



A DEMOCRATIC CITY?

THE ROLE OF TRANSPORT NETWORKS ON SOCIAL COHESION

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Declaration

I declare that this research report is my own work. It is being submitted to the degree of Master of Urban Design to the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination to any other university.

(Signature of candidate)

(Date)

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NOTE: All photographs and diagrams in this document are the author's unless otherwise stated.

AT LAST.

Family (especially my mom and sister), friends and colleagues, thank you for your support, wisdom and encouragement through this journey.

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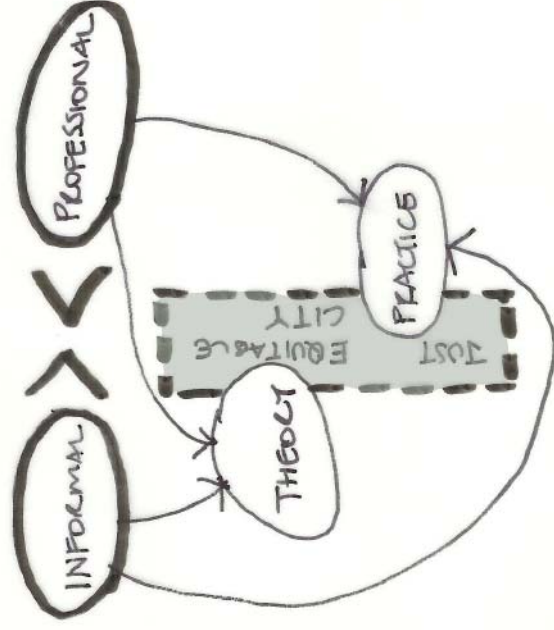
Abstract

Urbanity is political, thus, urbanists have to engage in political issues and systems in order to address the injustice of the past, especially in the context of South African cities. 2014 marks South Africa's 20th year into democracy, but what are the achievements and advancements in changing the legacy the country inherited?

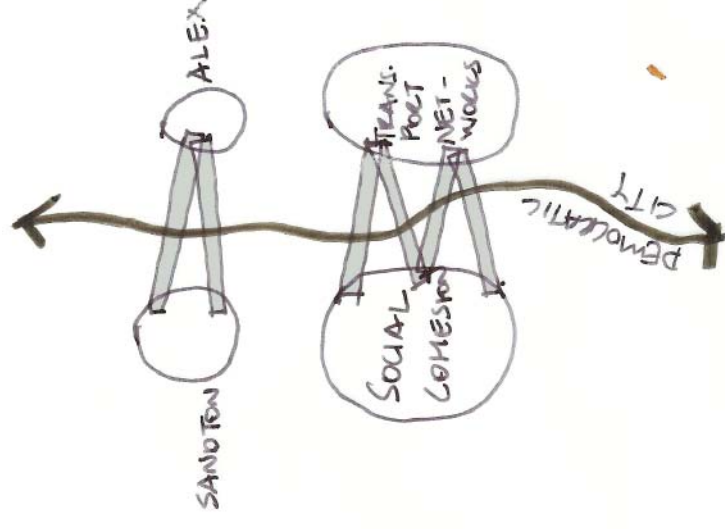
“What is the spatial layout/“blueprint” of a democratic city and society?”

“Democratic urban space is derived from the design for all concept” Kurdistan et al. 2012, 71. Burdett, 2013 argues that a multiple scale perspective informs us that social processes are the outcomes of often hidden spatial narratives, alongside more conventional social science considerations.

“It is perhaps the role of urban scholarship to bring informal role players and professional agencies closer together, both through theoretical reframing of the contemporary urban crisis and by the identification and explanation of projects and initiatives that are, by default or design, changing our urban world, as they contribute to making cities just and equitable” (Burdett, 2013, 365).



This research attempts to act on Burdett's call above. It discusses the inherited legacy of social, economic, and physical separation, in the goal of understanding the development trajectories proposed by the City of Johannesburg that are focused at addressing this legacy. Regional and neighbourhood projects such as the Gautrain, Rea Vaya Bus Rapid Transit, and Alexandra Renewal project are being implemented throughout the city. Very few projects such as the Corridors of Freedom focus both on the regional and metropolitan scale. This research specifically focuses on the metropolitan scale; it unpacks, and expands on the City's vision of a Socially Cohesive city. Furthermore, it proposes an urban design framework that identifies key projects at a metropolitan level that need consideration in order to change the image of Johannesburg.



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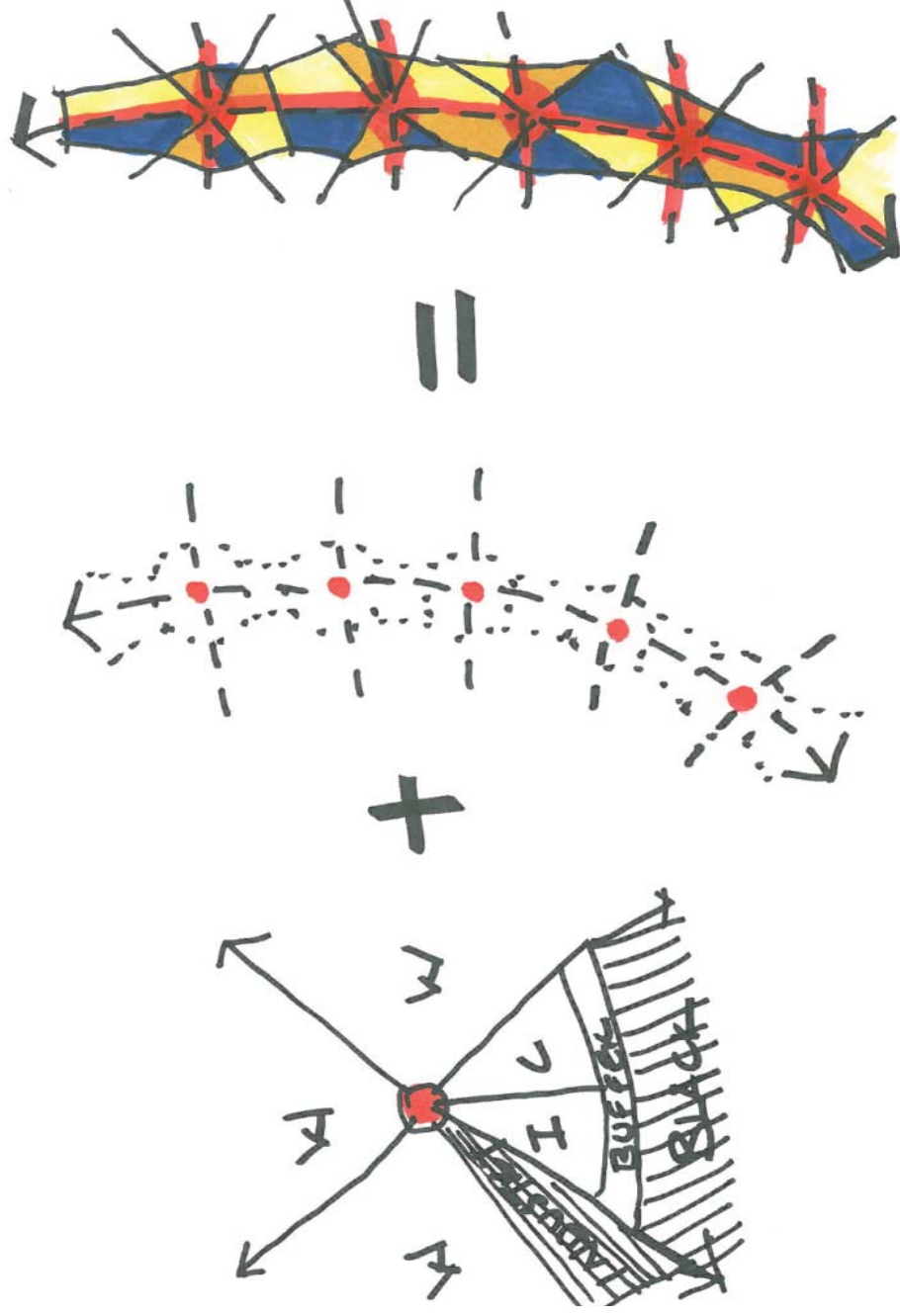


Fig 1: Design Hypothesis
Source: Author 2014

Part A: Introduction

1.1 Background

One may easily argue that social cohesion is likely to occur in social groups within communities with a shared sense of value/s or activities such as religion, class/status, sport, recreation or business. This observation is based on literature studied for this report. However, this research report seeks to address issues of social cohesion within distinctly diverse communities, bearing in mind that a community or a **society**, may be viewed as “a collective of those who have nothing in common” (Altay, 2013, 104). This research also seeks to answer how to create social cohesion in these communities.

“The City recognises that the transport network must support the creation of social cohesion, allowing all to play their part in contributing to a system that is less environmentally harmful, and that connects the city and its people in an inclusive way”(CoJ 2011, 72)

The Corridors of Freedom (COF) is based on a previous strategic city development plan called Joburg 2040 GDS and deals specifically with the aspects around transport redevelopment with the aim of “re-stitching our city to create a new future” (CoJ 2013a). Corridors of Freedom is thus a transit-orientated development (TOD) that uses a public transport spine to connect and restructure nodes along the spine. TOD's advocate for increased densities, mixed use, pedestrian friendly spaces and an increased use of public transport systems (Transit-Oriented 2011).

The Louis Botha Avenue Development Corridor is one of these COFs and runs North-South of the city of Johannesburg. It was once the main connection to Pretoria from Johannesburg, before the construction of the M1 motor highway in the 1960's. Today, Louis Botha Avenue divides communities it runs through such as Hillbrow, Berea, Orange Groove, Highlands North, Balfour, Bramely, Wynberg and Marlboro (see Fig 4.4). It stretches approximately 16kms through a diverse mix of disconnected communities.

1.2 Problem Statement

The use of buffer zones, (natural and man made land features used to segregate people on racial and ethnic grounds) through the implementation of Group Areas Act of 1950 in South Africa, transformed the spatial morphology of the country and its people, resulting in an exclusive and fragmented society.

Decentralisation and urban sprawl in Johannesburg further added to the city's fragmented morphology which Martin Murray (2004, 17) calls a ‘geographically disfigured metropolitan region of enormous economic and social contrast’ (see fig 3.5.1 & 3.5.2).

These are principles that contradict democracy. Thus plans are being proposed and implemented to rectify this paradigm. In the city of Johannesburg, one such plan is the Corridor of Freedom, a Transit Oriented Development (TOD) framework, adopted from cities such as Bogota, Curitiba, and Portland amongst others. The city sees this as a strategic plan that will “stitch” the city together economically, socially and spatially.

1.3 Research Question

Apartheid has such a clear spatial layout (which possess strong socio economic disparity and exclusion), a layout that is still a reality in cities such as Johannesburg even 20 years post-apartheid.

What is the spatial layout of a democratic city (a city designed for all, an inclusive city)?

Research Sub-Questions

What is the role of transport-oriented developments in creating social cohesion? How can social cohesion be created along communities on Louis Botha Avenue Development Corridor, especially between Alexandra and Sandton? How can this cohesion be expressed and represented spatially?

1.4 Research Aim

The aim of the research is to address the inequality of unjust spatial planning that is still evident in post-apartheid South Africa by considering its origin (sociology, Group Areas Act) and its implementation (buffer zones- natural green belts, industries and transport). It is not to unpack what an African Democratic city is? It looks at a specific area in an attempt to understand a broader national problem which may or may not apply to other cities or countries.

Objectives: to question current spatial planning trajectories proposed by the city of Johannesburg to address spatial legacy of apartheid.

The research also, proposes an urban design framework as part of the course requirements, that suggests a possibility in addressing (at design level) the research question above. This framework is intentionally left at conceptual stages

so as to not fall into a master plan proposal, therefore placemaking is not fully resolved and articulated. It is aimed at proposing concepts for discussions on possible “city futures” (E. Pieterse; 2006) through an interrogation of past spatial limitations.

1.5 Design Hypothesis

This research report departs from the conviction that due to apartheid spatial layout, that is prevalent in post-apartheid South African cities, there is no social cohesion. Therefore, interventions are required to address this and thus, frame what democratic city spatial layouts should be. It aims to find out whether this objective (of a, post-apartheid, socially cohesive, democratic city) is achievable through transit-orientated developments.

1.6 Research Methodology

This research report employs a **qualitative methodology** to address the research question; what is the spatial layout of a democratic city? Mapping, analysis and observation are employed to uncover the current spatial layout of the city of Johannesburg and contextualises these within literature. Due to potential ethical concerns and limited time to complete the report, the research purposefully excluded interviews and active participation of residences within the study area.

The literature review focuses on both “classical” modern literature and current/contemporary literature from journals and newspaper articles to reflect diverse views and opinions outside of traditional literature from authors such as H. Lefebvre, A. Malik Simone, A. Soja and D. Harvey. However, the contemporary authors consulted in this research report express a good understanding of traditional authors and refer to these in the points of view found in their writings. Authors consulted in this research report such as A. Amin, Sennet, A. Mbembe, S. Nuttal, E. Pieterse and Turok share similar views as K. Lynch, D. Harvey, A.M Simone and H. Lefebvre around ‘cityness and urbanism’.

The research uses case studies that are responsive (The Warwick Junction, Durban, South Africa) and conceptual (Melun-Senart by OMA) alternatives forms of urbanism.

Furthermore, the research does not follow the very rigid and colonial research structure in which topics are categorized in silo chapters, rather topics are interwoven into each other to reveal the relatedness between these and very complex nature of the subject matter.

2. Research Structure

As observed from the contents page, this research report is divided into 4 parts namely: introduction, the solution from CoJ, lived analysis and lastly proposition. Although these are presented in this report in a linear narrative, the process of engagement with each part was not, thus, some chapters within the different parts might read a little fragmented.

Part A- The introduction, consists of 3 chapters namely;

1. research outline
2. research structure
3. literature review

The literature is focused around 3 themes namely; unpacking of social cohesion as a design principle, use of transport as a tool for spatial transformation and lastly unpacks democratic design principles. Preceding this literature is a brief discussion that aims to give reasons why the choice of site for the research and contextualises the research topic within the history of South Africa.

Part B- The Solution from CoJ- Discusses Johannesburg's proposed answer to the fragmentation of the city, the Corridors of Freedom.

Part C- A 'Lived' analysis; understanding the problem- Discusses the limits of GIS based analysis observed from COJ in framing the problem and proposes a 'lived' observation based mapping and analysis approach.

Part D- Proposition- discusses design concepts and approaches the frame the proposed design framework.

The researcher had the opportunity to travel to the Katholiek University of Leuven (KUL), Belgium, to part take in a "World Urbanism" conference organised and hosted the KUL and presented the beginnings of this research report. for guidance and feedback from international urbanists and academics. The following poster was presented.

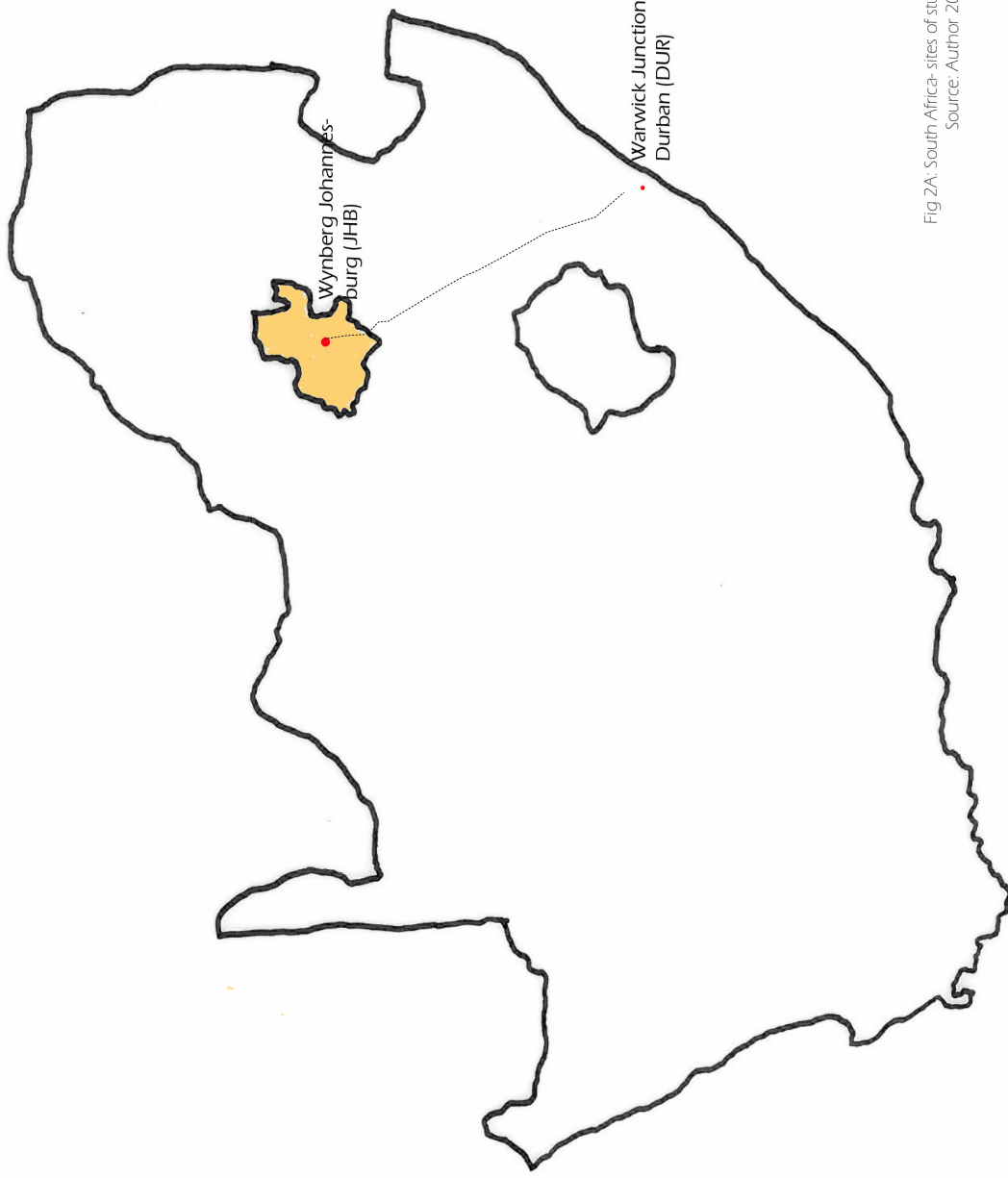


Fig 2A: South Africa- sites of study
Source: Author 2014

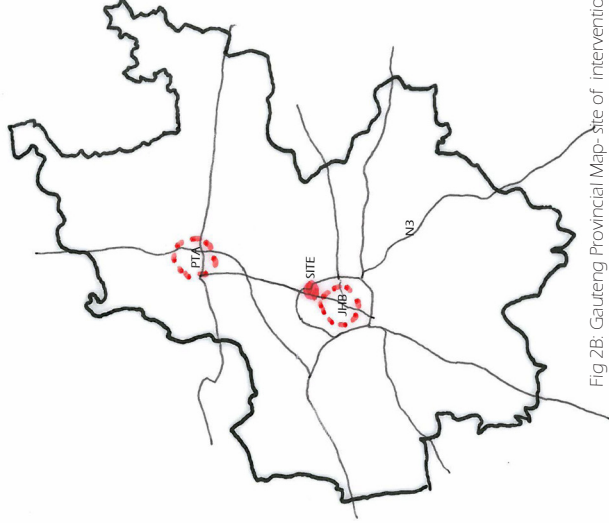
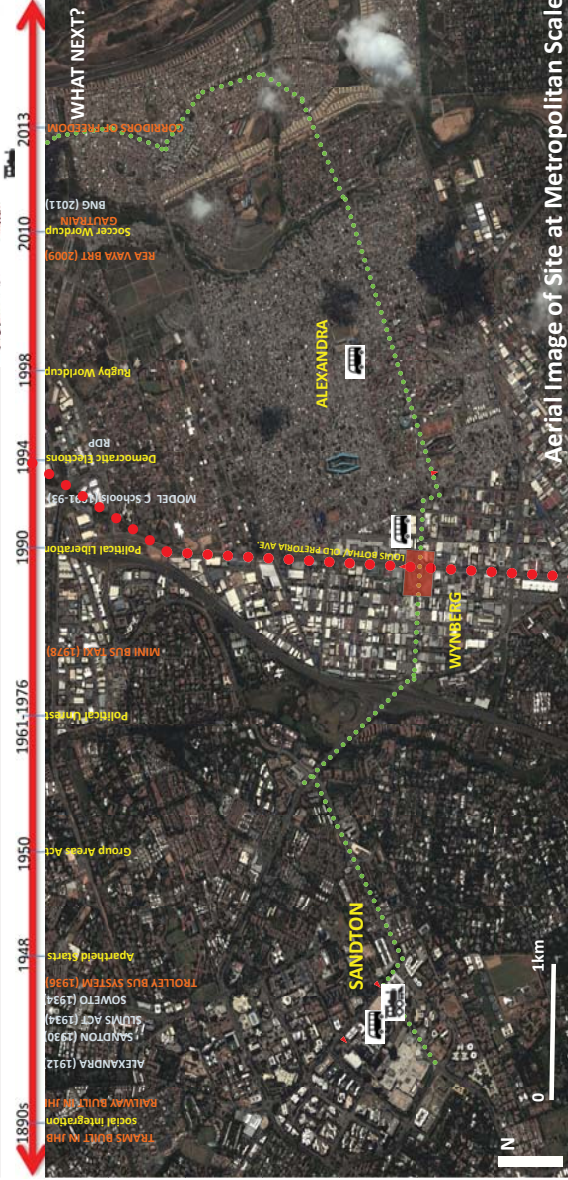


Fig 2B: Gauteng Provincial Map- site of intervention
Source: Author 2014

DEMOCRATIC CITY?

THE ROLE OF TRANSPORT NETWORKS ON SOCIAL COHESION IN WYNBERG, JOHANNESBURG



A city that belongs and includes?

Design hypothesis

Democratic City? A city that aspires? A city that bridges? A city that stands out? ???

Existing site conditions

conceptual responses

Vision

"Creating consciousness through concrete examples that place the social realities of a site at the forefront of political discussion. Our work does not merely contemplate the city, we change it, through direct intervention. We do this by creating a public sphere in the public sphere, in favour of the bottom-up, locally driven, action-oriented, top-down hierarchy of governance. In the public sphere of Johannesburg and Alberton, the bus route is a key element of the urban fabric."
Alfredo Jaume and Hubert Kumpfer of Urban Think Tank Philosophy

On 16th of June 2014, I travelled to Leuven, Belgium to part take in a World Urbanism Seminar that was organised and hosted by Katholiek University Leuven (KUL) in which projects and debates around world urbanism were presented, held between the 25-26th June 2014. These included students research work both studio and thesis research presentations and presentations by professors. I also took part in this conference and presented the beginnings of my thesis research proposal to further interrogate, and seek guidance regarding the development of my research.

I received a lot of positive feedback regarding the relevance of my research and the proposed site of the research exploration. Furthermore, I was also directed to a number of sources to consult to further develop my research, these were from a panel of professors, which included Prof Bruno De Mulder (Head of School of Urbanism at KU Leuven), Hannah Le Roux (Wits university), Prof Richard Plunz (Columbia) Prof Jeremy Foster (Cornell) and Prof Kelly Shannon (Oslo). Some of the sources that I was directed to included studying OMA's Melun-Senart proposal that looked at the in-between space and proposes a series of "bands" across the site that could be implemented at once or separately to connect the fragmented spaces around it. Closer to home, I was directed to the Warwick Junction (muti market) in Durban, to study how social cohesion could be achieved indirectly through economy and the positive use of negative spaces. I was also advised to be more critical about urbanism whose work I praise such as the partners of Urban Think Tank (UTTT).

The poster highlights the racial and economic separations that exists in Gauteng (discussed later), overview of South Africa time line as it relates to key social, spatial and developmental occurrences over the years. It also illustrates the current morphology/grain of the study area through an aerial image. A few photographs of the area express this morphology in its vertical built form. Thereafter a set of initial questions and responses to the research endeavour are presented to initiate the above discussion and feedback.

3 Literature Review

Pieterse (2006) highlights three themes for future research programme after having observed the short comings of current urban studies in South Africa, which is mostly policy base.

"...a lot needs to be done across the academy and beyond to create a flourishing environment for such lines of thought and practice. In the short term the balance will have to tilt towards theory work, linked with methodological retooling, spilling over renewed pedagogical practices... if we hold off on too much policy-specific research and rather focus on understanding the rich complexity and indeterminacy of urban practices carried through various networks, we may be in fact better positioned to see a decent policy response if it stares us in the face."

The three themes Pieterse (2006) refers to are:

Theorising postcolonial Cities- that is, learning on the wealth of knowledge AbdouMalik Simone had done and taking it further by asserting 'more robust conceptual frameworks'. The second theme is around '**networked entanglements**' which he (Pieterse) divides in two namely, social entanglement (this refers strongly to theories around social cohesion discussed earlier) and technology-built-nature-social entanglements which is about the relationships between natural, material and social dimensions of the city (Pieterse 2006, 408). In this theme, Pieterse highlights that "it will be necessary to explore new political vocabularies that can support and extent radical democratic citizenship in the postcolonial city" (2006, 409). The third theme is around **methodological sensibility** in social enquiry, which is broadly about recognising the limitations of research methodologies in framing problems. He mentions two types of researchers this awareness creates, reflexive and reflective. A reflective researcher is aware of the broader context where else a reflexive researcher is aware of one's ontological and epistemological assumptions and what it excludes and occludes (Pieterse 2006,409).

In retrospect, this research report finds itself touching on all these themes without being explicit on why this is the case. However, how does one begin to separate them when they are so related?

Judin (2014) argues that architecture is political, this statement is even more appropriate in urbanism. Urbanism is political, because at its core is people in the public realm. The research question, what is the spatial layout of a post-apartheid democratic city? In this case a South African post-apartheid city, channels one to specific literature and at the same time excludes some "classical" literature (H. Levebre, EW Soja, J Jacobs).

The research is not about unpacking what an African city is and therefore it does not include African urbanism literature in the core themes. However, it is about a specific environment, a different one, but not a unique one, therefore it may or may not relate to others similar to it. It can and should be compared to others like it in both Africa and the rest of the world.

The research is about a small piece of Johannesburg in a democratic setting. It questions what this (democracy) is, for this piece of Johannesburg, spatially. It unpacks why this understanding and articulation is necessary by discussing the morphological evolution of this piece of the city.

The research is born from questions based on the massive infrastructural upgrades (which included transport networks) the City of Johannesburg is implementing across the city to address the spatial fragmentation of the city post-apartheid. The city Mayor (Mr. Tau) argues for the goal of an inclusive and socially cohesive city through upgrades in transportation networks.

Literature around three key themes namely; transports oriented developments, social cohesion and democracy becomes apparent. Most of the immediate literature that lends itself to the research question is policy based, theorist such as E Pieterse, A Mbembe, S Nuttall, AM Simone and many others also attest to this limit in literature. As a design based research report, the literature includes design literature/case studies from both local and international sources around contested and left over spaces, to give some direction on the approach to the design proposal.

The following section on literature review opens by attempting to argue why this specific area of Johannesburg was chosen as the site for both enquiry and design proposal. It then contextualises the research question within history followed by the unpacking of the concept of social cohesion, which is seen as the goal Johannesburg needs to achieve. It goes on to discuss ways this is achieved in other contexts through social before returning to how the city plans to achieve this.

3.1 The urban edge

This chapter considers the urban edge as an area to focus on when addressing issues of transformation. It draws on theorists such as Kevin Lynch, R. Sennett, A. Amin and H. Judin in supporting why change in the urban physical landscape is best addressed on the urban periphery/egde.

'The edge may be more than simply a dominant barrier, if some visual or motion penetration is allowed through it – if it is, as it were, structured to some depth with the regions on either side. It then becomes a seam rather than a barrier, a line of exchange along which two areas are sewn together' (Lynch 1960, 100).

Image 1 & 2 illustrate the contrasting economic fabric of eastern edge of Wynberg and Sandton' CBD. The Wynberg image shows the relationship of formal business and informal trading and the activities in the public realm, the street. The non-visible social solidarity networks connecting an individual to the group ensure survival. The idea of 'society' or 'stokvel' as it is widely known by in townships, takes a very interesting meaning in townships such as Alex. It means an organisation formed by a group of people to save money together to assist in funeral expenses and to offer a helping hand in times of hardship, thus in these environments social networks are extremely important both economically and socially. Elsewhere in Sandton, the image of economy and social fabric is defined by the visible formal architecture and regulations imposed on the streets they are competing on. In Sandton, the street is for cars. What lessons can these contrasting environments teach each other? Would that lesson give clues on how to define a democratic city? Is there a link between them? Could there be one, if so, how?

'As we in Johannesburg search desperately for common values and shared consciousness, we wonder if it is possible to forge unity out of such lasting division. Is it possible to find patterns with common purpose and a sense in all this urban commotion?' Hilton Judin (2008, 143)

Judin (2008) highlights just how complex Johannesburg is, and that there is a yearning for commonality within the urban landscape. Alexandra and Sandton lie on the northern urban edge of the City (N3). Due to the strong contrast that exist (Socially and morphologically) within this metropolitan it thus, acts as a microcosm representing many other urban edges in apartheid cities of the country

Seeing the edge of the city as an important public domain of exchange and intersection instead of a limit is an idea

shared by a number of urbanists such as Kevin Lynch, Richard Sennett and sociologist such as Martin Murray.

Sennett's paper on Boundaries and Borders (2011) is particularly important to this research both contextually and theoretically. According to Sennett we don't live in our "imagined, ideal cities" that something went wrong even with our technological advancement, vernacular environment have proved to be smarter than ours (2011, 324). He elaborates that the centre of the city where the social and economic hub is, has changed, and the edge is where it is now. He goes on to describe the edge as either being a boundary (impermeable, limiting) or a border (porous, interactive zone) and links these concepts to nature, comparing them to cell walls and cell membranes respectively. This agrees to Lynch's perspective as noted from the quote above. Sennett (2011, 326) warns that to create a lively border, proposing 'amorphous open space' is not an appropriate solution, rather planners and designers need to rethink the urban edge. This is one of the reasons that the site of investigation for this research report is situated in a buffer zone, an edge between very diverse communities and urban forms.

Planners concentrated too much on visual legibility and not enough on 'scenes of social mixture' in all its complexities, preserving identity instead of providing opportunities for exposure to the 'unlike' (Sennett 2011, 330).

Amin (2006, 1012) highlights the challenges that current urbanism faces, those of 'negotiating class, gender and ethnic or racial differences placed in close proximity, with the spatiality of the city playing a distinctive role of negotiating... strangers, strangeness and continuous change', which are relevant perspectives for many South African cities.

How then do you negotiate strangeness, strangers (Amin 2006, 1212) and continuous change? For Johannesburg, the Provincial government (2009) believes the answer lies in readdressing mobility systems to improve accessibility and connectivity for all. Thus initiatives such as the Gautrain (a fast rail TOD connecting nodes in-between Johannesburg and Pretoria and OR Tambo International airport) and the Rapid Bus Transit (BRT) system are being implemented in and around the city (fig 4.1), questions then are, how and at what cost?

Mobility systems contribute greatly toward creating an image of any city, especially a democratic one. Brilllembuorg and Klumpner (2013) highlight how significant mobility is in bringing diverse poles together. In the last chapter of "The 100 mile city" (1992, 305-309) Sudjic compares

mobility to a 'force field around a high-tension power line, crackling with energy...' adding that these force fields have transformed cities, thus weakening the city centre's importance, resulting in a geography that is disorientating (1992). I would add a geography that is also socially unjust. Motorways and railwaylines contributed greatly in the spatial shaping of apartheid morphology. The following section discusses how the Group Areas Act of 1950 (a Legallised act, law and legislation which gave birth to this morphology) transformed South Africa's social and spatial layout.



3.2 Group Areas Act 1950

Louw (2004, 27) writes, 'Apartheid grew out of Afrikanerdom's painful encounter with modernisation and British imperialism'. He goes on to mention that this forced Afrikaners (Dutch settlers) into the cities creating resettlement which meant confrontation with other cultural and racial groups which were largely Anglo colonies with large black labour market. The Afrikaner felt this was unfair to them, thus a new policy to right this wrong needed to be established. According to Louw, apartheid was proposed by the Afrikaner's National Party (NP) as a better policy compared to the opposition Anglo's United Party (UP) who proposed segregation policy which separated people based only on race. DF Malan, leader of the NP argued that their party's apartheid (apartheid) policy was the better option because it went further than just separating based on races (horizontal separation), but based on ethnicity too (vertical separation) which they argued 'freed' blacks to politico cultural identity. Malan went on to argue that this would ensure white supremacy, which was not evident in the UP's segregation/white domination policy, this was subsequently put into action when the NP won the 1948 elections (2004, 29-31).

To ensure a smooth transition of white people into the city and more economically advantage platform, Hendri Verwoerd, minister of Bantu Affairs in 1950, proposed an act that restricted non-whites from movement in and out of the city while advantage /power was taken from non-whites to the hands of whites (Louw, 2004, 46). Thus, a redesign of South African cities became necessary, which required ethnic groups to be separated from one another (Group Areas Act). Added to this, it was believed that there needed to be separation of ethnic groups outside work areas and outlawing any interracial social and sexual relations (Louw, 2004, 50). This separation was spatially achieved through buffer zones (green belts, industrial belts, railway lines, major road ways and topography) in between different ethnic groups (Frescura 2000, para. 10-15).

Looking at an ideal apartheid spatial layout (see Fig 2) one can argue that the Group Areas Act had some positive considerations in that the industrial buffers were closer to the labour market (non-whites) and more social inclusion

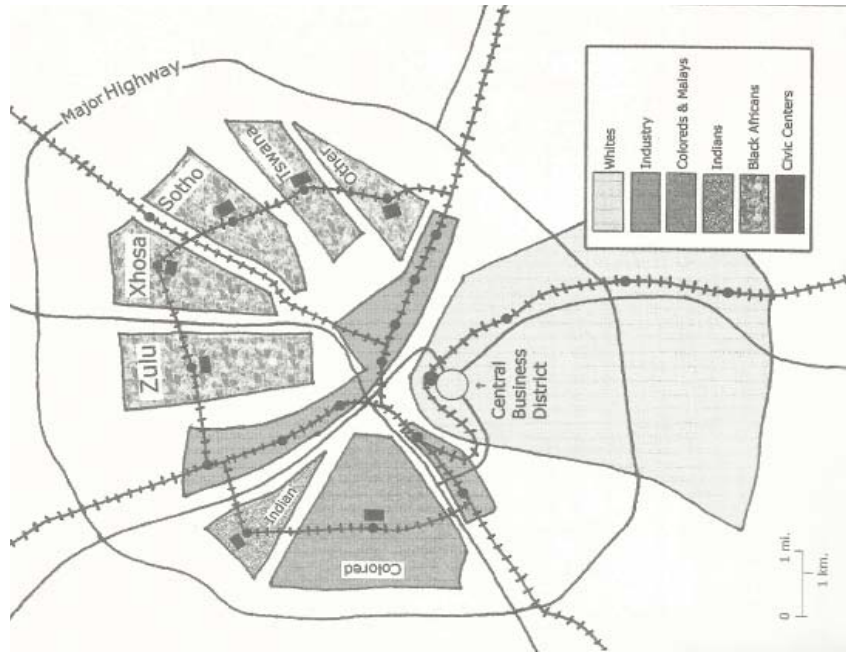


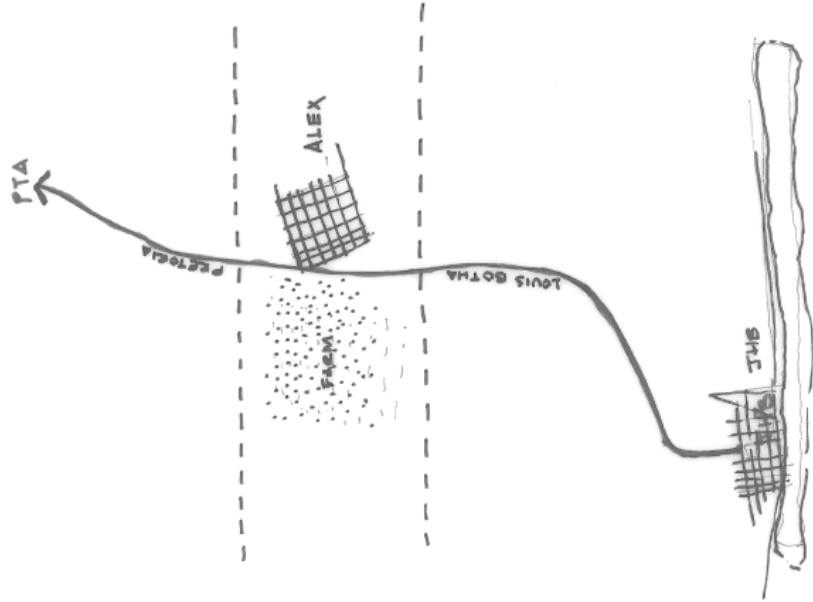
Fig. 3.2: Idea Plan of an Apartheid City
Source: Western, J. 1981. Outcast Cape Town [Cape Town: Human & Rousseau, 19]

as different people came to work together. In the same breath one could also question why only closer to industries and so far from the Central Business District (CBD), where participation in economic markets is at the heart. What is that saying about the potential of non-whites? However this report regards the potential of buffer zone to 'create' diverse social cohesion that extends beyond some of the reasons it was conceived. Furthermore, it forms an interesting edge for the foundation required to 'stitch' the fragmented segments of the city together.

