URBANISM AND SUSTAINABILITY IN DAVEYTON:
DESIGNING THE TOWNSHIP MAIN STREET
[An exploration of Spatial Transformation in previously marginalised
Townships, with a focus on the Main Street]

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Declaration

I declare that this research is my own unaided work. It is 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 Aadil Bham)

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________ day of ____________ year _______
Dedication

All praise is due to God, and only through Him do we accomplish anything.

I am grateful for this opportunity - learning never ceases.

I would like to thank my family, my wife Zeenatunisa who has stood by my side throughout this amazing process. My three wonderful children - Hamza, Humaira and Uthmaan who make everything worth while. A big thank you to my parents who have been supportive now and in all my years. Thank you to Urban Edge Architects and the staff for their assistance and resources.

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ABSTRACT

In township environments where pedestrian activity occurs out of necessity, and public transport prevails - the main street becomes a magnet for mobility, social encounters and economic exchange. It is the path that connects the settlement to the whole; it disperses and draws in; it collects and connects. It is the image of the township. Streets play an important role within townships as the primary form of public urban space. It is within these spaces that the residents make their own opportunities for a better quality of life. (Jacobs, 1993) explained that by designing the streets, one has largely designed the city.
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1.1 INTRODUCTION

1.2 PROBLEM STATEMENT

1.3 STREET NARRATIVE

Sketch of Daveyton Township (Drawing by Author)
Townships are one of the most recognisable South African Urban forms. They are the spatial legacy of an unjust political system that aimed to establish domination of one group over another. Townships, initially conceptualised as spaces for control, ultimately through their public space contributed to the liberation of the majority. The streets of townships were the scenes of unity and massive political unrest that grabbed the attention of the international media; bringing the discriminatory apartheid system to its knees. The streets of townships were featured when snaking queues of people were witnessed in the first democratic South African election. The streets of townships today are a vibrant mix of socio-cultural expression. However, the dissatisfaction around limited economic opportunity; service delivery and poor living conditions has once again brought people out onto the streets in violent protest.

Townships have prevailed through our historical development. "Townships refer to all those areas previously reserved for African settlement under apartheid laws, including formal townships, site-and-service areas and informal settlements" (Harrison et al, 1997:43). Post-apartheid South Africa has witnessed social barriers being deconstructed, but the spatial and economic barriers have remained a legacy of our past. The peripheral location of most townships has proved to be the greatest challenge of the spatial apartheid legacy. Change has nonetheless brought with it opportunity for new ways of living and interacting with each other and with the city. A characteristic of the built form is that through its development, one is able to pick up changes in the social and political hierarchies that have shaped its environment. This spatial transformation is a product of a changing society. "The townships, on the other hand, on the margins of the cities and home to formerly disadvantaged groups, have experienced a much slower transition" (Jürgens and Donaldson, 2012: 154).

Donaldson & Du Plessis (2013) point out that area based urban renewal programmes addressing marginalised townships are underway, but the results have yielded much of the same in terms of spatial diversity. The technological approach to place making, had from the onset, stripped townships of the qualities of cities - and rendered them as mono-functional dormitory spaces. The townships were planned along the modernist principles of efficiency and technology. The resultant forms were suited to the temporary character that the apartheid government envisaged for the townships. Poverty, limited social and economic opportunity and poor quality of place are the hallmark of South African townships. Development in townships today must serve to improve the lives of its residents, by affording them more choice within the township environment.

Townships are affectionately referred to as ‘eKasi’- meaning our township. There is a genuine attachment of many people towards these settlements, for those who reside there and as well those who have ‘moved’ out for whatever reason. Even to those who have never been to a township, an anxious curiosity exists about the unfamiliar culture and vibe. The traditional dormitory nature of townships has the potential to evolve into more diverse environments that position themselves as urban centres.
1.2 PROBLEM STATEMENT

Previously marginalised townships have been typically mono-functional areas, characterised by poverty and poor quality of public space. Urban renewal projects have introduced much needed infrastructure (roads, electricity, sewer), as well as higher order facilities to the more established townships; but they still lack a sense of urbanity.

(Levy, Dewar, Uytenbogaardt, et al, 1977) explain that urbanity refers to the positive physical qualities that are manifest in an urban environment. These physical qualities enhance the experience of the public environment and improve the manner in which all activities within the environment are conducted. It further stimulates better use of public space in a manner that improves the lived experience within the environment. Dewar and Uytenbogaardt (1991:18) further comment that the challenge in South African cities is “to create qualities of ‘city’ as opposed to suburbia: the latter model is heavily dependent on private means and the use of expensive, resource wasteful technologies”. Township growth and development most commonly manifests in the form of low density state provided housing. The practice is unsustainable in that the sprawl of development has high infrastructure cost. The resultant urban forms are monotonous and lack identity, perpetuating the poverty trap that is common within marginalised environments.

