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THE EVERYDAY

THE APPLICATION OF URBAN DESIGN TOOLS IN A COMPLEX MULTI-USE SITE:

THE CASE OF UJ SOPHIATOWN STATION AND STATION AREA AS PORTION OF THE CORRIDORS OF FREEDOM



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FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT
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DECLARATION

I declare that this research report is my own work. It is being submitted for 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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ACKNOWLEDGMENTS

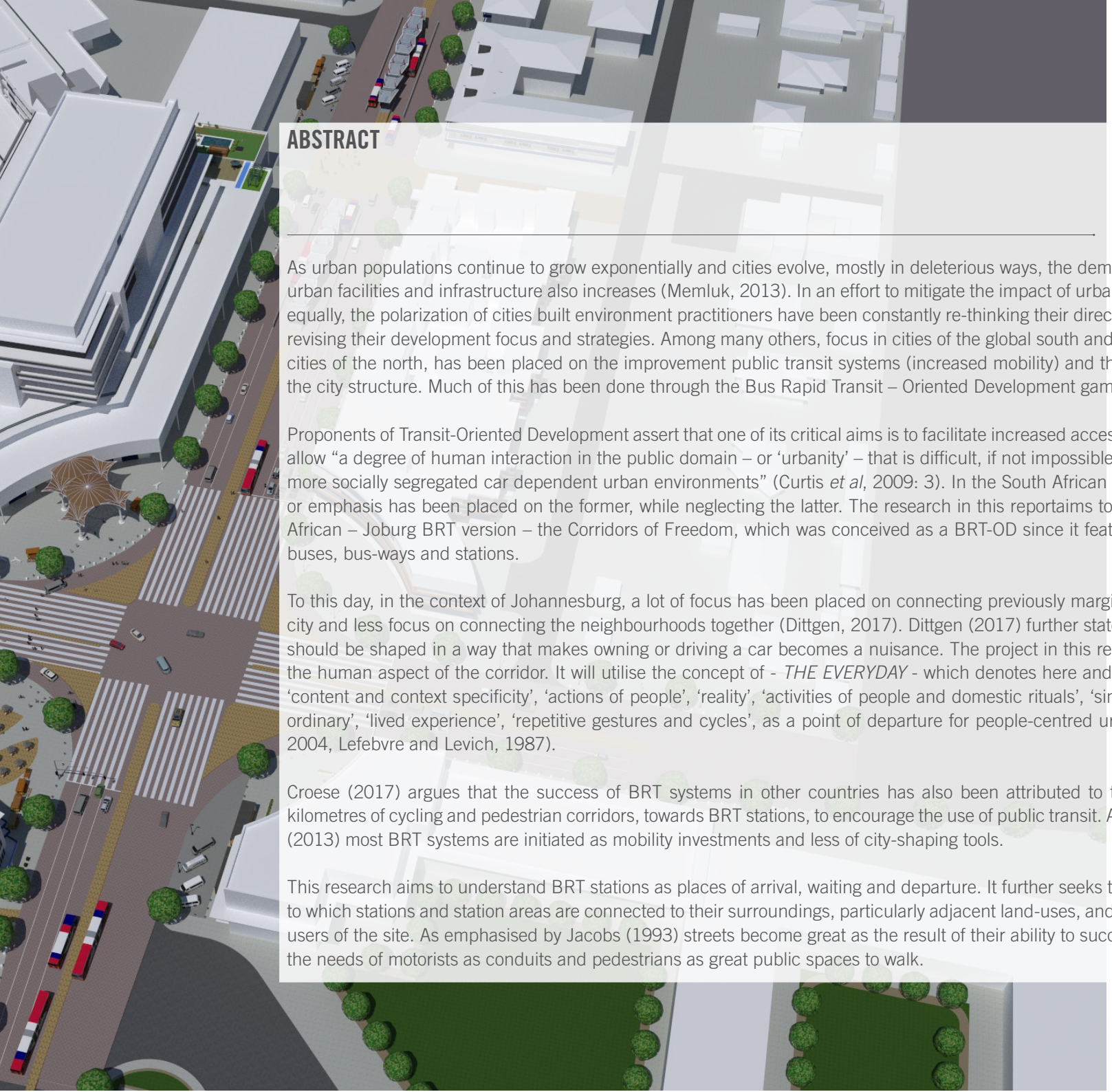
I am immensely grateful to God, the beginning, the end and everything in between, without whom this research would have not been possible.

I would like to express my sincere gratitude to Ludwig Hansen for his guidance, insight and supervision throughout this academic journey and for the key role he played in the development of the concept. My great appreciation also goes to Tahira Toffa for her constructive suggestions that helped improve my research, her guidance, mentorship and taking time from her busy schedule to review my work, most importantly for welcoming me into the realm practical experience at the right time. Assistance provided by Tariq Toffa is also greatly appreciated, particularly for augmenting the philosophy of *the everyday*.

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ABSTRACT

As urban populations continue to grow exponentially and cities evolve, mostly in deleterious ways, the demand for good quality urban facilities and infrastructure also increases (Memluk, 2013). In an effort to mitigate the impact of urbanization, and almost equally, the polarization of cities built environment practitioners have been constantly re-thinking their direction of planning and revising their development focus and strategies. Among many others, focus in cities of the global south and almost equivalently cities of the north, has been placed on the improvement public transit systems (increased mobility) and the reconfiguration of the city structure. Much of this has been done through the Bus Rapid Transit – Oriented Development game plan.

Proponents of Transit-Oriented Development assert that one of its critical aims is to facilitate increased accessibility and, at least, allow "a degree of human interaction in the public domain – or 'urbanity' – that is difficult, if not impossible to achieve in much more socially segregated car dependent urban environments" (Curtis *et al*, 2009: 3). In the South African context much focus or emphasis has been placed on the former, while neglecting the latter. The research in this reportaims to focus on the South African – Joburg BRT version – the Corridors of Freedom, which was conceived as a BRT-OD since it features more than just buses, bus-ways and stations.

To this day, in the context of Johannesburg, a lot of focus has been placed on connecting previously marginalised areas to the city and less focus on connecting the neighbourhoods together (Dittgen, 2017). Dittgen (2017) further states that the corridors should be shaped in a way that makes owning or driving a car becomes a nuisance. The project in this research will focus on the human aspect of the corridor. It will utilise the concept of - *THE EVERYDAY* - which denotes here and now, 'the ordinary', 'content and context specificity', 'actions of people', 'reality', 'activities of people and domestic rituals', 'simple, mundane and ordinary', 'lived experience', 'repetitive gestures and cycles', as a point of departure for people-centred urban design (Noero, 2004, Lefebvre and Levich, 1987).

Croese (2017) argues that the success of BRT systems in other countries has also been attributed to the idea of creating kilometres of cycling and pedestrian corridors, towards BRT stations, to encourage the use of public transit. According to Cervero (2013) most BRT systems are initiated as mobility investments and less of city-shaping tools.

This research aims to understand BRT stations as places of arrival, waiting and departure. It further seeks to analyse the extent to which stations and station areas are connected to their surroundings, particularly adjacent land-uses, and how the impact the users of the site. As emphasised by Jacobs (1993) streets become great as the result of their ability to successfully satisfy both the needs of motorists as conduits and pedestrians as great public spaces to walk.

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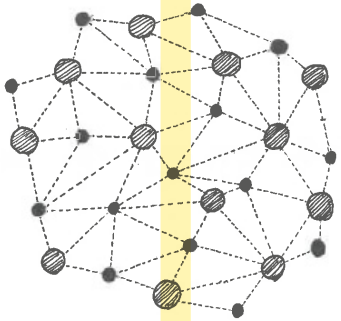
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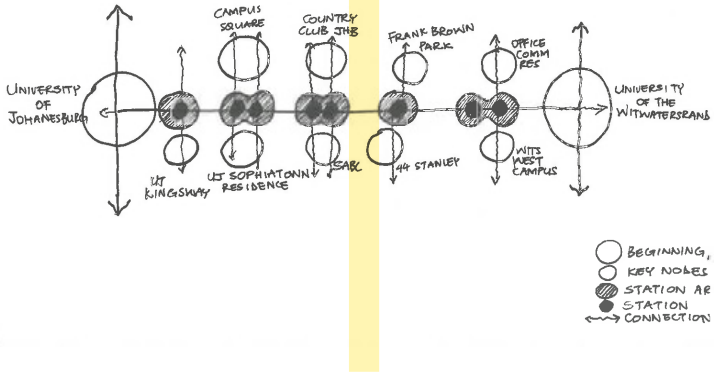
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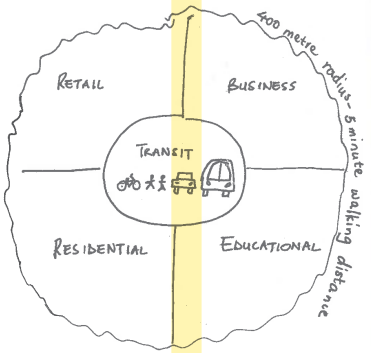
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UNIVERSITY OF JOHANNESBURG
CAMPUS SQUARE
COUNTRY CLUB JHB
FRANK BROWN PARK
OFFICE COMM RES
UNIVERSITY OF THE WITWATERSRAND
UJ KINGSWAY
UJ SOPHIATOWN RESIDENCE
ISASA
94 STANLEY
WITS WEST CAMPUS
BEGINNING,
KEY NODES
STATION AR
STATION
CONNECTION