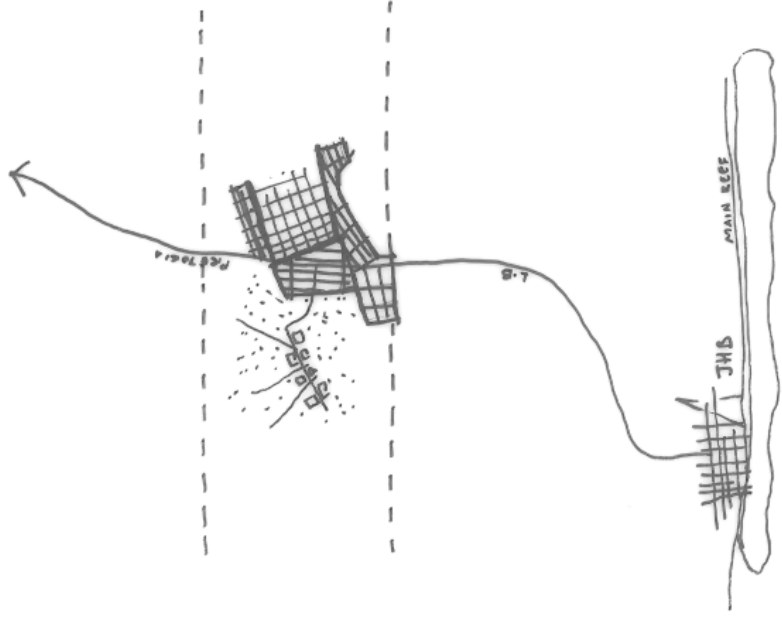
Not all of the fragmentation is as a result of the Group Areas Act. Murray (2004, 17-18) sites the growth of agglomeration of commercial offices in the periphery post-apartheid due to factors such as flexible employment, telecommunication and data processing which did not depend on the CBD anymore



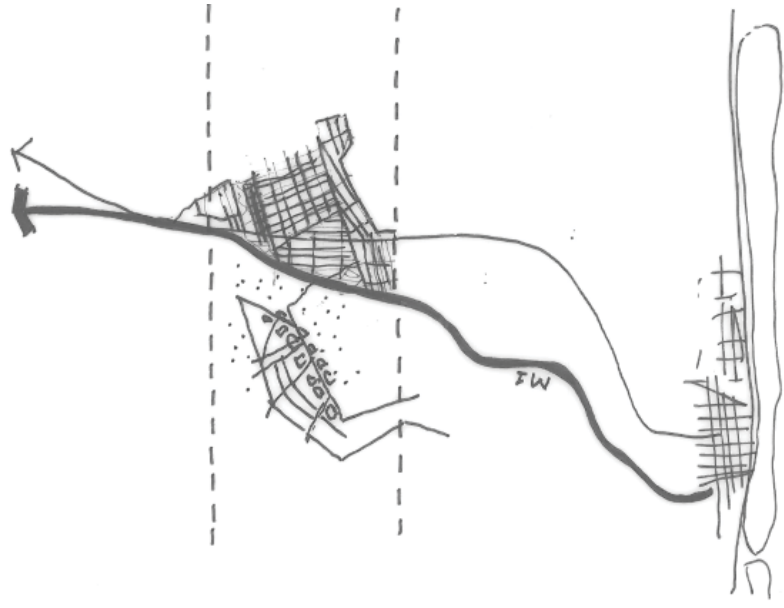
IMAGE 9& 10: Watt Ave. Wynberg and Maude St. Sandton
Source: Author 2014.



1912



1960s



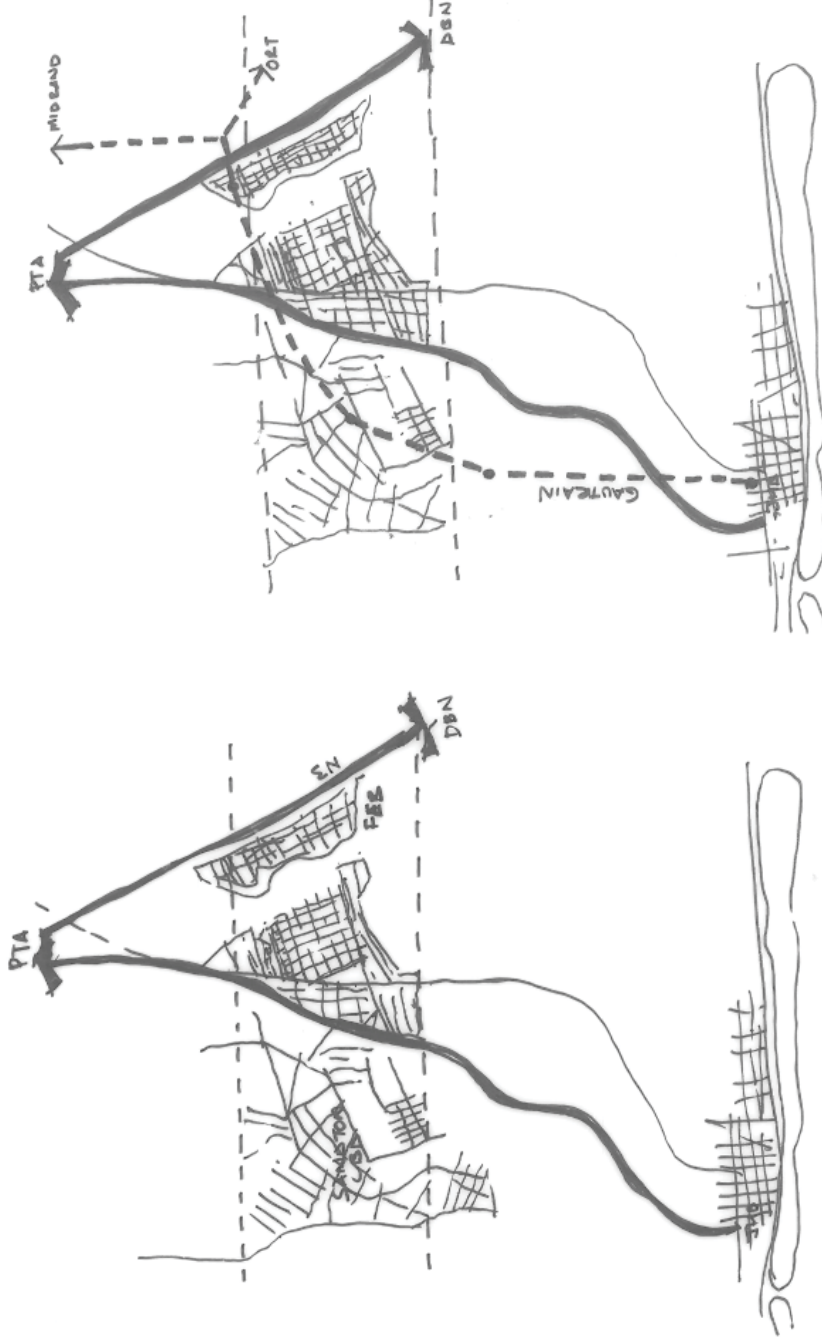
1975

Morphological Evolution

- 1912- Alexandria is established as a native and coloured township
- 1960's- Group Areas Act of 1950 restructures the morphology of the country and buffer zones (such as Wynberg Industrial zone) are introduced to segregate along racial lines
- Louis Botha Avenue's role as the connector is reduced by the construction of the M1 Motorway connecting Johannesburg and Pretoria cutting through Johannesburg's established northern suburbs (Houghton) in 1975.
- 1980-2002- Sandton's significance continues to increase, fragmented developments both in Sandton and Alexandra occur such as Alexandra Renewal Project
- 2010-SA host the FIFA Soccer World cup and this mega event propels major developmental projects such as construction and redevelopment of stadia, public transport (Rapid Bus Transit and Gautrain- fast rail network).

Revealed by the analysis is the deliberate exclusion, through physical and natural buffers/boundaries of Alexandra (a 'native/black' township based on the Group Areas Act of 1950 (elaborated on in the literature review).

Is there a way to address the fragmentation, one that connects divided communities? What is the significance of connecting communities in a post-apartheid democratic landscape? Why disturb existing social structures? These are some of the questions that arise in discussions around issues relating to social cohesion. This is arguably a fundamental principle of democracy. The following section attempts to unpack it and its significance in a post-apartheid democratic context such as South Africa.



early 1970-2002

2006-2010

3.3 Social Cohesion?

Social cohesion is a concept that is widely researched over the last couple of centuries, but it seems it is a concept that is not conclusively defined (Bruhn 2009, 31 & Jenson 1998). Jenson (1998, 17) argues that the 'meaning is dependent on the problem being addressed and who is speaking'. With that being said, literature on the subject does coincide on some levels and from that Jenson (1998) gives a good attempt at defining social cohesion. He draws on theories from "major social scientists" who have had an interest in the concept, including Emile Durkheim in the 1880s and Talcott Parsons later in the 1900s who according to Jenson (1998) developed theories on the concept from considering interdependence, shared loyalties and solidarities as key components of social cohesion. Bruhn (2009) goes further to trace its historical origins and its evolution throughout the centuries (late 19th-early 21st). Both Jenson (1998) and Bruhn (2009) acknowledge Durkheim as a key sociologist in framing arguments around the concept. Bruhn however associates the solidarity aspects of its origins to Gustave Le Bon (1896) and social integration to Durkheim just a year later. Throughout the centuries, there have been a number of sociologists and psychologists that have grappled with the concept of social cohesion (Bruhn 2009). So what are some of those key definitions? What is the definition going forth in this paper? In addition, how relevant is it in the context of South Africa in the 21st century?

Bruhn (2009, 45) and Jenson (1998, 18-21) both found that it is difficult to study/map social cohesion at macro scale, for a number of reasons such as lack of participation and fragmentation. Thus, Bruhn focused his study on "the group" addressing some of Jenson's (1998) gaps in research. His conclusions are that depending on the social ties (forces that bind a group together) and network connections different degrees of cohesiveness can be achieved irrespective of group size (Bruhn 2009, 47). This was based on a study of other researchers on the concept. According to Schmitt (2000, 2) citing McCracken (1998), social cohesion is **'viewed as a characteristic of society dealing with connections and relations, associations as well as territorial units'**. Jenson (1998, 4) puts it much simpler and defines social cohesion as **'a set of social processes that help instil in individuals**

the sense of belonging to the same community and the feeling that they are recognised as members of that community'.

This paper echoes the same definition that so many have articulated in that: social cohesion is a democratic process that recognises all the different members of the society and their role (especially economic) in shaping shared values of the society at large. This articulation is based on the five Dimensions of Social Cohesion that Jenson (1998, 15) derived, namely,

Belonging- isolation that talks about identity and a sense of being part of community,

inclusion- exclusion, talks about a degree of inclusion/exclusion in the economic market,

participation- non- involvement refers to working together of different bodies within a community,

recognition- rejection addresses the differences that exist and that these should not be undermined but nurtured.

Legitimacy- illegitimacy refers to the recognition of the legitimacy of bodies that act as mediator within the community. Therefore based on the above definitions, racism, homophobia, classism, xenophobia and other forms of social discrimination are the opposite of social cohesion.

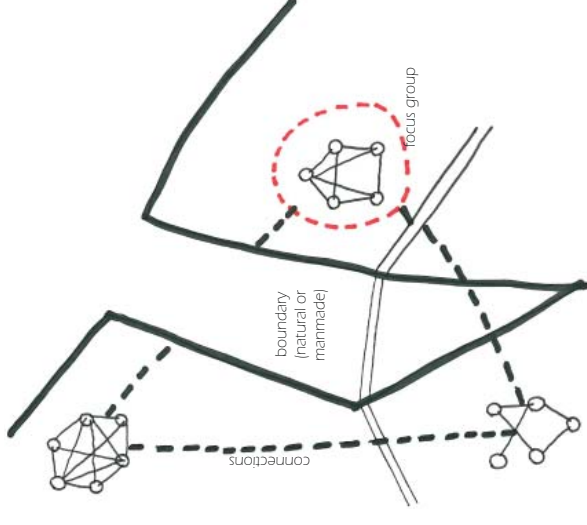


Fig 3.3.3 Interpretation of Bruhn (2009) and Jenson (1998) how to study social cohesion-focus on a group rather than a macro scale Source: Author 2014.

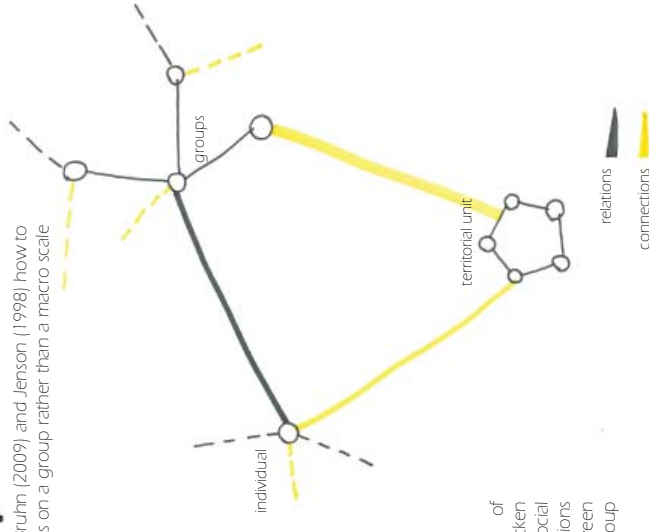


Fig 3.3.4 Interpretation of Schmitt(2000) and McCracken (1998)-definition of social cohesion- nature of relations and connections between individuals and the group Source: Author 2014.

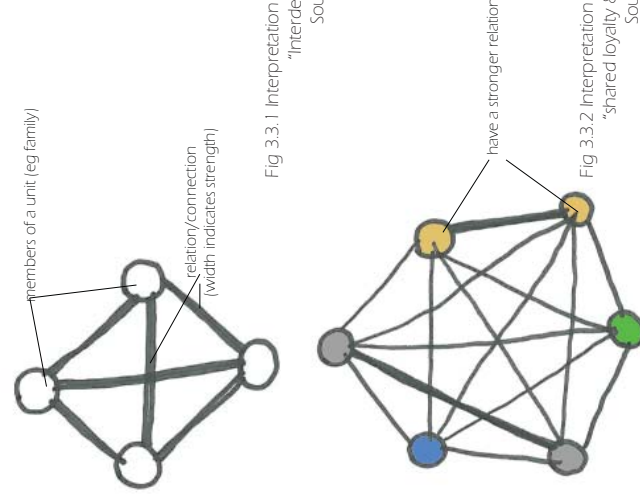


Fig 3.3.1 Interpretation of Parson's (1990) "interdependence theory" Source: Author 2014.

Fig 3.3.2 Interpretation of Parson's (1990) "shared loyalty & solidarity theory" Source: Author 2014.

'a set of social processes that help instil in individuals the sense of belonging to the same community and the feeling that they are recognised as members of that community'

Fig 3.3.5 Interpretation of Jenson (1998) social cohesion Source: Author 2014.

How does all of this relate to the context of this research? What is its relevance to South Africa?

The second and very significant dimension of social cohesion as mentioned above is inclusion-exclusion; social exclusion played a significant role in shaping South Africa's socio-political and spatial landscape. It is interesting to note that whilst parts of Western Europe and Canada were moving towards 'versions of social democracy, Christian democracy and positive liberalism' (Jenson 1998, 12). Post 1945, South Africa on the other end of the globe was moving towards apartheid in 1948 (Louw 2004, 27-50), which was later strengthened by the implementation of the Group Areas Act in 1950. This law's legacy continues to test South Africa's young democracy. This is elaborated on in more detail, later in this research report. It is important at this stage to discuss social exclusion and social capital in the context of South Africa's history.

Social exclusion

Schmitt (2000, 4) describes social exclusion; as the denial of citizenship rights (civil, political and social) which major societal institutions should guarantee. South Africa has seen first-hand what the impacts of social exclusion with the implementation of the Group Areas Act during the apartheid regime. A brief scan of the spatial morphology of the City of Johannesburg reveals the impacts of social exclusion with the increased number of poor living conditions (Schmitt 2000, 5) in and around the city in areas such as Ivory Park, Alexandra, Diepsloot, Orange Farm and the likes. Another substantial part of social cohesion is social capital.

Social Capital

Social capital encompasses the other four dimensions of social cohesion that Jenson (1998) describes. Schmitt (2000, 6) sites a number of authors to formulate a description for social capital which he describes as the sum of institutions and the quality of relationships which binds a society. Furthermore, it includes civic responsibility, democracy, governance and this aspect is public in nature (Schmitt, 2000).

Coleman (1988), North (1990) and Putman (1993) describe social capital from three different but similar points of view which Schmitt (2000, 6) notes. Namely, Putman describes social cohesion having a horizontal relationship (individuals from same category e.g. race, class, age), Coleman includes a vertical relationship as well (diverse individuals from different categories) and lastly North's description highlights the important of political

legal relationship as well. These are key indicators of how socially cohesive a society is explained later in this research report. Schmitt (2000, 6) also highlights that social capital is directly proportional to the economic well-being of a society, furthermore investigations show that a more cohesive society has improved dimensions of welfare. If you consider Sandton & Alexandra (discussed later) social capital plays an important role in defining the very different socio-economic statuses of these neighbourhoods that are so close to one another. Sandton and Alexandra represent a microcosm for SA. According to the World Bank, South Africa recoded a GINI coefficient (measuring disparity) of 0.63, an increase from 0.59 twenty years ago (see fig 3.4.5), furthermore 60% of black South Africans live below the poverty line while the 9% white population of the country earns 8 times more than the black (economic interest: 2012). This raises questions about the country's levels of cohesion with such disparity.

Bernard's Conceptual framework for Social Cohesion

Bernard (1999) builds on Jenson's (1998) dimensions of social cohesion and adds three domains to consider in social cohesion namely economic, socio-cultural and civic domain, cites Struwig et al (2013). They further elaborate on these domains and construct a pie chart to use when researching and analysing social cohesion (Struwig et al, 2013). What is important to note about Bernard (1999) and Struwig et al (2013) is that it is when you deconstruct social cohesion, that you really understand that it is not just about 'forced integration', but more about inclusion, shared values and basic human needs such as education, employment, social networks and protection of rights.

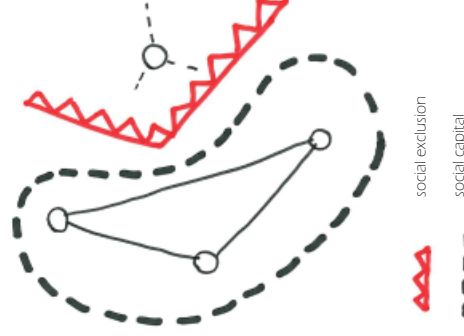


Fig 3.4.1 Interpretation of Schmitt (2000) theory of social exclusion and social capital
Source: Author 2014.

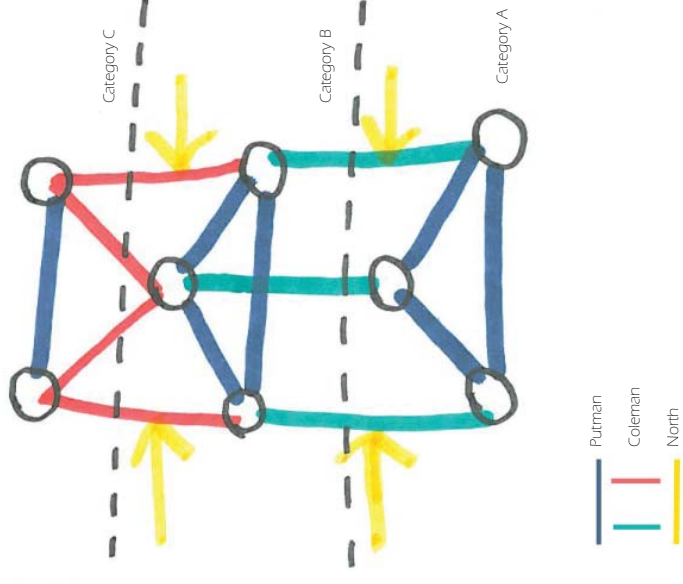


Fig 3.4.2 Interpretation of Coleman (1988), North (1990) and Putman (1993) description of social capital
Source: Author 2014.

socio-cultural domain

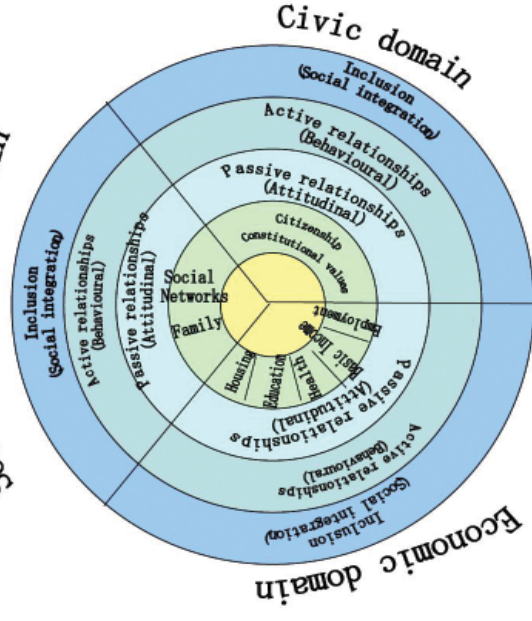


Fig 3.4.3: Bernard's Conceptual Framework for Social Cohesion
Source: Struwig J. c2013. Towards a Social Cohesion Barometer for South Africa
CSEI Cape Town, p. 04.

3.4 Social Cohesion in South Africa

'Since 1994 we have sought to create a united cohesive society out of our fragmented past. We are called upon to continue this mission of promoting unity in diversity and to develop a shared value system, based on the spirit of community solidarity and a caring society. Our shared value system should encourage us to become active citizens in the renewal of our country.' President Jacob Zuma, State of the Nation address, June 2009 [source: Struwig et al., 2013c].

This speech is particularly important for a democratic South Africa because it highlights what the values of a democratic society ought to be and more importantly, it affirms that this is a continuous process that needs active participation by all to embrace and uphold. The question that arises from this is whether South Africa is on the path towards improved levels of social cohesion. The answer to that is contained in Struwig et al's (2013c) research paper titled 'Towards a social cohesion barometer for South Africa', which consolidated and categorised social cohesion into three main domains based on Bernard's (1999) conceptual framework above (fig 3.4.3). The table 1 briefly describes their findings.

Variable	Domains of social cohesion		
	Economic	Socio-cultural	Civic
Age groups (16-19, 20-29, 30-39, 40-49, 50-59, 60-69, 70+)	-Common values exist between people of same age group -Younger people are in favour of economic redress more	"Born freees" (16-19) are more tolerant towards the other.	-Younger people generally have low civic cohesion, thus are less active when it comes to voting
Race	-Coloureds, Indians and Whites are more economically cohesive than Blacks and have a more positive outlook about their economic circumstances	-Whites are less socio-culturally cohesive than blacks due to a fear of crime	-Blacks are more civically cohesive and vote more than Coloureds, Indians and Whites
Living Standards Measurement (LSM)	-medium LSM has low economic cohesion -low LSM has high economic cohesion and support economic redress	-medium to high LSM is more socio-culturally cohesive -low LSM is less (xenophobic)	-medium and high LSM scored higher than Low LSM,

Table 1: Social Cohesion in South Africa
Source: Author, based on Struwig et al. (c2013). Towards a social cohesion barometer for South Africa

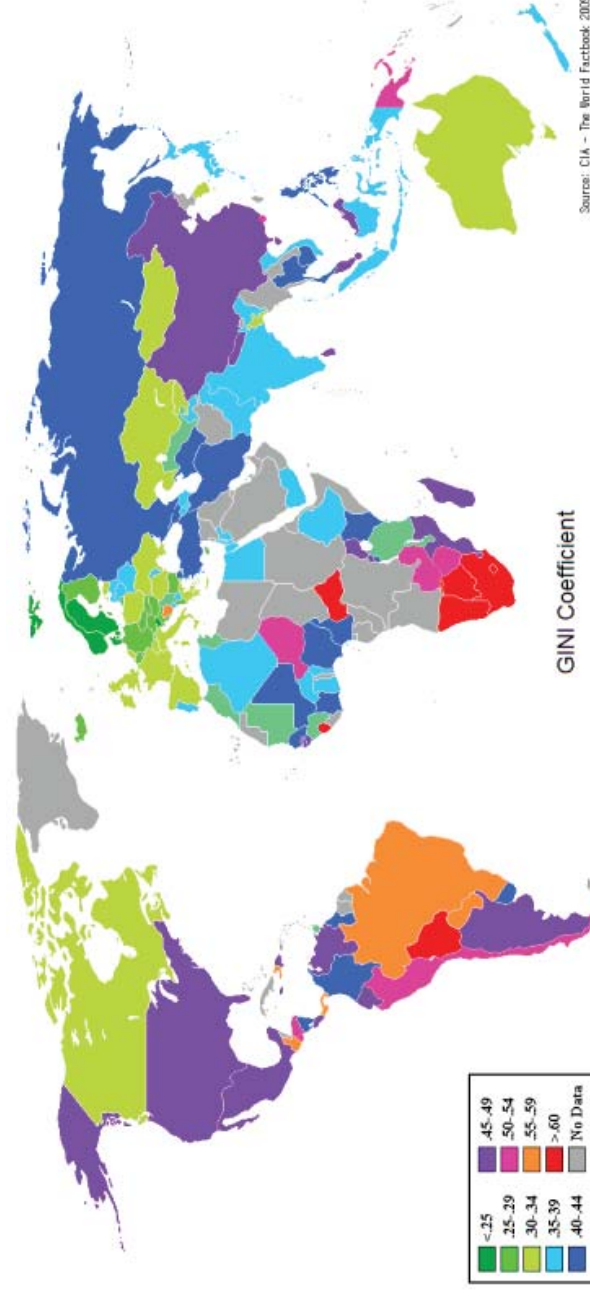


Fig 3.4.5. Diagram illustrating World GINI Coefficient. (2009)
Source: <https://economicinterest.wordpress.com/2012/09/04/no-longer-the-king-of-the-playground/>

Over and above what table 1 above illustrate, it was further found that gender has no influence to the level of social cohesion in all domains and that education levels impact cohesive levels, that is, respondents with at least a matric qualification were more cohesive (Schmitt et al c2013, 23). Therefore it is clear to see that race, living standards and education play an important part in the level of social cohesion in South Africa, and thus interventions to improve it need to focus on these factors. Looking at Gauteng province in terms of the domains of social cohesion (socio-cultural, economic and civic) illustrated through maps tracing race, economic activity and 2014 election results show how fragmented and non-cohesive the province is.

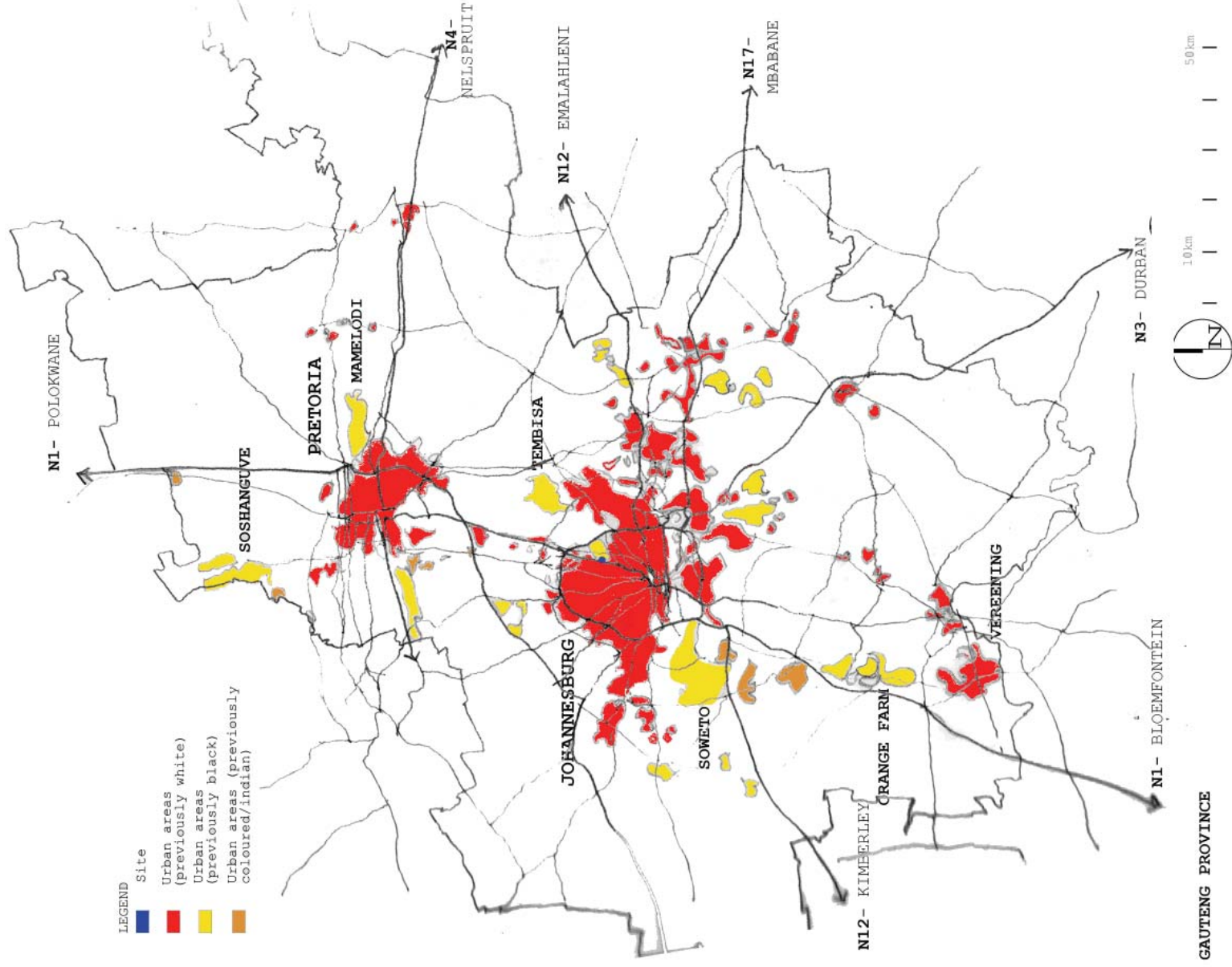


Fig 3: Diagram illustrating Gauteng Racial Distribution and Major Roads
Source: Author 2014 after Informal Studio Mariboro South (2012, pg 7)

Gauteng is a spatially fragmented province. This fragmentation is manifest also in its social, economic and political layout. The study area highlights this fragmentation. It sits on the urban edge of the province surrounded by the ring motor highway that defines this edge and strengthens the fragmentation. Alexandra is the only area that is previously (and still is) black that is within the ring. All the other black areas are outside it (see fig .5.1). It is also clear to note that most of the previously white areas are within this ring and closer to the central business district/s. The man made buffers such as the M1 highway and the industrial zone around Alexandra limit its connections to the areas around it.

Based on fig 3.5.2, there are more businesses per square kilometre in Johannesburg CBD, Ekurhuleni and Sandton. All of these areas are previously white only areas. This proves the statistics of the country's GINI coefficient levels being one of the most unequal in the world. However fig 3.5.2 seems to only indicate the number of formal businesses/sqm. A lot of business in 'black' areas is informal (take the mini bus taxi industry, a highly profitable business venture), it would be interesting to observe how this illustration adjusts (if at all) with the inclusion of the informal business market.

One cannot separate economic data from educational levels of people of employment age, that is 16-65. Statistics show that South Africa has an unemployment rate of 25%, whereas countries with similar social conditions such as Brazil and India are 6.2% and 2.7% respectively (COJ 2011, 53). Furthermore, research also reveals that the level of education in terms of numeracy and reading (which has a direct influence on employment) has decreased over the last 10 years, with a notable racial difference. That is, the greatest population with the lowest levels of education (no schooling) is the Africans at 4.3%, compared to 0.4% whites. Inversely the population with the highest levels of education (degree or higher) is the white at 30.5% compared to Africans at 4.1% (COJ 2011, 52). Generally the Province, especially the city of Johannesburg consists of more people with a matric certificate as their highest level of education. Education and ultimately employment is therefore an important consideration for changing the social, economic and ultimately spatial morphology of the city. Innovative and sustainable ways of generating income from the large pool of unemployed youth is another consideration.

