERED INTERACTION UNSAFE LIVELY SPEED HARD EDGES CONCRETE TRAFFIC CHANNELS COMMUNITY XENOPHOBIA

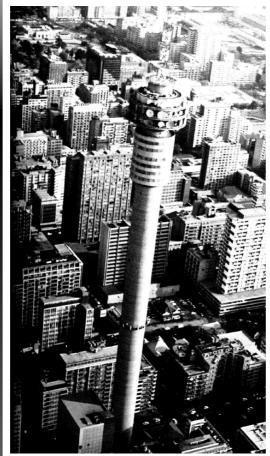


Hillbrow is located on the southwestern side and Berea to the southeastern side of the site. These urban environments are marked by mainly high-rise residential structures with residents of a poor socio-economic status.

The dense urban fabric accommodates insufficient safe public open space according to Inspector Kriban Naidoo, public relations officer of the Hillbrow police service (Personal communication: 2005). The streets, which are mostly desolate channels for high-speed traffic, are used for interaction and play. In Hillbrow different families share small flats, therefore their living space is very limited and the street is perceived as the public social space; although it predominantly caters for the vehicle.

Described by Pearse (1994: 67) as Johannesburg's Manhattan and Bronx rolled in one, Hillbrow is the most densely populated area in South Africa, known for its clubs, drug trade, late night trading,





02.32. The Hillbrow communications tower

hookers, street kids and crime.

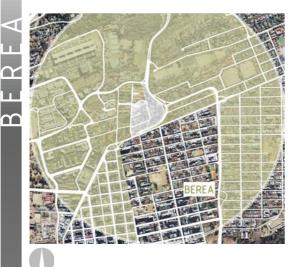
The Hillbrow Telecommunications Tower dominates the city skyline and is as potent a symbol of Johannesburg as Table Mountain is for Cape Town. For decades, Hillbrow has functioned as the holding lounge for a city of immigrants, be they from the *platteland* or from the other side of the world.

The tower blocks date from the era of white immigration in the 1950s and 1960s. In the 1980s, they became the first foothold in the city for black residents seeking alternatives to the townships. By this time, many whites were already moving out to the suburbs, and landlords were glad to have tenants of whichever color. Thus hard economics rendered the Groups Areas Act irrelevant years before the government saw it fit to scrap it. More recently, Hillbrow and its neighbour Berea have been the first jumpingoff point for another wave of immigrants, this time from central Africa. During the 1990s, the population of Hillbrow became more transient than ever, and the owners of a large number of flats started renting by the day rather than by the month. The high-density, quick-turnover population enables criminals to operate with impunity (Pearse 1994: 67). Inspector Kriban

02.33. A desolate street in Hillbrow: hard edges, no provision for the pedestrian

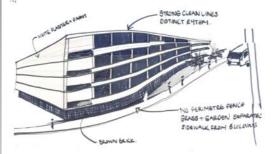




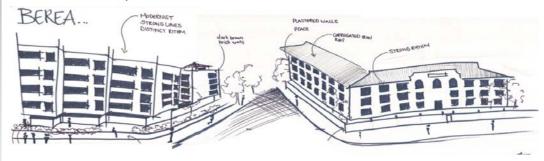


Naidoo (personal communication 2005) explains that most flats in Hillbrow are dilapidated and lack basic services. Flats are also being *shack farmed*, which is where flats are partitioned and shared by different families.

It is said to be the place where New drugs first appear on the street Forged versions of new bank notes start circulating Gunshots fill the night The numerous pawnshops happily relieve criminals of stolen goods Banks recoil from granting home loans to people wanting to buy in the area Slumlords exploit residents and buildings deteriorate (Pearse 1994: 67).