P


400 metre radius - 5 minute walking distance
RETAIL
BUSINESS
TRANSIT
RESIDENTIAL
EDUCATIONAL

"Judging from the mass transportation infrastructure now coming on stream in Gauteng, it is clear that, when it was conceived and implemented, very little attention was paid to the benefits that high quality urban design principles would bring to the public realm"

- Hansen and Kotze, 2012: 18 -

CHAPTER 1

THE POINT OF DEPARTURE

INTRODUCTION

In recent decades urban BRT-based mobility became the epicentre of urban design and city planning across the globe following the example set by Bogota (TransMilenio) in 1998 and Curitiba in the 1970s through their iconic public transport systems (Goldwyn, 2013) (The Guardian, 2015). The primary objective of these transport systems is to foster integration and promote sustainability by affording all citizens equal access to social and economic opportunities through functional public transport systems. BRT or Bus Rapid Transit is widely understood as an innovative bus system with comfortable and sophisticated vehicles operating at a high frequency and high speed, usually travelling on dedicated lanes, with high capacity and cost-effectiveness (Stojanovski, 2013). These systems, depending on the context, are either fully or partially segregated from other motorised transit systems.

In the South African context, the Johannesburg municipality scaled up its efforts to transform the city by adopting the idea and formulating a new spatial vision for the city. The new vision - 'Corridors of Freedom' - aims to re-stitch the city through "well-planned transport arteries, linked to interchanges where the focus will be on mixed-use development – high-density accommodation, supported by office buildings, retail development and opportunities for leisure and recreation" (CoJ, 2014: 2).

In recent literature, proponents of Transit Oriented Development acknowledge that if the impact of the Corridors of Freedom is to be maximised more focus needs to be placed on finer detail and specific socioeconomic attributes of different areas. Some of the elements include the (a) multimodal transit system which includes the BRT, commuter rail, minibus taxis, Gautrain, most recently Tuk-Tuks in the context of Johannesburg, (b) the condition and design of crosswalk, pedestrian pathways and sidewalks, (c) micro-businesses (often informal), social pathologies as well as other characteristics and resources (Croese, 2016).

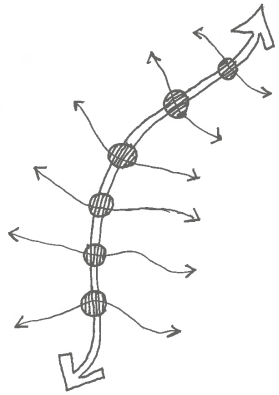




Figure 1a: Object of Research: Rea Vaya – BRT station and bus (Author, 2017).

Understanding the Research Object

The Corridors of Freedom is understood as a community-broad and city-wide transit-centred new spatial vision adopted by the City which is based on TOD principles (CoJ, 2014). The CoF project is aimed at "connecting strategic nodes through an affordable and accessible mass public transit system" while providing access to social and economic opportunities (City of Johannesburg, 2013: 57). The project is in line with key policies and frameworks such as the Strategic Integration Transport Plan Framework 2040, National Development Plan 2030 and 2040 Growth and Development Strategy (CoJ, 2013) (Johannesburg Development Agency, 2014).

The main aim of this investigation is to critically analyse the urban design tools employed in a diverse area, referred to as Empire-Perth. Diversity, in this text, refers to a setting, geographic area or a cluster of neighbourhoods with households that vary in income levels, culture or race/ethnicity (Day, 2003). This research seeks to analyse the suitability or appropriateness of principles and guidelines proposed for the study area. Ultimately, the study aims to criticise the propensity of the urban design practice to focus more on physical aspects while "masking underlying group differences" (Mumtaz, 2010: 88).

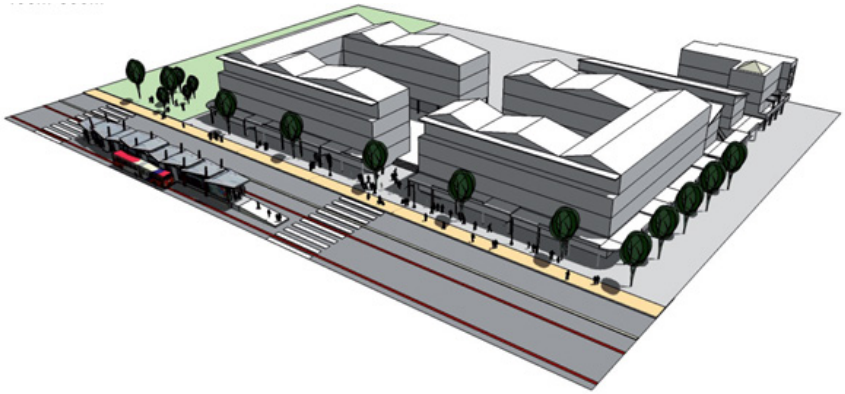
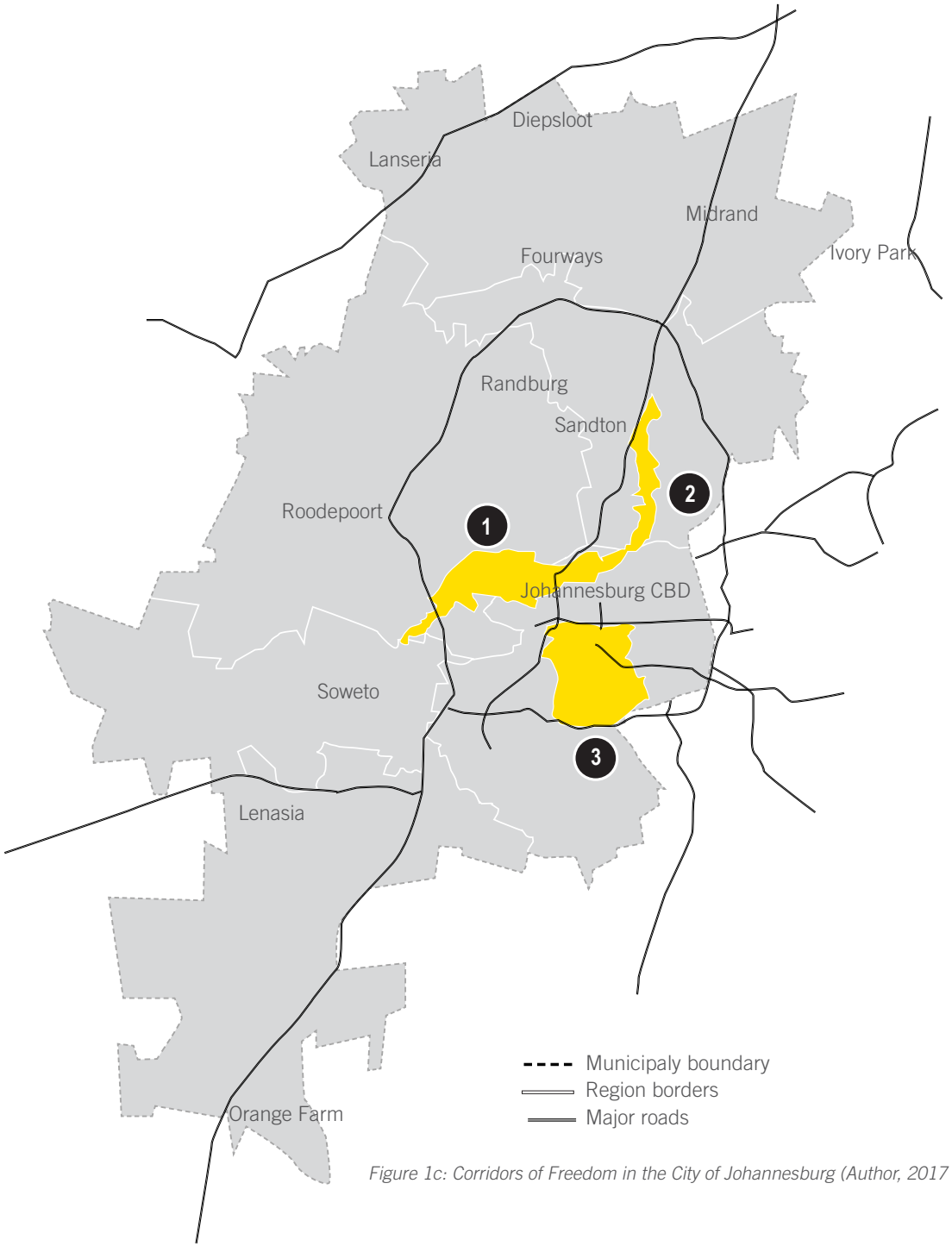