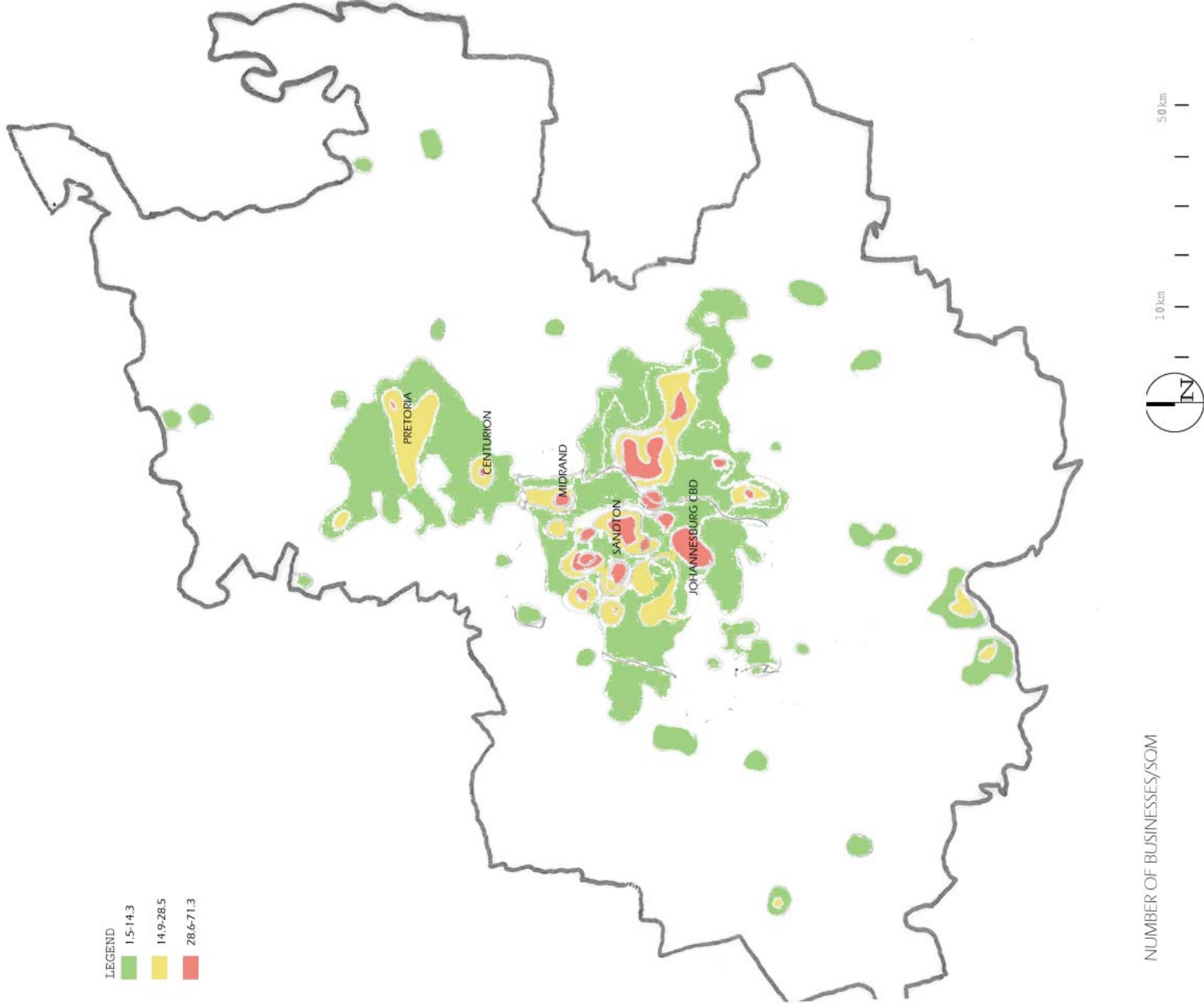


Fig 3.5.2: Economic Activity across Gauteng 2010
Original Map Source: GCRO [n.d.] GCRO. <http://www.gcro.ac.za>

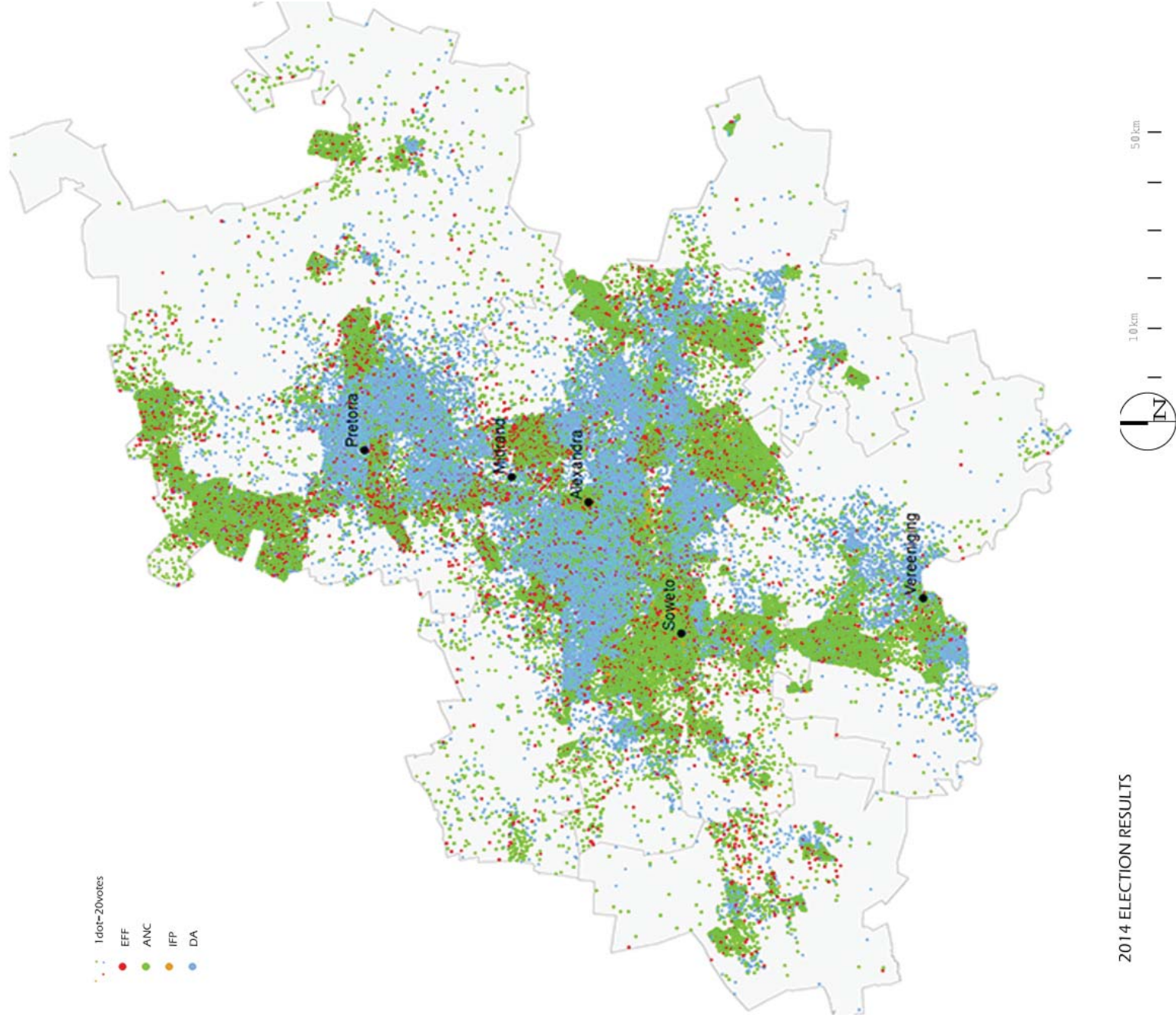


Fig 3.5.3: 2014 Election Results map
Original Map Source: GCRO [n.d.] GCRO. <http://www.gcro.ac.za>

There is also strong correlation between political association and race within the province. Fig 3.5.3 illustrates the results of the 2014 general elections within the province. It shows that previously white areas voted for the Democratic Alliance (DA), a party associated with white rule and people. What is interesting to note though is that unlike in 1994 elections, black areas are not as unanimous with voting for the African National Congress which took power since the country's first democratic elections. Could this represent a political shift that is emerging? Or is this a political/civic manifestation of service delivery protest which gained prominence in 2008? If so, how can social urbanism intervene?



Puente Mirador, Medellín- source: Fontent A 2015, originally from Open Architecture Network

3.5 'Social Urbanism'

The concept of designing cities from a social perspective seems to be widely investigated and tested in Latin American countries, Canada and European countries and not so much in African countries. This could be based on the lack of conclusive agreement on what social cohesion is and that it's an unquantifiable developmental paradigm and thus politicians and investors are too sceptical of the risk involved (Vranken, n.d.03, 13). Vranken also warns that there is a 'darker side' of extreme social cohesion, that of constraining and oppressive/ exclusionary and prevention of social mobility and innovation especially in members that do not belong to the group/ neighbourhood (n.d.04). This has the potential of resulting in xenophobia, 'gansterism' and other crimes associated with cohesive societies. This can be overcome by a change in governance interventions, by proposing initiatives in these rough environments that are socially driven, as did the Mayor of Columbia in Medellin (Turok 2014, 32). In the early 1990's, 'Medellin was on the brink of self-destruction, sparked by drug-related conflict fed by profound inequality...' (Turok 2014,32). The Mayor pioneered transformative and catalytic urbanism projects to redevelop former industrial sites and rundown buildings for a range of new uses, these included a convention centre, innovation hub for business, headquarters for large regional and international corporations, writes Turok. Furthermore, these and many other interventions improved economic development both at macro and micro scales. Turok also highlights projects that were not very successful such as the old railway station that was redeveloped rather than upgraded (elaborated Turok 2014,32). However there significant lessons Medellin teaches, these include the following:

3.5.1 Lessons from Medellin

Urban Governance - traditional top-down forms of governance have not been very successful in addressing issues of social urbanism. Thus urban governance has become a prevailing topic in research to propose alternative forms of governance that address the issue (Vranken n.d, 11). A more bottom-up approach is tested in a number of cities around the world, especially Latin American cities and European cities, that involves participation of all members and networks in decision making.

Turok (2014, 32) refers to 'a **mature political leadership**' that puts the needs of the community before politics, that is, the continuation of projects initiated by the previous governing party.

Economic Restructuring - both Turok (2014) and Vranken

(n.d) highlight the change from industry-based forms of economy to service/local/informal based economies. Thus industrial sites such as Wynberg in Johannesburg are very good 'incubators' for mixed use and service based space with a unique identity.

Socio cultural innovation - the idea of investing in people as capable of taking care of themselves and the spaces that they live in is a fundamental shift that is required from government institutions who still believe welfare is the only way of developing underdeveloped communities. This does not necessary equate the adoption of Margaret Thatcher's drastic neoliberalism approach to governance. It is rather a developmental approach that invests in 'people, places and jobs, through first-class public facilities and infrastructure' says Turok citing Medellin's approach to development. Building a civic culture that enhances a sense of ownership in people on public infrastructure results in a respect and protection there of (Turok 2014, 32). Vranken warns that this should be done strategically as most projects of this nature fail due to lack of investment return (n.d, 13).

Urban Diversity - Vranken (n.d) talks about the importance of neighbourhoods in society and how diversity can both enhance and restrict cohesion. It could either be a source of bonding capital (especially for low

income neighbourhoods) or bridging capital (n.d, 11). According to Turok (2014, 32) the Mayor of Medellin, Sergio Fajardo said "Our most beautiful buildings must be in our poorest areas"; that statement resulted in a number of urban integrated projects that transformed perspectives of marginalised communities.

The above statement needs clarity, what sort of beauty is the Mayor referring to? Is it the glamorous, high maintenance buildings such as those found in Sandton, which a large majority of the population cannot afford to maintain living in? Is he rather, referring to a different kind of beauty? One that is robust, innovative and sustainable. An approach that "open building" ideologist such as John Habraken advocate for, where in all role players, be it professional or end user, play a part in decisions regarding the design, implementation and eventual use of the space and/ the environment (Kendall 2006) see fig 3.5.1.

Warwick Junction in Durban, South Africa is an interesting market space and transport interchange that articulates this alternative kind of "beauty" that responds to its immediate context in a robust and sensitive fashion. It does not come without its shortcomings, the following sections analyses the interchange/market using the major issues raised in this research report, namely: morphology, transport networks and social inclusion and social capital.

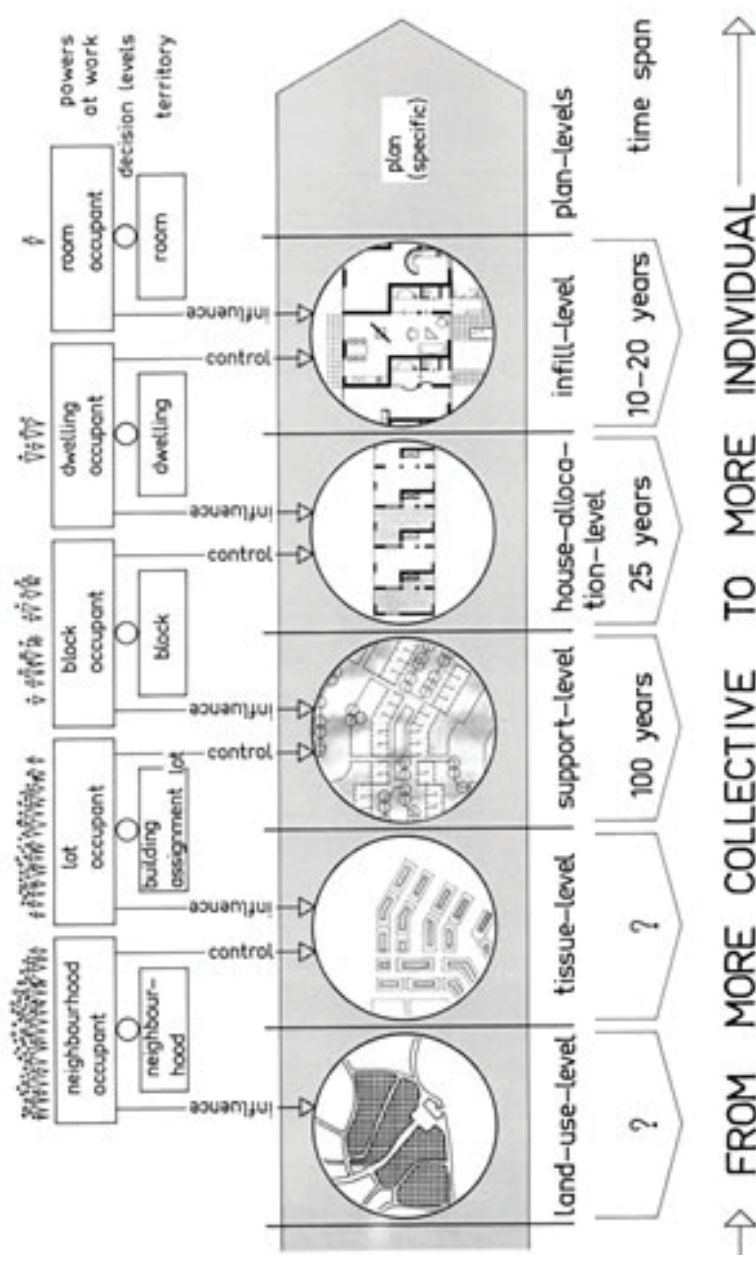


Fig 3.5.1 Layers and levels of public participation in open building source: Kendall 2006 19



3.5.2 Emakethe (Warwick Junction)

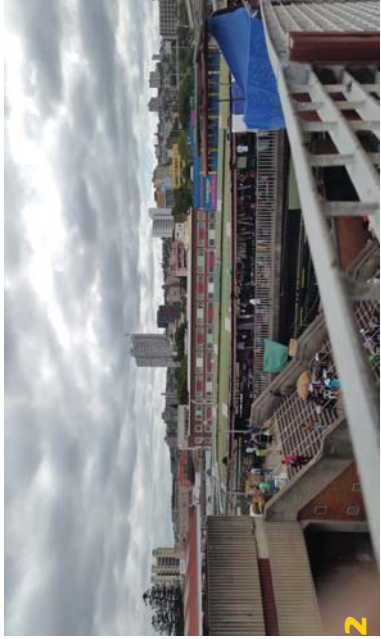
In June 2014, at the KU Leuven World seminar, where I presented the beginnings of this research I was directed to two case studies to look at, Rem Koolhaas's Melun-Senart competition entry and Durban's Warwick Junction. One I had not heard of, the other I had read about and been to but never paid much attention to. The question that I kept asking myself about what I was directed to, was why? And how do these relate to my research? I read up a bit more on both of them, but could not really answer and find clear relevance to my research. So I decided to visit the other, at this time there was already a buzz in the architectural circles about it. This was during the 2014 UIA Conference which saw over 4000 architects, academics and students of architecture gather in Durban under the theme of architecture elsewhere, where in Warwick Junction featured quite strongly in the discussions and debates framed (Architectural review 2014). I could not attend this conference but I knew I had to go and experience

for myself what this "elsewhere" that Warwick Junction presents and what lesson can I learn from it. Is it a space that is different, scary, a space for experimentation or a space for tourists? What is the elsewhere it represents?

I have been to quite a few local markets in Johannesburg including Oriental plaza in Forsburg, Kwa Mai Mai and Faraday muti markets in the city centre. These markets were, to me, the same as Warwick Junction. Thus I spent half of the festive holidays in December 2014 visiting a few friends in Durban with the intention of getting them to take me to Warwick Junction. When I mentioned the idea to my friend Skhumbuzo, a pastry chef in Durban ICC, he was hesitant, told me a not so romantic story of how he was mugged there as a student. A friend of his, Sbekezelo, a recent graduate from Durban University of Technology (DUT) close to Warwick, shares a different story. He assures me I will be fine, he catches taxis home from there all the time and asked when do I want to go. A couple of days later we left for the market, my eye was

on the spatial aspects, the beautiful double volume spaces, light quality, often compromised pedestrian environment and the 3 dimensionality of the various spaces. They walked me through the market explaining a number of the various nodes such as the small theatre north of the market, connections to DUT, interchanges, taxi ranks, bus stations and markets within the precinct.

It was not until we got to Denis Hurley street that 'everything came together', I saw the diversity of spaces, uses, buildings and people next to and on top of each other dancing in synchrony to the hooting sound of taxis around us. I saw a ribbon of minibus taxis parked along what looked like a Mosque, a Cathedral and a beautiful contemporary build in between the two religious spaces. This 'harmony' is not evident in the Oriental plaza or in Kwa Mai Mai muti market in Johannesburg. Perhaps Hilton Judin (Constable 2014, 56) refers to this 'elsewhere'. A place where difference is acknowledged, celebrated and not merely tolerated.



Durban University of
Technology
Steve Biko Campus

2



Emmanuel Cathedral
Parish Centre
Juma Musjid complex

3



4

DUT RES and
wholesale store

theater



early morning market

transport nodes

public social buildings

fly over muthi market

markets of Warwick

Victoria market



1

1-a view from inside the early morning fruit and vegetable market

2- View on the fly over bridge looking towards DUT's new residence just behind the market, and on the background Musgrave

3- Still on the fly over bridge, north of the market are the 2 motorway bridges weaving over the market

4- 'Sangomas', 'inyangas' and healers are clustered together on the bridge displaying and selling a variety of natural herbs, medicine and dead wild animals hung on string. In the background is the skyline of Durban CBD

5- back on the ground, a colourful display of "cultural" print dresses bring the eye down and the scale of the double volume open air roof structure above is humanised.

6- From outside the Victoria market appears to be a traditional Indian building with all the arches, columns and temple like roof structure, but inside the market are meanders of stores selling traditional and modern products and a fishmongers market.

7- A beautiful composition of diverse spiritual spaces co-existing, right next to each other, tied by a ribbon of minibus taxis



5



6



Juma Musjid complex,

Parish Centre

Emmanuel Cathedral

7

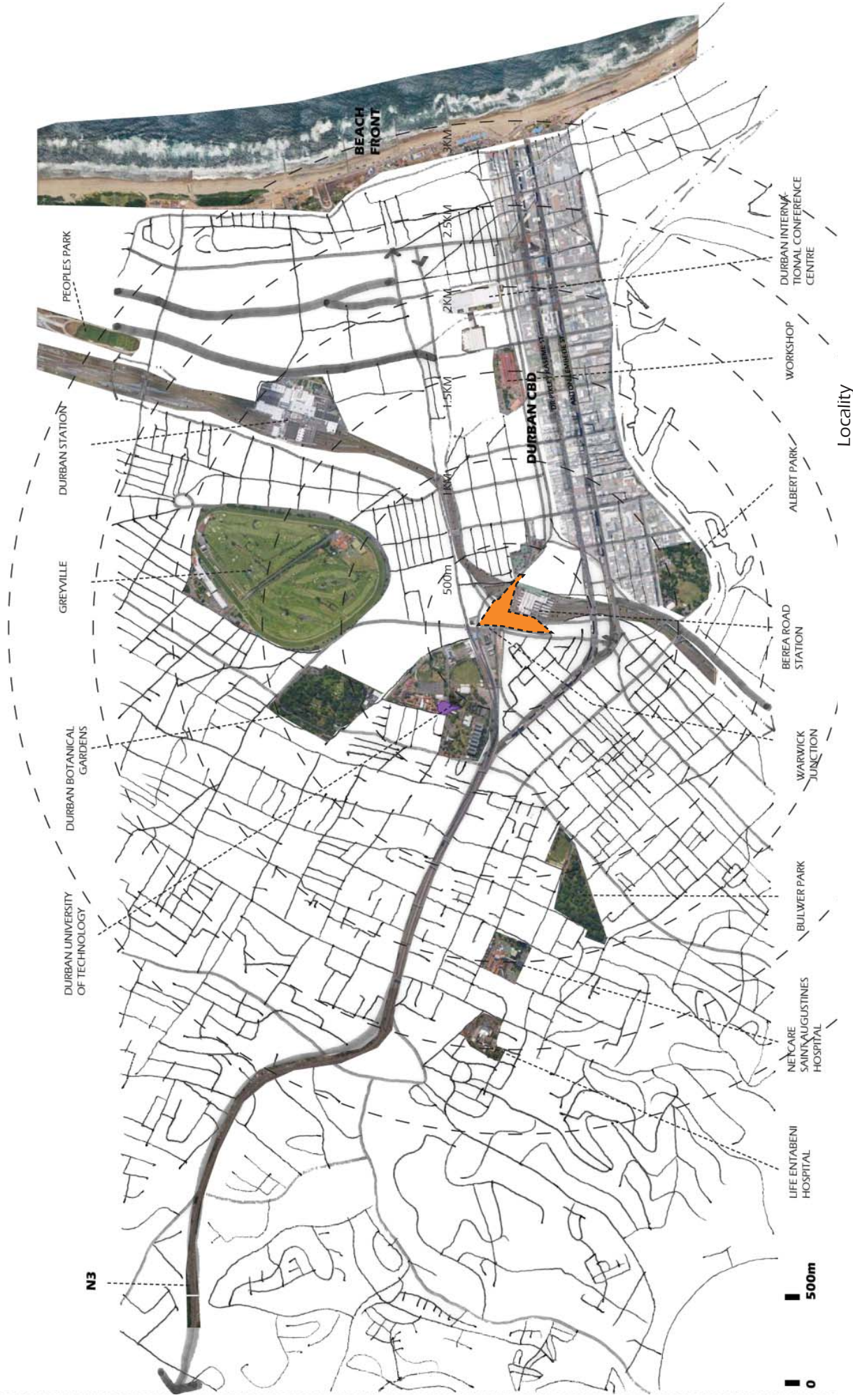


Fig 3.5.2.a: Locality map of Warwick Junction, Durban

The Warwick Junction “multi market” and transport interchange in Durban is an interesting case study due to the shared similarities of it and the research study area. They are both in South Africa, in industrial zones and build around transport nodes. According to Skinner (2009) “modernist visions of the city do not include informality, especially street trading, which is a visible manifestation of informality” that cities of the global South are characterised by.

Warwick Junction is a transport interchange node with rail, bus and taxis operating in close proximity to one another

making it a conducive area for street vendors and informal traders (Skinner, 2009).

Political violence and displacement of vendors during the late 1980s and early 1990s led to these traders having to live and work in the area, this and other factors contributed in the areas degeneration over the years that followed. In 1995 the City Council of eThekweni established an urban renewal initiative to regenerate the area into what it is today, a productive transport hub that ‘focused on the needs of the urban poor’ (Skinner, 2009).

The N3 connecting Johannesburg and Durban terminates less than a kilometre shy of Warwick Junction. The markets is named after Warwick avenue, now Julius Nyerere street (Constable 2014, 56) which runs North –South parallel to Berea metrorail train station, which connects residents from southern townships such as Umlazi to the city centre. Warwick Junction or ‘emakethe’ as the locals call it, is located east of Durban CBD, it has close connection to the harbour where in goods into the city and contry are received and exported via water transportation.

Morphological Evolution of Durban

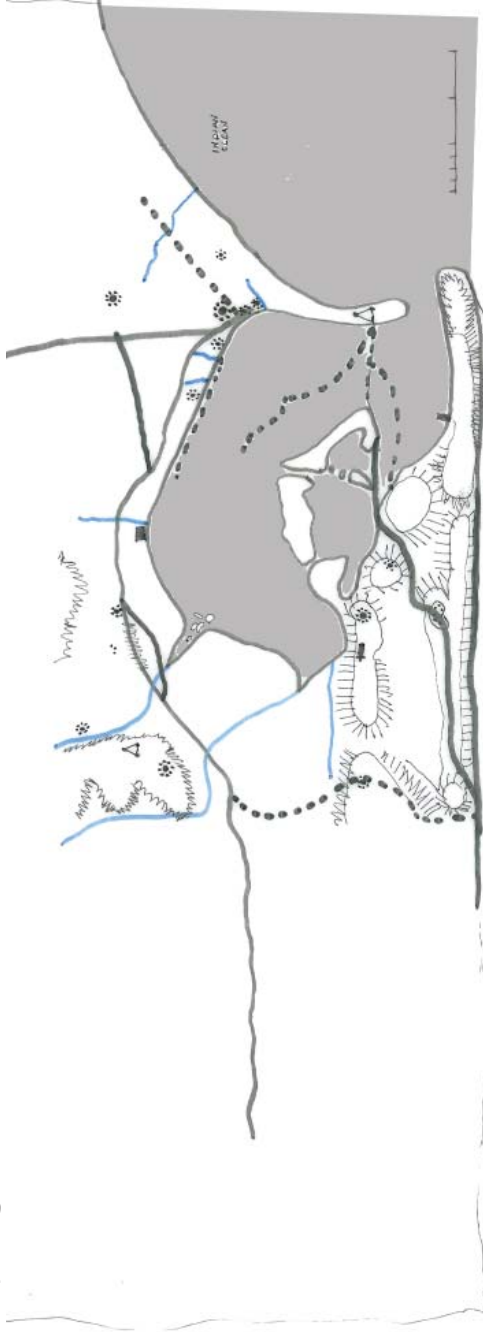


Fig 3.5.2 b: Morphological evolution of Durban: 1840's- Rural kraal villages and beginning of small towns through harbour



Fig 3.5.2 c: Morphological evolution of Durban: 1898- Durban city centre's grid structure gains prominence

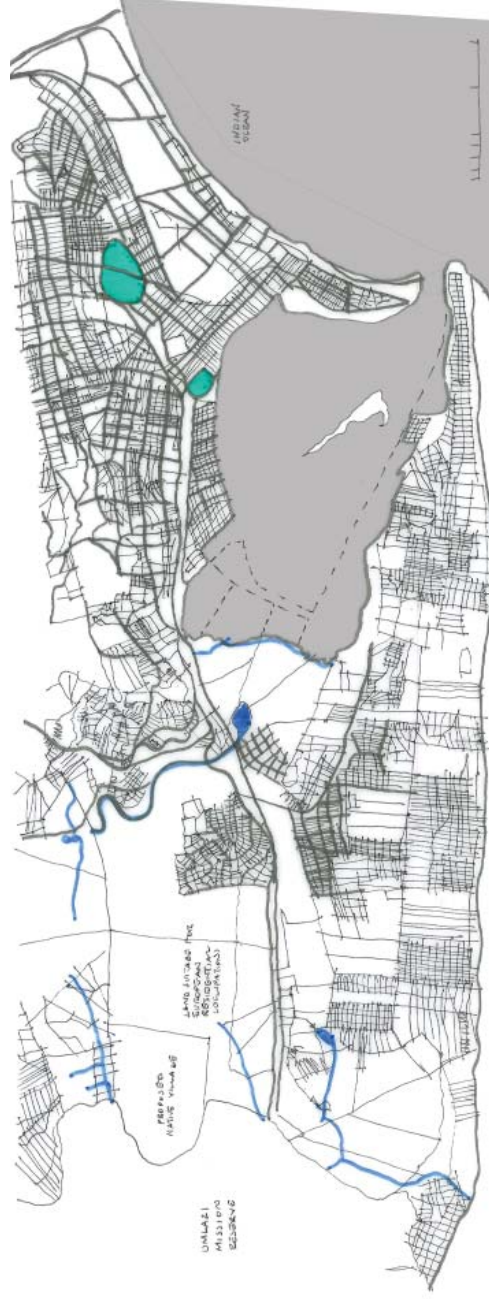
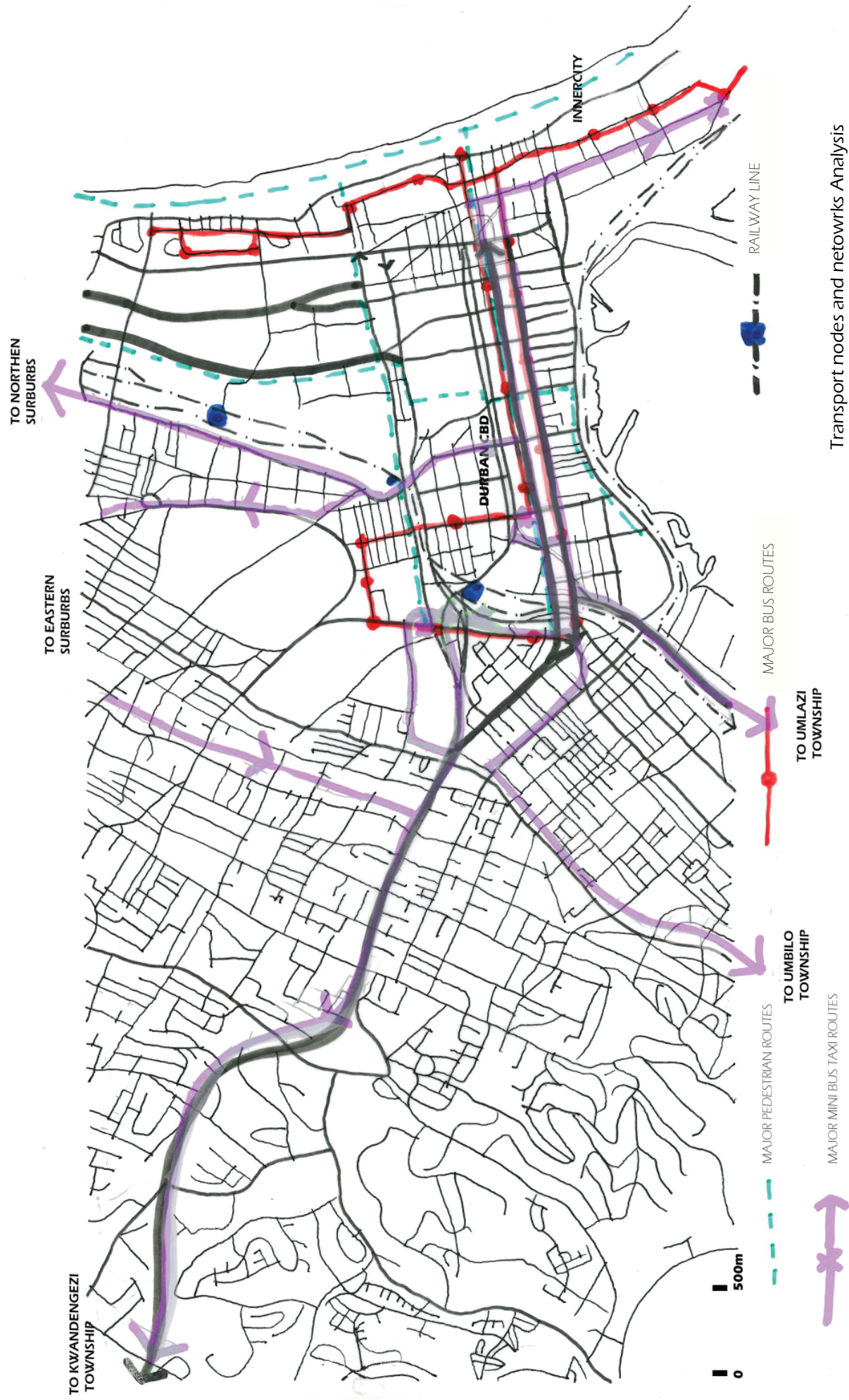


Fig 3.5.2 c: Morphological evolution of Durban: 1930's- Durban industrial structure grows especially south of the harbour



Transport nodes and networks Analysis

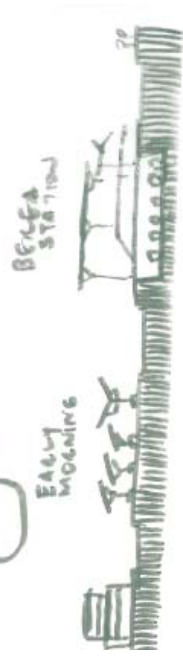
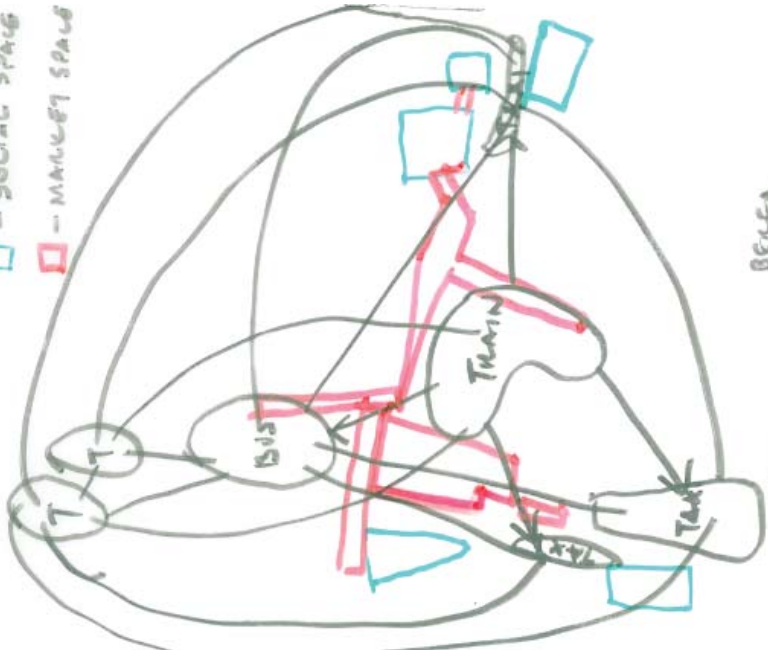
Warwick junction has a wide and diverse transport network, which contributes to the diverse social fabric within the precinct. Durban has two mini bus operational routes, the inner city routes serviced by taxis that run on the major inner city streets (Anton Lebeembe and Parsely Kasembe-west). The rest of the minibus taxis have networks outside the city centre.

Fig 3.5.2 d: Current Transport nodes and networks in Durban

high way over pass
beyond

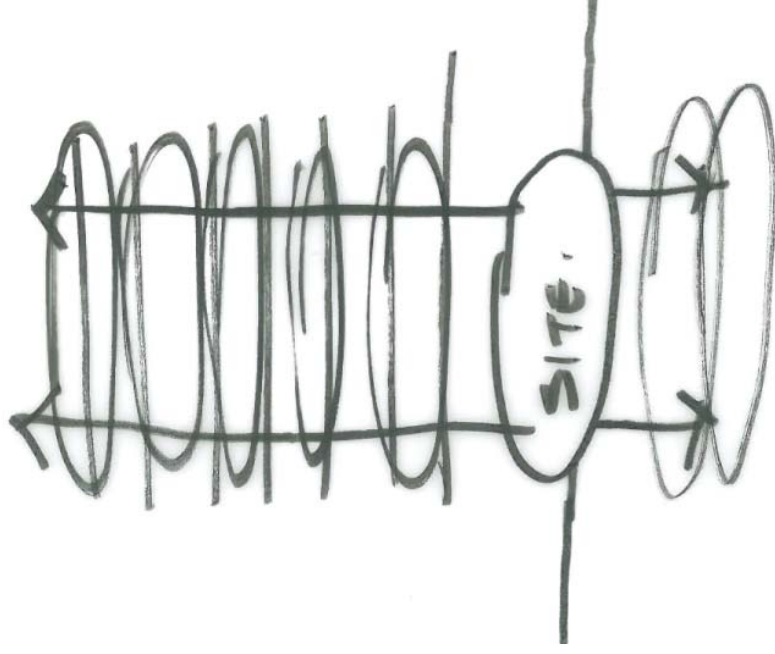


□ - SOCIAL SPACE
 □ - MARKET SPACE



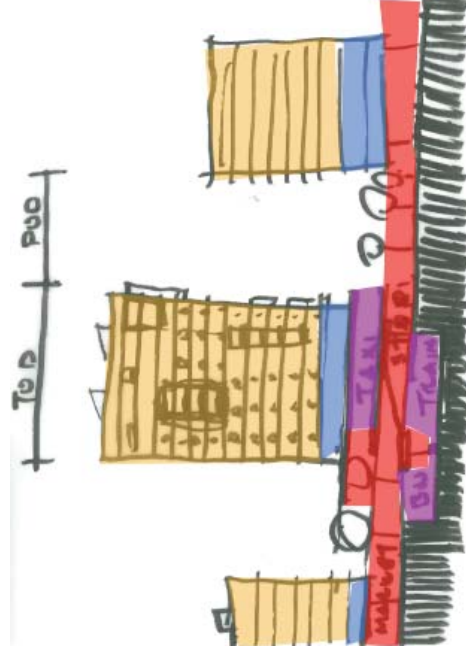
Lessons from Warwick Junction

Although the precinct has a diverse mix of spaces and transport option, these are quite widely spread out. The market/s forms a "band" connecting some of these spaces in an interesting way (on ground and above ground). However, streets around the precinct are not pedestrian orientated designed (POD) or friendly, heavy vehicular traffic makes the space uncomfortable for pedestrians. The scale of the built form is quite sensitive (arguably too sensitive) to the scale of the context surrounding it. Floor Area Ratio



(FAR) Densities are quite low around the precinct, bearing in mind that there spaces that draw in a number of people such as students of DUT, workers in the city who travel via various transport modes from township far from city centre. Thus a much higher density and more compact transport model could be explored which capitalises on the already existing diverse social fabric.

A diverse Transport network has the potential to improve social cohesion. However, many other factors need to be considered, such as the reason people would be drawn to that space, eg market to shop, transitional space, proximity to employment, places of worship, places of learning, all of which are about a collection and interaction of people from different backgrounds. Warwick expresses this quite well.



Julius Nyerere St.



3.6 Transit Oriented Development (TOD)

TOD is a concept used quite often within the New Urbanism movement. Belzer and Autler (2002, 01) define it as intense, comprehensive development around transit stations (bus and rail). TOD's advocate for increased densities, mixed use, pedestrian friendly spaces and an increased use of public transport systems (Transit-Oriented 2011). Unlike 'traditional' forms of planning, a TOD needs to 'explicitly perform as both a node within a larger region and metropolitan system and a good place in its own' cities Belzer & Autler (2002, 04) from Luca & Spit (1998).