02.35. Architectural style: Berea





02.36.Inside the Ponte tower: elevator shaft02.37.Inside the Ponte tower



31 ONTEX ETWEEN





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02.38. Aerial photograph: Houghton

PRIVATE SAFE STERILE YARD LIVING CONTROL GREEN OWNERSHIP SANCTUARY ISOLATION NO COMMUNITY QUIET SLOW SOFT EDGES OPEN TREES MONO-FUNCTIONAL XENOPHOBIA

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02.40. Johannesburg College of Education

First established in 1892, Parktown and Houghton (north of the site) was originally a garden suburb for Johannesburg's rapidly emerging patrician classes. Slessor (1995: 60) describes the area as being perched on a north-facing ridge, symbolically elevated above the scrum of nineteenth century industrialization on the southern side. It is described as an adaptation of London's Bedford Park with handsome houses and great swatches of *rus in urbe*. This was the area where the 'proconsuls of the Empire' lived, and a few Herbert Baker structures grace the ridges. (Slessor 1995: 61)

From the 1980s Parktown became a business node, and today it is a mixed-use zone supporting business, educational and medical functions. The lack of residential functions makes it an area where commuters invade the area during office hours and leave it vacant during the evening. Structures surrounding the site are three to four storeys high, and the urban scale and grain becomes increasingly dense and higher towards the northwest.

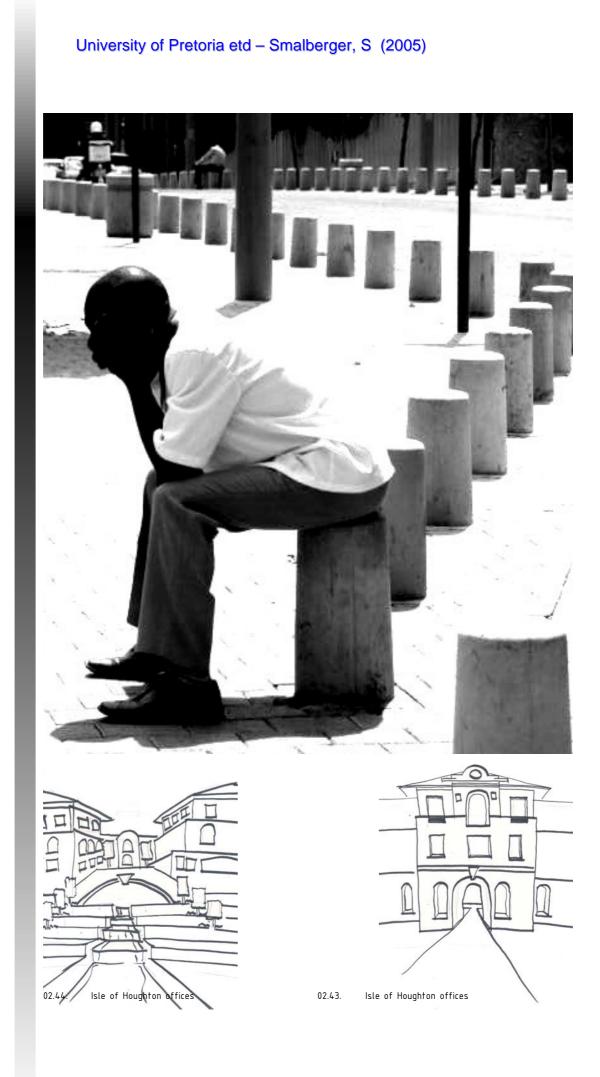
Houghton, to the eastern side is marked by, exclusive private schools, old money, big stands, and lush, exotic gardens. There is no hierarchy and connectivity in the urban fabric since the scale and grain is small and dispersed