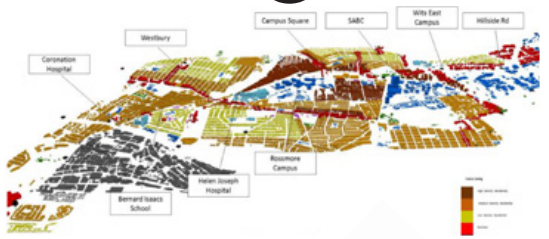
Figure 1b: Research Object: Visualization image (CoJ, 2013)

Locating the Study Area - Broad Context



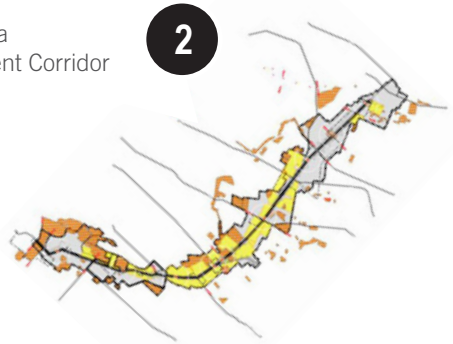
Empire Perth
Development Corridor

1



Louis Botha
Development Corridor

2



Turffontein
Development Corridor

3

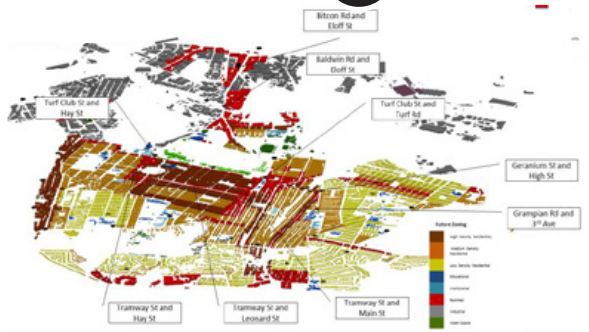


Figure 1c: Corridors of Freedom in the City of Johannesburg (Author, 2017 and CoJ, 2013)

The Empire-Perth Development Corridor is situated region B, in the City of Johannesburg (CoJ, 2013). It is located northwest of the Central Business District of Johannesburg – which is currently identified as a local and international economic node (CoJ, 2013). The Empire-Perth corridor, as illustrated in the Strategic Area Framework, spans a distance of more than 20 kilometres between Parktown and Soweto, but this research will only focus on the corridor link between the University of the Witwatersrand Braamfontein Campus and the University of Johannesburg - Auckland Park Campus (Figure 1d). As shown in figure 1f, the study area has diverse land-uses in close proximity which include a large retail facility (Campus Square), student accommodation, office parks, tertiary institutions (University of the Witwatersrand and the University of Johannesburg) and other low-density residential use (figure 1e). The corridor has a good horizontal mix of land-uses.

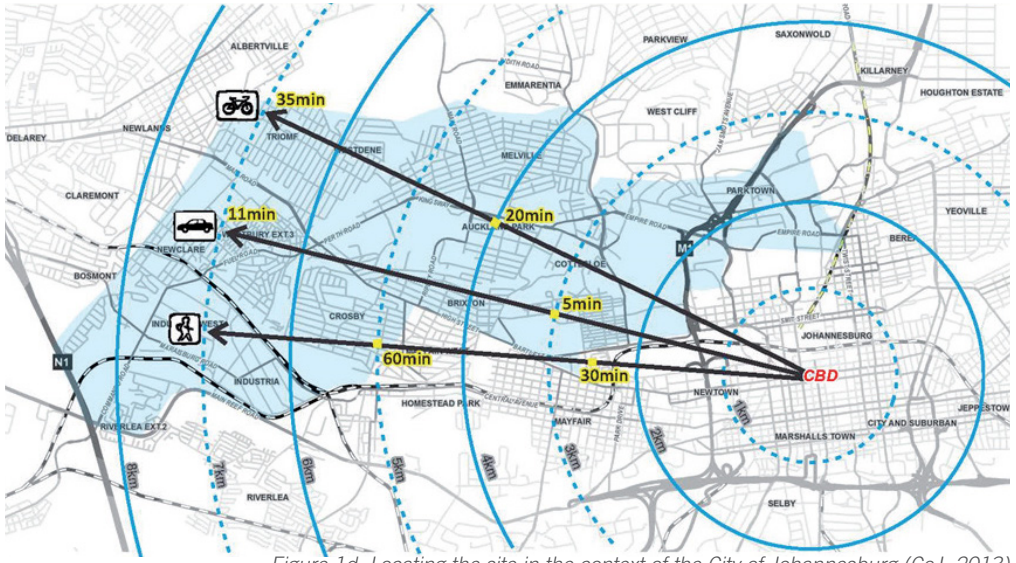


Figure 1d: Locating the site in the context of the City of Johannesburg (CoJ, 2013)

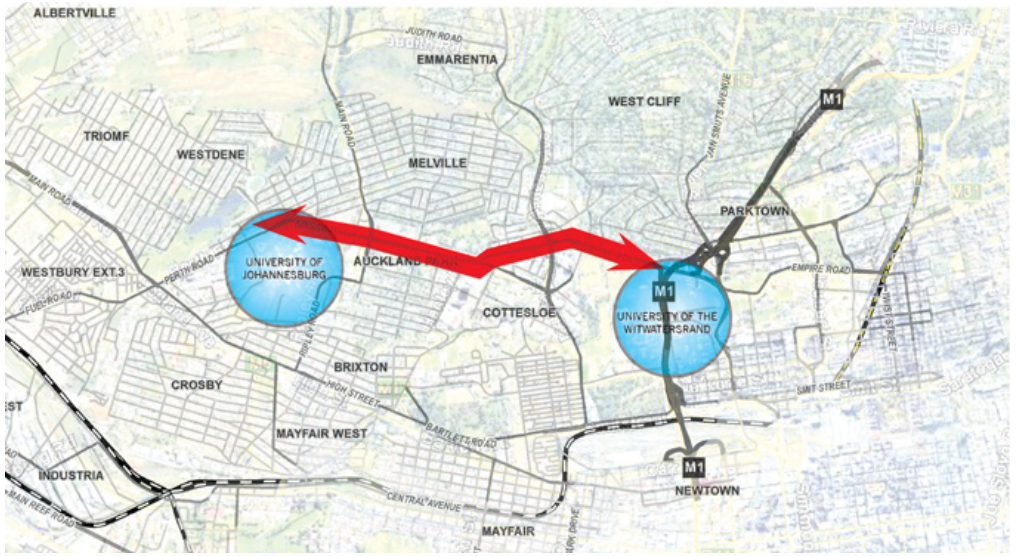


Figure 1e: Delimitation of the study area (Author, 2017)



Fig1f: University of the Witwatersrand (Braamfontein Campus)



Fig1f: University Johannesburg (Auckland Park Campus)



Fig1f: Yale Village, Wits student residence



Fig1f: UJ student residence

PREDOMINANT AND KEY LAND-USES ALONG EMPIRE



Fig1f: Car dealership



Fig1f: Free standing housing



Fig1f: ABSA call centre



Fig1f: Clinic (medical institution)