Belzer & Autler (2002) argue that TOD's have not all reached their full potential as most lack an 'appropriate mix of uses that generate an internal synergism as well as responds to market conditions'. They warn that this should not be treated as a utopia, but rather that it must operate within market constraints and lifestyle patterns even though these changes over time, thus too much focus on the built form may satisfy Bernice and Cevero's (1996) considerations of density, diversity and design but fall short of performance, elaborates Belzer & Autler (2002). They then came up with six performance criteria to measure what they believe forms a good TOD namely: location efficiency, value rapture, liveability, financial return, choice and efficient regional land-use patterns (Belzer & Autler 2002). These and Jenson's dimensions of social cohesion are used to measure the proposed Corridors of Freedom TOD to assess its degree of appropriateness in the context of Johannesburg.

According to Belzer & Autler (2002, 18) there is not enough research that examines the successes and failures of TODs, their successes are attributed to the fact that they are built, they have no performance criteria. They also highlight some of the barriers that would prevent a TOD from being built (as with the original Oxford Road corridor, west of Louis Botha Avenue) and they propose some guidelines to overcome these challenges to create successful TODs including funding options, technical assistance, participation and context specific design (2002). Part B of this research discusses the proposed Louis Botha Corridor of Freedom in detail highlighting some of its key objectives, challenges and successes, with social cohesion as core thread guiding the critical analysis. The following section discusses two case studies of Bus Rapid Transit (BRT) where the proposed Corridors of Freedom are adopted from (Curitiba BRT and Bogota's TransMilenio BRT). These share similar contextual issues with Johannesburg.

Case Studies of Bus Rapid Transit systems (BRT)

Curitiba

As a pioneering bus way system based development initiative in the early 1970s, which developed over the years and in, 1992 concretised the now popular BRT system. Curitiba set the foundation on which many other cities in Brazil and elsewhere in the world based their strategic development plan (Menckhoff 2005). Meckhoff (2005, 1) mentions that there are a number of dimensions that form part of BRT, namely: physical, operational, institutional, financial, social, environmental, developmental and political. This report focuses on the social and the spatial aspects (environmental and developmental) of the system with the aim of linking it to the creation of social cohesion using the system as the driver.

BRT developed in Curitiba as an urban planning initiative to increase densities, economic growth and combat urban sprawl rather than as a transportation system, describes Menckhoff (2005, 2). Efficient public transport and public realm was implemented along strategic radial corridors, resulting in a change in the spatial development pattern of the city as more development grew along these corridors (Menckhoff 2005, 2). In addition, BRT systems, especially those of Latin America, differ considerably from the traditional Metro bus system, according to Menckhoff (2005, 10-15). The BRT system busways and stops are located in the centre of the multiple road feeder dedicated to the BRT. This reduces travel time, because fare collection is remotely operated, and high level entry increases accessibility for the disabled, larger buses to carry high volumes of commuters and the very different funding strategies forms some of the key differences of the BRT from the traditional metro bus systems. The success of the Curitiba BRT is evident in its increased use even in a city with a high car ownership (Menckhoff 2005, 2).

Bogota

TransMilenio is Bogota's BRT system implemented in 2000 amidst high opposition due to perceptions of the system being strong competition for the existing private bus operations. Thus the Mayor of Bogota, Antanas Mockus, went through an intensive process of public participatory means to clarify confusions around the system and how different stake holders will benefit from it (Turner.etal. 2012, 07). This version of the BRT is arguably the closest to the proposed Corridors of Freedom system in Johannesburg, due to its focus on 'citizen culture'.

"Mockus began an important change in Bogota's civic culture with his Cultura Cuidadana (Citizen Culture) campaign, which encourage civic behaviour and served to create a sense of belonging for the inhabitants of the city" (Turner et al. 2012, 07). Being one of the most populous cities in Columbia, issues of high ridership has negative effects too. There are a number of YouTube videos available on the internet on the system showing how unsafe the system gets on peak times due to overcrowding and long queues to board buses.

Public Transport Infrastructure in SA

Metro rail trains and the minibus taxi are arguably the most widely used form of public transport in Johannesburg, with minibus taxis, originally a private initiative in the 1980's, transporting 72% of the public daily (CoJ 2003: 43). A fact that is not evident in South Africa's version of BRT system, which should be integrated intimately in the plans. Nodal taxi ranks such as Bree Metro mall in Johannesburg, Baragwanath Taxi rank in Soweto and Pan African Taxi rank in Wynberg have a strong influence in the spatial morphology of immediate contexts around them.

Gautrain and Rea Vaya (BRT)

Gautrain Spatial Development plan (c2006) is based on a principle of confined urban edge (a compact city), which encourages the use of an integrated and efficient public transport system, a move away from the dominant private transport system, states Gautrain (n.d.). This is achieved by defining a development edge, an edge that radiates from a node along a linear corridor with opportunities for new nodes formed where two node edges intersect as illustrated on fig 3.6.1.

The Rea Vaya (translated as- we are on the move) is Johannesburg's version of a BRT system. A (TOD) planning trajectory that uses bus systems that run on strategic corridors to connect commuters to different areas, support economic development, minimise traffic congestion, cost of travelling and enhance the city's development

Hansen and Kotze (2012, 17) build on the definition of what they believe is urban design; by citing other urbanists; they add principles such as 'broad human development goals, context sensitivity and values'. These, they argue, are undermined by the strong engineering approach in the design and implementation of the Gautrain and first leg of BRT system in Gauteng that is more concerned with mobility; that is moving people efficiently from point A to B with very little consideration to the effects of these on public spaces (Hansen & Kotze 2012, 17-21). Furthermore, they argue these were 'bulldozed' into existence disregarding principles of good urban planning due to political pressure to deliver tangible development for mega events such as the 2010 Soccer World Cup. They warn that so much power being given to engineers creates cities that are efficient, but not necessary cities that are pleasant to be in.

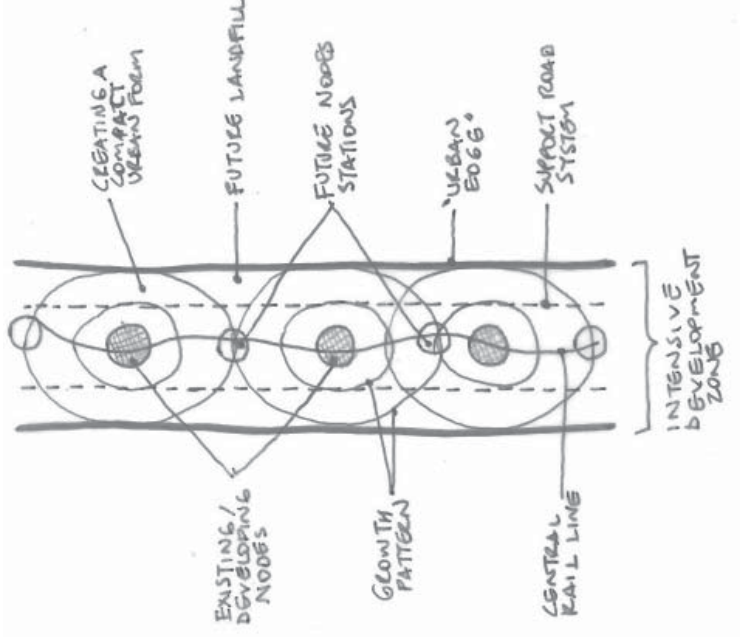


Fig 3.6.1: Gautrain's Spatial Plan Principle [diagram]

Source: Gautrain, (n.d.) Gautrain Spatial Development [online] Gautrain.co.za

Perhaps a more transparent collaborative process between professional agencies such as urban geographers, researchers, traffic engineers, government officials, and urban designers and the various community members involved needs to be thoroughly explored in future projects. Many planners and urban designers agree that the BRT system is an appropriate initiative to address issues associated with transportation and development if conceived and implemented sensibly. A principle that is key in democratic design processes. The following section elaborates on this and other principles of democratic design.



Fig 3.6.2: Gautrain's Sandton Station

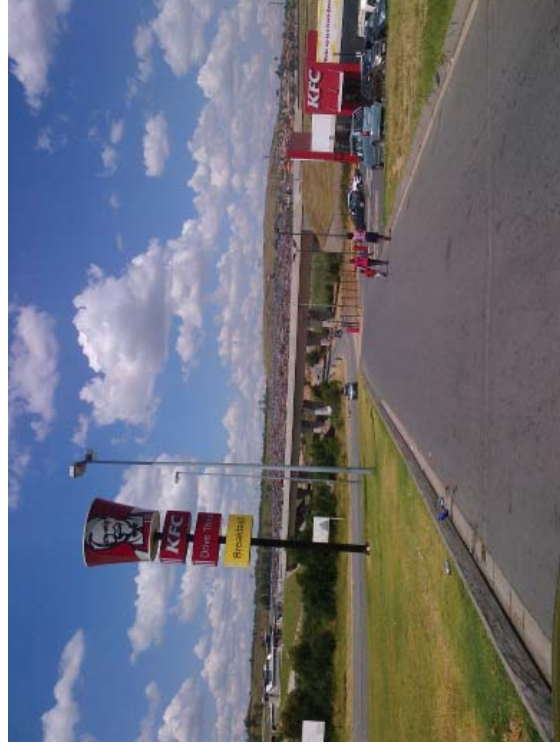


Fig 3.6.2: Gautrain's Mariboro (Alexandra) Station

3.7 Democratic design principles

Previous sections of this research discussed theories related to social and transportation aspects that frame the argument for the spatial realisation of a democratic city. This chapter discusses design literature related to democratic design in order to extract principles and tools to consider throughout the design process of the study area of this research and other areas like it. Literature from Burdett (2013) and Kurdistani et al (2012) is cited to bring forth the argument for a democratic design approach in realising the image of a democratic city.

Burdett (2013, 349) argues that professionals in the urban design and planning fields are still using out-dated methods of engaging with the city. Furthermore, they do not recognise the rate and scale at which cities are changing outside the formal structures managing city developments. "In fact, the planning and urban design professions seem to have lost the ability to conceptualise and implement robust spatial models that are capable of adaptation and change at a time when city dynamics are both volatile and uncertain. Choosing instead to opt for anachronistic, unidimensional, and rigid urban models that fail to live up to the social and environmental exigencies of twenty-first urbanization" (Burdett, 2013, 349). What does this mean for plans such as the COF? Is it perhaps one example of these trajectories described above? If not, how flexible and robust is it?

What is particularly useful about Burdett's (2013) paper is that it discusses in detail, existing cases at both metropolitan and neighbourhood scale in various locales around the world, to adequately frame the arguments raised there in. Thus, it is both socially and spatially relevant here in. The question still remains, what is a democratic urban space?

Design for all

Democratic urban space is the physical expression of 'general democracy' which appears in urban spaces and is definable based on specific principles (Kurdistani et al, 2012, 71). The physical expression talks about design, but how do we design democratic spaces? Burdett (2013) argues for a new approach, one that shifts focus of analysis away from 'blunt instruments of top-down versus bottom up', but one that highlights the designer as facilitator rather than creator. Therefore, the urban frameworks, visions, or master plans must do more than respond to short term needs of the market, land speculation and 'weak' metropolitan governments concerned with the deadlines imposed by a mayoral election cycle than with long term sustainability (Burdett 2013, 350-351).

This research echoes the above statement while fully aware of criticism around utopian ideologies associated with it. However, this is reachable (Kurdistan et al 2012, 71). What principles are available to explore in designing democratic spaces?

While integration and democratic engagement of socially excluded urban residents is most viable at neighbourhood level (Burdett 2013, 350), it is also possible to achieve it at metropolitan level through "rapture", which Burdett (2013) describes as a slow, gradual and adoptive morphological process that absorbs social and economic change without undergoing radical shocks. Although sometimes a "radical", process is necessary to highlight the limits and inequalities that some cities live under and the need for change thereof. Otherwise, a lot of South African cities and cities alike will continue to exist in unjust spatial morphologies for a long time post the achievement of democracy.

Design Principles and Tools

In framing principles and tools for designing democratic spaces, Kurdistani et al (2012, 72) include the concept of solidarity in their research methodology, which if we recall, is one of the key components that led to the definition of social cohesion. They identify design qualitative norms categorised in 12 categories, namely;

- Citizen utilisation- providing opportunities to citizen (could be linked to exclusion/inclusion domain of social cohesion)
- Freedom of movement- pedestrian and vehicular movement
- Spatial alternatives- variety, diversity and mix use
- Accessibility- ease and choice of movement from one space to another
- Participation- working together of different role players and bodies (also one of domains of social cohesion)
- Citizen interaction- public space considerations (recognition/rejection domain)
- Environmental characteristics- identity (belonging/ isolation domain)
- Proper human scale- environments for people not cars
- Public and Private territory- hierarchy of spaces and privacy

- Environmental tranquility- ecology, comfort, safety and security
- Facilities distribution- balanced infrastructure and service delivery
- Urban management- sense of responsibility of various bodies (legitimacy/illegitimacy domain).

As notable, principles of democratic design are intricately interwoven with domains of social cohesion. Thus, the finding is that it is possible to design and represent a democratic city by considering social cohesion. Literature goes on to define what democratic streets, and based on those definitions similar to the principles above, one cannot help but wonder what would be the resultant design of the COF if they were conceived from the point of view of democratic street theories? In other words, are the COF designed to be part of the immediate neighbourhood? Do they reflect social justice, economic health, pedestrian friendliness, vitality and balance? Or are they bulldozed into existence (Hansen and Kotze 2012).

The following diagram and table are extracts from Kurdistani et al (2012) and expand on the above principles. Some of these are tested in the design section of this report along with domains of social cohesion in conceptualising the Urban Design Framework (UDF) of the study area.

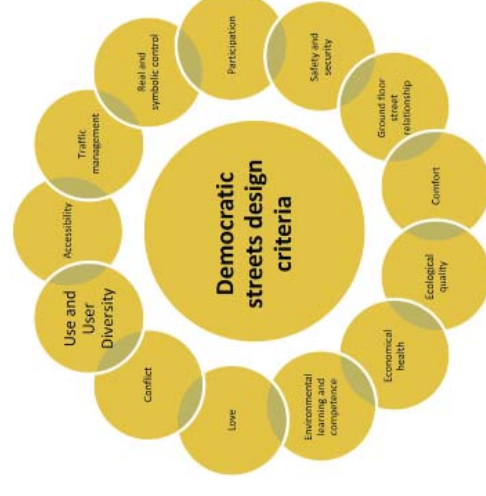


Fig. 3.7.1 Democratic street design criteria
Source: Kurdistani et al. 2012, 77

Democratic Urban Spaces Norms	Sub-norms	Democratic Street Design Strategies
Possibility of using spaces for all	Mixed using Compatibility of uses	- Providing diversity and distinction of uses and activities - Proper compilation of uses and connected urban spaces - Providing distinct vehicle and pedestrian spaces
Special freedom in movement	Adaptation with the user Free movement of pedestrian and bicycle Proper movement of vehicles in urban spaces	- Repairing, substituting and renewing of street elements during the time - Easing bicycle movement - Eliminating barricades in pedestrian path - Physical management of vehicles traffic
Delivering various spatial alternatives to users	The capability of change and flexibility Visibility	- Designing multi purposes spaces and places with land use flexibility - Defining the beginning and end of street - Locating marker points elements through more visibility of path
Accessibility for all	Penetrance	- Providing adequate accesses - Providing emergency accesses to special places
Public participation in creating and utilizing places	Residents trust in design responsibilities Presence of residents in design process	- Informing residents regarding previous and present designs - Providing mechanism for a face to face interactions among people and design responsibilities - Participation of residents in design, repairing and conserving of street elements
Capability of the users interaction in space	Walkability	- Dedication of adequate pedestrian path width - Proper pavements in pedestrian ways
Environment meaning	Hesitation ability Observing Chatting	- Providing open spaces for seats - Proper urban facilities/ furniture design - Providing transparent facades (specially in ground floor) - Controlling noise pollution - Proper urban facilities/ furniture design
Proper human scale	Identity Memory Spatial enclosure Human scale Spatial contrast	- Preserving special and memorial places - Providing necessary facilities for national and religious ceremonies - Proper streets naming - Providing proper physical harmony (ratio of building height to street width) - Providing diversity in form of street elements
Defined public and private territories	Defined spaces regarding privacy Privacy Vitality	- Connectivity in facades and refusing vacant spaces - Preserving entrance sanctum of local accesses and buildings - Providing diversity and complicity in building facades - Organizing billboards as attractive visual elements - Proper utilization of green spaces and water - Controlling air pollution - Utilizing new technologies in new energy sources
Environmental tranquillity and comfort	Environmental sustainability Climatic comfort	- Providing shadow in pedestrian ways - Using water in street space - Proper lighting (pedestrian and vehicle way) - Providing public supervision on street space - Protecting pedestrians against accidents with vehicles
Proper spatial distribution of urban facilities	Adequate supplying of green spaces and services per capita	- Proper location of essential services along the street
Efficient urban management	Participation in urban management	- Utilizing residents participation in street management - Defining street future vision and helping residents and users

There is also a growing trend in abandoned, inner city spaces especially industrial zones, of recycle, reuse and re-appropriation of space. A design and build development that is completely initiated and implemented by people doing it for themselves with available resources to improve their lives. These could be viewed as acts of urban transgression (explained in the following section) as they go beyond boundaries and limits set by governing bodies. These are often, illegal and are faced with a number of challenges from the local authorities who based on a specific often-Eurocentric image of what cities should be, are on missions to irradiate them. Reasons that are often cited are that these are unsafe and present health hazards, overlooking why these spaces exist. In 2012 I was part of a research project that looked at such spaces in Johannesburg, Marlboro South immediately north of Alexandra (research study area), wherein I observed first hand some of these issues. Urbanists are fast finding innovative ways to work with and within this development trajectory.

Table 3.7. | Democratic street design strategies based on Democratic urban design spaces design norms and sub norms
Source: Kurdstani et al. 2012, 80

“...going beyond boundaries set by law, discipline or convention.”

3.8 Urbanism of Transgression in an era of Democracy

The concept of transgression stems from theorist such as George Battaille in the 1930's and a decade later Michael Foucault, whose literature depicted what transgression meant through 'metaphors that reveal patterns of exclusions, expulsion and dehumanisation...'. This to revealed and reacted against the limits of capitalism (Jenks 2013, 22). Transgression may be defined as: '...going beyond the boundaries set by law, discipline or convention' (Mosely and Sara 2013a, 15), 'a social process... that transcends boundaries or limits' (Jenks 2013, 20) or 'overcoming unacceptable prevalences' (Mosely and Sara 2013b, 34 after Tschumi 1976).

The relationship between transgression and limit is not an exclusively opposing one. From what one could understand of Jenks's (2013, 20-23) description of this relationship, quoting Foucault, who highlights this through using a metaphor of a lightning flash in the middle of the night, saying that one exist because of the other and yet the other exists to highlight the limits of the other. The concept of transgression as a way to reveal the limits and propose new ways of doing things is relevant to this research. Schumacher (2013, 130-133) argues that transgression is only necessary in the "emergence of the next revolutionary situation, when a new socio-political upheaval re-politicises all aspects and arrangements of society". Furthermore, he highlights the limits of political architecture in a representative democracy, saying that architecture cannot carry the burden of political agenda, but must respond to "transformative socioeconomic and political developments" (2013, 133).

This research draws on political and social connotations that transgression, as a concept, is based on. It acts on the basis that there is a need for revolutionary urbanism, especially in the context of South African cities, whose image still bears the legacy of apartheid planning principles. It advocates for an urbanism that does not accept limits and boundaries (spatial, socio economic and political) as tools to define post-apartheid cities, but rather interrogates and reimagines these, or rather, the dismantlement of them, as spaces and networks for creating an image for a democratic city.

In an online interview, architects and urbanists Alfredo Brillemborg and Hubert Klumpner of Urban Think Tank, whose work in informal, contested and political spaces has received both accolades for its arguably 'revolutionary' design approach and criticism for its monotonous talk about the role of transport networks in defining democratic spaces (U-TT FILMS 2012):

In the interview, they are asked to elaborate on the shift they believe is necessary for São Paulo and they responded by saying that 'Sao Paulo is caught in a grid lock of traffic/immobility and an separation/ big gap between rich and poor'. Furthermore, they believe that these polar ends need to be brought together to build a democratic city. They also do not believe that markets are bad. To them, markets are good, but should be for a common good. Thus the shift they are referring to is one of a mobility system that brings these diverse and conflicting poles together through a democratic plaza or centre of the city that is designed in a different way. They go on to elaborate that this shift may

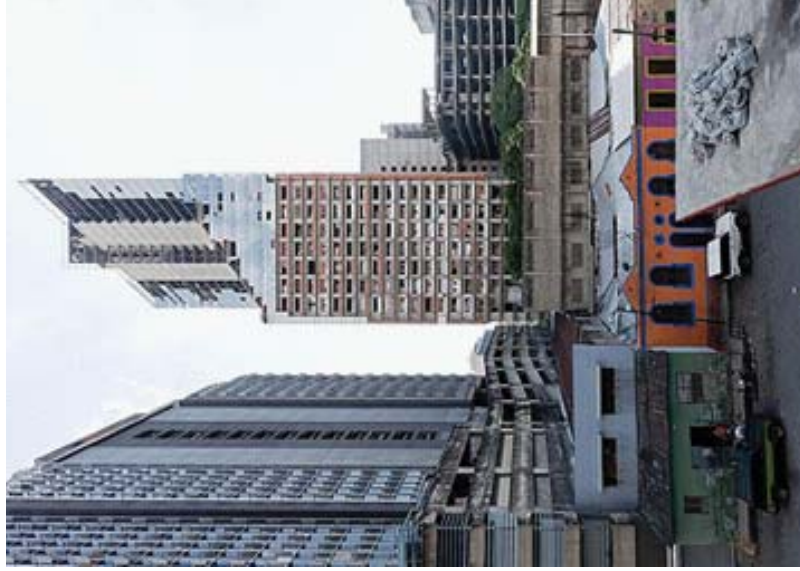
also be viewed as an act of innovation, bearing in mind that systems from other examples have their "peak and eventual failures" and thus a new way of transportation and space occupation is necessary for São Paulo (U-TT FILMS 2012).

This is quite interesting in that it touches on what forms the foundation of transgression that is to highlight the limits and propose a new way of responding without necessarily opposing the limits. It is saying cars are both the problem and part of the solution. Transportation and buffers are part of the problem in the case of apartheid cities such as Johannesburg; these could also be part of the solution reimagined differently, as seen in the case studies below that present an alternative (not always legal) to the limit. This research attempts to do that through the proposal of an Urban Design Visionary Framework that uses the concept of transgression to create an image for a democratic city.

An incomplete office tower, abandoned due to financial pressure, the Tower of David in Caracas, Venezuela, is home to over 2,000 occupants who have formed networks to turn a symbol of failure into one of hope and opportunity through acts of transgression (Mosely and Sara 2013b, 36). Abandoned industrial factories in São Paulo are converted into interesting innovation hubs with office and leisure space where people in transition can meet, exchange and trade (Wiley 2013, 56-57). In Johannesburg, Marlboro South (a declining industrial area immediately North of Alex) is appropriated by local residents, much like the tower of David, to meet the local housing shortage in the region. The lessons that these examples teach are

amongst many that people are valuable resources and role players in changing and shaping the spaces, which they inhabit, what is needed in place in a flexible FRAME-work to work from. Thus, the research here with presents an urban design framework and does not in any way detail a master plan of any sort. The 3 precinct identified in it are both independent and part of a whole. These precincts are identified as strategic testing projects that interrogate the edge, limit and boundary in so doing, attempt to spatially represent social cohesion at various scales of urban design. in order to strengthen the Wynberg BRT station as both a nodal destination and departure station.

People are constantly making and remaking the city to suit their needs and depending on how much money one has, this may include desires too. Governments have the challenging role of mediating between the two, needs and desires. How it does it, is always questionable. The plans that are proposed need to illustrate clearly, what the objectives of each plan are, how it aims on achieving them and more importantly (and not always well articulated), what are the measures of success of each plan. The following section, Part B discusses the City of Johannesburg's plans to restructure, or as the documents articulate, "stitch" the city through transport networks.



Tower of David- Caracas, Venezuela



Tower of David- Caracas, Venezuela



SESC Pompeia Factory Leisure Centre-
Sao Paulo, Brazil



SESC Pompeia Factory Leisure Centre-
Sao Paulo, Brazil



Mariboro South Factories-
Johannesburg, South Africa

©Grant Woodward 2012

Fig 3.8.1-3.8.6 : Spatial acts of Transgression
Source: AD 2013-pg 36,37,55,56 and Mariboro South Studio, 2012- pg 52

Part B: The Solution from CoJ- City of Johannesburg

This section deals with the proposed “Corridors of Freedom” which the city of Johannesburg sees as the solution to the fragmented spatial morphology of the city. A brief overview of the plan is presented, this is followed by a measure of how socially cohesive this plan is based on Jenson’s dimensions of social cohesion (1998) and Bernard’s conceptual framework for social cohesion (1999). It concludes by asking what image would emerge if these plans were socially cohesive by presenting a before and after montage to represent this image.

4. Background to Corridors of Freedom

The Executive Mayor of Johannesburg, Councillor Mpho Franklyn Parks Tau released a report that outlines the Growth and Development Strategy (GDS) of Johannesburg called “Joburg 2040” in October 2011. In the foreword, the Mayor describes the city’s morphology as “the city of stark contrast... divided and bearing spatial scars of the unjust and immoral apartheid system” (CoJ 2011, 3). He elaborates further and highlights that a different story about the city needs to be told, which he lays out in that report.

One of the stories detailed in the report is about a new way of connecting the city, through transport infrastructural developments (fig 4.1), because this “is central to the city’s economy” describes CoJ (2011, 67). It highlights how previous spatial planning contributed to urban sprawl, traffic congestion, and increased cost of transportation. It highlights that the future of public transport in Johannesburg lies in a change in mind-sets and the “creation of new cultures” around transportation (CoJ 2011, 67-72).

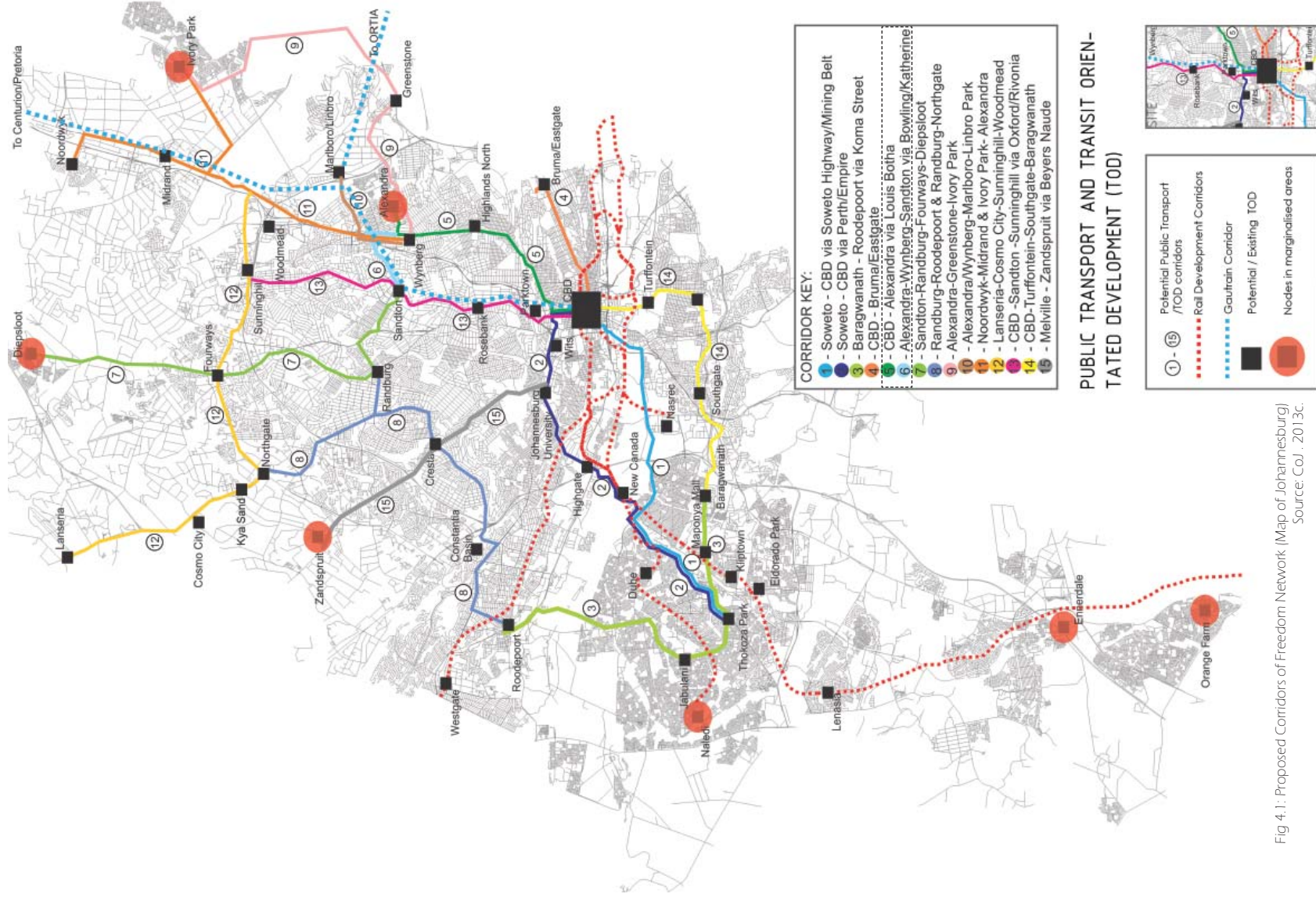


Fig 4.1: Proposed Corridors of Freedom Network (Map of Johannesburg) Source: CoJ . 2013c.



The Louis Botha development corridor is one of number of corridors proposed to “help integrate Joburg residents” says Maseng (a2013, 4) from Northcliff Melville times newspaper. He quotes Tau (the City of Johannesburg Mayor) to describe the TOD characteristics of nodal, mixed use, pedestrian friendly, connected social facilities (such as universities, schools, hospitals and shopping centres). These various corridors will be phased in over the next couple of years (until 2016) (Thakurdin and Maseng 2014b, 1). This report briefly analyses Draft 2 of the strategic development framework of Louis Botha Avenue Development Corridor (LBDC) published on 30 November 2013. According to LBDC (2013, 06) the report should not be considered as final due to ‘consultation and interaction’ with various bodies that is still on-going.

The framework gives a very generic overview of the different spatial considerations such as historical morphological evolution of urban areas around Louis Botha Avenue, and the predominant communities along the corridor. It maps key informants such as existing social facilities, nodes, networks and connections (fig 4.3 &4.4). As with many frameworks, it also provides guidelines for development along the corridor, dividing it up into eight (A-H) precincts or ‘local areas’ which are further analysed and conceptual ‘new urbanism’ type drawings are presented to depict what each precinct is envisioned being. My criticism is that these are approached from a master planning perspective and contradict principles of democratic planning of inclusivity. Furthermore, the framework does a good job of presenting housing typologies and how the mixed use will be achieved through time, but what is not clearly articulated is how the social functions will develop (such as educational facilities and health care facilities). Are there any new services proposed? If so where? In addition, has social cohesion through these services been considered? Massive infrastructural upgrades are proposed for some bus stations such as the Wynberg station that will have a significant impact on existing economic and social networks that already exist on site.

Fig 4.2: Louis Botha Avenue and the surrounds- Contextual location and area of investigation
Source: Author 2014.

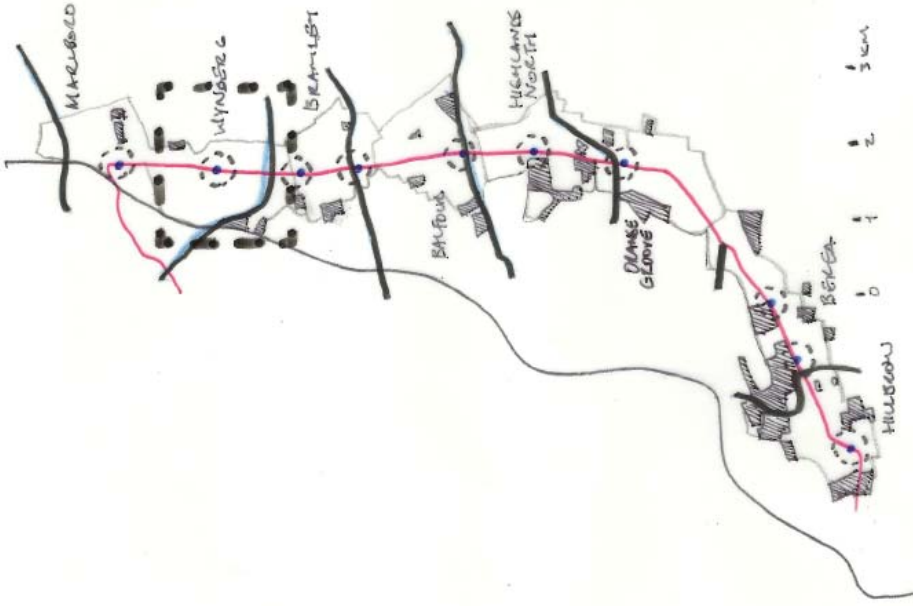
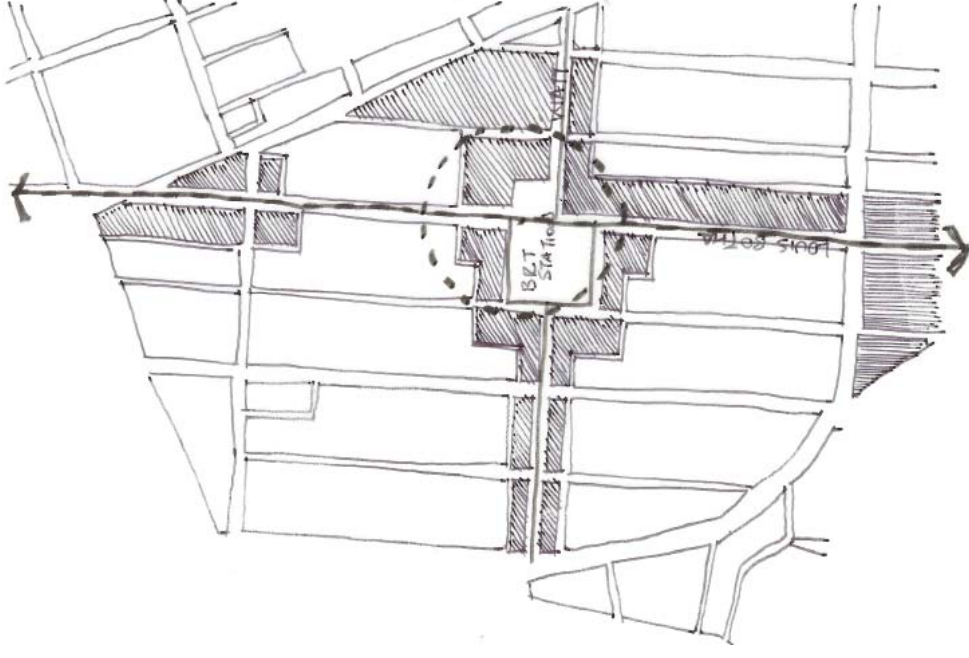


Fig 4.3&4.4: COF Land Use Map and Public Facilities respectively
Source: LBDC 2013, 17 & 24

TransMilenio in Bogota, Columbia's version of the Bus Rapid Transit (BRT) adapted from Curitiba, has gone to great lengths to protect and instill a cultural change towards its public infrastructure, limiting informal trading around the station and prohibiting eating of any kind in the facilities to maintain a state of the art infrastructure. With quite a strong presence of informality in and around the proposed stations, the LBDC (2013) does not explain how it plans to address this issue. This is important because there are social networks formed by the informality that may be negatively affected. What is also missing on the planned proposal is an appreciation of the very intricate social fabric that already exists, this could be due to limited time in which the plan was prepared and that these will be more prominent in later drafts of the plan, considering the on-going process of consultation and interaction.

So how socially cohesive is the proposed Louis Botha Avenue Corridor of Freedom plan? Jenson (1998) and Bernard(1999) have both presented principles and dimensions to measure social cohesion, which will apply to answer the above question.