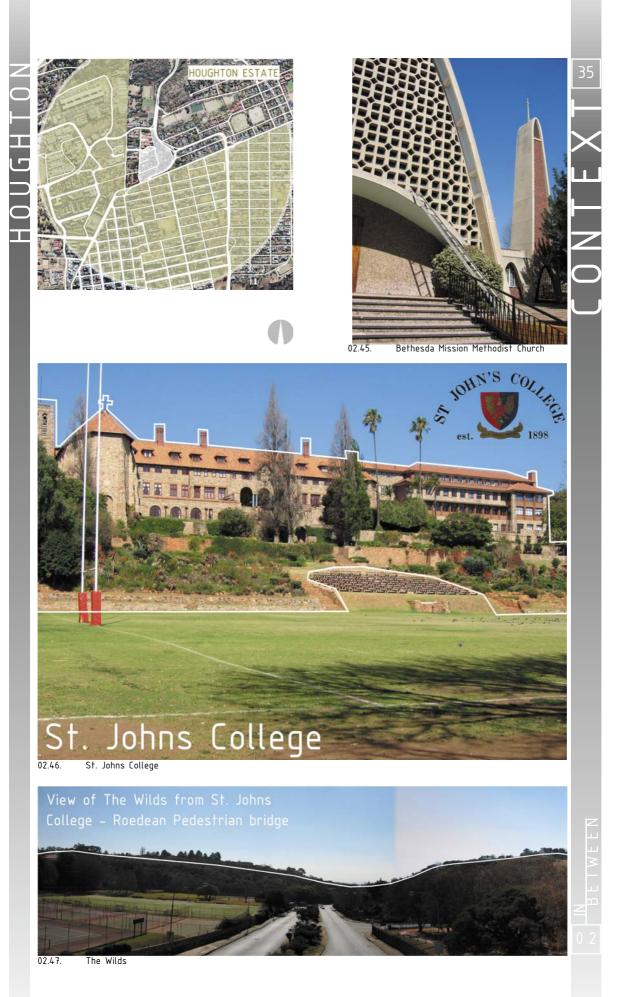


02.41. Sunnyside Hotel, a historical landmark

02.42. Johannesburg General Hospital







The American architect Jane Jacobs is an observer of urban spaces where life happens and, for that matter, also those where it has been lost. She explains that learning from the current situation and past mistakes is the only way to know what works and what does not.

Jacobs (1965: 85) contends that among the superstitions about urban planning and housing, a fantasy exists about the transformation of children. This is the tale:

A population of children is condemned to play on the city streets. These children, in their sinister moral environment, are telling each other canards about sex, sniggering evilly, and learning new forms of corruption as efficiently as if they were in reform school. This situation is called "the moral and physical toll taken of our children by the streets" otherwise known as "the gutter". If only these deprived children can be got off the streets into parks and playgrounds with equipment on which to exercise, space on which to run, grass to lift their souls! Clean and happy places, filled with the laughter of children, responding to a wholesome environment.

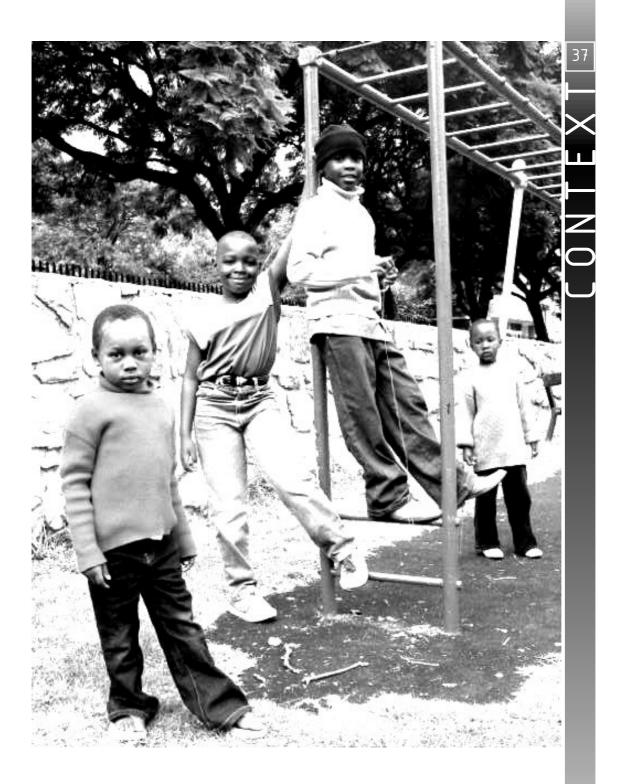
So much for a happy fantasy, because Jacobs (Ibid: 99) describes urban parks as volatile places, either extremely popular or extremely unpopular. This phenomenon is perceived in the usage study of local parks. Underused parks are either fenced-off green fortresses or desolate, unused pockets.

Parks become dangerous grounds owing to the lack of activities, such as retail in and around the parks, to provide passive surveillance and a distribution of energy. The lack of all-round activity makes them dangerous places for children to play by themselves; because parents do not have the time to watch them play all day, they either send them off by themselves or forbid them to go to parks.

For this reason, the project aims at providing activities within the park that would ensure its maintenance and surveillance at all times. The public route crossing the site allows for a flow of energy and activity through the area without anyone's necessarily taking part in the activities.