PREDOMINANT AND KEY LAND-USES ALONG EMPIRE



Fig1f: Offices



Fig1f: New development on Empire



Fig1f: Campus square



Fig1f: SABC headquarters

PREDOMINANT AND KEY LAND-USES ALONG EMPIRE

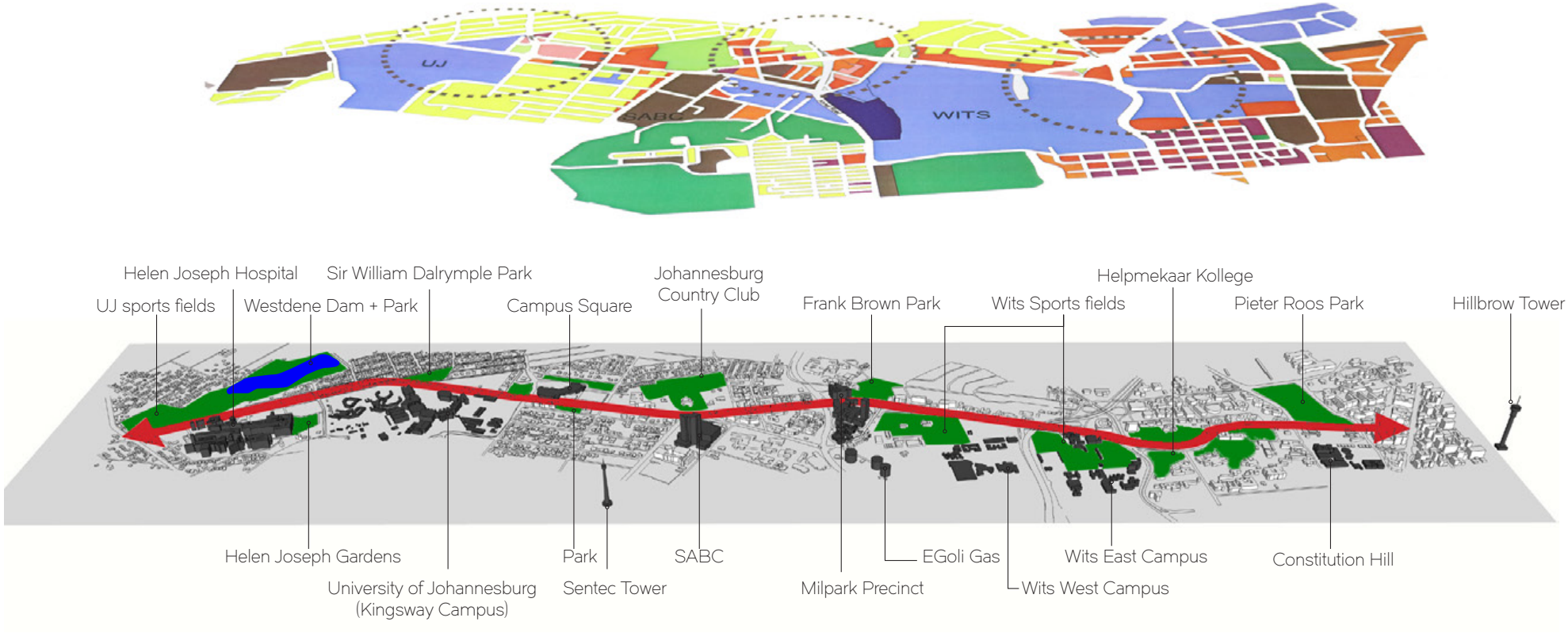


Figure 1g: A complex and diverse system on Empire-Perth Corridor: Key Structuring Elements, Built-form, Open spaces and Existing Land-use (Author, 2017)

Problem statement

More than two decades into the new dispensation, apartheid morphologies still persist in the City of Johannesburg. In the wake of this reality, the positivist approach to development in the built environment profession continues to envision futures that do not tally with the spatial reality of the areas of intervention. These are mostly perceived in spatial frameworks, development plans, precinct plans and the like.

"There is an on-going global public transportation renaissance in the last two decade" (Stojanovski, 2013: 17). Following the same pattern, the City of Johannesburg has proposed the Corridors of Freedom - a framework based on the principles of Transit Oriented Development, aimed at 're-stitching the city'. While it is a known fact that this idea/model was a success in places such as Bogota and Curitiba, some literature has shown that the tools have yielded negative result in a local context. To substantiate, the Louis Botha corridor has emphasised the divide between the communities it traverses such as Alexandra, Balfour, Sandton, Orange Grove and Highlands North producing a tunnel effect through most parts of a 16 kilometre spine, causing an economic, social and spatial disconnection between a diversity of communities (Makhubu, 2016).

Furthermore, other stations such as the UJ Sophiatown station are well-located but poorly linked with other modes of transport as well as their surroundings. This has led to a number of issues such as less than expected usage of the BRT and the exclusion of the most dominant users (pedestrians) in the scheme or functionality of things. Development is still guided by the "persistent culture of fear and insecurity that pervades urban realities... It pushes social life into interior spaces, private homes or into the secure mall" (Burdett: 182 in Hansen and Kotze, 2012: 18).

This has, to some extent, illustrated the failure to observe and acknowledge the significance of the everyday in the urban design and planning process. The central problem in this investigation is the manner in which the urban design tools have been employed, in a generic manner, in a diverse and complex area. Contemporary cities are composed of a 'complex ethno-cultural mosaic' which brings forth new challenges for designers (Mumtaz, 2010). According to Day (2003) the diversity that exists between urban neighbourhoods, which usually pose a challenge to new urbanism, should be approached with caution.

The problem statement is also supported by the argument which states that there is a huge "disconnect between what the planners [and designers] learn and know and what they put into practice for the general welfare and liveability of the populace" (Watson and Agbola, 2014: 1). Scholars in the field of urban design, planning and architecture have noted that such projects have little care for the human aspect or the everyday. This has been established at least in the context of China. According to Xue (2006:84) research institutions in China, which include Universities and Colleges, "usually pay excessive attention to the physical aspects of urban design" while giving less consideration to social effects.

Furthermore, other authors such as Cervero (2014: 10) argue that cities, when developing BRT systems, opt for the direction with the least resistance and minimum cost. This meant the siting of BRT stations and lines on medians "often with poor pedestrian access, because of relatively cheap available rights-of-way and the avoidance of building demolitions and relocation costs". Evidently, in the City of Johannesburg, similarly to Bogota's Transmilineo, critical urban design and planning elements which were disregarded to a degree, sometimes due to budget constraints, led to the placement of stations on medians of busy roads resulting in "mostly unattractive pedestrian environment immediate to stations" (Cervero, 2014: 11). Therefore making BRT more of a mobility investment and less of an integration and city-shaping tool. As shown on the images the Corridors of Freedom placed little or no weight on the pedestrian experience.

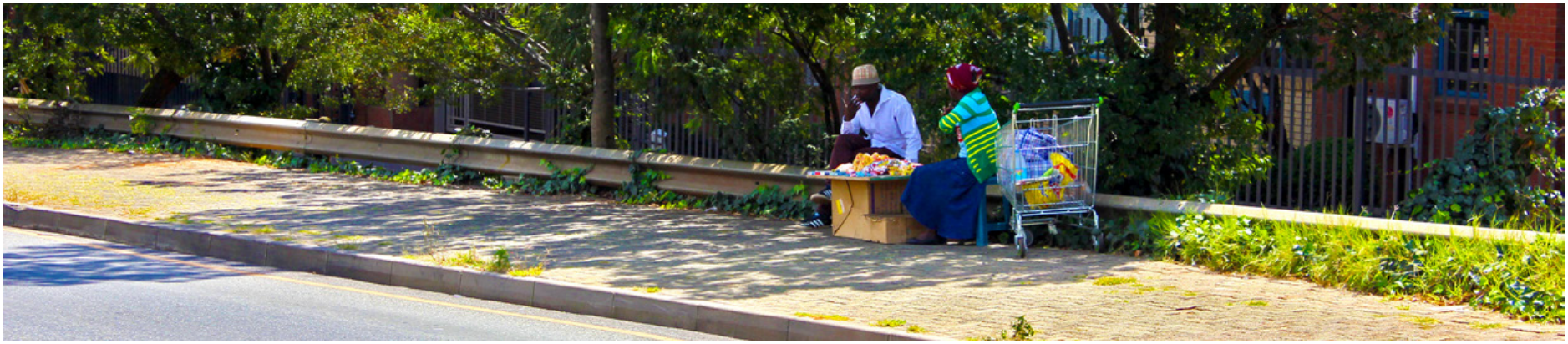


Figure 1h: Informal trader on the sidewalk along the Empire/Perth corridor, without sheltered trading facility (Source: Author, 2017).



Figure 1h: Students walking to Wits on a narrow sidewalk on Empire (Source: Author, 2017).



Figure 1h: Cyclist on Empire/Perth, without designated cycling lanes (Source: Author, 2017).



Figure 1h: Traffic stop entertainers: Improving perceptions of safety on the intersection (Author, 2017)



Figure 1h: Pedestrians sharing the sidewalk with informal/street traders outside Campus Square (Author, 2017)



Figure 1h: Pedestrians jaywalking on University Road between Campus Square and the University of Johannesburg (Author, 2017)

Rationale

The main aim of the research is to explore a humanistic approach to urban design through promoting 'design for otherness' and the inclusion of the lowest common denominator in the planning and design process. It also aims to explore the concept of 'the everyday' and its application in a local context.

It surfaces the danger of applying modernist approaches and ways of thinking to postmodern systems and ultimately highlights the importance of understanding context before design. It also seeks to promote the idea of 'new urban social imagination' which allows practitioners to re-education their perceptions and observe the reality in a different way (Sánchez, 2014). It accentuates the argument that urban designers should "develop participatory strategies to address those real issues provided a chance to contribute to the social process concerning cultural diversity in a constructive and sustainable manner" (Mumtaz, 2010: 1).

Proponents of positivism contend that there needs to change in the way we [urban designers, planners and architects] think, and that the only real solution to the contemporary city's problems is innovation (Sánchez, 2014). This is preceded by looking at the realities in a different way, which often prompts new discoveries (Sánchez, 2014). This study aims to explore a new possible urban imagination which would allow the researcher to discovery new narratives and toolkits that will contribute to the production of positivist knowledge and ultimately add to the crystallization of the revolution.