Belonging/Isolation- LBDC recognises the diversity along Louis Botha, but is not explicit about how it will create/ strengthen a sense of belonging within these communities, of which some have strong and protective unit ties. LBDC scores very well in the other four dimensions, through their very inclusive, public participatory initiatives that recognise all members of the community and their role in making the project a success. Spatially, the plan goes to great lengths to describe the envisioned growth and densification patterns, which address the economic domain. LBDC is part of



existing corridor projects planned and implemented in the city. What are the successes and shortcomings of other corridors, such as the Empire/Beth and inner city corridors? Have these influenced private transport usage, reduced traffic congestion, social connections, and increased densities? Are these successful because they are built, or is it too early to measure their successes? The LBDC proposal does not include answers or even discussions around these questions, which I believe are vital in the planning, implementation and success of the corridor. Based on the above, it is not clear how success, economically, socially, civically and spatially will be achieved and measured once the project is completed, except when we consider the generic 'long term benefits' expressed (LBDC, 09), which are largely qualitative than quantitative.

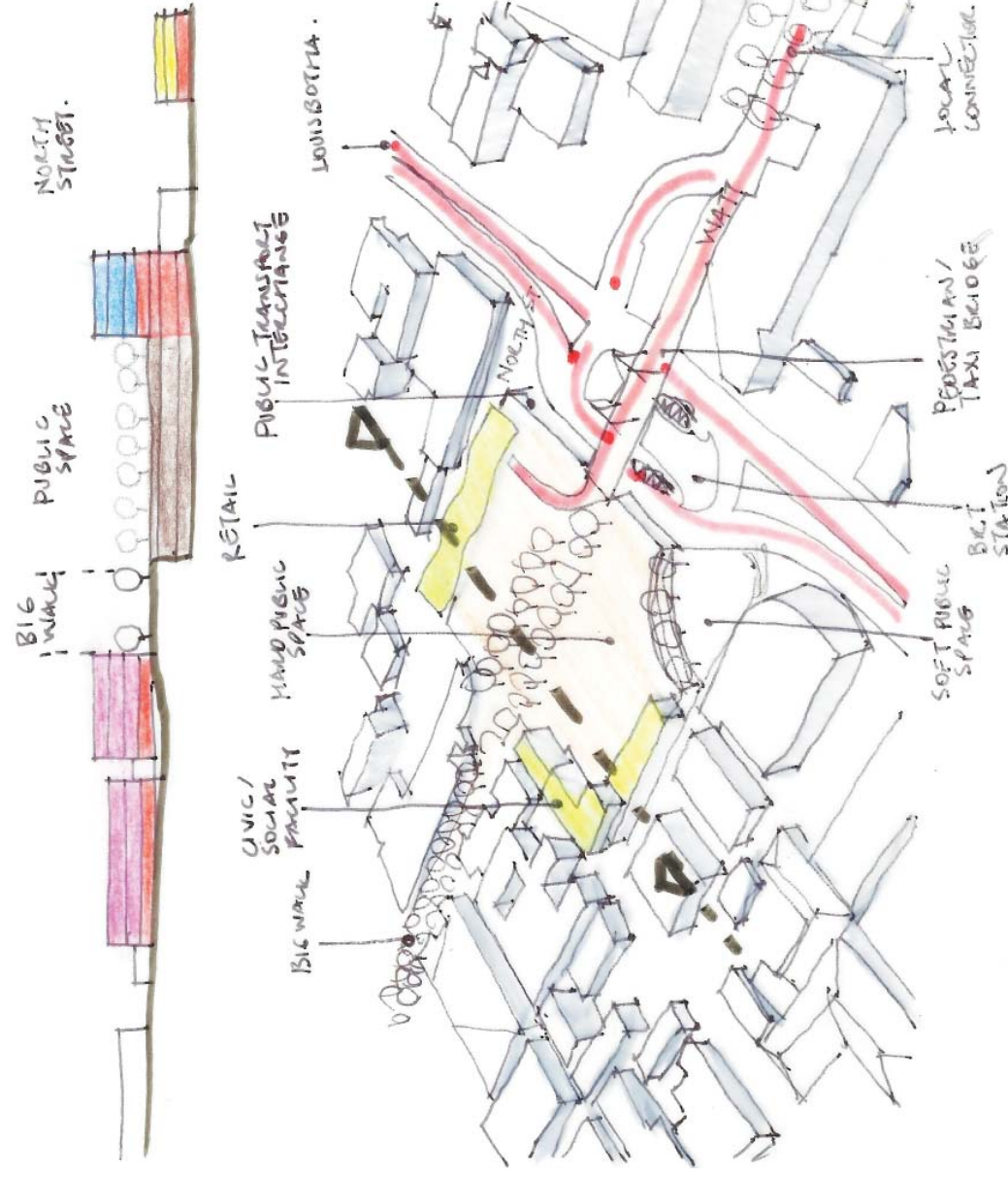


Fig 4.5, 4.7 & 4.8: Proposed Design for Wynberg Station
Source: LBDC 2013, 93 & 95

PRECINCT G: Wynberg Station

According to LBDC (2013, 90-97) the Wynberg station is a key link between Alexandra and surrounding economic node of Sandton, through a potential intermodal transport interchange, thus the massive infrastructural upgrade proposed on the station. LBDC (2013, 93) recognises the challenges of the station being in an industrial area. It also recognises the potential to propose new typologies for mixed use developments that incorporate the industrial typology. The section drawing above indicates provision for public space above retail. What exactly does this mean?

Urban public spaces are becoming highly privatised (Amin 2006, 1012). Furthermore public spaces remain the emblem

The open public space provision in the Wynberg station shows recognition of the need and valuable importance of such a space in the urban environment and its role in enhancing what Amin (2006) and Harvey (2008) highlight above. This space is especially important for Alexandra and Sandton in its potential to create social cohesion between the two societies. How it is articulated needs careful consideration taking consideration of Sennett's warning about public space.

There is also a "big walk" (a green pedestrian orientated street connecting pedestrians between Alex and Sandton via Watt avenue and Grayston Drive) proposed. Pedestrians would still need to walk over 3 kilometres from the Wynberg station to Sandton CBD, a considerably long walk. There are a number of possible "short cuts" that could be explored that are have not been explored in the report. Furthermore, the report does not indicate how it will deal with already existing issues such as traffic congestion on Louis Botha.

What if post apartheid developments were more socially strategic and proposed developments that were not only transit-orientated but also addressing the segregation formed by boundaries such as Louis Botha avenue, what image would emerge?

of the public culture as well as the sites of gathering where some aspects of this culture are formed and performed (Amin 2006, 1012). Amin argues that it is possible to achieve a good city, which he defines as the city that learns to live with (even value, he adds) difference, publicise common and crowd out the violence of an urbanism of exclusionary and privatised interest (Amin 2006, 1012). He elaborates that this could be done through urban solidarity, which consist of four registers, that is repair, relatedness, rights and re-enchantment (Amin 2006, 1013):



Fig 4.9A : EXISTING LOUIS BOTHA /WATT STREET INTERSECTION



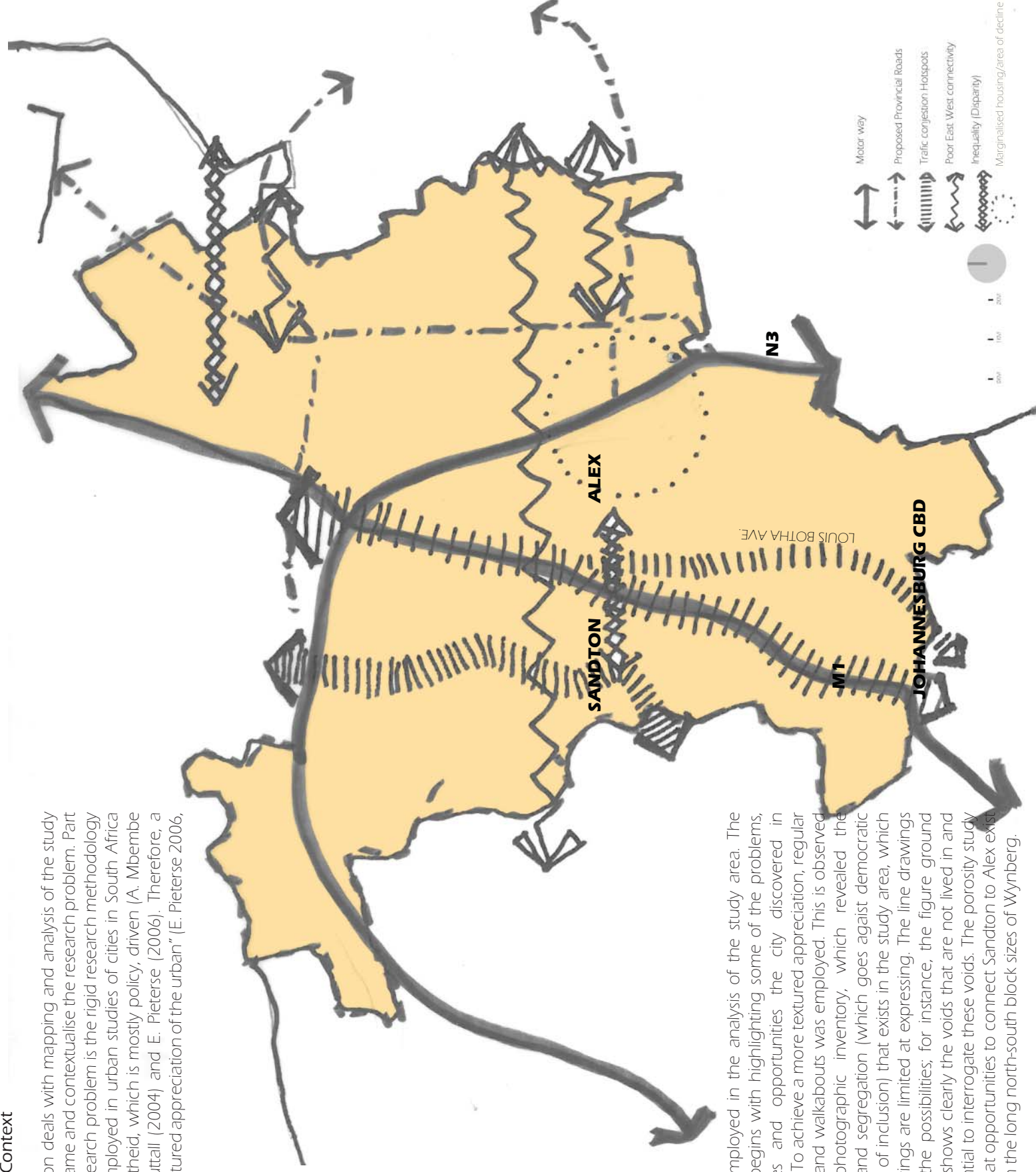
Fig 4.9B: WHAT IF?



Part C: a 'Lived' Mapping and Analysis

5 Context

This section deals with mapping and analysis of the study area to frame and contextualise the research problem. Part of the research problem is the rigid research methodology that is employed in urban studies of cities in South Africa post-apartheid, which is mostly policy driven (A. Mbembe and S Nuttall (2004) and E. Pieterse (2006). Therefore, a more "textured appreciation of the urban" (E. Pieterse 2006,



403) is employed in the analysis of the study area. The chapter begins with highlighting some of the problems, challenges and opportunities the city discovered in research. To achieve a more textured appreciation, regular site visits and walkabouts was employed. This is observed in the photographic inventory, which revealed the contrast and segregation (which goes against democratic principles of inclusion) that exists in the study area, which line drawings are limited at expressing. The line drawings illustrate the possibilities; for instance, the figure ground drawing shows clearly the voids that are not lived in and the potential to interrogate these voids. The porosity study reveals that opportunities to connect Sandton to Alex exist even with the long north-south block sizes of Wynberg.

Fig 5.1.1 Regional Key Issues
Source: Author 2014 after ICOJ 2011 pp.26

5.1 Regional and Site Overview

Alexandra

Alexandra or Alex as it is widely known is a freehold township established in 1912 to house Africans and coloureds working in nearby farms (Bonner and Niefagodien 2008, 17), on the edge of Johannesburg City Centre. Alex is also one of the country's poorest urban areas. Nonetheless, there have been quite a number of government led developments implemented in and around Alex, post 1994. One major project was the Alexandra Renewal Project, which saw the development of medium density housing within Alex, PAN African Mall and taxi rank in Wynberg and the extension of Alex through different housing typologies in Far East Bank. One may also argue that these developments are fragmented and lack a legible design framework which they are based on. Alex also has very harsh edges that limit development of the township. These edges include the highways (M1 to the West and N3 to the East) and industrial buffer zones surrounding it.

Wynberg

Wynberg is an industrial buffer between Alex and Sandton consisting of low rise factories. Wynberg faces challenges of manufacturing decline due to a move towards service based economic activities such as motor repairs and scrap yards (LBDC 2013, 22). This results in vacant factories and fragmented ownership of property.

Sandton

Johannesburg's decline in its significance as the economic hub of the country resulted in agglomeration of commercial offices to the periphery, due to factors such as flexible employment, telecommunication and data processing which did not depend on the CBD anymore (Murray 2004, 18). Thus, places like Sandton, which are on the periphery of Johannesburg CBD, developed (early 1970's) and continue to at very increased rates. Attracting capital investments, as a result of companies moving their headquarters in the area, thus further adding to the already fragmented and polarised city (Murray 2004, 18). The recent Gautrain Station attracted even more companies such as Alexander Forbes (opposite station) and capital investment into Sandton.

Poor (disconnected) East-West connectivity and economic polarity are a few prevailing conditions that are identified by COJ (2010). It also highlights the region's economic importance as the financial hub of the City and for the region to remain the economic and 'financial hub' of the City and in order to meet the Development challenges of the region. The report proposes interventions to alleviate traffic congestion and improve East-West linkages across the region (COJ 2010, 25). COJ (2010,5) also recognises Louis Botha Avenue as a potential development spine to connect the marginalised communities along it and to regenerate the spine as a high street.

At regional level, this research aims to address the 'poor' East-West connectivity and disparity as highlighted by the City of Johannesburg framework (see fig 5.1.2). It considers transport nodes as strategic anchors around the three areas highlighted in previous sections (Sandton, Wynberg and Alex) and the buffers that limit connectivity and inclusivity and conceptually investigates ways to break these thus increasing connectivity, economic development and inclusivity (see fig 5.1.3- fig 5.1.5 respectively). To do this, an understanding of the regional and metropolitan context is necessary to expose the intricate and very complex networks that operate within them.

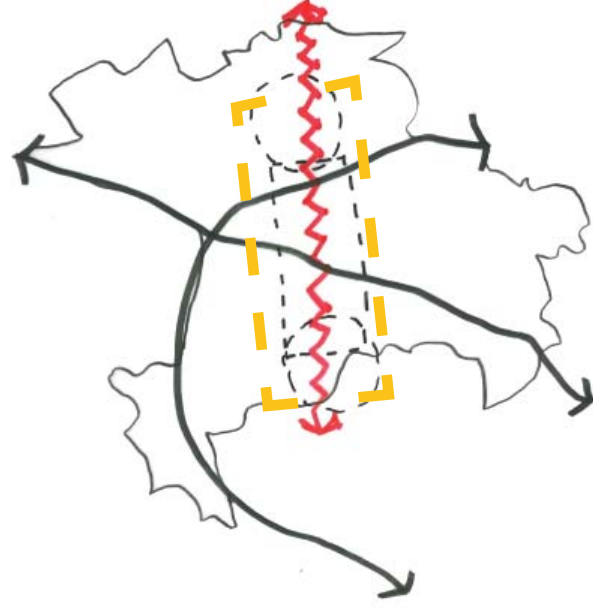


Fig 5.1.2 Regional issue of intervention

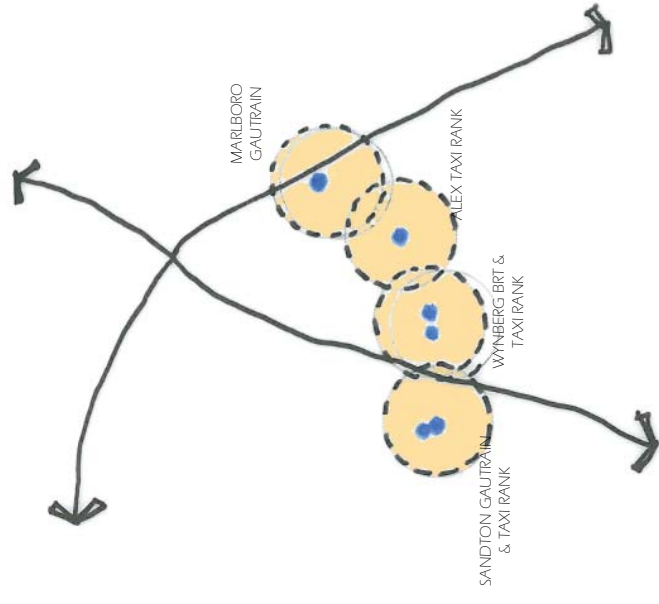


Fig 2.2.3 Regional Transport nodes

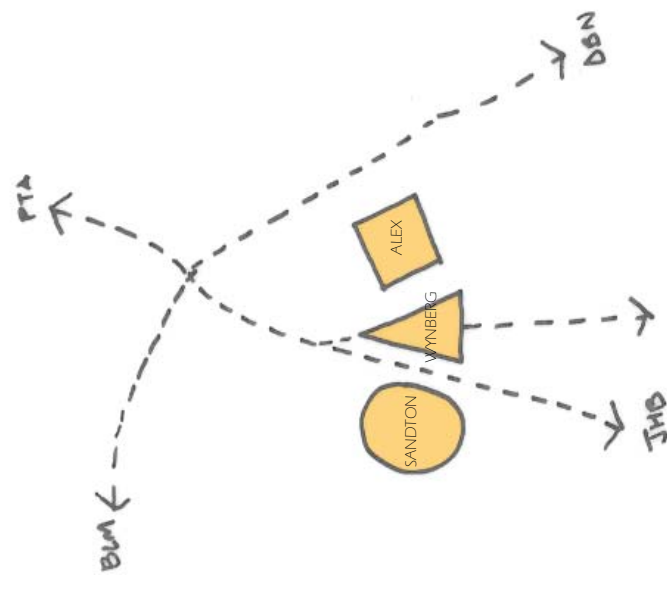


Fig 2.2.4 Regional areas of intervention



Fig 2.2.5 Regional proposed intervention

Transport Analysis

Figure 5.2 illustrates the major transport networks within Region E, namely mini bus taxi, rail and bus. Johannesburg has quite a number of formal taxi ranks from which various people, networks and nodes are connected. In the CBD, main taxi ranks include Bree Metro mall, Noord Taxi rank, Park city near Park station servicing the major networks in and around the city. There are many other informal taxi ranks throughout the city, which broaden the networks and service nodes outside Johannesburg. Around the study area there are about five formal taxi ranks that extend the CBD network to surrounding areas, these include Sandton taxi rank behind the Gautrain station, Pan African mall taxi rank along Watt Avenue in Wynberg and one in the core of Alexandra. As previously mentioned, the minibus taxi networks are the most widely used form of public transport in the city. Ideally, these should be core in transport plans for a richer transit oriented development; however, there are challenges that need special attention, such as the private operational nature of the system.

The metro bus network covers the major economic nodes within Region E from Ghandi Square (main metro bus station), however, it does not sufficiently cover the communities east of Louis Botha Avenue. There are plans to extend these through the proposed Louis Botha corridor. More networks could be developed to increase access and connectivity to economic nodes and neighbouring communities. Figure 5.3 illustrates the major economic nodes around the region. Notable is the imbalance of economic nodes separated by Louis Botha Avenue



Fig 5.2 Regional Transport nodes and major routes



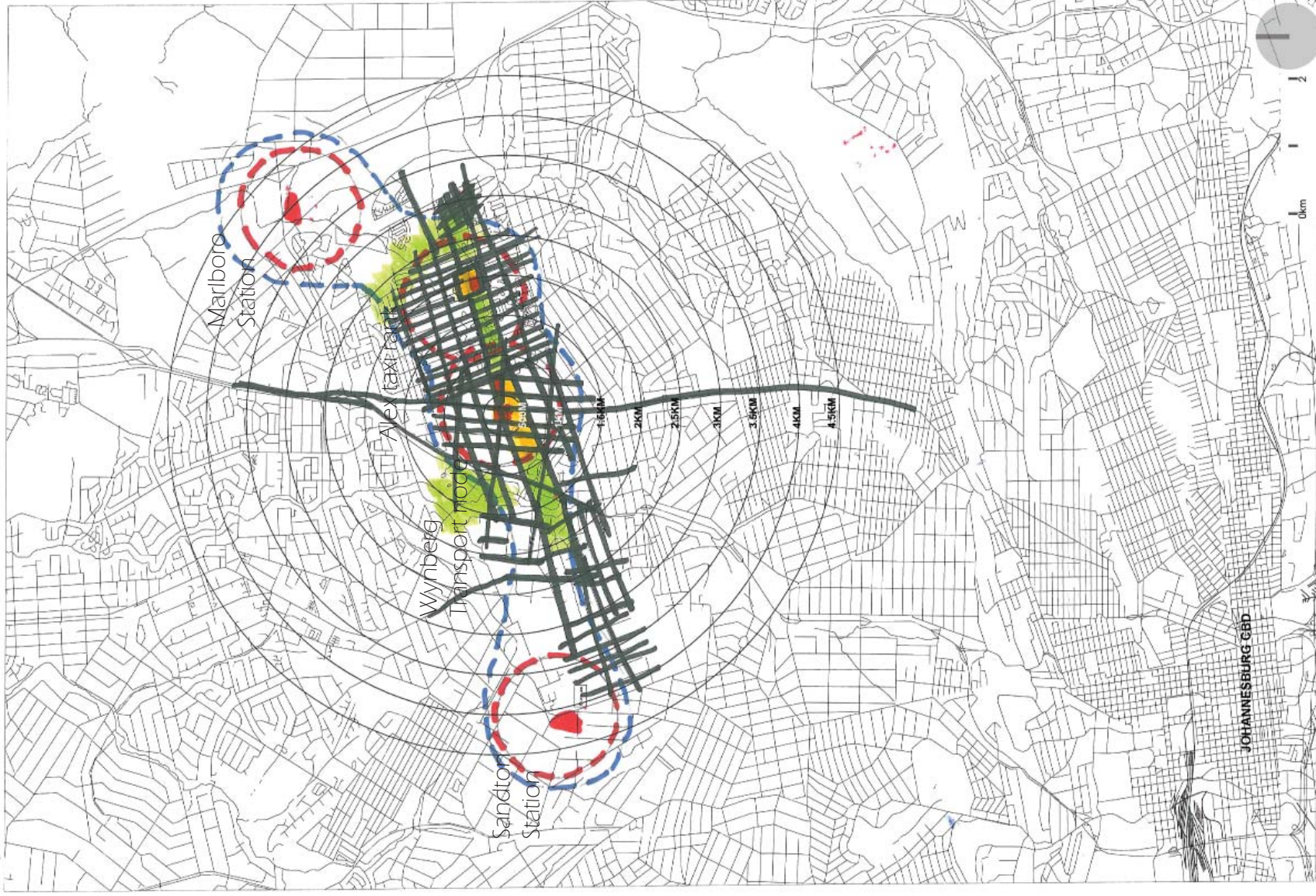
Fig 5.3 Major Economic nodes within region



Transgression

'...going beyond the boundaries set by law, discipline or convention' (Moseley and Sara 2013a, 15), 'a social process... that transcends boundaries or limits' (Jenks 2013, 20) or 'overcoming unacceptable prevalences' (Moseley and Sara 2013b, 34 after Tschumi 1976).

This research draws on political and social connotations that transgression, as a concept, is based on. It acts on the basis that there is a need for revolutionary urbanism, especially in the context of South African cities, whose image still bears the legacy of apartheid planning principles. It advocates for an urbanism that does not accept limits and boundaries (spatial, socio economic and political) as tools to define post-apartheid cities, but rather interrogates and reimagines these, or rather, the dismantlement of them, as spaces and networks for creating an image for a democratic city.



response



Photographic Inventory

The following photographic inventory captures the study area's textures, tensions and motions. Key informants that come out of the exercise relate to three topics that describe the physical differences noticeable over the length of the study area, namely:

- Pedestrian movement
- Built form and typology
- Boundaries

These informants expose the disparity and diversity found within the study area. The photographs are grouped according to the above topics for a comparative study of the three neighbourhoods within the study area.





pedestrian realm

democratic design requires that spaces are designed for all in mind, motorist, cyclists and more importantly pedestrians.

- Unfriendly pedestrian conditions, cyclists use road due to uncomfortable pavement conditions exist in Sandton
- Roads are reserved to vehicular usage, not enough pedestrian crossings and narrow side walks

SANDTON

- As with Sandton, Wynberg also has poor pedestrian realm, pavements do not cater for informal trading and thus pedestrians are pushed to the roadway.

WYNBERG

- Being and industrial area, roads are designed to facilitate delivery vehicles and thus a poor pedestrian realm.
- High pedestrian traffic without adequate consideration for pause and flow

- In Alex streets are the public realm, due to limited private spaces, although poor pedestrian infrastructure is evident in Alex, however drivers are more of pedestrians thus speed in streets is reduced and pedestrians generally cross the streets with more ease even with no designated pedestrian crossings. The environment is however, more domestic.

ALEX



Economic Freedom



Pedestrian Freedom



Built form and Typology

The three different spaces each have very distinct built form and typology representative of the socio economic fabric of each area

- Sandton's built form is made up of eclectic contemporary architecture juxtaposed right next to interpretations of modern and classical architecture, some of which seems out of place
- Buildings are set far from the street edge, sometimes with fences and high walls around them.

SANDTON



- Building heights are generally between 4-15 floors

- In Wynberg, buildings are larger, steel framed factories with a front office block façade
- Buildings have inactive facades, fences around and introverted
- Heights are mostly 2- 4storey buildings
- These sheds offer possibilities for conversions and opportunities for development of new typologies

WYNBERG



- Rich textures and diverse typologies (formal and informal dwellings, back yard rentals, 5 storey walk-ups, hostels and various conversion from dwelling to business-taverns, bars and shops)
- Buildings have an intimate relationship to street
- Low rise building but an incredibly high population density.

ALEX



boundaries

The study area has three strong boundaries (impermeable and limiting edges- Sennett (2011), namely the M1 highway in-between Sandton and Wynberg, Louis Botha Avenue in the middle of Wynberg and a Jukskei river on the eastern edge of Alex.

The M1 high way

- High volume and fast vehicular traffic
- Very wide road way (approximately 250 metres)

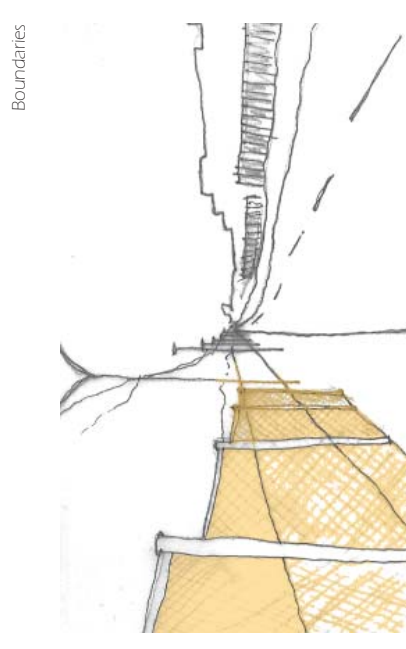
Louis Botha Avenue

- Is a through road and service road with separate service lane on either side of the already 4 lane road.
- To prevent pedestrians from crossing the road, a fence was built in the middle of the road which over the years was vandalised and now is only a memory

Jukskei River

- Forms one of the main north south water systems in the city
- Pockets of informal settlements (slums) are found along its river banks, these are susceptible to floods

The following metropolitan analysis highlights and isolates key informants for the design section of this research report. It looks specifically at the spatial morphology of the study area, it also considers the various movement patterns and lastly it attempts to unpack the complex social networks and role players active in the study area.





metropolitan analysis

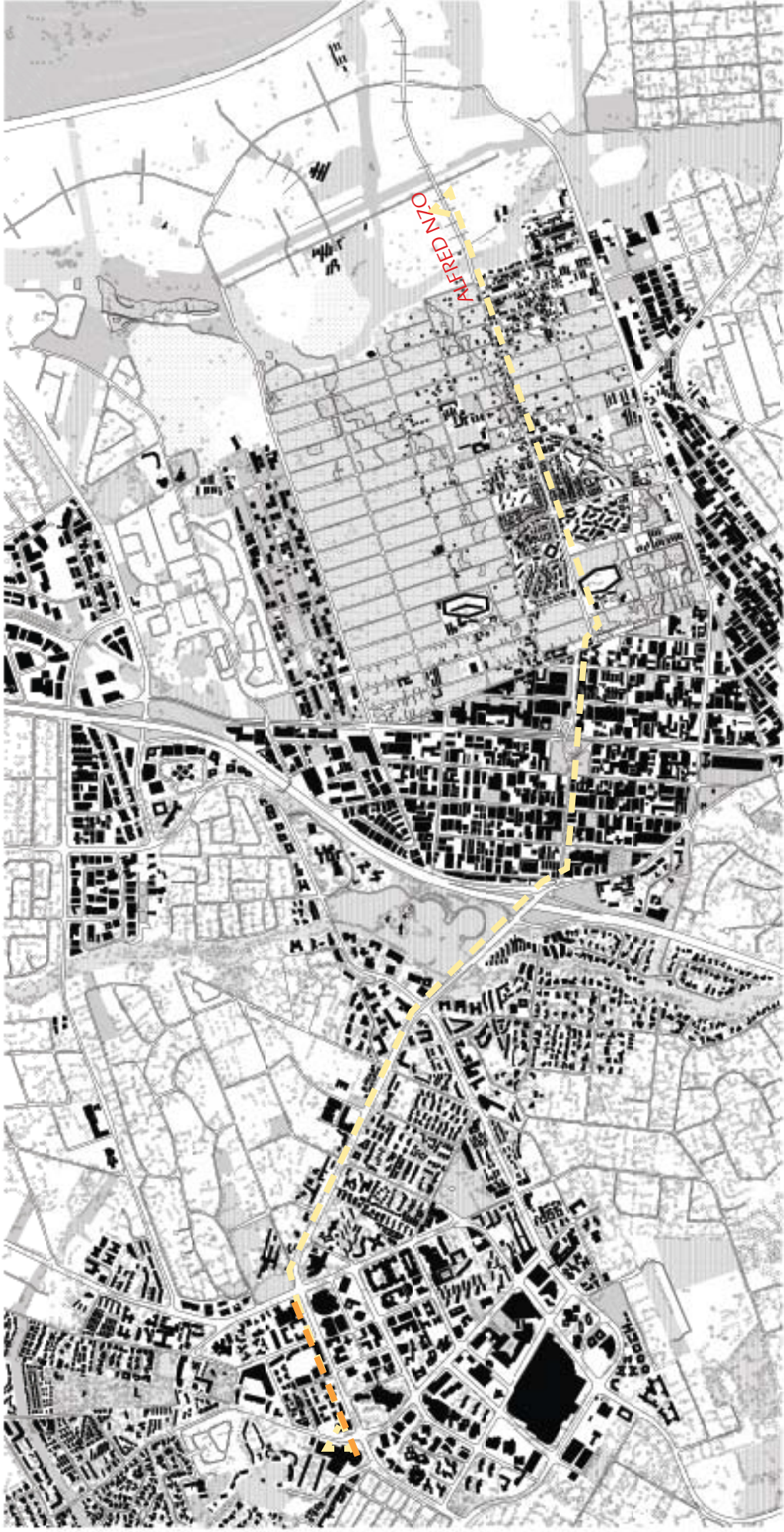


Fig 6.3.1 Physical layers building the area of study

Analysis, Mapping and Argument development

The physical morphology of the study area consists of a number of layers, each bearing certain degrees of segregation. For instance, the M1 highway literally cuts the natural vegetation, the west of it is lush green and on the east of it where Alex is, it is dry with very little trees. This is also evident in the open space distribution between the two areas (see fig 6.3.10). What is most prominent as seen

from the photographic inventory is the strong difference in the built form between these areas. Many developments were implemented in Alex post 1994 to address this spatial morphology do not seem to have a clear urban frame work that not only address current issues, but paves a vision for the area. Thus a lot of the developments picked up on the housing shortage and tried to meet that gap through various developments such as the Far East Bank (FEB) extension and infill housing along Alfred Nzo street. There are also current works underway on Alfred Nzo to improve this public spine/High street to a more pleasant shared

environment. How do the developments address the economic disparity and lack of social cohesion that exists between Alex and Sandton? Even the Gautrain station situated in FEB dissociates itself with Alexandra opting for Marlboro (see figure 3.6.2). The following analysis aims to expose some of the layers in the goal of framing the argument for the need for a more vigorous urban framework to address the apartheid spatial morphology and disparity that persist in many cities in South Africa



Fig 6.3.2: LONGITUDINAL SECTION ACROSS STUDY AREA

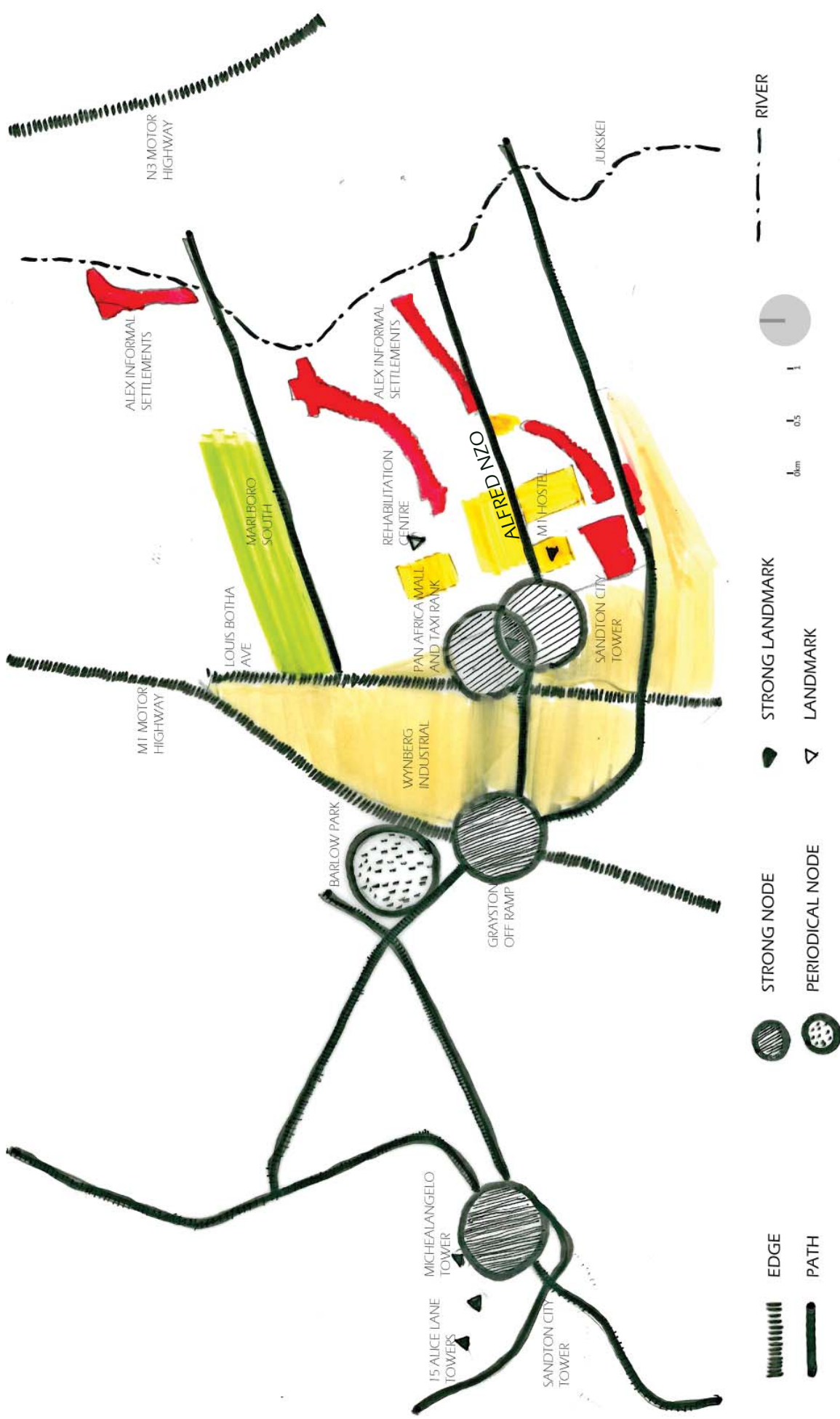


Fig 6.3.3: Representation of distinctive elements of the study area

Fig 6.3 illustrates the distinctive elements of the study area, settlement that is mushrooming into abandoned factories in Marlboro South. What are the plans proposed for these vulnerable and unsustainable spaces? Furthermore, from the above diagram, there is no distinctive element that connects Sandton and Alex. Durban has the market Wynberg draw people from both sides of the buffer?

drawing diverse people, London and Medelline proposed high quality architectural development in 'poor' areas to inspire a socio-cultural innovation. High education levels positively affect the social fabric, as noted in the literature review. Could a new tertiary technology campus in Wynberg draw people from both sides of the buffer?