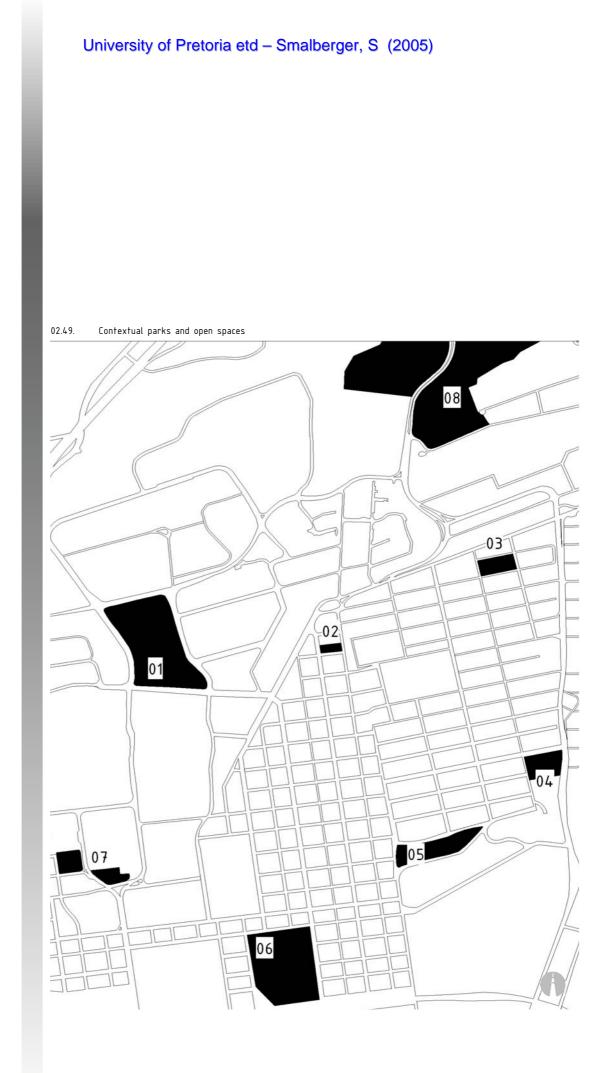
A visit to Hillbrow and Berea on Saturday, March 19, 2005, revealed a vibrant atmosphere of activity, trading and socializing in the streets.

Most public parks and activity points were visited during a police-escorted tour of Berea, Hillbrow and Yeoville on Tuesday, March 22, 2005. Inspector Naidoo, the public relations officer of Hillbrow Police Service, shed light on the functioning of and life in Hillbrow. The combination of sunny weather and school holidays promised heightened activity in and around parks. Surprisingly, some parks were fenced off and quiet, with only security guards at the imposing gates. In contrast, streets in residential areas and commercial areas and parks supporting diverse functions were busy, vibrant spaces (figure on the right). The different parks and their surroundings have been investigated in an attempt to establish why the parks are underused and how public open spaces could be utilised better.



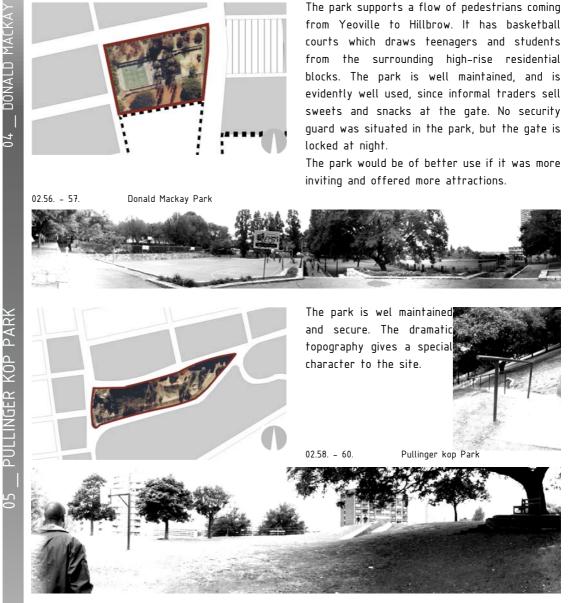
One of the most noticeable features of South African cities is the lack of public facilities for the citizens. Not only did apartheid planning ensure the removal of public gathering places such as town square, pavement cafes and city markets, which were so much a feature of public life, but this draining of the city's life blood continues today within our new democracy. (Van Wyk 1999:116)

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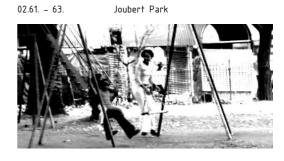


PAR IOUBFR





Joubert Parks is a well used and lively park, this is due to its proximity to the innercity and the Joburg station. Diverse surrounding functions, such as commertial, residential and business, and functions within the park such as a kindergarden, medical facilities and the gallery add to the extensive use of the park.