RESEARCH QUESTION

How can a re-imagined Urban Design tool-kit be utilised to accommodate the 'lowest common denominator' in a diverse local area – along the Empire-Perth Corridor?

SUB-QUESTIONS

- What has been the impact of the Corridors of Freedom facility around the UJ Sophiatown Station, in Auckland Park?
- How is the UJ Sophiatown Res Station and the BRT system integrated with the surroundings?
- What would the re-imagination of the tool-kit entail?

lowest common denominator = pedestrian

Objective

As explicated by Curtis et al, (2009) “car dependence has reached its limits. Cities are now breaking down because of car dependence and the problems of climate change and peak oil are undermining the extremities of cities built this way”. For this reason there is a need to strategically reduce car dependence in cities. This can be achieved by placing focus and emphasis on non-motorised and motorised mass transit systems. Policy on these systems should be followed by viable and practical urban design frameworks. This research project therefore seeks to analyse an existing transit system with the aim to improve its condition to favour the connection between the pedestrian environment and transit stations/ systems.

The objective of this research is to understand how the Corridors of Freedom, as a BRT-OD initiative, has positively or negatively contributed to the current conditions of pedestrian environment along Empire Road. The analysis will be limited to stations, station areas and other parts of the corridor such as the sidewalk, building facades and so forth along the stretch between the University of Johannesburg Kingsway Campus and the University of the Witwatersrand West Campus.

According to (Curtis et al, 2009: 3) “Transit Oriented Development allows, at least potentially, a degree of human interaction in the public domain – or urbanity – that is difficult, if not impossible to achieve in much more socially segregated car-dependent urban environments”. It is against this statement that the study area will be analysed, focussing mainly on pedestrian connections. The project seeks to further on suggest strategies that may help mitigate negative impacts of such development in a local context.

Unlocking the potential of one of the stations to improve the conditions of the surrounding areas. As stated by Croese (2016: 4) “inability to create effectively mixed and diverse neighbourhoods; the lack of effective changes in land uses around transit areas, or the inability to effectively densify, regulate and capture changes in land use and values”.

CORRIDORS OF FREEDOM IN CONTEXT

The map (fig1.) shows the location and the role of the study area in the context of the City of Johannesburg. The map also illustrates potential links which may improve the connection between the corridors and adjacent areas or other key nodes of social and/ or economic opportunity that exist outside the perimeters of the corridor across regions. These are shown in red (existing major roads) and blue (existing national roads and major highway). The potential linkage also suggest that this could be a way to integrate the BRT with other modes of public transport found in the context of Johannesburg such as minibus taxis, metro buses, tuk-tuks etc. Connectivity is a big part of BRT-OD.

According to Dittgen (2017) these are the connections that have been ignored while the City focuses on connecting people from previously marginalised areas to areas of economic and social opportunity, while putting less focus on connecting the neighbourhoods. This map highlights the importance of intersecting connections which will be further analysed in detail at a local scale in succeeding sections.

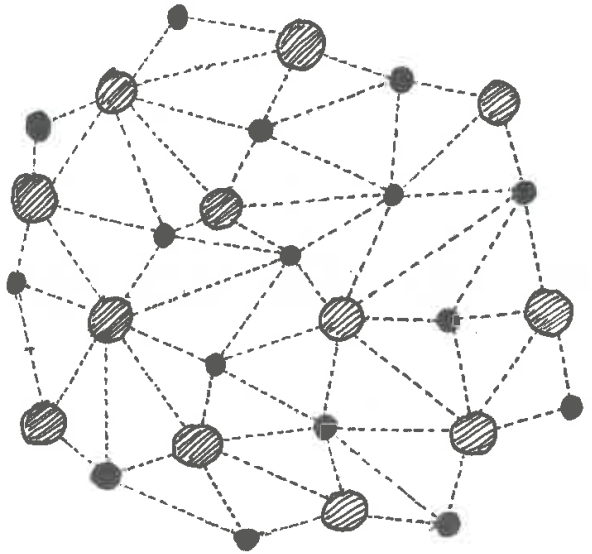


Figure 1i: This graphic reflects the importance of intersecting links and connections (Author, 2017).

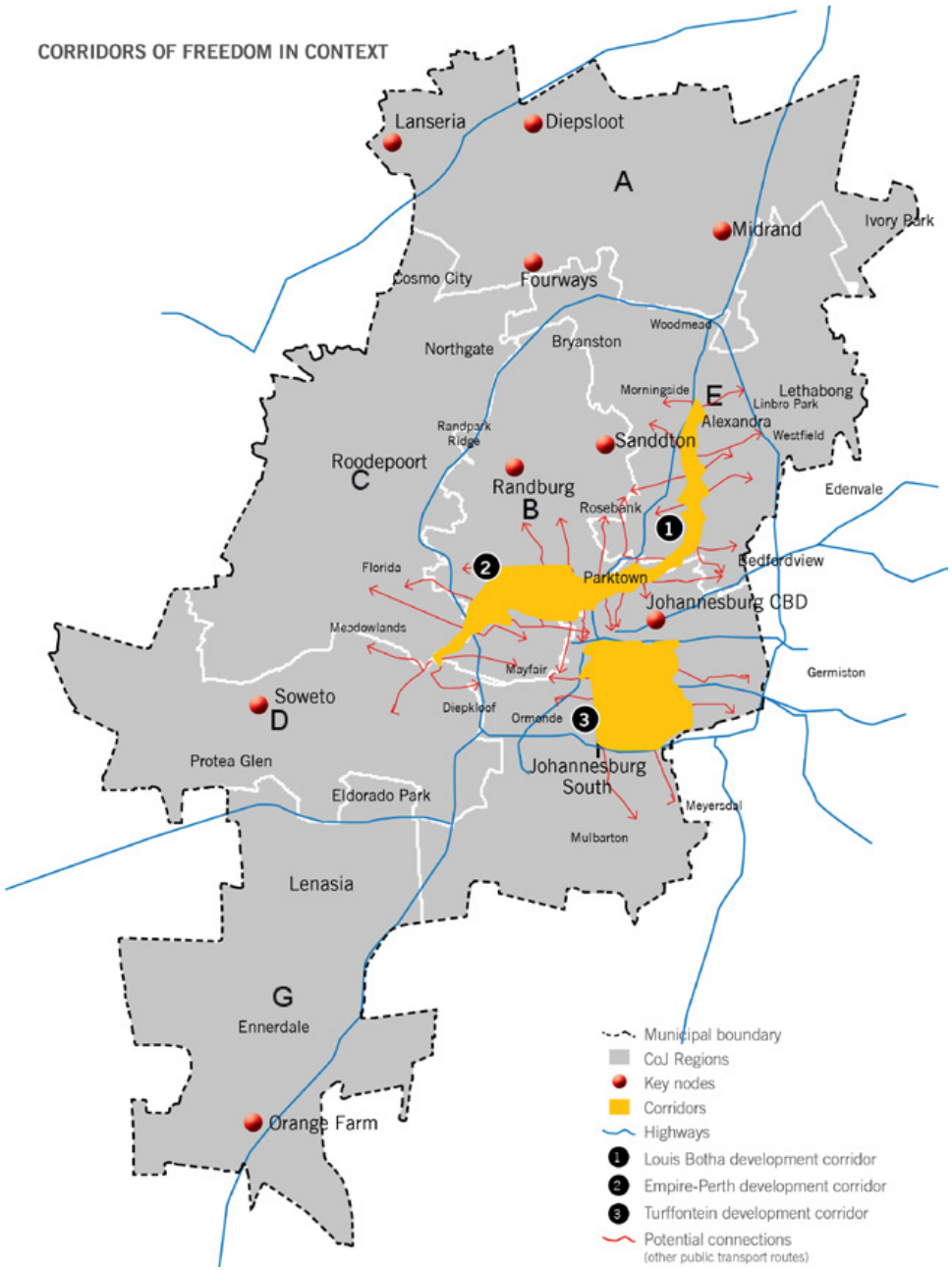


Figure 1j: Locating the Corridors of Freedom within the City of Johannesburg (Author, 207 adapted from CoJ, 2015).

Regional Role

As shown on the map the corridors potentially play a huge role in addressing the spatially segregated system of Johannesburg, which results from the apartheid regime. This proposed new spatial arrangement aims to connect previously disadvantaged communities (mainly in southwestern areas) to social and economic opportunities in northern areas. According to the CoJ (2014: 17) “the corridors aim to assist in restructuring (spatially and economically)the apartheid city -make the city more accessible to all its citizens, curtail urban sprawl, promote densification and infill-development”.

The map below, which is a reflection of the existing socio-spatial inequality in the city, illustrates the challenges better. The data is based on five key indicators namely income, employment, health, education and living environment. As shown on the map the areas with the highest population concentrations (hatched in red) are the most deprived areas in the City, which are also plagued with high levels of unemployment and low levels of education as well as minimal health facilities (CoJ, 2015). Core nodes and major economic hubs in the northern areas of the City, such as Sandton and Rosebank, show the lowest levels of deprivation or no deprivation (CoJ, 2015).