Democracy has offered its citizens freedom of movement. This has allowed people from previously disadvantaged townships the opportunity to relocate closer to urban centres; however, this freedom of movement has not diminished the size of our townships. Townships continue to expand, both naturally, and through rapid urbanization. Townships serve as a stepping stone for rural migration as well as cross border migration of people from the Southern African region. People seeking to access the economic potential of large cities have moved into townships, resulting in the further growth of townships. Foreign nationals have started their own businesses and assimilated into the townships. It is now common knowledge that in 2008, 50% of the world’s population resided in urban areas. It is also predicted that most of the future growth will happen in the developing countries of the south, and, urban areas like townships, need to provide sustainable solutions, Cilliers et al (2014).

In re-imagining the townships of tomorrow, my starting point is the street. The street narrative that follows in the next section, lead me to conclude that development within the township should commence with an appreciation for the township street. Streets have been the primary public space of previously marginalised townships, in the absence of higher order social infrastructure. The life of the township depends on the life on the streets. The entrepreneurial nature of people, due to poverty and unemployment, has led to informal trade and services along the typically residential streets. Taxis as the primary form of public transport along major routes generate significant activity around their routes and drop zones. The vibrancy of place is achieved through the intense use of the streets. The ‘activity spines’ that run through townships represents an opportunity to encourage street vitality and more liveable streets that reflect the identity of township environments.

It represents the opportunity to break the strict modernist structuring of the spine as a thoroughfare, and to re-imagine them as ‘main streets’. Spontaneous development of residential business, taxi drop zones, street trade and township shopping centres has led to change on the main street, whereby people are taking back their public space and altering it to serve their patterns of behaviour. “For many urban dwellers, particularly in developing countries, issues of income generation, convenience and lower costs of living are considerably more important than the untrammelled flow of traffic” (Dewar and Uytenbogaardt, 1991:52). Townships have a very rich form of urbanity, due to the socio-economic nature of its residents. The patterns and modes of behaviour of the people support this urbanity. Development should thus focus on the people and transport oriented nature of townships, in the form of mixed-use walkable environments.

I wish to undertake an exploration of spatial transformation in previously marginalised townships with a focus on the main street. The township I have selected is Daveyton, located in Ekurhuleni. The specific street I have selected is Eiselen Street. I have selected this street because it represents the heart of this township. It is the activity spine that services the area, and all modes of transport gravitate around it. An opportunity exists to capitalize on the way the township main street functions, in order to develop a new form of contextually relevant township urbanism through better performing public spaces that encourage positive and sustainable growth in the township.

RESEARCH AIMS

• To identify a strategy for urban growth within Daveyton Township that encourages efficiency and urbanity, in the context of poorly performing settlements.
• To identify a strategy for urban growth within Daveyton Township that challenges the normative development process of low density sprawl.
• To provide a framework for positively performing public space within Daveyton.
• To develop townships through intensification of strategic nodes.
• To apply the physical principles of main streets along Eiselen street.

GOALS

The goal of this research report is to outline a strategy that serves to improve the urban qualities of Daveyton that encourages sustainable growth of the township.

RESEARCH QUESTIONS

How can Urban Design stimulate sustainable urban growth in Daveyton through spatial development of the township main street?
1.2 STREET NARRATIVE

My point of departure for this research report was a realisation that I made while visiting Daveyton. My visit to the township took me along Eiselen street, the main activity spine. After much time observing the systems and micro systems at work, I realised that this street functioned as the primary form of public space to which most activity gravitated towards. This observation helped me to frame my research report.

(Lynch, 1960) explains that people develop an understanding of the city through recognition of its key physical elements. This legibility of the city is gained through the recognition of elements that allows the user to gain a sense of place through perceiving them as organisational clues. Lynch describes this as imageability, the recognition of familiar elements and the mental meaning one derives from them. The five elements he uses for urban imageability are paths, edges, districts, nodes and landmarks. In township environments, one of the biggest challenges is legibility. My preliminary investigation of Daveyton drew me into the township as an outsider trying to gain an understanding of ‘place’. I employed Lynch’s approach to imageability and found that the path i.e Eiselen street, was the dominant structuring feature that allowed me to orientate myself within the settlement. All other elements, namely edges, nodes, districts and landmarks were essentially linked back to the path. This observation of the path became apparently consistent for the social and economic patterns, in that most forms of activity occurred around Eiselen street. The planning of the township employed the activity spine as a major arterial that served as the only access into and out of the township. All higher order land uses, barring schools, were subsequently planned along this spine.