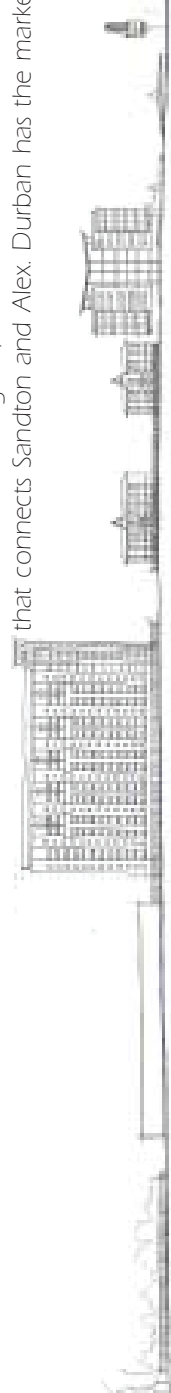
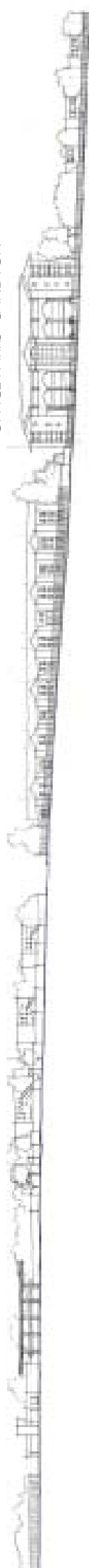




Fig 6.3.4- Aerial View of area of investigation- different grains and built form, economic node (red), prominent industrial buffer (blue)

Formal opportunities of employment exist in Wynberg's light industries/ factories and Sandton's office parks, retail zones. An observation captured on video on a weekday (6:00 am) shows thousands of workers/job seekers walking between 1-5 kilometres of vehicular oriented environment to areas of formal employment. Is there no way to negotiate this distance?

OFFICE PARKS - SANDTON



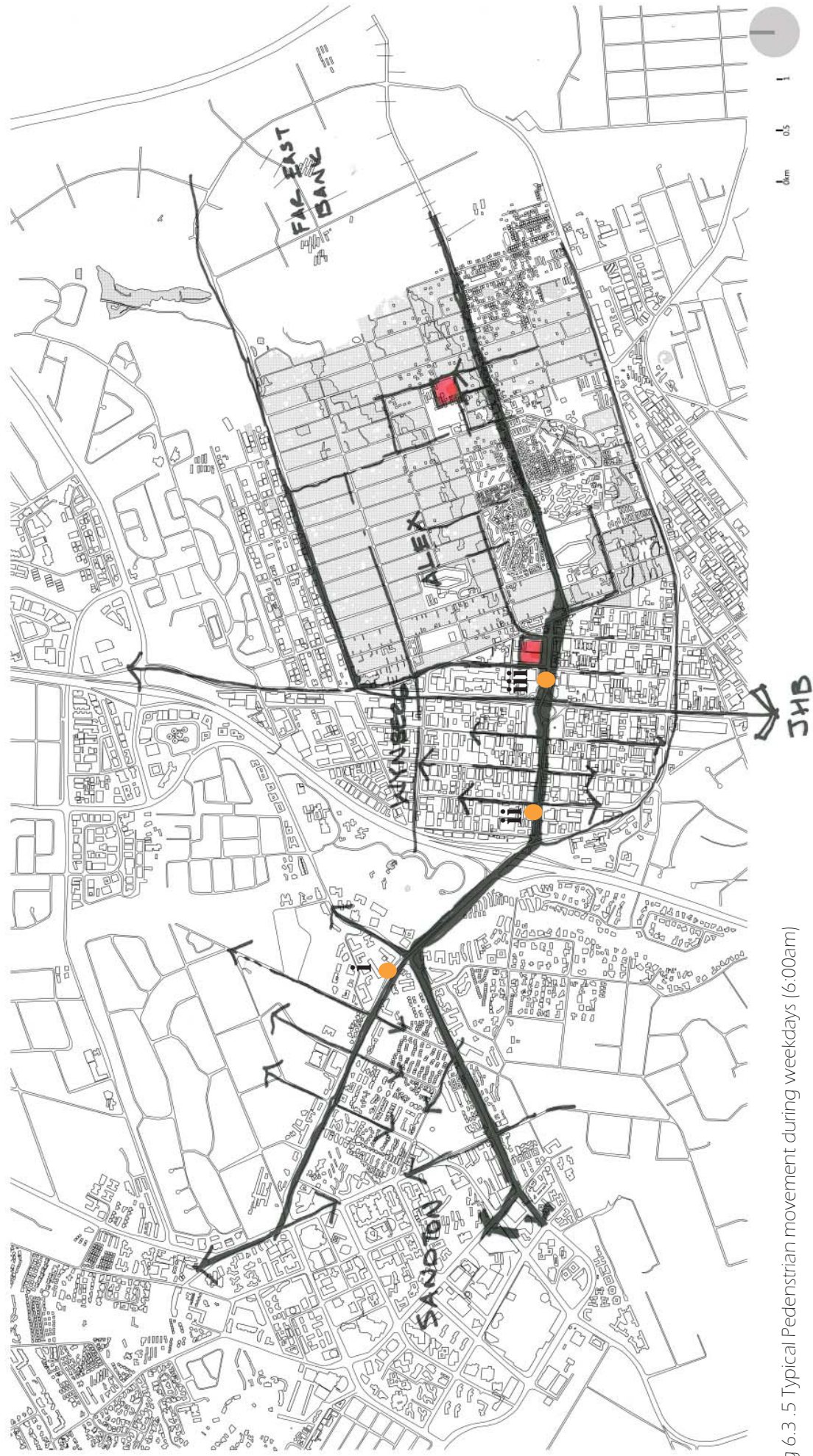


Fig 6.3..5- Typical Pedestrian movement during weekdays (6:00am)



Image 6.3..5i- Pedestrian movement on Grayston Drive



Image 6.3..5ii- Pedestrian movement on Rautenbach Street



Image 6.3.5.iii- Pedestrian movement on Watt Street





Fig 6.3 -6- Road network

Unlike Warwick Junction, the study area's transport systems are limited and not well connected. With so many people walking to and from work, streets need to be reconsidered as public spaces. The LBD proposed "big walk" (see fig 3.8) is from this point of view an appropriate intervention, however more such routes are necessary not only to connect but also to shorten distances and give pedestrians and even cyclists more choice. This may mean considering strategies to reduce the very large block sizes

of Wynberg, which will open opportunities for innovative and diverse spaces as seen in SESC Pompeia Factory Leisure Centre in Sao Paulo, Brazil (see section 3.8 of this report). An opportunity to achieve this exists in Wynberg, although the block are large, Wynberg is quite porous (especially in the east-west direction- see fig 6.3.8 and 6.3.9) the plots are relatively narrow with buildings built off the boundary, thus corridors exists which could be opened up for pedestrian flows.

This analysis together with the literature review give a number of clues on how to articulate the spatial layout of a post-apartheid democratic city through consideration of social cohesion as the vision driven by transport networks and other factors. The following section presents concepts leading to an Urban Design Framework.

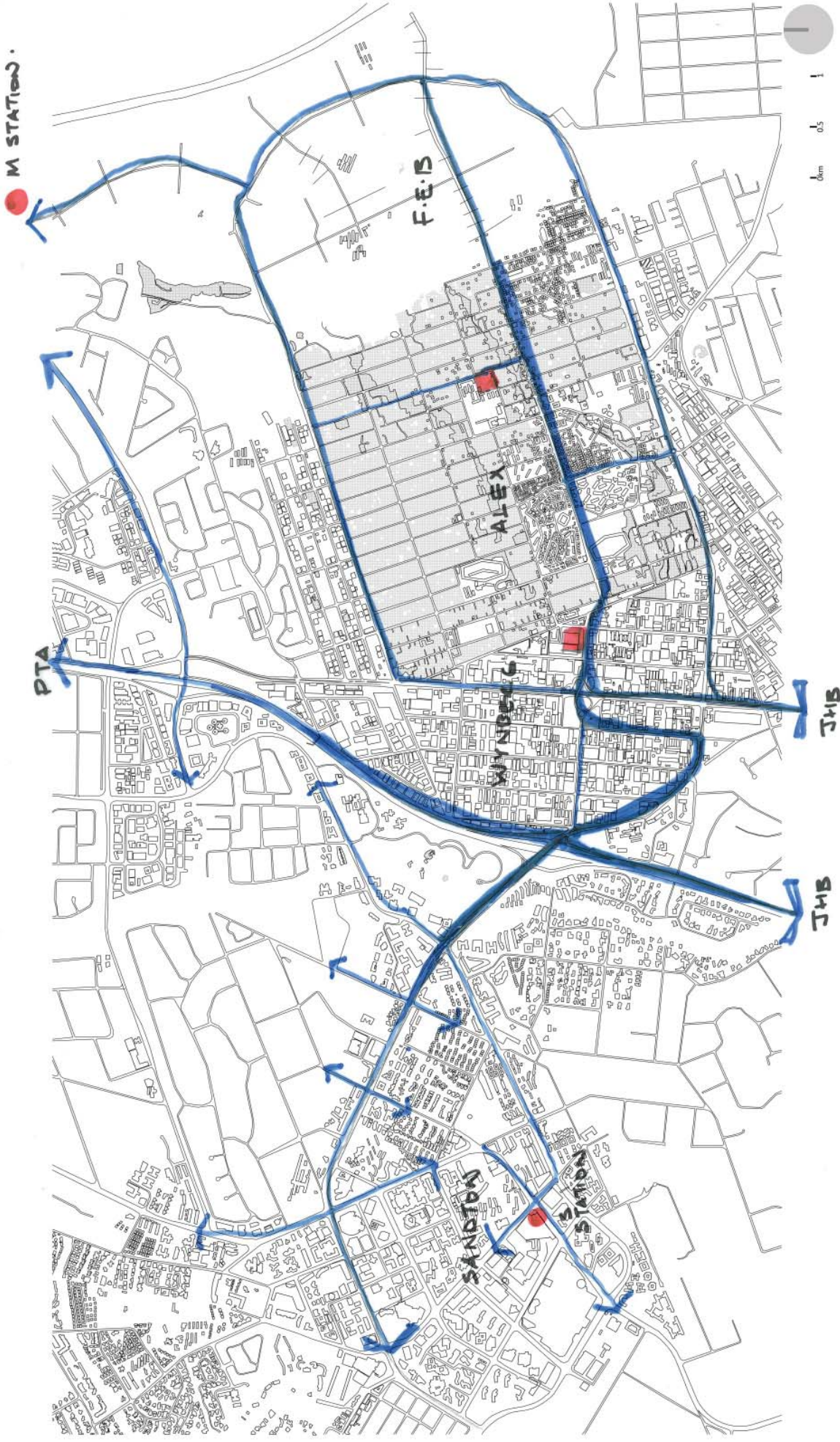
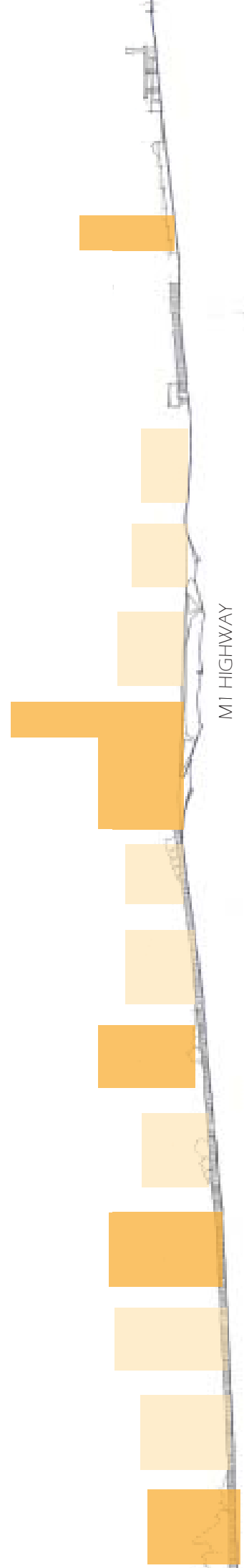


Fig 6.3. 7- Typical Mini Bus Taxi movement during weekdays (6:00am)



M1 HIGHWAY



LOUIS BOTHA AVE.

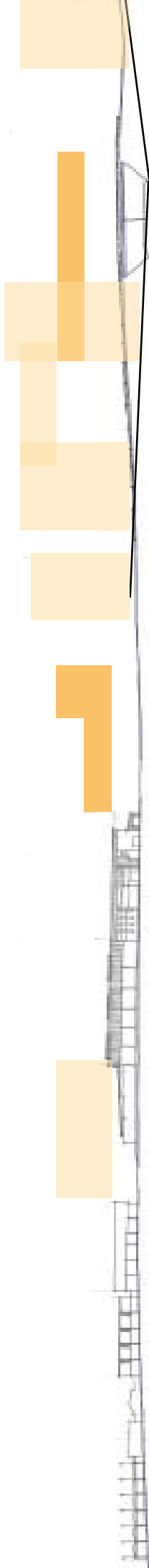
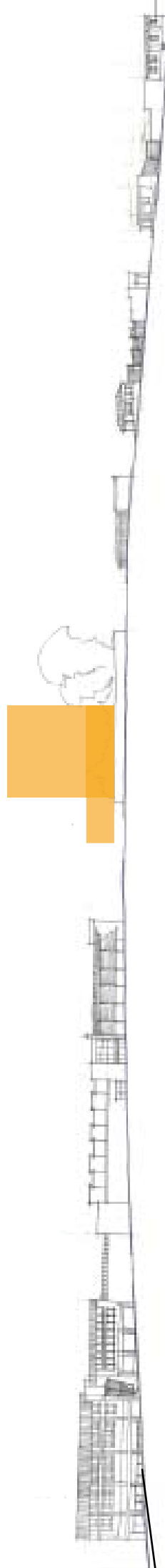


Fig 6.3 8 Figure ground



Fig 6.3 9 Porosity

PAN AFRICAN MALL



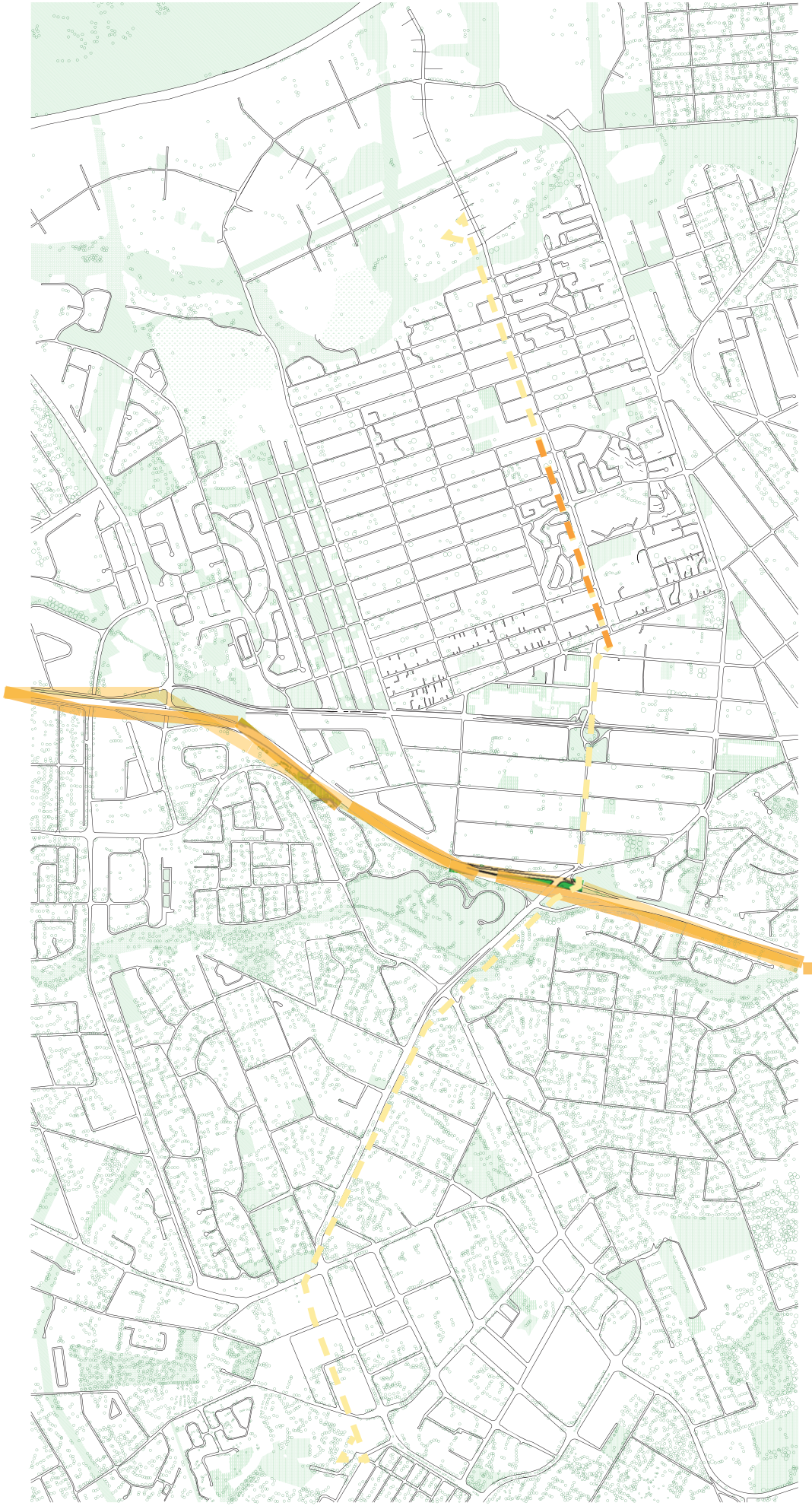


Fig 6.3.10. Open space systems, tree distribution over road network

MALE HOSTELS



SOCCER PITCH

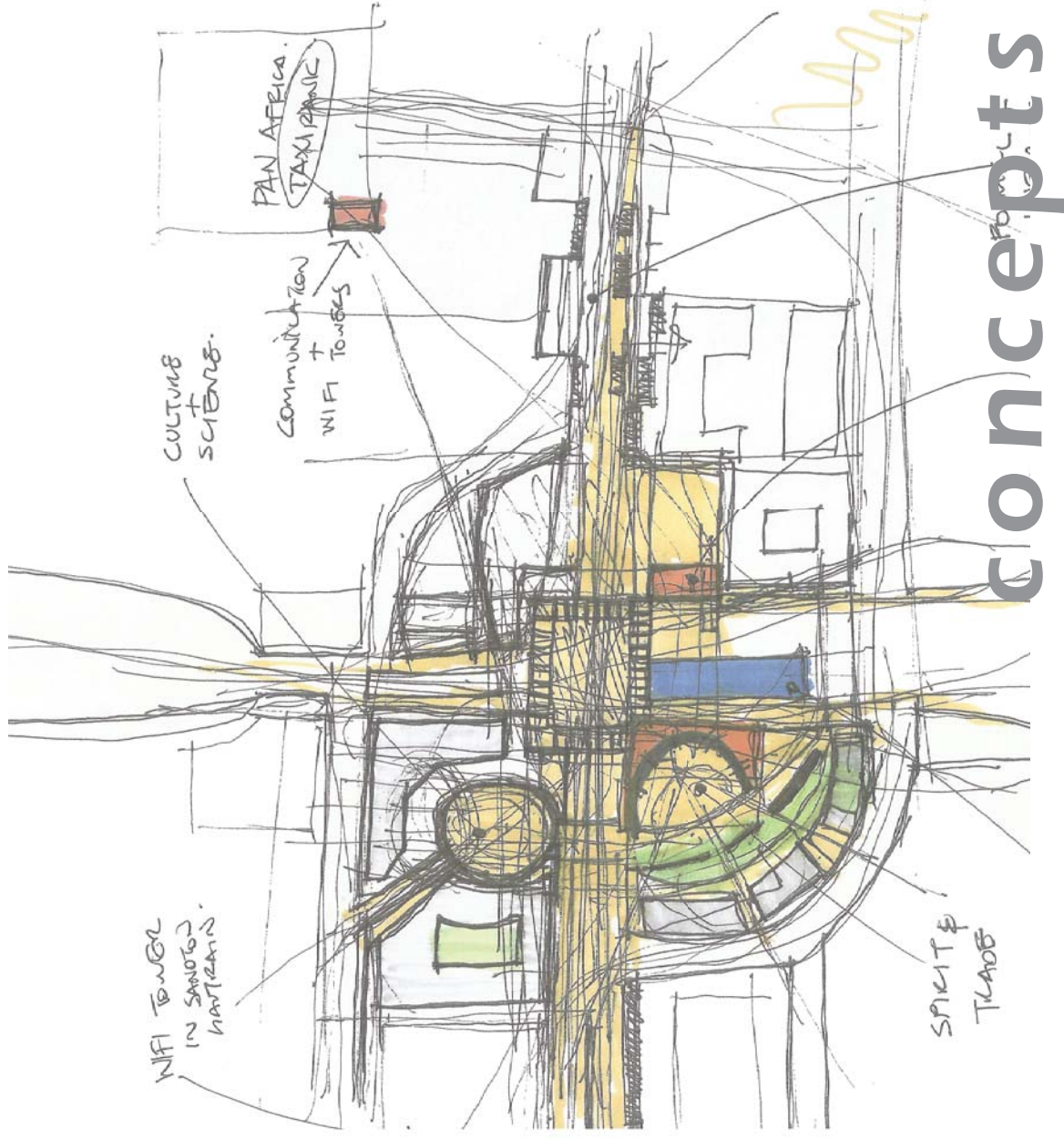


FEMALE HOSTELS



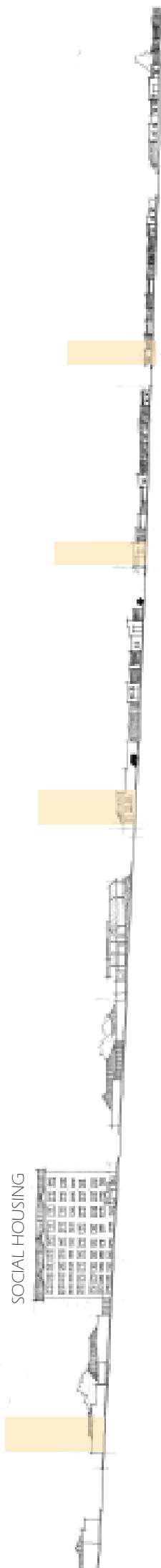
From the preceding analysis, the following conclusions that guide and have an influence in the design proposal are noted. The study area (Sandton, Wynberg and Alex) is still representative of modernistic apartheid spatial layout. The developments within the area (Far East Bank Housing, Gautrain and Pan Africa Mall) post 1994 (after transition into a democratic state), have not changed the spatial layout of the area. This is based on the observation of the disparity that exists in the study area. Through an interrogation of these boundaries, opportunities to increase connectivity, inclusion and just public spaces is also evident from the mapping exercise done both at regional and metropolitan scale.

Literature points to a multi scalar approach to address and map social cohesion. The following section discusses concepts drawn from literature, mapping and case studies to begin framing possible designs that express a democratic city layout, which for the purpose of this research report is described as an all-inclusive and permeable city. These concepts are both separate and interrelated ideas that respond to the literature and mapping. The first responds to the limits of modernistic planning principles of categorising spaces into separate bubble by employing a band approach inspired by OMA Senart Merlune proposal scheme. The second concept is based on literature on transgression and considers this as radical move necessary to invigorate transformation. Lastly, the third concept responds to the opportunities the mapping revealed for an east-west connection when one disregards the site boundaries and studies porosity. These separate concepts are later post-rationalised to articulate the urban design framework proposal for the study area explained in detail in section 8.



concepts

SOCIAL HOUSING



7. Concepts

7.1 Band theory

This research report also deals with the urban design aspects in answering the research question, which asks what the spatial layout of a democratic city is. One also has to question, is formal design necessary? Alternatively, should that layout come out of free market forces? The debate between what design approaches are appropriate is not a new one, Fontenot (2015) tracks the planning trajectories and pedagogies in framing arguments around the necessity of planning by considering history.

He (Fontenot, 2015) tracks theorists such as Sir Peter Hall who wrote and published articles in the 1960's about how planning and planners were "unsuccessful... in bringing about more just, sustainable, healthy and beautiful cities and regions". Another noteworthy theorist, driving the argument on "spontaneous order" which gain popularity and reinterpreted as "non-planning" was Austrian-British economist Friedrich August Hayek in the 20th century. He (Hayek) argued that design from a socialist point of view was too rigid, and that a much more spontaneous order that freed economic markets and democracy from controlled governments was necessary. This view point was taken literally by some governments (Thatcher) and scholars who dismantled planning departments/schools in various institutions during the '70s and 80s (Fontenot, 2015). This eventually led to a state of disruption and collapse.

The work of Rem Koolhaas and OMA played a "pivotal yet ambiguous role" of seeking to find balance between the planned and the unplanned, sitting the unbuilt Ville Nouvelle Melun-Senart proposal as "especially remarkable in this regard" (Fontenot 2015). This project is discussed briefly in the following section. It is starting to make sense to me why I was directed to the project during my initial presentation in Leuven. What I seek to do was find balance between what to design and what to leave as void.

Fontenot (2015) continues the discussion and brings in another architect/theorist; William McDonough (2000) who considers the "tragedies" that resulted in the free markets spontaneous movements such as global warming and argue that designers have to take responsibility for these tragedies.

"We (designers) can't say it is not part of your plan that these things are going to happen. It is part of your de facto plan. It is the thing that is happening because you have no plan... planning is most effective when practised in advance" (McDonough-2000).

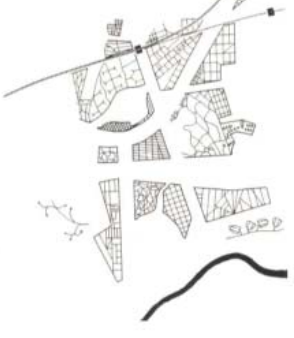
What is interesting from McDonough's viewpoint is the need for a reference/base from which to understand where we are, how we got here and more importantly where are we headed. Without a plan, a map, a layout it becomes difficult to find and articulate this information. This is why this research report argues for the articulation of a spatial layout/map/plan of a post-apartheid democratic city. To understand where we are, how we got here and more importantly where are we going. Otherwise, all these projects such as the corridors of freedom proposed by the government are meaningless.

Therefore, what is the appropriate design approach? Fontenot (2015) elaborates that is beyond the debate of whether a top-down, bottom-up or state versus market oriented approach is appropriate. It is more about a "new middle way" in which cities of the South such as Medellín (discussed earlier) are pioneering. A methodology where both governments and people (users and funders) are involved as active participants in the making and remaking of their environments.

This concept is based on OMA, Rem Koolhaas's New town of Melun Senart 1987 design proposal in a left over large land and had the challenge of connecting various activities around it. The concept looks at redeveloping the whole area of investigation through systems of interrelated and independent band/voids. These are based on existing functions and the extension and articulation thereof over larger land parcels. The emphasis here is that these bands may be developed completely independently from each other and would have some impact in changing the spatial image of the area.



Bands



Circulation in the interbands



Interbands



Recreational facilities



Principal axes



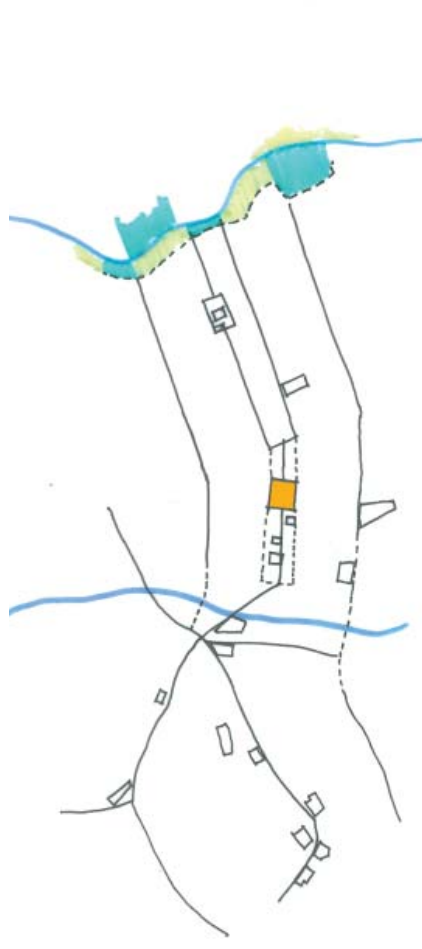
Fig 7.1-1-5; New Town of Melun Senart proposal- OMA, REM KOOLHAAS
Source: Lucan J. 1991 OMA- Rem Koolhaas Architecture 1970-1990 pp 115-116

Lessons from Melun-Senart

What resonates with the researcher in this project is the conceptual approach of band and void, planned and unplanned. Where in the planned is an ordering device and the unplanned void is free to develop while being cognisant of the bands. Therefore, the environment is never totally conceived and represented, but the bones of it are in place to allow and guide the unplanned. This is quite similar to the CoF, however the band theory does not express an explicit reliance on a transport line to guide and tie developments to. Transport could be considered as one of the numerous layers each band is made of. It seems to advocate for the creation of place and identity.

Modernist plans work in bubbles, separating spaces according to use (apartheid planning is a form of modernism in this regard), a legacy of many cities. These could be interpreted as voids; the bands would be the mediators in between the bubbles, bringing about more diversity and interrogation of the bubbles. This is one of the key concepts explored in the development of the design.

Another lesson is that of finding and/or making links between various existing open space systems and using them as structuring devices. The following diagrams express this conceptual thinking on the area of investigation. These diagrams purely express a very conceptual interpretation thinking of the above lessons, which are developed further in sections to follow.



THE 'BANDS' / CORRIDORS

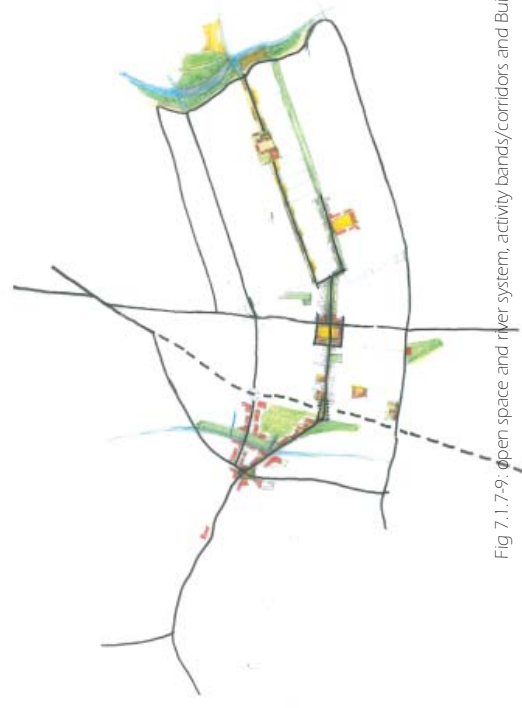


Fig 7.1.7-9: open space and river system, activity bands/corridors and Built form infill respectively

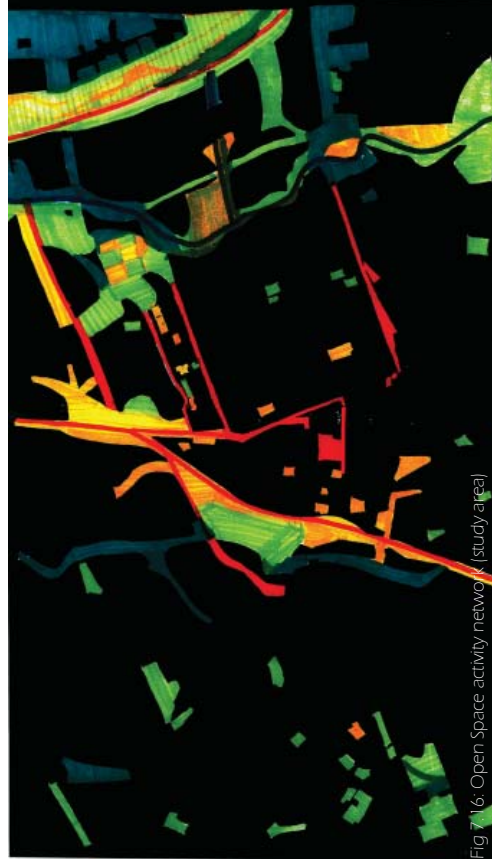


Fig 7.1.6: Open Space activity network (study area)

7.2 Transgression

A very reactionary conceptual response to the study area after having done preliminary mapping and observations that was an interpretation of the revolutionary ideas of transgressions discussed earlier. Wynberg and the M1 highway are strong boundaries that limit social and economic exchange between Sandton and Alex. The response with this conviction is to extend Alex's existing movement networks through Wynberg into Sandton. Anything on the way of this reaction would have to adjust to the change. The driving force is increase connectivity, shorten the walking distance and create a new spatial and morphological layout. It works on the conviction that

the COF's intervention is separating the two areas even more and thus a much stronger east-west connection is necessary as opposed to the north-south connection proposed by COF.

The criticism and argument that this conceptual idea raised was on the principle it is based on, like apartheid planning, it regards spaces with existing activities as green fields, able to be erased and replace with new activities with little consideration. In this instance Wynberg's existing networks and activities need more though rough consideration even at such a conceptual stage. However, the argument of Wynberg and the M1 as boundaries that need to be re-imagined is sustained in the design framework presented later in this research report.

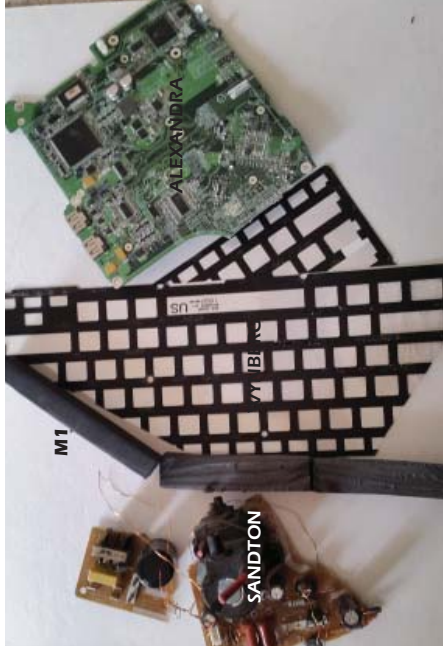


Fig 7.2.1: Existing condition

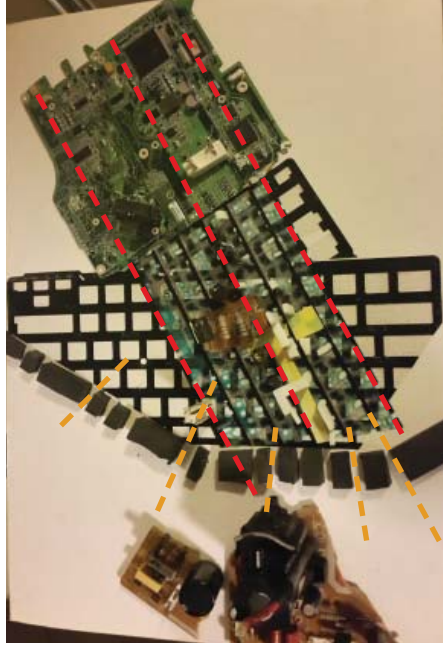


Fig 7.2.2: Proposed intervention- extension, transgression



Fig 7.2.3: Perspective of proposed intervention



Fig 7.2.4: Block size changes

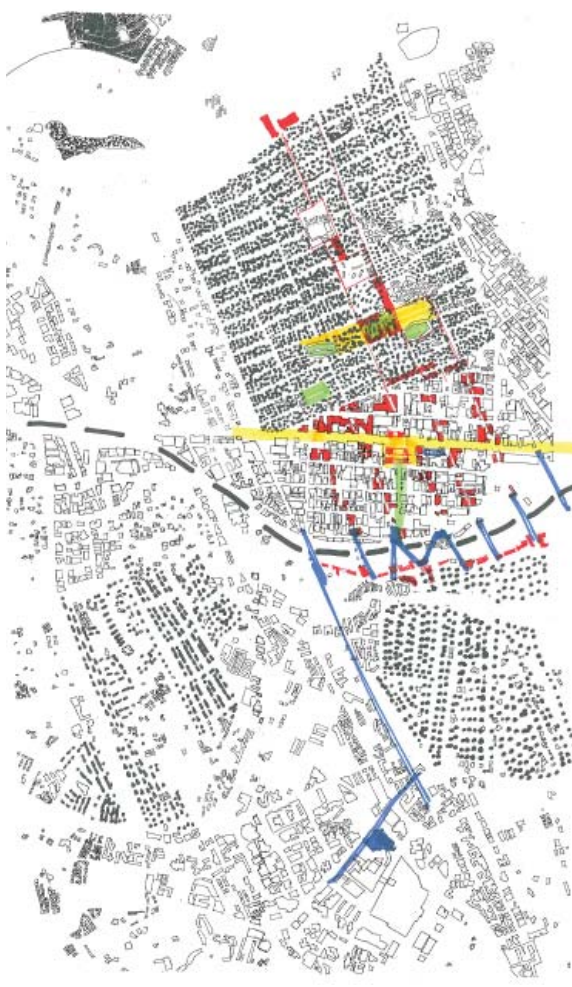


Fig 7.2.5: M1 Connectivity and Buildings lightly to change



Fig 7.3.1: Porosity, Open space and Infill proposal

7.3 Infill

This concept considers porosity and looks at the potential of open spaces that are underutilised as spaces best suited to introduce new typologies thus changing the existing morphology. The open spaces are rationalised and restructured through an ordering system, then infill built form is introduced to frame and define them. This approach would require a lengthy process of negotiation with the business owners of land parcels within Wynberg, a process that may be contested and bear no fruit without bargaining power.