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THE WILDS

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The Heath Precinct development framework repared by Urban Solutions (2002:8) describes the open spaces surrounding the Civic Center as intended to showcase the modernist segregated architecture of the complex, windswept and unfriendly it is therefore unused as public open space.





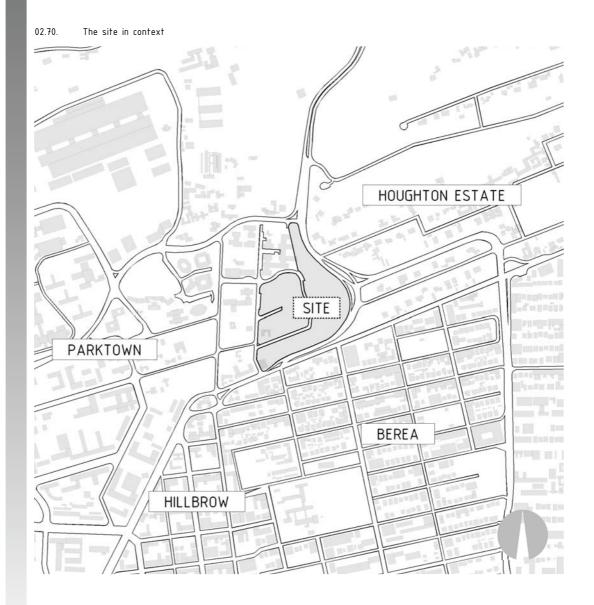
02.65. - 69. The Wilds

The wilds are conserved ridges linked with a pedestrian bridge over Houghton drive. The park supports a series of recreational and educational activities



The site, a green, park-like environment, is situated at a point where four very different and severely separated urban environments meet. It is within a mixed-use belt, buffering the suburban residential areas to the north from the inner city to the south. Typically, this zone has an institutional flavour with a mixture of residential, medical, educational, office and light industrial functions.

Hillbrow and Berea are mainly high-rise, residential urban environments with a very poor socioeconomic status. The dense urban fabric accommodates little safe public, open space. Houghton is a high-income suburban area, and Parktown houses mainly office, educational and medical functions.





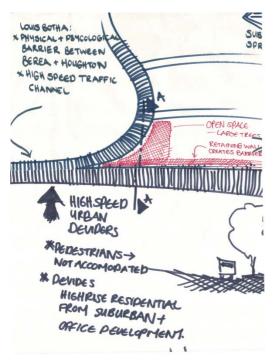
is also barrier

Although this site is currently under-used and inaccessible, and the proposal is to develop it into an inviting park development. The park will be developed in conjunction with Johannesburg City Parks, a self-contained business owned by the Johannesburg City Council. The company will be responsible for the development and maintenance of the park. Developmental objectives of the park are to ensure environmental conservation and awareness and to promote ecotourism.

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SUBURGAN SPRAWL, SPRAW

02.71. - 73. The retaining wall segregating the South from the North



The site has an intensely green character and personifies a green retreat on the edge of the urban environment. Most large trees on the site are exotic species.

- Willow trees
- Jacaranda Mimisofolia
- Pinus species

Vegetation

- Pride of India
- Eucaluptus

Syringe trees (have to be removed)

Black wattle trees (have to be removed)

This situation is not ideal because of their water consumption and invasive nature, but deforestation of the site will lead to erosion and loss of top soil. The site is seen as part of the larger context, which is characterized by its lush, green vegetation and great number of large, exotic trees.

Therefore, an ecological management plan will be implemented to distinguish alien, invasive species from indigenous species and from exotic species with historical or aesthetic value. According to this plan, alien, invasive species will be removed over a period of time and be replaced with indigenous species like Cellis Africana, Canbretum erythrophyllum, Rhus lancea and Acacia Karroo.