My street photo analysis that follows is intended to present a feel for Daveyton through the experience of Eiselen Street.
Eiselen street functions as an activity spine
Taxi rank located at the heart of the Daveyton CBD. Operates from after 4:30 am to almost 9:00 pm. The rank appears to be poorly organised and little attention has been paid to urban elements that contribute to its appeal.

Regular lighting masts along the central median do not adequately light up the area around the traders and the taxi rank.

Pedestrians dangerously run across the busy thoroughfare.

Informal traders are plentiful around the public transport exchange and are well supported.

Large number of advertising boards in and around the township tells us that there exists a growing consumer market and increased purchasing power.

Palisade fence blocks free movement across the main street and creates harsh edges.

Parking area in front of mall is blocked off by palisade - the parking area diminishes the quality of the public space. There is limited parking on the streets so provision must be considered.

Poorly maintained flats sit above ground level retail shops.

The main street is a system, and it is primarily within this system that the public life of the community exists. It functions as a corridor that links the adjacent settlements, generating the highest intensity of motorized vehicular use. The taxis dominate the street, with the passengers intensifying along it; as they seek mobility and access to the distant employment opportunities. The CBD is a thriving node, located at the beginning of the path. Its heart is the taxi rank that spurs a life of informal activity. The Daveyton shopping centre is a landmark that services the needs of the local residents. The CBD area has developed a unique character as the economic opportunity space within the township. Traders, loiterers, consumers, workers and passengers flock here.

The main street runs through the centre of the node, it is a dual lane thoroughfare. It is flanked by the shopping centre and municipal buildings, and tree lined hawker kiosks adjacent to the taxi rank. The vehicle is dominant, as the street allows for fast movement. Pedestrians have poor walking areas, and links across and between the buildings are poorly conceptualised.
Large trees frame the road. Their setback creates a walkable pavement and the shade encourages traders to set up their stalls.

Regular street lights along central median. The lighting is adequate for vehicular visibility in the evenings. It does not adequately support pedestrians and trade in the evenings.

The central median creates a boulevard. This gives a civic feel to the street. It does however generate faster vehicular movement in opposing directions.

School children rush across the street. The main street is not pedestrian friendly. It is unsafe due to fast moving traffic.

Traders stalls are well supported. They are located close to the taxi rank and the shopping centre. People enjoy the shaded informal shopping space.

Raised concrete platforms create a threshold and serves as a mediator of public space. One is able to step up the low platform and engage with the trader and his goods. It also ensures that the public walking space remains unobstructed.

Formal structures have been built for the informal traders. Sense of urban management is evident.
Tree provides shade for people who come to this clinic. Seating has been provided along the wall - it is an extension of the private space.

Public phones are still very common and placed at most public facilities. Many poorer residents do not own cell phones and still depend on these for communication requirements.

Clinic is one of many service facilities that have emerged along the main street.

Deliveries to the clinic and most businesses happen directly from the main street. There are inadequate parking facilities.

The character of the street changes as one leaves the CBD. There are however, no clinics and residential businesses that have begun to emerge along the main street. There are a number of public transport services that either walk or are the main mode of transport. The streets are highly active during the day and have a lot of pedestrian activity around their routes and drop zones. The vibrancy of place is achieved through the intense use of the streets.
Boundary fences along paved walkway creates an edge. The space/street is poorly enclosed.

Houses converted to shops make use of shading devices over the public walking space.

Paving is poorly maintained and uneven. Uncomfortable walking experience.

Regular light poles along the central median. Lighting is however inappropriate for evening pedestrian activity.

Avenza type vehicles serve as main form of public transport for all internal travel. They are efficient, flexible and feasible.

Front fences are typically low. Active streets and visual connection from the dwellings increases security. Passages between houses have stronger security measures like full height palisade spikes.
Churches are common along the main street, but not unique to it. There is an abundance of churches throughout the township. This church is a landmark along the path. There is high volumes of activity here on the weekends and on religious holidays. Cars park all along the street edges and people congregate on the street edges and pavements. Weddings and funerals are also occasions for intense activity. The Daveyton Theatre, currently appropriated as a church, is a prominent landmark along Eiselen street. The township residential units have experienced small changes in the form of extensions. The general urban fabric is a fine grain low rise residential type. A common addition are garages, in an environment where private vehicular ownership is rapidly increasing.
Solar geysers are a common sight on many of the rooftops. Sustainability and efficiency are a key concern in disadvantaged communities, but high initial capital costs for alternate energy systems mean many residents simply cannot afford them.