Fig 7.3.2: East West Porosity



Fig 7.3.3: Open Space networks



Fig 7.3.4: Build form Infill



Design

8. Design

Research herein presents arguments for the spatial definition of a democratic city and the achievement thereof from a social cohesion point of departure. Theories, literature and case studies presented here bring to the conclusion that this endeavour is not only achievable, but also necessary for cities such as Johannesburg, whose image is still dominated by apartheid planning morphology. Therefore, the vision for the specific area of study (Sandton, Wynberg and Alex) is;

To set precedence for the creation and representation of a post-apartheid/democratic city from a social cohesion as point of departure.

Literature teaches that rigid, socially irresponsible master plans and vision are not appropriate ways to design democratic spaces. These lack the recognition of the rate at which cities are appropriated by immediate users and how flexible these spaces need to be. A point that South Africa understands quite well and express in the adoption and implementation of Spatial Development Frameworks instead of Masterplans as expressed in the enactment of the Systems Act of 2000. Also presented in literature here, are not so conventional ways of 'urban design', such as transgression, which not only bring forth the complexities of the city, but also propose alternative, much more responsive approaches to urbanism. Therefore, the above vision is not set in stone, it can and should adapt to changing conditions, but be committed to readdressing the inequalities and unjust nature of the current city inherited.

The design principles that guide the vision are based on three pools of literature, namely: dimensions of social cohesion (Jenson 1998, 15), social urbanism (Vranken n.d) and democratic urban space norms (Kurdistani et al. 2012). Below is a list of common principles from these theorists.

- Freedom of movement and accessibility (pedestrian friendly spaces)
- Participation
- Citizenship/recognition/interaction
- Public space articulation
- Socio cultural innovation
- Diversity (mix, choice and urban management)

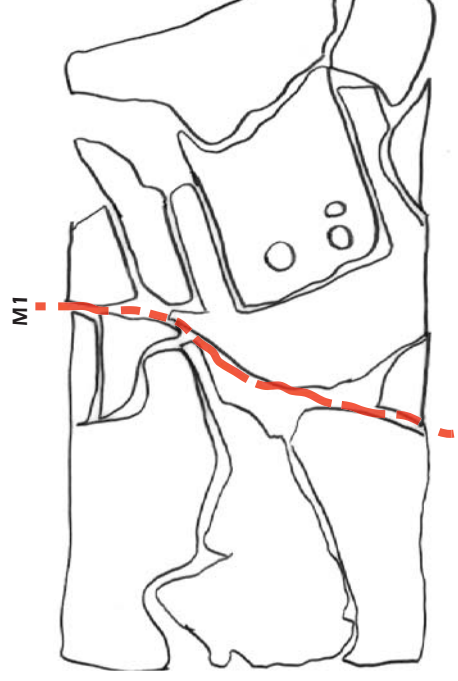


Fig 8.1.1 Bubbles - Spaces based on predominant landuse

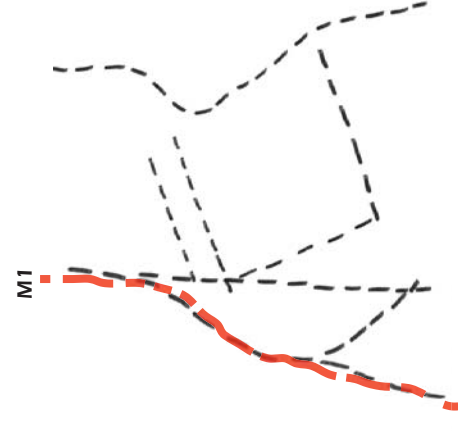


Fig 8.1.2 Boundaries- Natural and man-made boundaries

8.1 Banding over bubbles

Mordenistic planning uses bubbles to define land use and thus resulting in separated uses. This way of planning limits social interaction, chances of casual meeting and gathering. Banding, unlike stitching, in this instance refers to defining structural ordering principles that frame and promote mixing of uses while having clear and readable identities that overlap creating new and unique mixes. Instead of a defined line, it defines a space, but it also, like a stitch, seeks to connect and bring one bubble closer to the 'other'. Over this band layer, is the transport/movement layer that address the disconnection in a sustainable, human orientated design emphasis, where the opportunities to meet, interact, pause and fall in love are promoted.



Fig 8.1.6 and Fig 8.1.7. Connected green networks across the M1 Highway, framed by social, public, mixed use built form



Fig 8.1.5. As it comes together - conceptual expression of proposed intervention

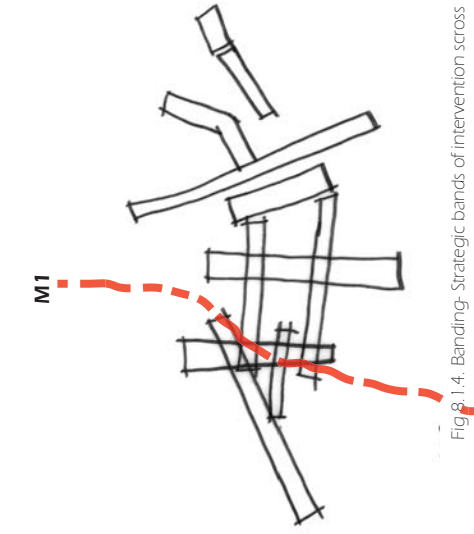


Fig 8.1.4. Banding- Strategic bands of intervention across bubbles

“banding instead of stitching”

UDF

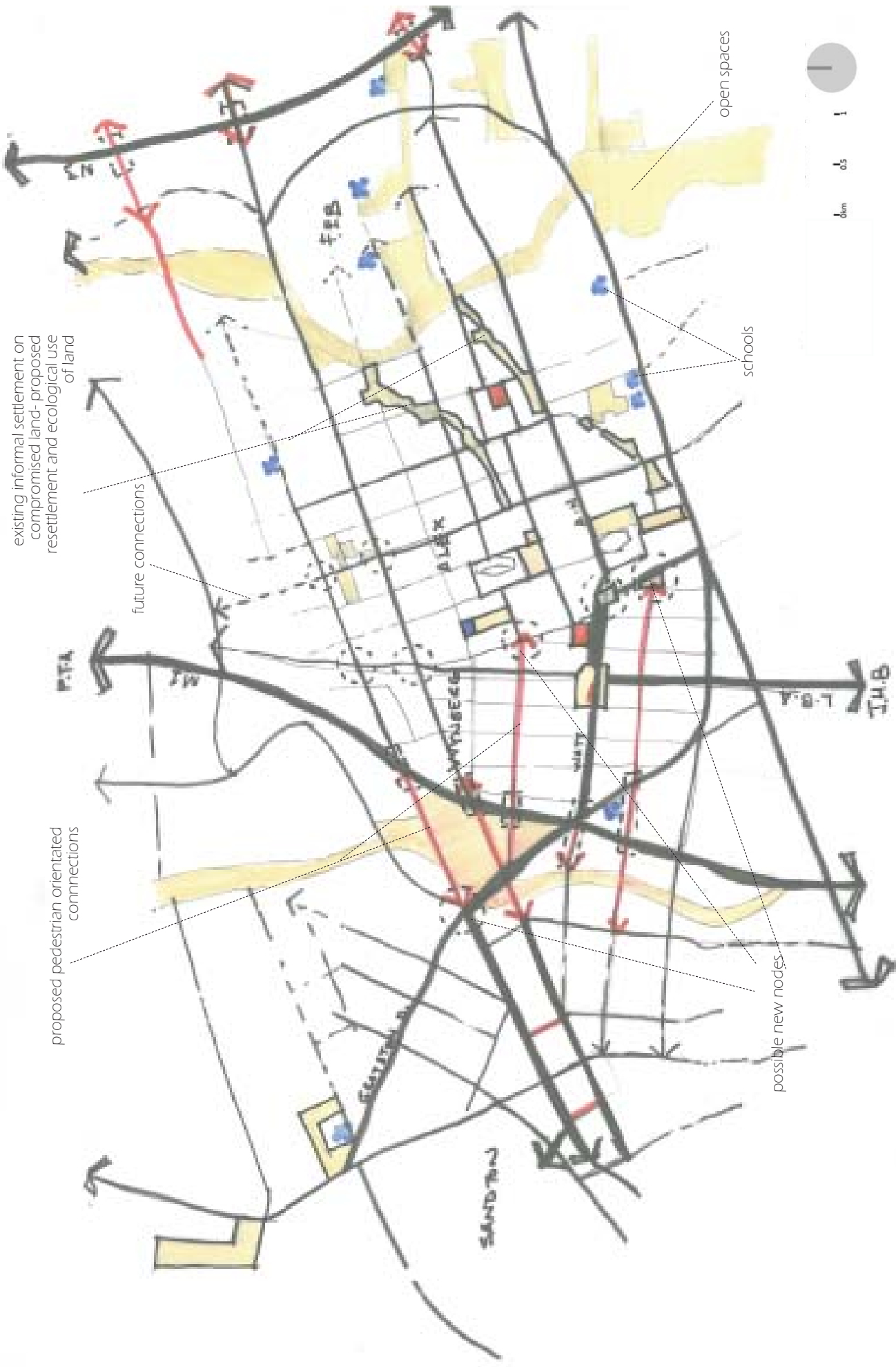


Fig 8.1.3. Connectivity and Linkages- exploring possible connections and linkages through, across and under boundaries

8.2 The bands

Although the proposed bands have strong identities and characteristics, most of the design principles may be found in each band, some more pronounced in one than the rest. Unlike the CoF, these bands cover a much wider area of intervention and are not restricted to the transport line. They occur along, over, on and across various transport networks.

8.2.1 Socio Cultural innovation and diversity bands

These bands focus on both built form and open space system along and on boundaries and seek to address exclusion and fragmentation in an innovative way. Here one would find new typologies of mix use and mixed economies, a possible university campus, increased housing densities, stronger connections to public transport systems and pockets of public spaces framed by built form.

8.2.2 Pedestrian orientated bands

The introduction of new pedestrian routes across the very long industrial blocks may increase accessibility, connections and diversity to an otherwise very harsh environment. These new "roads" are pedestrian orientated, therefore cars are restricted in these spaces and the design thereof will comprise of spaces that encourages pedestrian flow, pause and meander. Cafes, well designed trading spaces and active building edges are prioritised in these roads.

8.2.3 Central park bands

Alex does not have enough open public spaces that are for both leisure and production. Considering that the central informal settlements lie on shallow stream valleys, this land could be better used as productive leisure parks. With a strong informal goat trading economy in Alex (especially within the male hostels), this park is envisioned as a grazing land, urban farms and recreational spaces. It thus, forms a mitigation space for community engagement and participation, a strong principle to foster social cohesion.

8.2.4 Economic band

People from Alex walk a long distance to their work places, what if those workspaces were closer. It would reduce travel distances and possibly introduce new and innovative economies that attract diverse people, and exchange of ideas. These environments promote social cohesion. This band focused on the economic activities with strong social innovation.

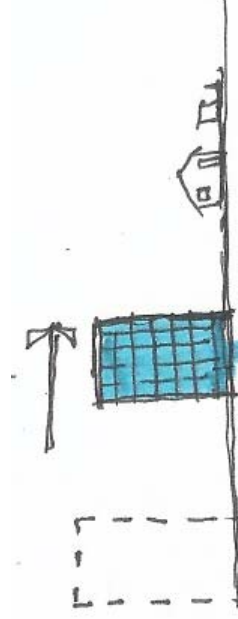
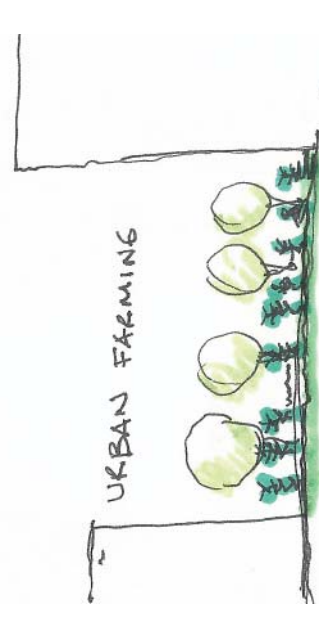
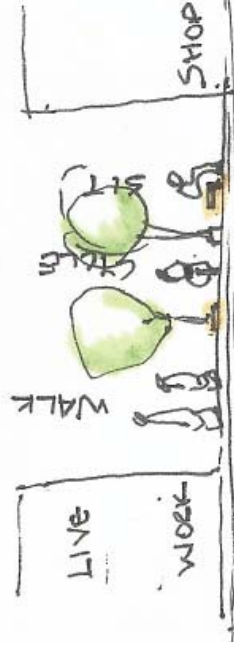
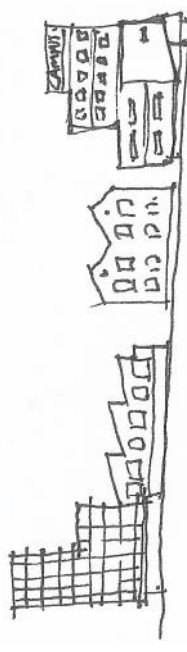
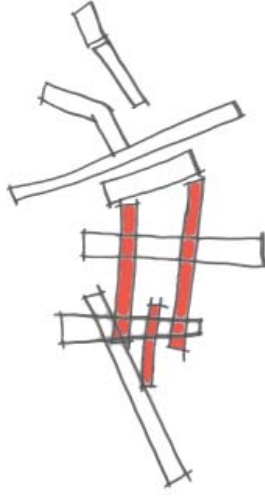
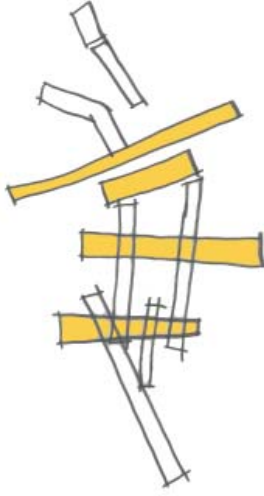




Fig 8.3.1. Proposed Urban Design Framework for study area.

8.3 Urban Design Framework (UDF)

The UDF identifies three precincts as strategic nodes that have the potential to address the spatial representation of social cohesion at regional scale (highway-M1- overpass), metropolitan scale (Wynberg pedestrian connections) and lastly at neighbourhood scale (introduction of green belts through re-blocking of informal settlements in Alexandra). These nodes are elaborated on in the sections to follow. The section elaborates further on precinct A due to its active address of the divide (M1) and how it bridges over it:

As part of the overall framework at a metropolitan scale, the researcher decided to:

- Reduce the large block sizes of Wynberg, by introducing intermediate pedestrian friendly streets, thus creating shorter connections between Alex and Sandton.
- Infill and repurpose existing industrial buildings and spaces with new uses such as innovation hubs, alternative economic market spaces, housing, tertiary level educational facilities and centres.
- Inhabiting the M1 boundary by decking it, while bridging over, with mixed use, pedestrian friendly, high density, investment attractive developments. Similar to Melrose arch.

• Better articulation of public spaces and transport nodes to encourage interaction and engagement

• Re-blocking of informal settlement within Alex that lie on unsustainable ecological land, replacing it with alternative self-sufficient housing models. The idea is to provide a frame structure from which people can build to their homes to suite.

• This will free up some land from recreational, agricultural and better ecological use and shared pleasant community public spaces.

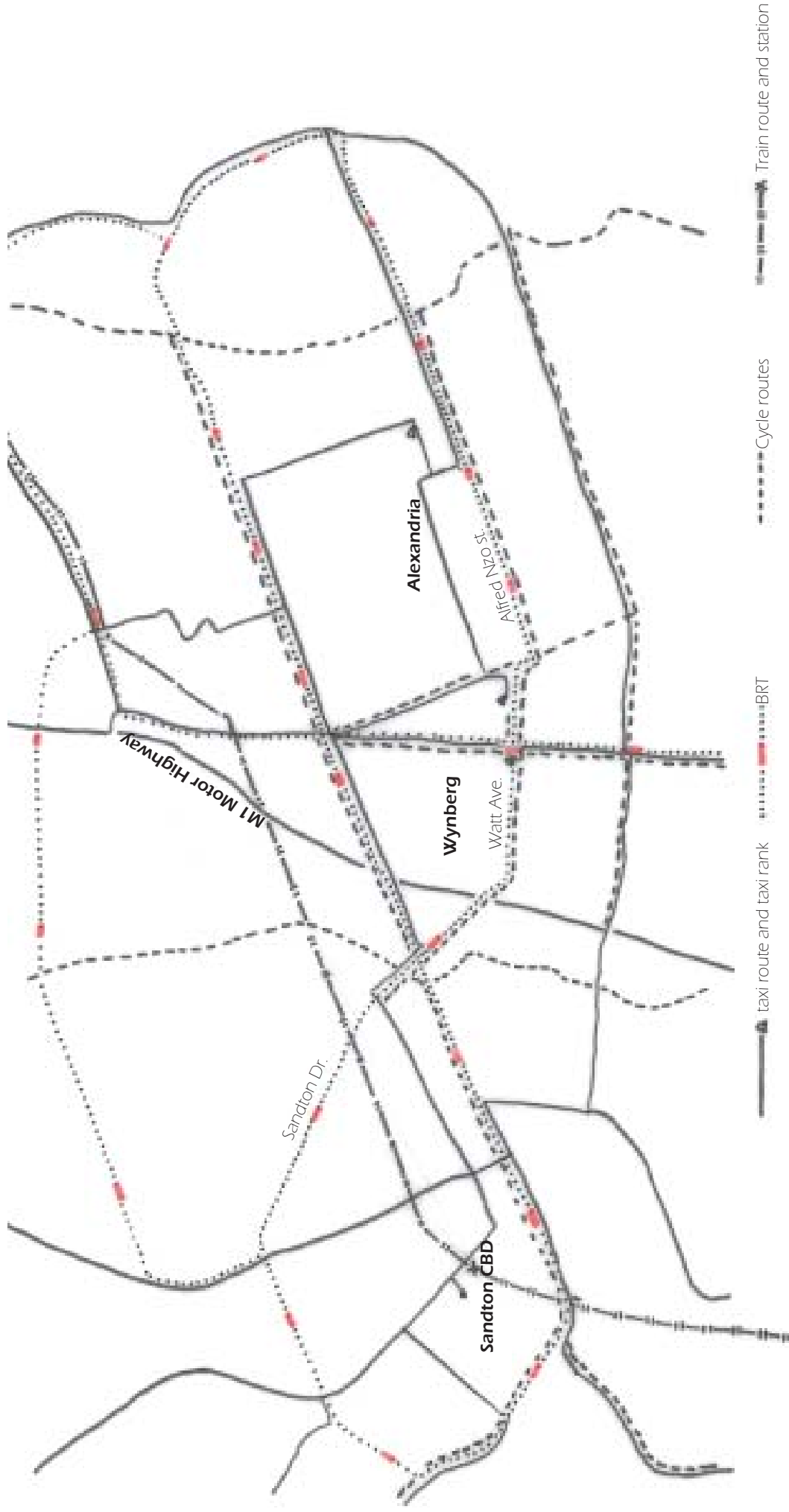


Fig 8.3.2. Proposed Transport Networks for study area.

8.3.2 Transport

Sustainability and convenience of public transport, as a means of mobility, is arguably an important focus to restructure a divided city such as Johannesburg. Non motorised transport (NMT) is slowly becoming recognised by the city officials as 'a feasible and sustainable transport mode in the City' (CoJ, 2009,03). The proposed transport network (fig 8.3.2) picks up on the existing transport plan, which specifies an NMT route connecting Sandton and Alex (CoJ, 2009,27) and expresses how various modes of transport mix and allow for choices in close proximity. The 3 precincts are discussed below with the detailed discussion on the M1 Deck precinct to unpack desing and theoretical links to transgression and the idea of banding.

8.4 Precincts

8.4.1 Precinct A- M1 Deck

Transgression as an act of going beyond boundaries set by law (which in this case refer to the M1 motor highway, which is a physical boundary of separation) is tested by extending more roads to cross it. These are further breaking through both Wynberg and Sandton's residential blocks around the highway. As mentioned earlier these would require negotiations with land owners to acquire pieces of the land to realise the vision to increase connectivity.

Precinct A, is the most diverse of the three, due to the intersection of three band types, namely the pedestrian orientated spces band, economic band and the socio-cultural innovation band. Thus the development of this

precinct requires a clear articulation of this diversity, in its place making. What is avoided are segregated and specific zones for very specific uses and inevitably segregate people, but rather spaces are encouraged to bleed into one another while maintaining a clear gradation of spaces from public to private.



Fig 84.1a. Proposed Urban Design Frame work for M1 Edge.

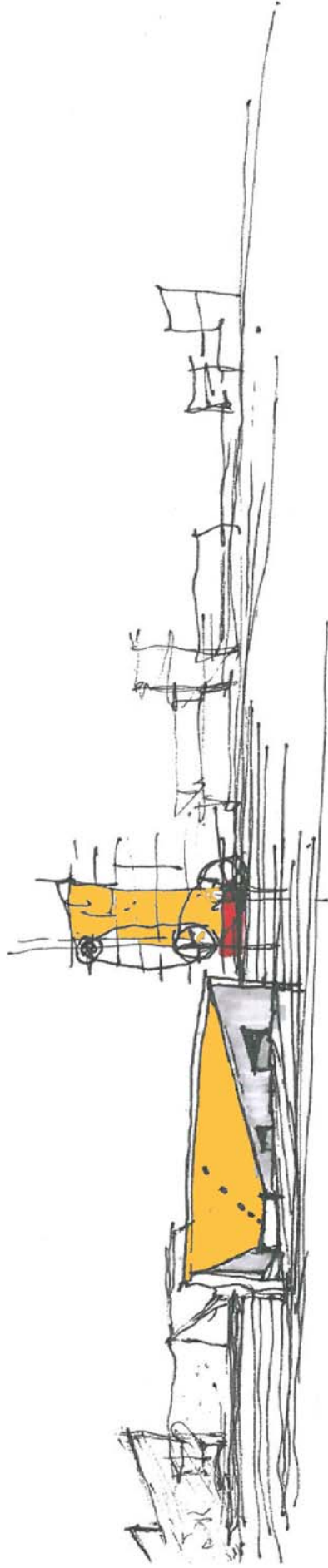


Fig 8.4.1b. Conceptual exploration of cycle/pedestrian tunnel north of Proposed M1 Deck- View from Wynberg.

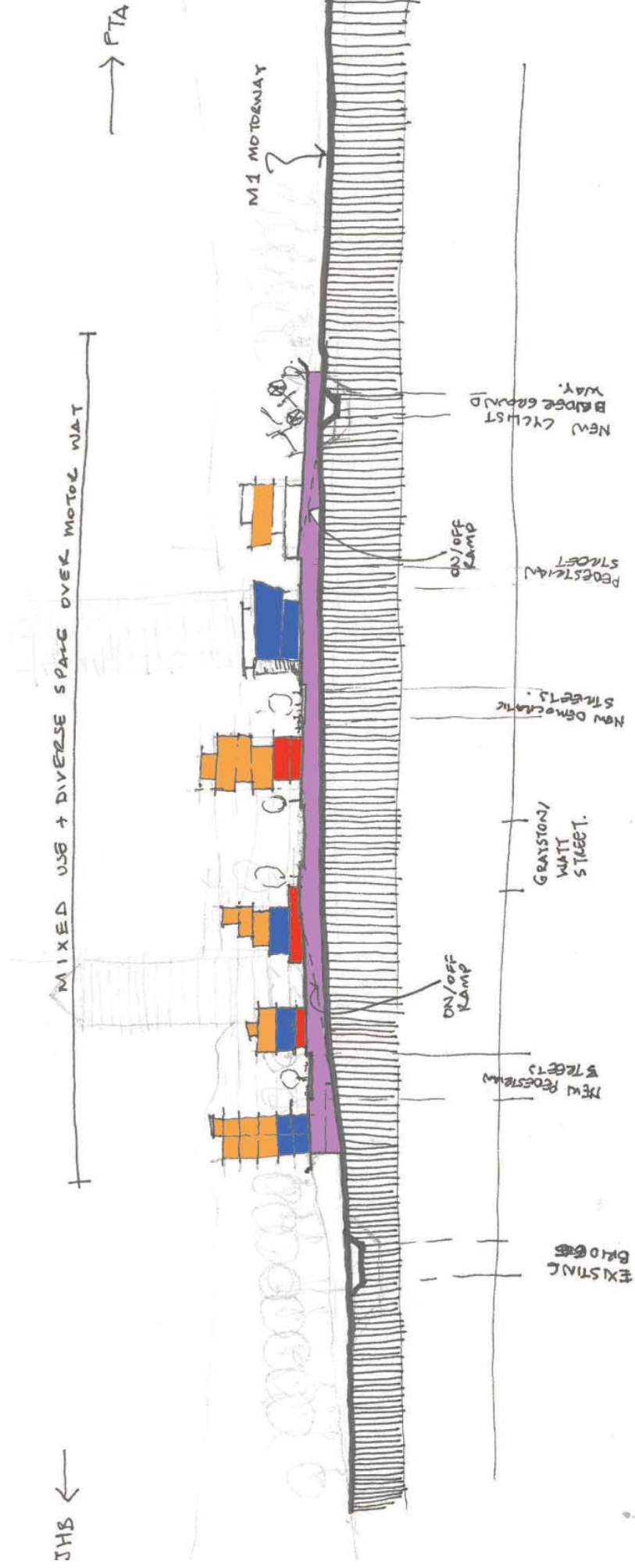


Fig 8.4.1c. Conceptual exploration of proposed M1 Deck development- North-South Section through M1 highway



Public open spaces



Transport Networks

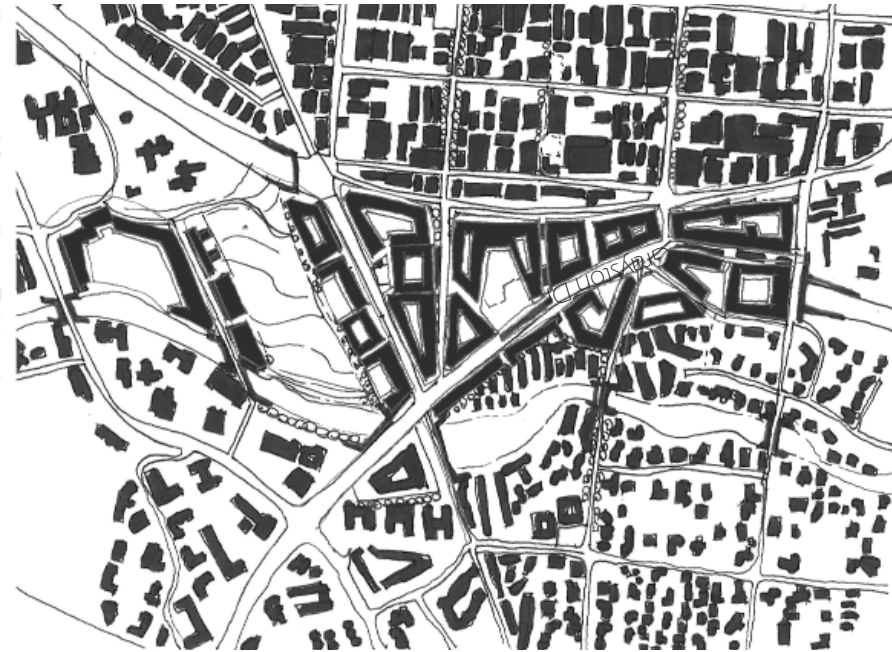
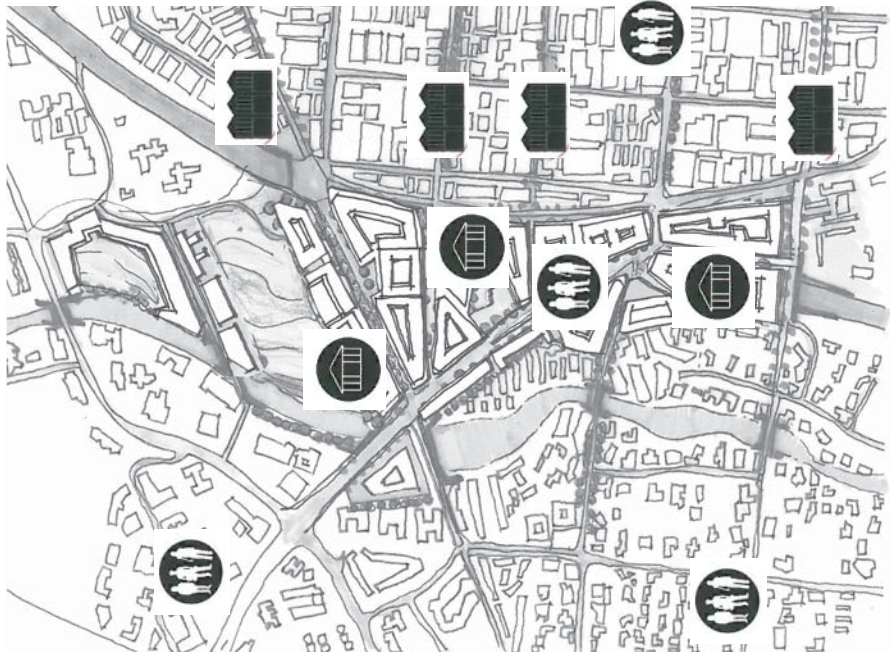



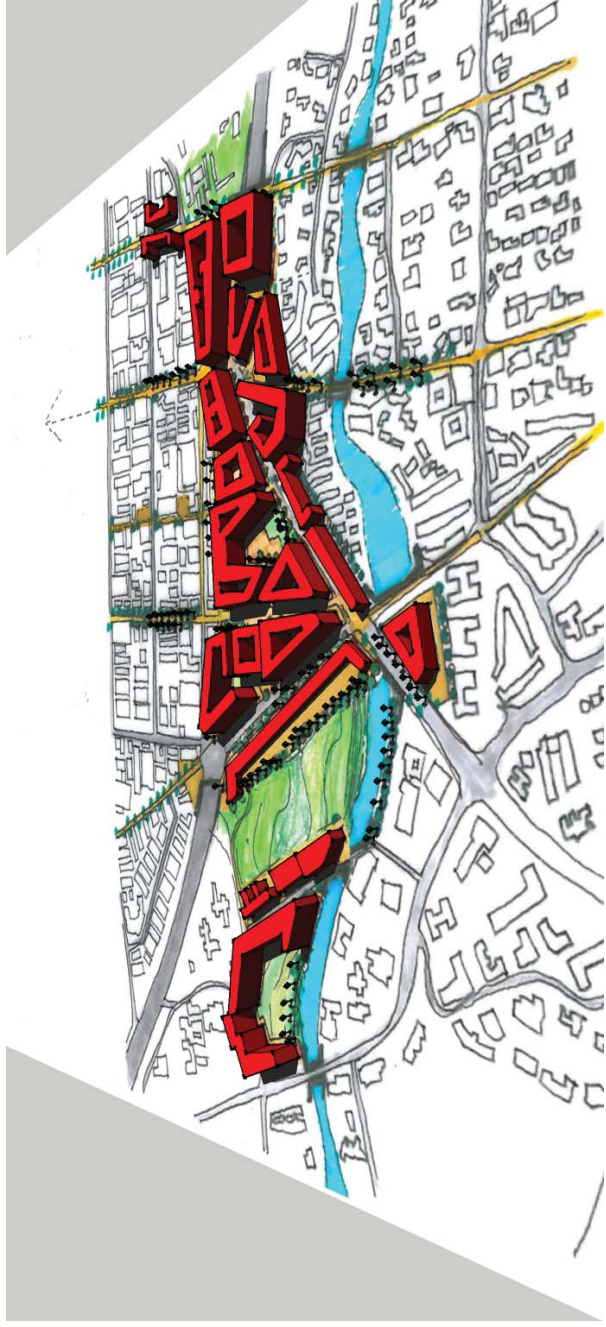


Figure ground



Role Players

-  City of Joburg
Property developers
business owners
planners
designers
engineers
ecologists
-  Residents
commuters
traders
students
transport actors
activists
-  employers
employees



massing and proposed pedestrian street section through industrial buildings

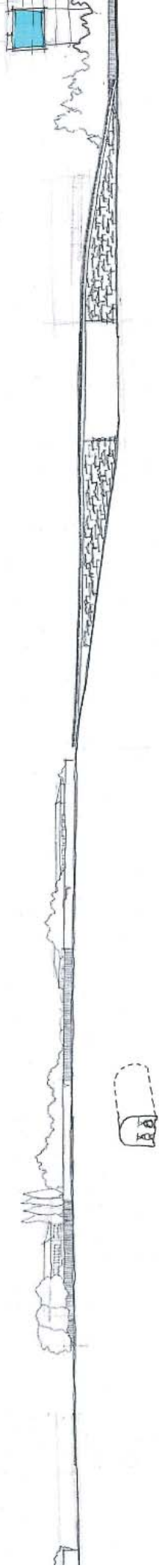


Fig 8.4.2d: Proposed Urban Design Framework Cross Section (along Grayston Drive)



8.4 Precincts
8.4.2 Precinct B- Wynberg transformation



Fig 8.4.2a. Proposed Urban Design Frame work for Wynberg transformation through pedestrian links, public open space and innovation.