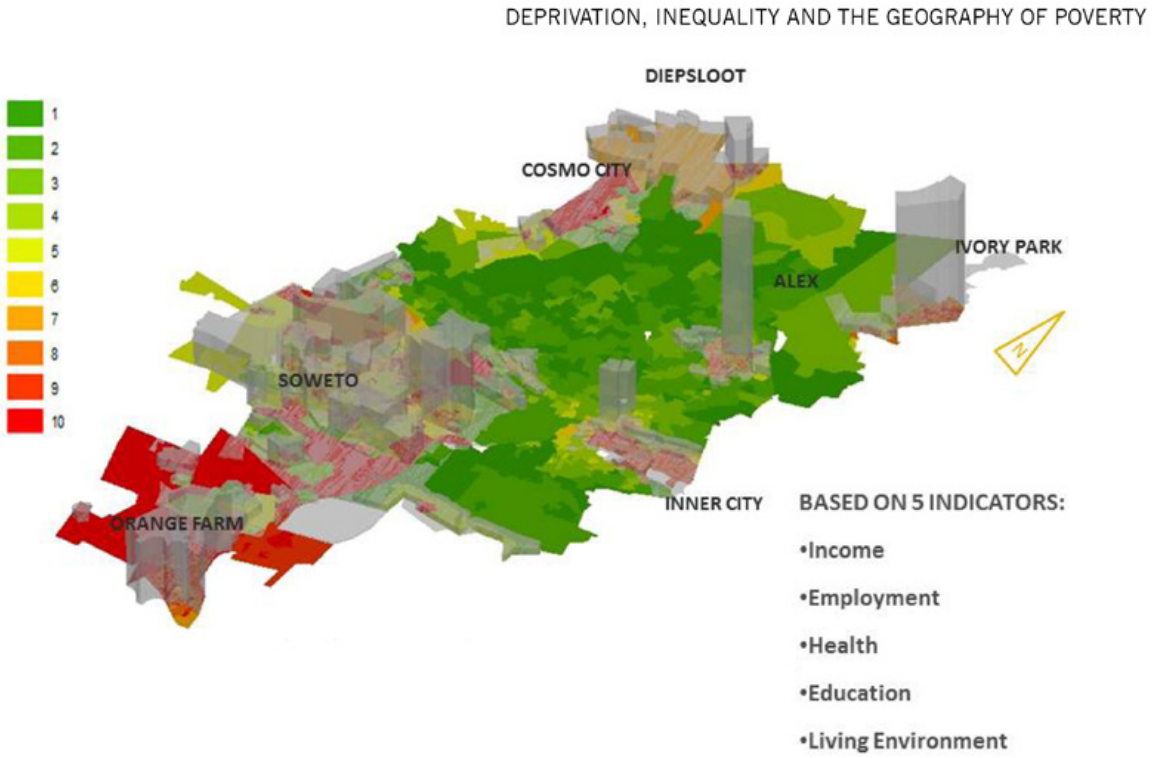


Figure 1k: A graphic showing levels of deprivation within the City of Johannesburg (CoJ, 2015).

Priority development zones

The figure below does not only illustrate the City's spatial concept of the desired landscape but also shows the limitedness of the Corridors of Freedom project in reaching the most marginalised area in the far north and south, perhaps this also testifies to the notion that the impact or legacy of apartheid planning is far-reaching and deeply entrenched. The corridor project is only focused within a 10 kilometer radius.

According to the City of Johannesburg (2015) some of the key interventions aim to consolidate the public transport backbone, strengthen the metropolitan core and establish a hierarchy of nodes by developing areas located in the fringes of the city.

- Even though these areas (identified as townships) are earmarked for future development they still remain spatially marginalised from the economic core where the project is concentrated. Thus, only fulfilling half the initial strategic aim of connecting "strategic nodes through an affordable and accessible mass public transit that includes both bus and passenger rail, over a decade" (CoJ, 2014: 4)

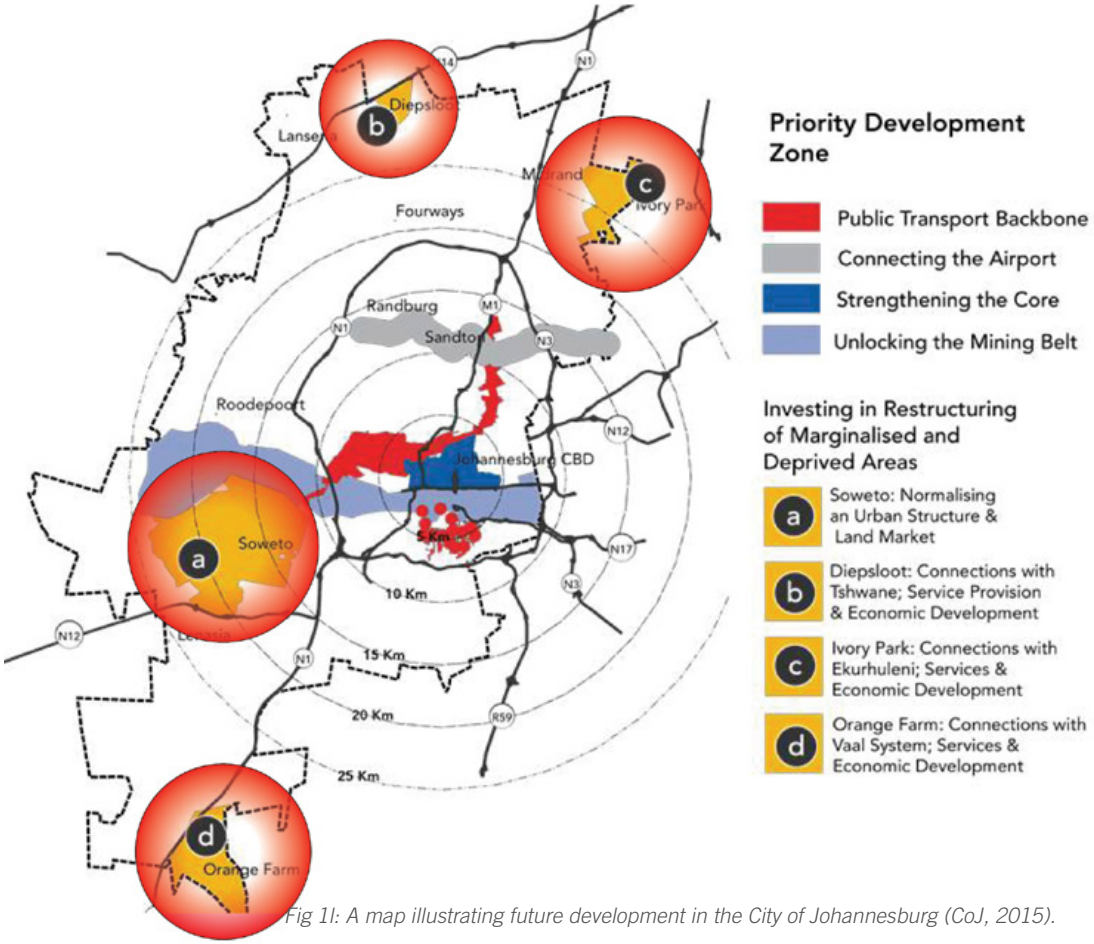


Fig 1l: A map illustrating future development in the City of Johannesburg (CoJ, 2015).

Regional Role: Development perspective overlaid

The fragmented and dispersed urban structure, which the Corridors of Freedom seek to address, is a consequence of the apartheid past exacerbated by contemporary economic and social trends. The mining belt, which was a key instrument of apartheid planning, has shrunk overtime with the depreciation of the mining activity coupled with urban growth and/or sprawl. As the mining belt contracts it creates an even better opportunity for integration between formerly divided areas.