Topography

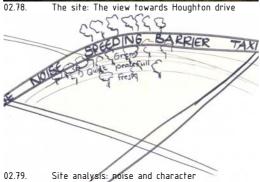
The site has a 45% slope on the northern side next to Houghton Road, which flattens out to

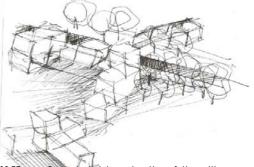




02.76. The site: the pine tree avenue

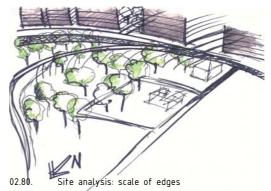






02.77. Concept sketch: exploration of the rolling character of the site

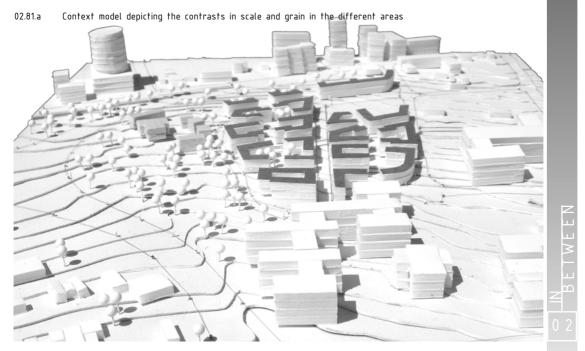
1% slope. The buildings are sensitive to the slope of the site to minimize disruption to the natural landscape. Pedestrian routes are placed relative to the slope and make use of the natural character by the provision of benches and small nooks for picnics and resting.





02.81. The site: exclusion

From the placement of poor opposite rich, inviting opposite closed, dense urban fabric opposite sprawling suburban, exclusive opposite inclusive; arise the question: when dealing with an island placed amidst these contradictions, how do you include and acknowledge all? By providing for the one inevitable leads to the exclusion of the other, yet again reinforcing the segregation inherited from political history.





02.81.b Context model depicting the site and its proposed development

BIO-PHYSICAL CONTEXT

•	Temperature
J	Average 11 K difference between day and night temperatures
	Winter temperatures around 15 K below comfort levels
-	January temperatures: 20 – 25 °C
-	July temperatures: 10 – 15 °C
_	(Napier 2000: 9.8)
)	Rainfall
J	Distinct rainy and dry season
	Summer rainfall: 125 – 375 mm
	Winter rainfall: 62 – 250 mm (ibid)
J	Wind
	Summer: northeast
	Winter: northeast to northwest
J	Humidity
	Summer: moderate
-	Winter: low (Holm 1996)
)	Climatic region
•	Temperate eastern plateau
-	Napier (2000: 9.8) describes the Highveld as predominantly grasslands with
-	scattered trees. Summers are warm to hot, with fairly dry air, relieved by
-	thunderstorms generated by thermal air movement. Winter days are pleasantly
-	sunny with clear cold to very cold nights.
Microclim	
	Vegetation
)	According to Joffe (2001: 27) few trees occur naturally in the Highveld, because
-	South African trees need warmer temperatures to thrive. Although most of the
	trees on the site are exotic species, they form part of the larger vernacular
]	urban landscape of exotic species in northern Johannesburg. Therefore the exotic
	species and add character to the site, and binds it with the context.
	The trees effectively attenuate noise pollution, air pollution and radiation,
	provide shade and increase humidity levels. Therefore, mature trees will be
	preserved where possible.
	Topography
	The site is on a north-facing slope, maximizing solar radiation.
	Sun angles and shading
	Strong solar radiation
	Sun angles: 26S 28E
	Noon altitudes of the sun
	Summer: 88°
	Equinox: 64°
	Winter: 40°
	(Napier 2000: 4.6.1)
	(Napier 2000: 4.0.1)

BETWEEN

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ONTEX

The constraints of the site are viewed as unique opportunities and design generators. Three of Trancik's theories are considered:

The **figure—ground** theory addresses spatial definition and the relationship between private and public space (Trancik 1986: 97); from these diagrams, the definition and hierarchy of spaces become evident.

From the figure—ground study of the area, it is evident that streets and social spaces in the urban fabric south of Louis Botha Avenue are well defined by a dense configuration of high-rise residential blocks. In contrast to the northern side, neither clear definition of streets nor hierarchy of spaces exists.