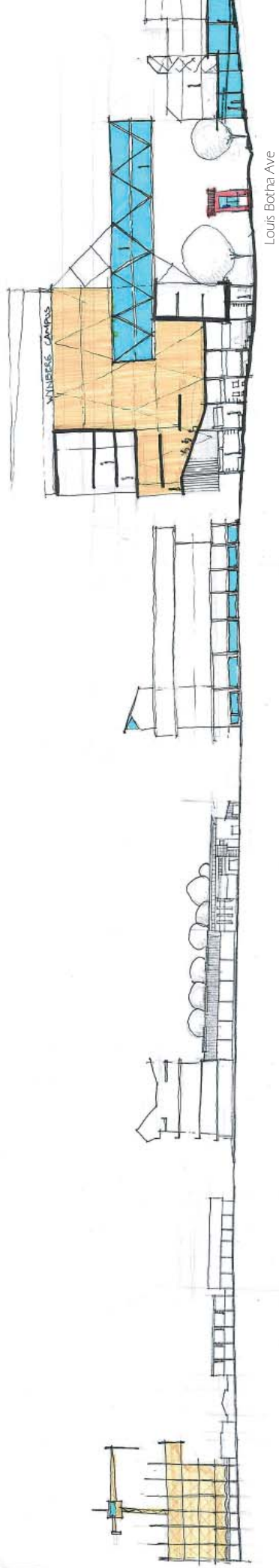


Fig 8.4.2b. Proposed Urban Design Frame work Cross Section in Wynberg |view North along Rautenbach/Watt street

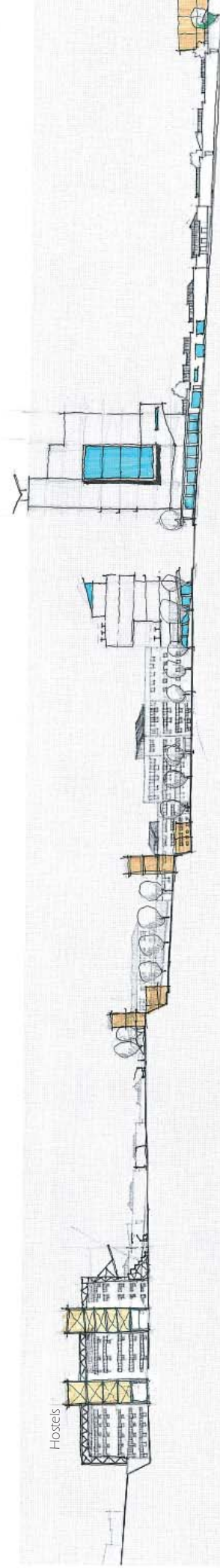
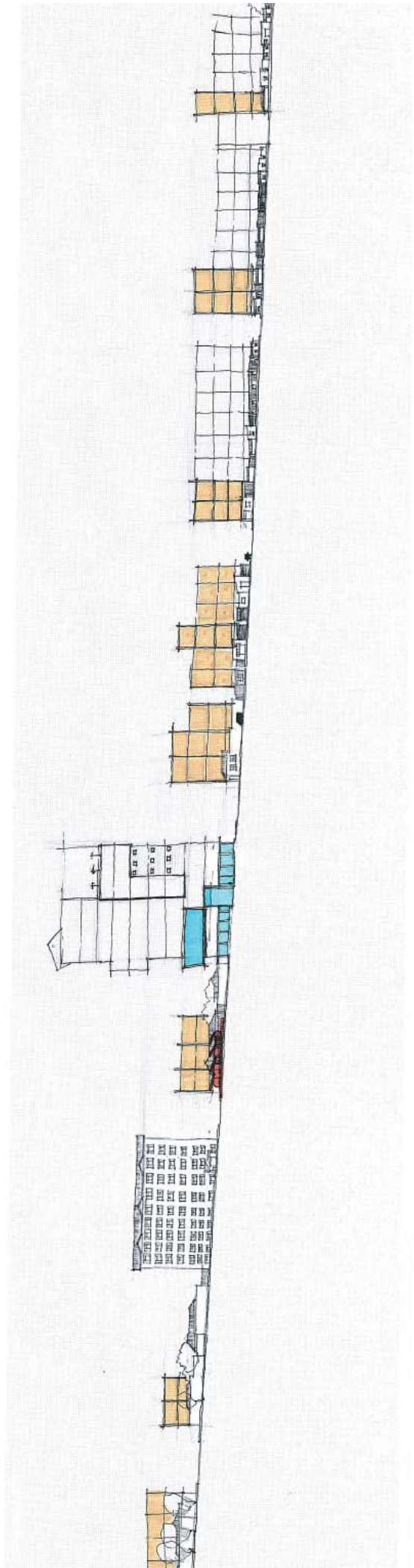
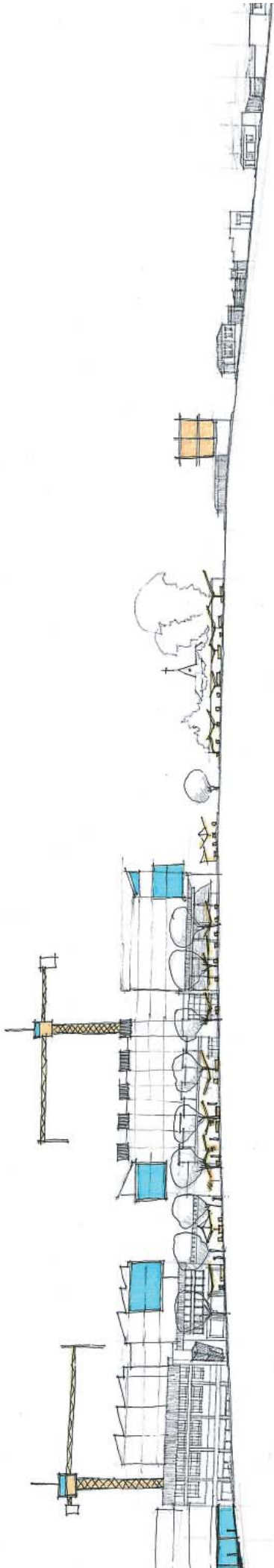


Fig 8.4.2a. Proposed Urban Design Frame work Cross Section in Alex |view North along Alfred Nzo



8.4 Precincts
8.4.3 Precinct C- Visions for Alex



Fig 8.4.3a. Proposed Urban Design Frame work- Visions fro Alex- a cohesive and greener neighbourhood

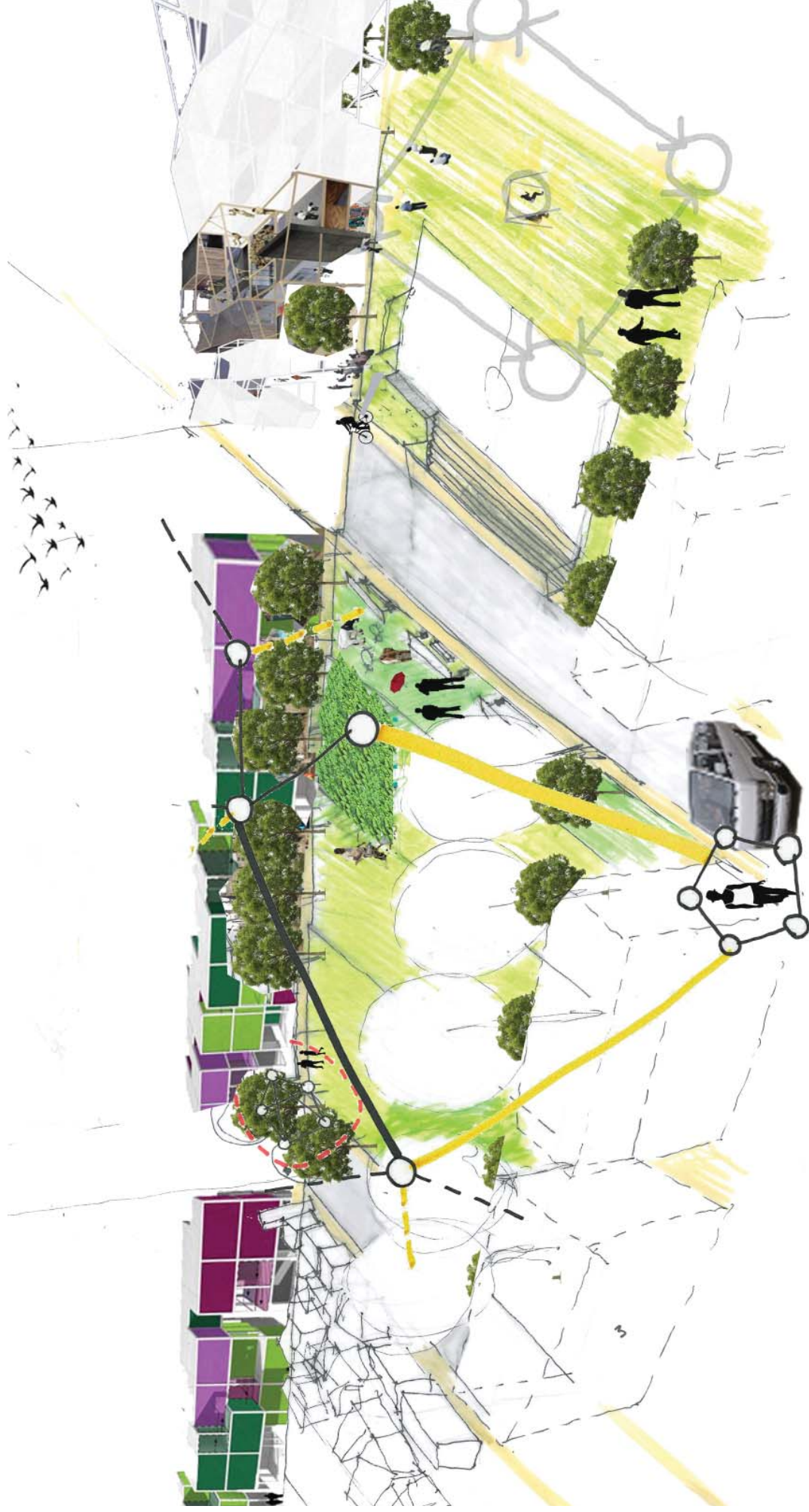


Fig 8.4.3b. Green band Montage

Precinct C is derived as a response to four key issues observed on site, namely

The need for open spaces for the already existing micro goat farming and communal spaces.

The informal settlements (built outside registered plots) lie on natural valleys that feed the Jukkie river are susceptible to floods during rainy seasons and thus the land would be better suited for agriculture.

The M1 Hostels are not well maintained and the struc-

tures still represent strong and rigid apartheid planning and thus a decision to upgrade and open these up to increase permeability connectivity.

lastly, north and south of Alex are neighbourhoods that Alex is poorly connected to, thus a north south connection is also proposed.

The above montage illustrates the vision for the green bands that are framed by, alternative housing typologies that take advantage of the residents skills and capabilities to build and house themselves. The idea is that these will be owned by residents around them, thus improving

levels of social cohesion at a neighbourhood level. These would have various accommodations, such as grazing land for goat farmers, play areas for children, Bus and taxi stops and trading spaces.





Fig 8.4.3c and d. Alfred Nzo (High street) proposed transformation (before and after)

9. Implementation Strategy

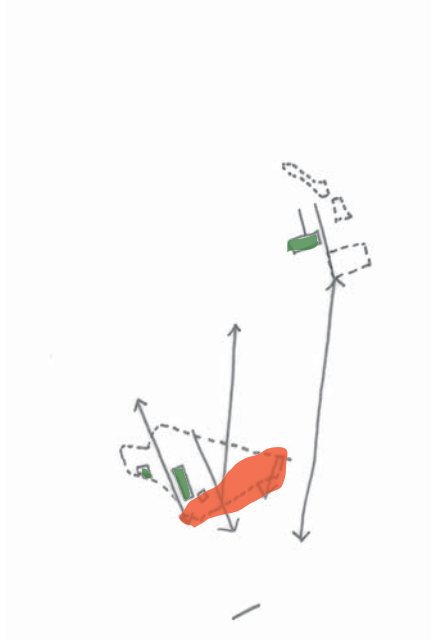
The scale and complexity of the area of intervention and design proposal is quite large and ambitious, thus the transformation process will inevitably take time. It will probably take 10-15 years for the proposed development to reach its completion and even longer should political systems change and the plan is abandoned. Therefore strategic phasing is required in its implementation. Its also imperative that this is a participatory process where in all role players are involved in decision making and implementation.

To limit ad hoc or piecemeal developments, phase 1 needs to apply very clear and tangible design principles that will attract buy in from relevant parties (residents, business, government) at all three scales of intervention and scrutiny (regional, metropolitan and neighbourhood). The report envisions three phases over 15 years in the implementation of the framework post design, this will be done through various projects around 6 core design objectives; namely

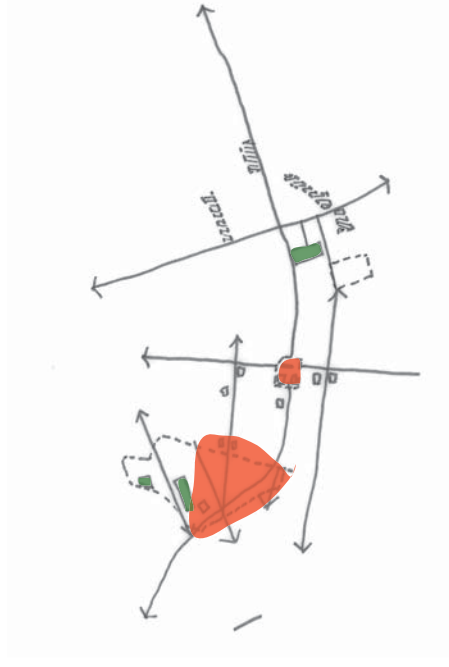
- Increase access and connection (transport)
- Reblocking of informal settlement into alternative housing models
- Developments over the M1
- Open public space development
- Innovation centres/university campus
- Urban farms



Phase 1A



Phase 1B



Phase 2A

2015

2017

2020

Transport networks- access and connections

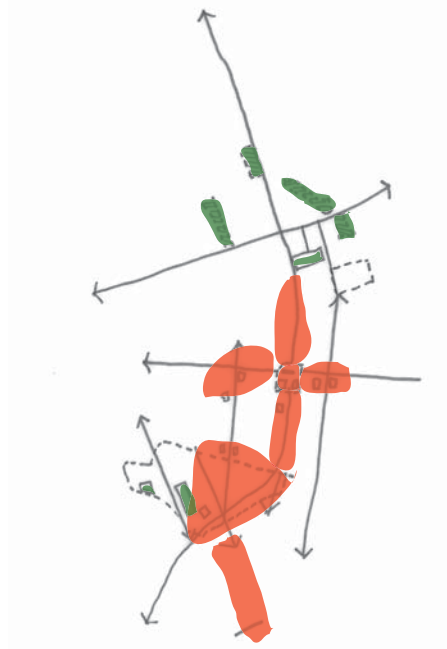
Development over M1

Open Public spaces

Reblocking of Informal settlements

Innovation Centres/University Campus

Urban farms and green leisure spaces



Phase 2B

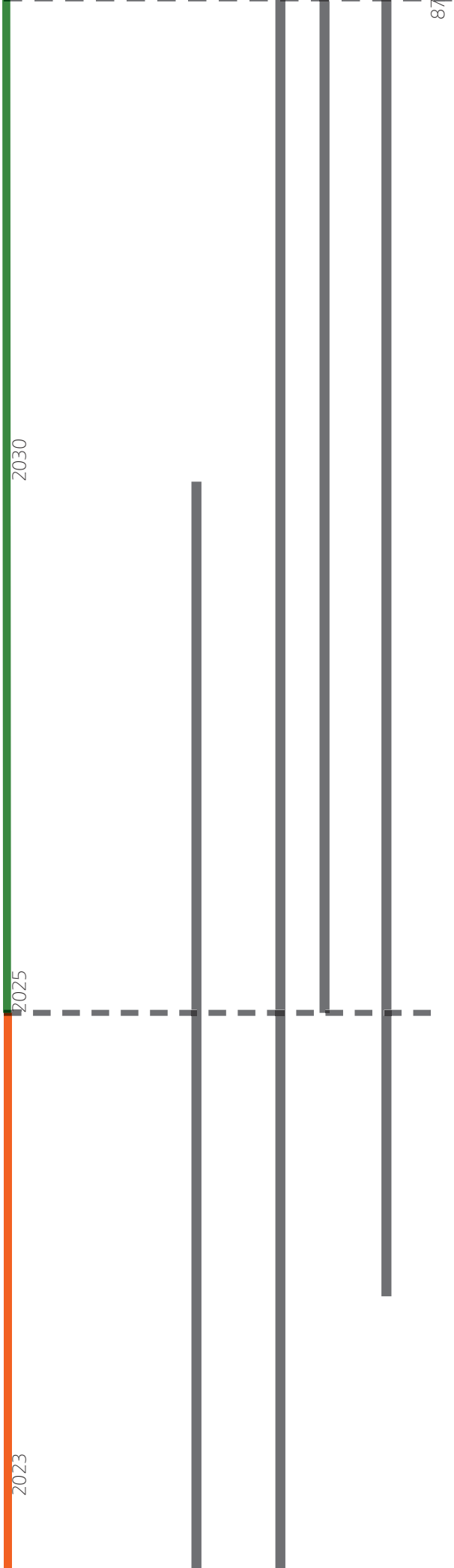
Phase 3A

Phase 3B

2023

2025

2030



10. Conclusion

Social cohesion is not a utopian ideal that is based on forcing people to 'live together in harmony'. It is much more than that; it is about an understanding that one's wellbeing is directly influenced by the wellbeing of the other. In this essay, the argument presented is for the recognition of social cohesion in designing post-apartheid/democratic cities. Verwoerd, minister of Bantu Affairs in 1950, was a sociologist; Durkheim (1887) was amongst the first sociologists to study social cohesion. Thus, the essay argues for more integration as opposed to segregation. An urban restructuring that recognises that to address urban morphology of apartheid planning, and thus define the image of a democratic city, it is necessary to understand the origins, objectives and most of all limits of apartheid planning.

Developments such the Corridors of Freedom have the potential to address both spatial and social fragmentation and redevelopment of the city of Johannesburg, especially when conceptualised from a democratic, social perspective. Furthermore, to define the image of a democratic city, these plans need to go beyond merely addressing issues of mobility. These plans need to include other layers that work together with the mobility layers that actively address physical, social and economic boundaries and limits of apartheid planning. Aeschbacher and Rios (2007, 90) and Kurdistani et al (2012, 72) highlight that democracy provides tools for design and production of space. These tools include freedom of movement, accessibility, participation, diversity, innovation and citizenship (Jenson, 1998, Kurdistani. 2012).

The top-down versus bottom-up methodology to democratic design are fast becoming out-dated. Cities are changing at fast paces through user led developments such as in the transgression examples highlighted in the report. A 'multi-scalar' perspective that recognises this fast development trajectory is necessary (Burdett. 2013).

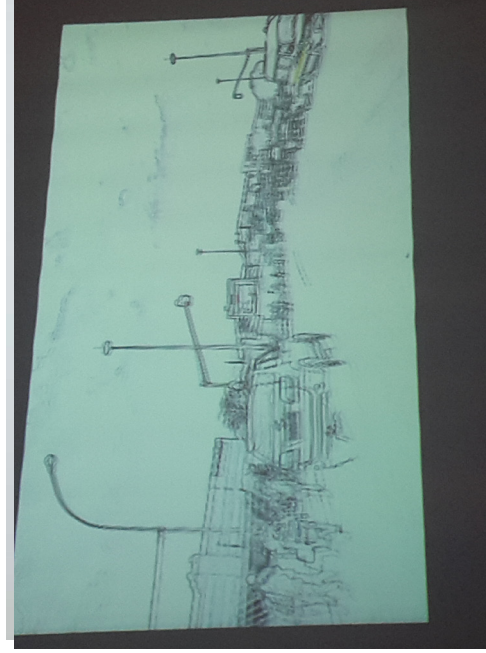
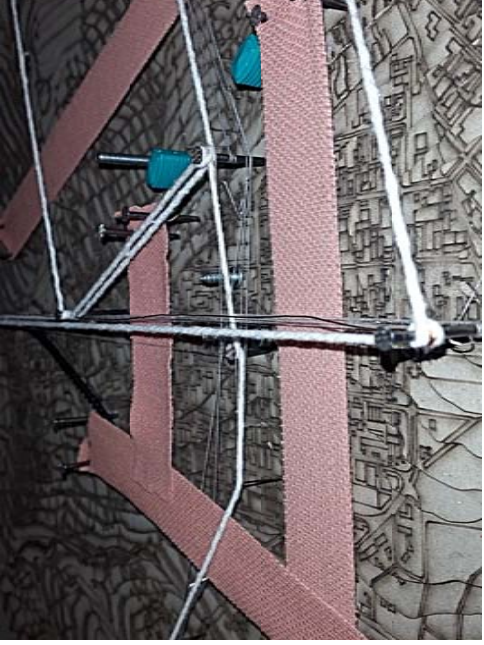
"It is perhaps the role of the urban scholarship to bring these two dimensions (informal actors and professional agencies) closer together, both through a theoretical reframing of contemporary urban crisis and by the identification and explanation of projects and initiatives that are, by default or design, changing our urban world" (Burdett 2013, 365).

It is achievable to design democratic spaces with social cohesion as a point of departure. However, master planning and rigid visions are likely to be less effective at achieving this objective, rather, a process that recognises design implementation as the beginning of the design process, than an end (Kurdistani et al 2012, 79). Therefore, plans need to be flexible and robust.

The Urban Design Framework proposed in this research report considers the above key factors and proposes strategic interventions within the study area (Sandton, Wynberg and Alexandra); it identifies three precincts and proposes design frameworks that express the image of a democratic city. Furthermore, these precincts aim at addressing the argument for the creation of social cohesion at three scales, regional, metropolitan and neighbourhood.

1 1. APPENDIX

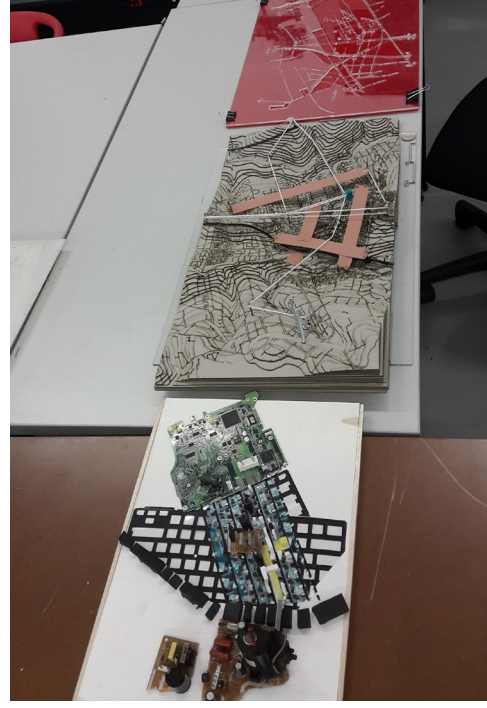
The following images are a montage of the oral presentation and defence process. They also include work produced after the book (research report) was submitted for examination pre oral presentation. Models and more graphics were produced to substantiate points raised in the report. Also included in the appendix are all the graphics/drawings produced for the oral presentation.



ON THIS PAGE

Above image illustrates a frame from the video presented as part of the analysis of the study area. The rest of the images show models of the conceptual proposal for the study area, that is, banding and porosity.

DATE: 13 MAY 2015

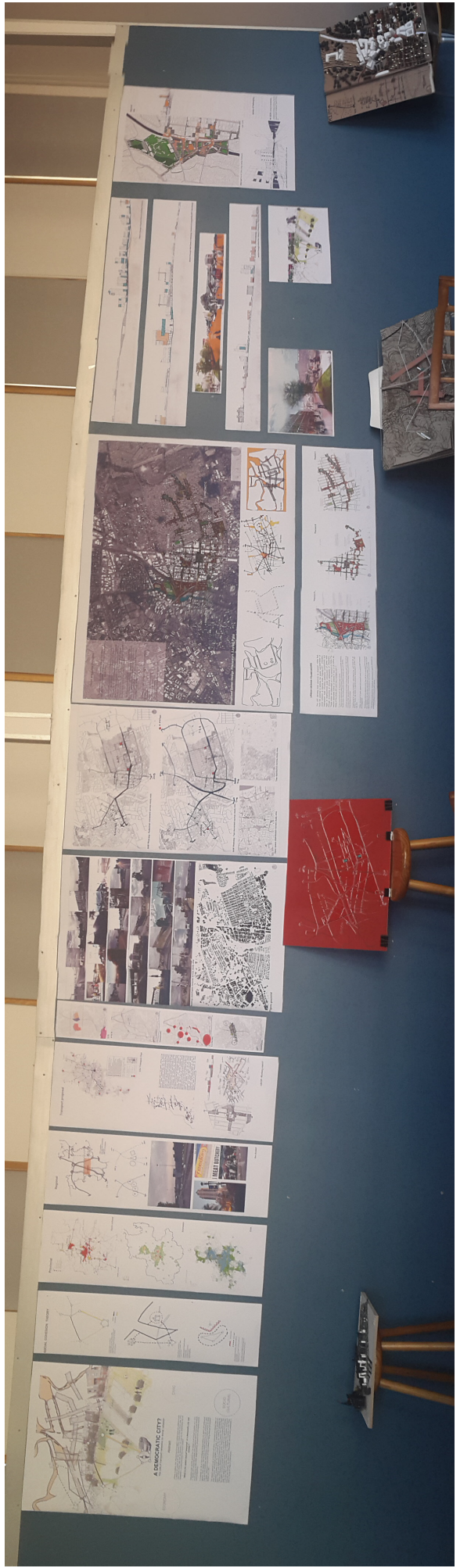
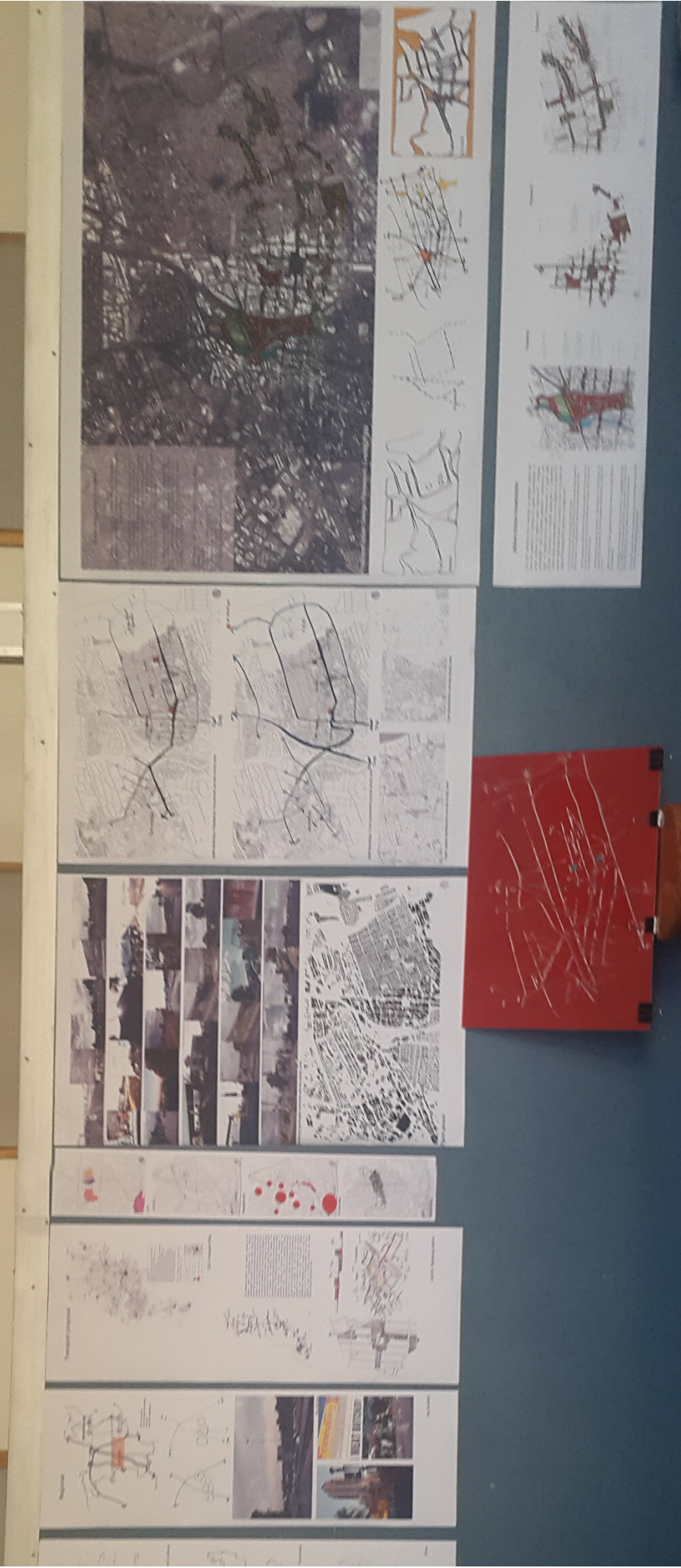


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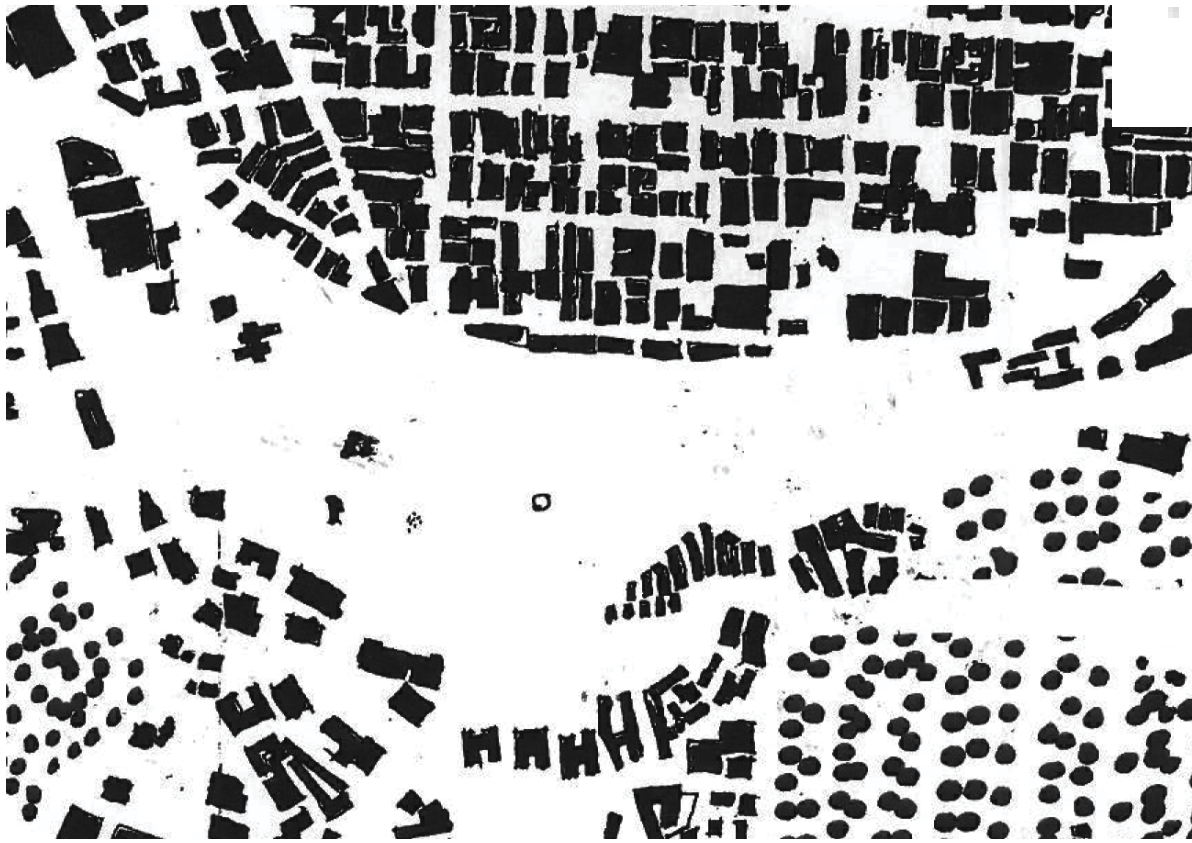
Images of massing sketch model of the area of intervention (M1 Highway). The White masses are proposed buildings, the black masses are existing buildings, over these are proposals of perimeter blocks.

The following page, shows the presentation panels presented during the oral presentation.

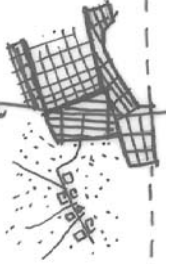
DATE: 13 MAY 2015



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1950- APARTHEID CITY



A DEMOCRATIC CITY?

The role of transport networks on social cohesion

ECONOMY

Abstract

CIVIC

SOCIO
CULTURAL

Urbanity is political, thus, urbanists have to engage in political issues and systems in order to address the injustice of the past, especially in the context of South African cities. 2014 marks South Africa's 20th year into democracy, but what are the achievements and advancements in changing the legacy the country inherited?

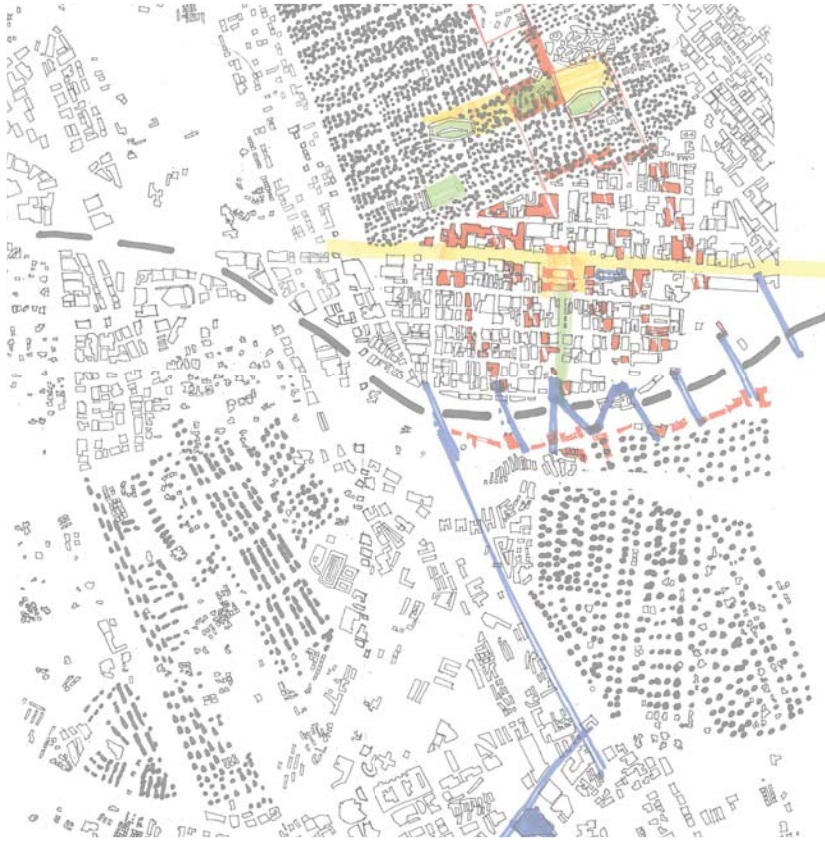
"What is the spatial layout/"blueprint" of a democratic city and society?"

"Democratic urban space is derived from the design for all concept" Kurdistan et al. 2012, 71. Burbett, 2013 argues that a multiple scale perspective informs us that social processes are the outcomes of often hidden spatial narratives, alongside more conventional social science considerations.

"It is perhaps the role of urban scholarship to bring informal role players and professional agencies closer together, both through theoretical reframing of the contemporary urban crisis and by the identification and explanation of projects and initiatives that are, by default or design, changing our urban world, as they contribute to making cities just and equitable" (Burbett, 2013, 365).

This research attempts to act on Burbett's call above. It discusses the inherited legacy of social, economic, and physical separation, in the goal of understanding the development trajectories proposed by the City of Johannesburg that are focused at addressing this legacy. Regional and neighbourhood projects such as the Gautrain, Rea Vaya Bus Rapid Transit, and Alexandra Renewal Project are being implemented throughout the city. Very few projects such as the Corridors of Freedom focus both on the regional and metropolitan scale. This research specifically focuses on the metropolitan scale; it unpacks, and expands on the City's vision of a Socially Cohesive city. Furthermore, it proposes an urban design framework that identifies key projects at a metropolitan level that need consideration in order to change the image of Johannesburg.

2015



transgression "...going beyond boundaries set by law, discipline or convention."

PRECINCT A- M1 Deck Urban Design Framework scale 1:2000

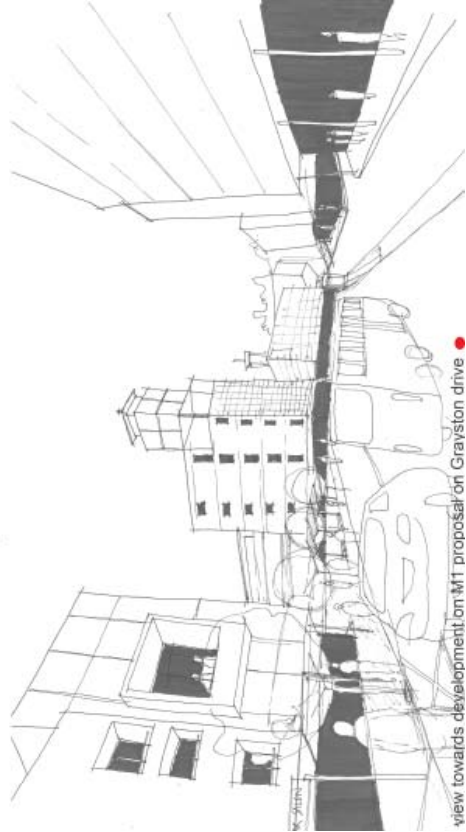


POST APARTHEID 2030+



Social cohesion "a set of social processes that help instil in individuals the sense of belonging to the same community and the feeling that they are recognised as members of that community"

M1 DECK- Living on the boundary
 Inhabiting the M1 boundary by decking it, while bridging over, with mixed use, pedestrian friendly, high density, investment attractive developments. Similar to Malrose arch.



view towards development on M1 proposal on Grayston drive

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