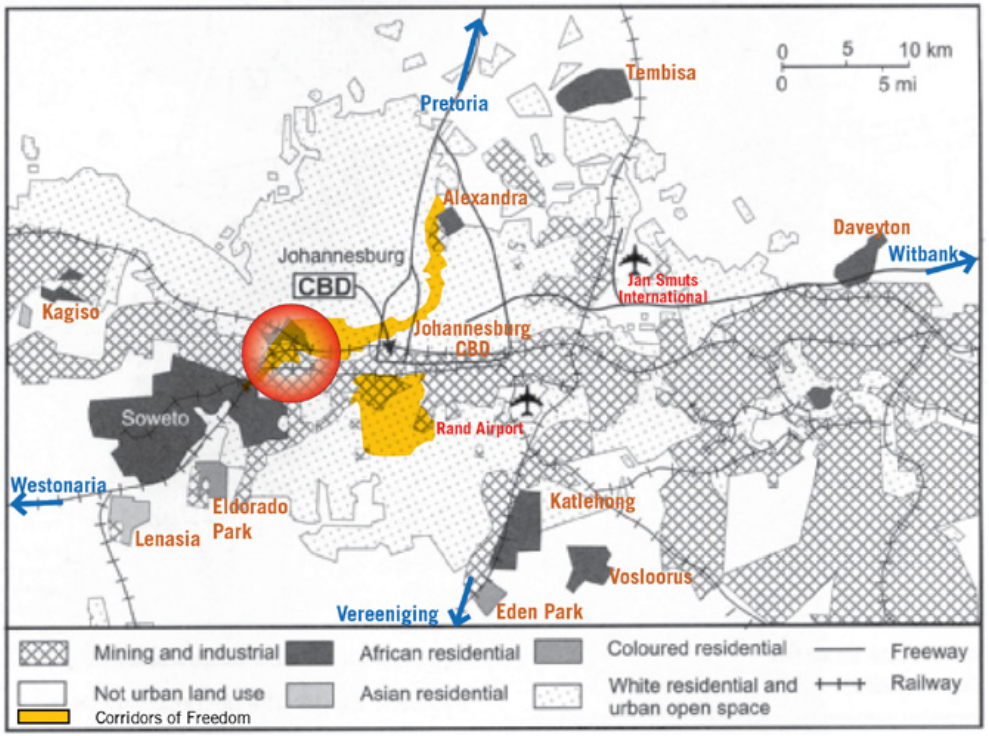


Figure 1m: Apartheid map overlaid with the Corridors of Freedom (Adapted from Cole and Blij, 2007)

The western segment of the city, as shown on the apartheid plan overlaid with the corridors project, still appears to be segregated by the mining belt as a large portion of the corridors development is focused north of the former buffer zone.

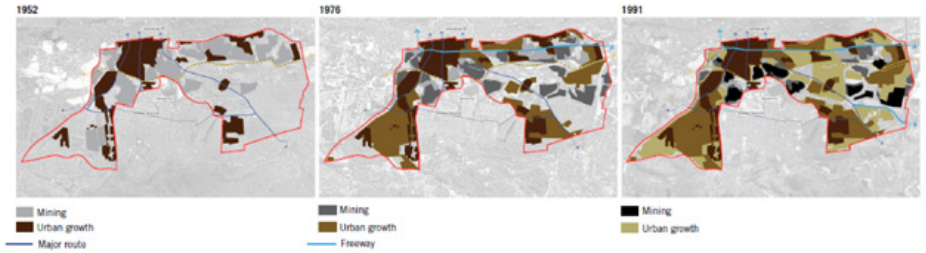


Fig: Urban growth in and around the East Mining Belt (Iyer, 2017)

CHAPTER

2

ESTABLISHING A CRITICAL LENS

SEARCHING + EVALUATING EXISTING LITERATURE

The previous section introduced the study area from the metro to the local scale, showing the contextual location and role of the research object in the City of Johannesburg. The introductory chapter also broadly presented a problem statement, guiding research questions and objective of the study.

The following section aims to establish a critical lens or theoretical foundation of this research through the review of existing literature. The briefly introduced the concept of the 'Everyday' is the predominant concept or notion which will be further unpacked in this chapter. Furthermore, this chapter also aims to critically look of the adoption of the BRT system as a public transport model widely transplanted across the globe and provide a critique of the application of urban design principles in the local context. From this section lessons will be gathered to set parameters or guidelines for the final concept development or proposal of this report.

Philosophy of 'The Everyday'

The everyday, as explicated by Noero (2004) and, Lefebvre and Levich (1987), denotes real life which comprises here and now, 'the ordinary', 'content and context specificity', 'actions of people', 'reality', 'activities of people and domestic rituals', 'simple, mundane and ordinary', 'lived experience', 'repetitive gestures and cycles'. Lefebvre and Levich (1987: 9) define the everyday "as a set of functions which connect and join together systems that might appear to be distinct". The everyday implies repetitive gestures and on-going natural cycles – hunger and satisfaction, life and death, seasons and harvest, days and nights, desire and fulfilment (Lefebvre and Levich, 1987).

The notion of the everyday finds parallels with Barker's (1968) theory of behaviour setting which "examines the relationship between a physical environment (setting) and the patterns of behaviour that may possibly take place in it" (Mehta, 2013: 108).

As explicated by Mehta (2013: 108) the behaviour setting concept consists of 3 elements:

- a milieu (a particular layout of the environment)
- a standing pattern of behaviour (a recurrent activity)
- and a synomorphy (a congruent relationship between the two)

A great synomorphy would entail that the layout of the environment is able to accommodate human activities and meet their social and economic needs. If the synomorphy is low then adjustments must be made to the environment or milieu so it can allow humans to engage, act or behave normally and comfortably.

It the context of this report the concept also speaks to how people use space in their daily activities, which may provide clues and cues to the direction which

the design process should undertake. Ethnographic indications include how they walk, where they walk, where and how they cross from one side of the road to the other, where they gather, the modes of transport they use more/less, the economic, social and political activities they engage in etc.

Proponents of this concept such as Venturi and Scott Brown "concerned themselves with everyday activities - the ordinary person going about their daily life" (Noero, 2004: 20). As per postmodern theory, the everyday should form basis for planning, urban design, architecture and other related disciplines, in the built environment that seek to contribute to the betterment of people's lives and their environment. This may lead to the production of plans and designs that are not far from the reality. The everyday is loaded with meaning and prevents the reduction of ideas into formal compositions without any reference to context or content (Noero, 2004).

It is not about trying to make 'things' look aesthetically pleasing or extraordinary but contribute to the function and meaning. The architecture of the everyday reinforces the everyday without seeking to alter it in any shape or form, and allows for flexibility (Noero, 2004). According to Lefebvre and Levich (1987: 11) the everyday is sometimes treated with impatience by some who are eager to "change life and do it quickly".

The Science of Art: Human behaviour as a more accurate and relevant unit of analysis

The 'Science of Art' is a feature of the everyday which "suggests that in order to provide aesthetic pleasure the built environment must follow a set of rules that are imposed by the human body" (Mehta, 2013: 106). Human activity – also referred to as the human body – provides relevant, richer and more appropriate view of the human needs and desires in space than the top-down visual-aesthetic approach.

The Science of Art is a notion that seeks to provide an alternative to former urban design paradigms which disregarded human activities and their behaviours in favour of "personal tastes, intuitions and aesthetic criteria of professionals trained in the field of design" (Mehta, 2013: 107). The concept of the everyday philosophically equips built environment practitioners with bottom-up tools to address the inhumane qualities of the contemporary cityscape, and to counteract the "visual-aesthetic tradition" within the field of urban design and architecture.

New Urban Imagination

As demonstrated by Mumtaz (2010) user-centred participatory approaches and mutual identification of concepts prove to be an effective approach to the design process for culturally diverse communities. Mumtaz (2010: 1) introduces the idea of 'shared creativity', and 'collaborative design exploration workshops'. These concepts are in conjunction with the spirit of pluralism. Sánchez (2014) in the same vein suggests that there need to be a new urban imagination – a completely different way of looking at reality which forces practitioners to utterly displace and transform previous perceptions, behaviours and languages.

Bus Rapid Transit Oriented Development (BRT-OD)

"Today transit and TOD planning are inextricably linked" and this has become a signature strategy practiced across the globe as cities pursue more progressive and sustainable development goals (Curtis et al, 200 9:112). The history and preliminary successes of BRT-OD can be traced back to the 1972 signature strategy and downtown plan of Portland. At the epicenter of Portland's downtown revitalization strategy was a Transit Mall. This strategy became a blueprint which was repeated over and over across the region (Curtis et al, 2009). Even though the outcomes may be similar, the processes of formation differ according to context. For instance, in some areas the process begins with the erection of a station and a BRT route which is then followed by development, in other areas compact development attracts public transport systems.

Bogota boasts one of the successful BRT-OD projects and model identified as Metrovivienda - an innovative poverty-alleviation/land banking program which aims to integrate affordable housing with affordable transport, by treating housing and transport as bundled goods. An important aspect of this program include the acquisition of land, by the city, prior the installation of BRT services (Cervero, 2014). So far, four Metrovivienda sites have been developed close to one of the terminuses "each between 100 and 120 hectares in size and housing some 8,000 families" (Cervero, 2014: 16). Through this program the poor were relocated from urban fringes to areas closer to the core and improved their access to services, shops, jobs and other socioeconomic opportunities while cutting the cost of housing and transport, which often takes a huge proportion of poor households' income.