The *linkage* theory involves the organization of lines that connect parts of the city, the connective qualities of an urban settlement. By connecting parts of the city and relating buildings to spaces, an interface of interaction is created. The link can be described as a channel of movement. The spatial quality of the street determines its identity as a linkage (Trancik, 1986: 106).

02.82. Figure - ground study showing the difference in character scale and density in the different surrounding nodes



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Louis Botha Avenue is a clear divider of urban fabric and is a barrier; the lack in north—south connection makes linkage between the different areas very difficult.

The barriers created by Louis Botha Avenue and Houghton Drive result in an expanse of lost space. If the space is utilized, it can achieve better integration with the existing city fabric.

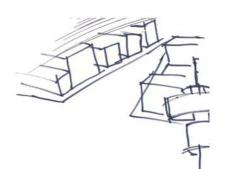
The *place* theory addresses the social responsiveness of an urban settlement. The cultural and human characteristics of an area must be understood to turn the area into a place with contextual meaning (Trancik, 1986: 112).

The essence of place in spatial design lies in understanding the cultural and human characteristics of a physical space. If in abstract, space is a bounded or purposeful void with the potential of physically linking things, it only becomes place when it is given a contextual meaning. Each place is unique and responding to the character of its surroundings Lynch 1992

According to Trancik, a mixed or integrated use assures greater richness and vitality than mono functional spaces (Trancik, 1986: 220). The proximity between housing and employment is addressed, and a vibrant community that could function on its own is established.

02.83. Ground - figure study





02.84. Contextual study: the hard edges of Hillbrow 02.84.a Context model: edges proposed



Accessibility

According to Bently (1985: 10), 'only places accessible to people can offer them choice.' Therefore, additional pedestrian and vehicular access to the site is provided and existing access points will be improved.

Activity Systems

Dewar (1991: 80) describes linear activity systems as accommodating of most intensive economic and social activities and facilities. The establishment of these systems depends on a number of actions:

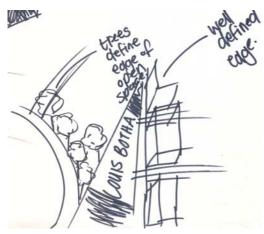
Compaction and densification of the city Hayward (1993) argues that the intensification of existing cities is necessary for them to become sustainable.

The site is located on the outer edge of the Johannesburg inner city within an institutional mixed-use strip separating the CBD from the suburban residential areas. Development of the area will therefore support the intensification of the city. High-density residential housing supports the incentive by the City of Johannesburg to promote inner-city living.

To assess the density of urban fabric, the figure-ground drawing of existing structures needs to be analyzed to illustrate the massvoid relationships of the urban fabric, thereby easily identifying problems in the urban fabric's spatial order (Hayward 1993).

The figure-ground study shows an expanse of lost space at the merging point of the urban fabrics of Houghton, Parktown, Hillbrow and Berea. The roads linking the site with the CBD to the north, Bedfordview to the east, and the M1 to the south need to be edged with a dense urban fabric to define street space and public squares along these systems. Louis Botha Avenue and Claredon Place Street are densely defined streets; in contrast, the urban fabric poorly defines Houghton Avenue.

> 'Create a grid of continuous, direct public transport, therefore maximizing the choice of the user. Channels should be reinforced by higher density housing, therefore benefiting the residents and contributing to the viability of the



02.85. Contextual study: the hard edges of Hillbrow and the soft edges of Houghton meets

02.86. Figure – ground study: lost space located around the chosen site



Louis Botha Avenue and Houghton Drive are high speed traffic channels, serves as physical and emotional urban dividers

Hillbrow and Berea

the figure ground study shows a clear hierachy of solids and voids.

High-rise residential blocks define high speed traffic channels

Houghton and Parktown

two to tree storey office blocks to the west and up market single to double storey houses to the east The Northern

side of Louis Botha avenue holds poorly defined urban fabric with undefined private open space. There is very little public open space. transport system' (Dewar et al 1991: 80).

Permeability

Permeability allows spaces to be easily reached in a number of different ways. The quality of permeability is the degree to which a street system is connected, integrated and intelligible (Hayward 1993: 86). According to Bently (1985: 10) permeability is where people can go and where not.