Many of the houses are unchanged from the original typology built in the 1950s. Change has however occurred in the yards where backyard shacks and dwellings exist in almost every yard.

Rocks have been placed on the pavements to deter vehicles from pulling up. People also use these as places to sit.

Garage extensions built up against the boundary lines - side and front.

Low fences allow for visibility and social interaction between public and private realm.

Mountable pavement in front of dwellings for private vehicles to access properties.

LANDMARK - Daveyton Theatre, currently used for church services.
Minibus taxis are the primary form of public transport. They operate along the main road and carry people out of Daveyton to neighbouring towns and CBD areas, as well as to the Avenza taxi park. They also operate in tandem with the Avenza taxis, which transport people internally in Daveyton.

Taxi drop off zones have been randomly provided, however, many are poorly serviced which causes unnecessary traffic accidents and blocks. Urban street furniture has been provided, however, many bins are poorly serviced - bins tend to overflow, contributing to an untidy urban environment.

Remaining paving areas are quite wide after drop zones have been allocated. Pallisade fence forms a hard edge against the sports fields. This dead edge along this stretch as it is a dead edge.

The Sinaba Stadium is another prominent landmark along Eiselen main street. It has a hard edge in the form of concrete pallisade fencing. The stadium complex is well used and generates activity on the weekends when matches are played; or for concerts and public rallies. The stadium sits within the residential fabric.

Traders are common all along the main street, but most of them gather at the intersections. The long street blocks are a form of edge that reduces street connectivity within the township. This funnels people up the few side streets to access the main street taxi network.
Many of the houses are unchanged from the original typology built in the 1950s. Change has however occurred in the yards where backyard shacks and dwellings exist in almost every yard. The main road serves as an arterial connecting Daveyton to adjacent settlements. Traffic volumes are high and traffic robots are essential for effective control.

Informal trading activity occurs at almost every intersection. These hawkers capitalise on the busy intersections where taxis stop to drop off and pick up passengers. Pedestrians gather at the intersections to catch taxis.

Pallisade fence forms a hard edge against the sportsfields. This diminishes the quality of the street along this stretch. Paving is generally in a poor condition and there is a lack of urban street furniture like bins and seating.

SECTION 1: STREET NARRATIVE

LANDMARK - Sinaba Stadium

(Edited photo by Author)
Many dwellings are still in their original form. Improvements and extensions have been made to some of the homes.

Residents along the main street have begun setting up informal businesses. This furniture trader, repairs and sells items that are displayed along the street daily. The activity indicates entrepreneurship and survival strategies.

Extensions are visible, some formal and others less formal.

Inadequate parking forces vehicles onto the pavements. This is dangerous for pedestrians.

A house has been converted into a street cafe. The business is highly accessible for passing pedestrians. These businesses are well supported in the evenings when residents accumulate and socialise on the street edge.

This corner site has been converted into a double storey, mixed use structure. Residential units are located on the top while grocery store is located on the ground level. Corner sites like these are being privately developed in a consistent manner.

Pedestrians crossing the main street and catching taxis at the intersection. There is poor provision for pedestrian activity.

Higher order land use buildings have emerged along the main street. Traders and entrepreneurs have modified their residential dwellings in order to provide services. Economic opportunities along the main street are limited, many residents have started their own businesses to take benefits from the movement and activity of the main street.

The site is prominent and symbolic in the manner in which it sits on the main street. Municipal buildings are located around the site, giving a civic nodal feel.
Residential land uses have evolved along the main street. New shops have been privately developed. The storefronts now extend up to the pavement edge. Shops are typically emerging at busy intersections where people gather to catch taxis.

There is an acute shortage of parking bays. Vehicles are forced to ramp up on the pavements.

The central median is poorly maintained. Added landscaping will contribute to a much more attractive urban environment.

Long impermeable blocks force people up the narrow passages or at the intersections. These intersections generate activity through traders and taxi patrons.

Informal traders and their activities flow over onto the road.

Private trees provide shelter for traders.

Informal traders take up the same positions along the main street daily. Many of them have standing arrangements with house owners to store their goods.

Section 1: Street Narrative
LANDMARK + NODE - Municipal site at Eiselen fork.