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Permeability has been achieved in the framework by using a grid system with a clear hierarchy of streets.

All areas can easily be reached on foot or by automobile.

Establishing view lines and pedestrian walkways towards the public park encourage access to green open spaces.

Grid

According to Hayward (1993: 88), the global connection systems of a city are the main streets, which have to be well integrated into the existing urban fabric. These streets need to have active frontages; the majority of retail and office, and some residential, activity occurs here; the public transport systems are also focused here. Local connectors need to feed them at intervals.

According to Caltrope (1990: 48), 'clean formalized and interconnected street systems make destinations visible, provide the shortest and direct path to destinations and result in security through community, rather than isolation.'

Therefore, the sites connection to existing urban fabric is improved.

Retail and active street frontages need to be created in the area.

The area is on the mayor taxi and bus routes, but a lack of designated drop-off and pick-up points cause taxis to stop anywhere. Therefore, stops for these transportation systems need to be integrated into the development.

A hierarchical grid system makes the use and permeability of the site easier.

Legibility

The legibility of the area is increased through the use of channels of movement public squares. By establishing a hierarchy of roads, the legibility of the area is increased. A hierarchy of roads provides:



02.87. The lively atmosphere of trading and transport in the inner city

02.88. The lively atmosphere of trading in the inner city



A set of legible access points and major routes through the area

A second level of internal movement routes

A third level of more private, pedestrianoriented streets

These levels are incorporated into the urban design through the establishment of vehicular roads and separate pedestrian walkways.

Public Transport

Van Der Ryn (1986: xiii) argues for urban sustainability through the use of diverse transit systems. He contends that modern technologies have deadened society to the natural world and that they have eliminated the common ground of communities. Because of the relatively cheap energy available in South Africa, the use of the automobile and of artificial climate control is encouraged. This factor is enforced by the lack of safe, affordable public transportation.

These issues cause the disbursement of urban life, with structures isolated from their environment. "Our cities are zoned black and white, private and public, my space and nobody's space" (ibid). The diversification of transportation options is necessary, but it is not feasible with South Africa's current forms of land use; the alternates are interdependent with clustering, densification and mixed-use planning.

Houghton and Parktown depend on private and public transport.

Hillbrow and Berea are low-income communities and mostly depend on public transport and walking.

According to the framework, a diversification of transport systems will be achieved through:

The introduction of a taxi rank

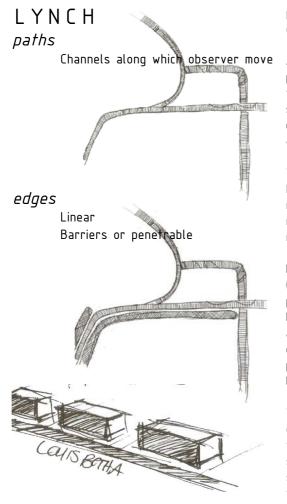
A pedestrian link with Berea

The provision of bus stops to tap into the existing bus systems

The availability of various kinds of public transportation allows the area to be developed with a greater emphasis on pedestrian activities.

Pedestrian Activities: Variety, Concentration and Proximity

Because the area is close to Berea, Hillbrow and schools where most users do not have their own transportation, pedestrian activities will be emphasized. The streets will be more



districts

Sections an observer move in and out of.

02.89. Concept sketches of Lynch's theories applied to the site in its context

pedestrian-orientated through the design and enlargement of pavements.

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According to Hayward (1993: 93), pedestrian proximity is a true measure of empowerment; therefore, because many uses and activities should be located within reasonable walking distance from where people live, a radius of 400 m is suggested.

The development is enfolded by residential blocks, providing an easily walk able neighbourhood with various uses, including residential and commercial activities and offices, resulting in a small, mixed-use community.

Hayward (Ibid) argues that the global connectors (main streets) will form the focal point for pedestrian activity, with public and commercial buildings, with a variety of functions within a 400 m radius around the focal place. The existing landscape will influence where focal places and districts will settle, as well as the location of major public spaces

The main streets have been indicated, and most of the functions and active frontages occur towards them. The main public transportation, such as buses and taxis, has been provided with stops at strategic points along the main streets for easy pedestrian filtering to the different functions.

BETWEEN