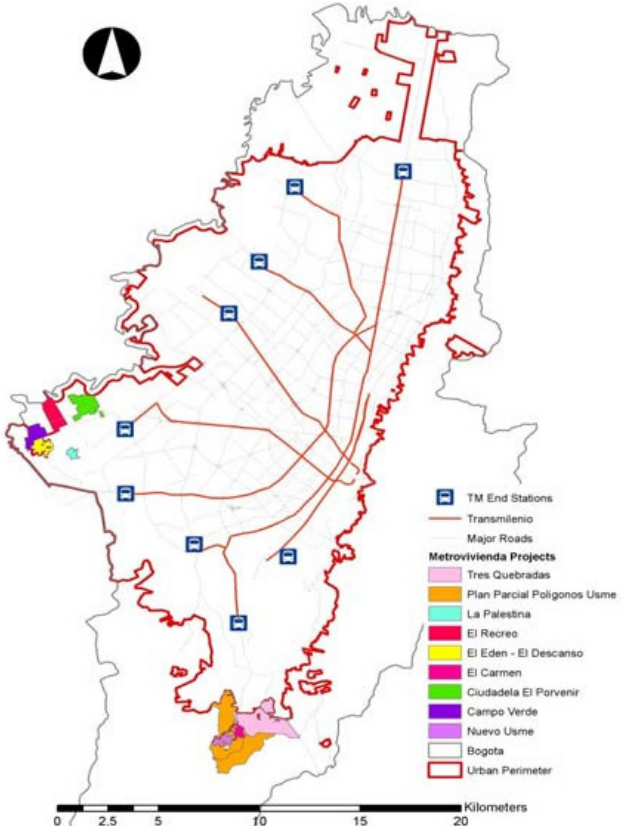


Figure 2a: Bogotá's TransMilenio BRT Lines and Metrovivienda Projects. (Cervero, 2014)

According to (Stojanovski, 2013) TOD is about synchronizing public transport systems with the everyday urban life. On one hand, well-designed TOD does not only force people out of cars into buses and other public transport systems and attract more travellers, but also contributes to the revitalisation of long-distressed urban districts and become hubs for the organisation of community development (Cervero, 2014).

On the other hand, BRT has complementary benefits, it curtails travelling times as the buses are separated from mixed traffic and are able to travel at higher speed on their exclusive lane. According to Carrigan et al (n.d. :11) "Johannesburg users save on average 13 minutes each way". In Instabul a commuter saves 52 minutes each day.

The dedicated lanes also improve passenger safety by separating buses from other transport systems, particularly in the South African system where lanes are usually dominated by often reckless taxi-drivers. Other design elements such as the improvement of pedestrian crossings in Bogota's Transmilineo have helped reduced road injuries and fatalities (Carrigan et al, n.d. :11).

Environmental benefits include the reduction of greenhouse gas emission, thereby improving the air quality and lessening the negative impact on global warming. BRT systems usually cost less than other public transport systems as they are normally "biased towards the lower income strata" (Carrigan et al, n.d. :14).

Corridors of Freedom (BRT): A *'Localised'* Global Urban Mobility Strategy?

Cities of the south have transport systems that peculiarly differ from those of their affluent counterparts in developed countries. Dominant public transport systems in developing countries, such as mini-bus (16 seat) taxis in South Africa have remained autonomous, "operating in a de facto deregulated environment" (Walters, 2008: 105). This system's progress has been hindered by its failure to be innovative and adapt to the needs of the changing and urbanising city. These challenges are often described as urban sprawl, centrifugal defragmentation, socioeconomic disparities, segregation, lack of viable and affordable public transport systems, urban congestion and its externalities (Iyer Urban Design Studio, 2013) (Levinson, 2013) (Venter, 2016). As an attempt to respond to some of these challenges, since 2008, South Africa has been going through a continuous phase of public transport system restructuring (Walters, 2008).

The BRT system is widely accepted as a creative, sustainable and feasible solution for many cities' mobility problems (Mejía-Dugand et al, 2013) (Levinson, 2013). Congruently, the South African context - City of Johannesburg, contextualised the concept into an integrated land-use transport strategy identified as the Corridors of Freedom (Venter, 2016). The main intent of the corridors of Freedom, which includes the BRT (transit backbone) as a key component, is to address these issues and ultimately overcome the spatial legacy of apartheid.

In the South African context – Johannesburg, the early phases of the BRT have yielded a number of challenges which include the failure to link the new BRT system into the existing public transport system and generally the existing context/reality. The former has exacerbated the challenge of disintegrated transport planning (Walters, 2008). The finer detail of this disintegration may have some kind of impact on the user; this will be explored further in the body of this research as it will investigate how people navigate their way between different means of transport. Some literature has suggested a hybrid method combining the formal and informal, this has financial implications and a negative impact of demand-responsiveness (Venter, 2016).



Figure 2b: Other public transport systems intersecting and running parallel to the BRT system on Empire/Perth (Author, 2017)

Economic, Environmental, Social and Spatial Impact

Like any other city development strategy of its magnitude, high quality public transport has an impact on a range economic, environmental to social facets such as the quality of life, health and safety (Carrigan et al, 2013). In support of this view Deng and Nelson (2011) state that the BRT, much like other systems of urban mass transit, has the potential to yield substantial impacts on urban economic, environmental and social development, and these may differ according to context (Mejía-Dugand et al, 2013). In addition, Mejía-Dugand et al (2013) refers to the improvement of the condition of the environment, which entails low energy consumption, cleaner air and noise reduction, as a side effect. This research also aims to treat it as such. For the purpose of this research much focus will be placed on the socio-spatial impact.

The main objective of the BRT system in Latin American cities, where it was successfully implemented, goes beyond providing affordable, comfortable and efficient transit system, it was also about "making city services more accessible for everybody, especially for the least favoured" (Mejía-Dugand et al, 2013: 82).

Public space as a socio-spatial device

As stated by Currie and Delbosc (2011) the quality of infrastructure in and around the stations, such as shelters, platforms and other amenities, is a major factor which influences when and how people use the facility. According to Currie and Delbosc (2011) the bus rapid transit system, in its application across the globe, seeks to emulate the amenity characteristics and performance of a modern rail-based transit system, but at a lesser cost. This denotes that they have their own segregated right of way and have "higher frequency services with longer operating hours", clear route maps and (departure/arrival) time information, pre-boarding collection and proper location or spacing of stations (Currie and Delbosc, 2011: 755) (Mejía-Dugand et al, 2013) (Levinson, 2013). As per the preliminary site scan of the study area, this approach and focus has had a negative impact on the spaces between stations and destinations – which are currently treated as by-products or leftover spaces. A lot of emphasis is placed on the above technical aspect, therefore leaving less room for the enhancement of spaces and links leading up to the stations, making them more safe, walkable and pedestrian friendly.

Colombia and Curitiba in Brazil have a lot to say about the technical aspects with no mention of the quality of transition spaces or the public realm surrounding these spaces, as well as associated softer social and spatial implications (Hensher and Golob, 2008). Emphasis is rather placed on speed, cost effectiveness and other aspects that make it comparable to the modern rail-based transit system such as segregated infrastructure, pre-boarding payment infrastructure, frequent

operations and so forth (Hensher and Golob, 2008). Seemingly, the urban design element is missing in both national and international examples, which makes the BRT seem like an engineering exercise than a sustainable solution to economic, environmental, social and spatial challenges the contemporary city faces.

Therefore, this research will use theoretical concepts listed in the Empire/Perth Strategic Area Framework such as accessibility, connectivity, permeability and the like (also mentioned in the conceptual framework) to understand the intention of the Corridors of Freedom policy and ultimately critique their application by looking at how they impact users and locals affect by the system.

BRT: Land/property and Human Behaviour

In some areas the bus rapid transit system has had impacts that have a direct influence on human behaviour. According to Deng and Nelson (2011) transit systems have an impact on land development since properties located close to stations become more desirable for location (household and business) or development because they save time and money (cost of commuting). On the other hand close proximity to the station may devalue the land or property as a result of noise, air pollution from the diesel engine, traffic disruption and so forth (Deng and Nelson, 2011). The latter may cause households to relocate or move away from areas located close to the station. For the purpose of this research, this impact will be perceived as a side-effect.

The Failure of Pedestrian Bridges and Overpasses

This section seeks to engage the idea of using bridges to make pedestrian connections over busy avenues or roads, in an attempt to create pedestrian-friendly environments. This is the idea which has been explored and continues to be proposed in different parts of the corridor as a pedestrian connection across Empire Road. The aim is to ensure that pedestrians pass safely without interfering with traffic. According to Alpert (2008) this has a negative impact on the quality of the public realm, street-life and the city fabric as it encourages the separation of uses. The separation of cars and people by devising systems for cars and cars only, people only, business etc.

As stated by Mkhabela (2017) “if the problem is on the ground, it should be solved on the ground”. Proponents of good urban design would argue that this problem should be solved on-grade. According to Jacobs (1961) this separation means less eyes on some parts of the city, reducing them to hot spots for crime and other illegal activity. Hansen (2017) further supports the stance by stating that the separation of people and cars creates more problems.

According to Alpert (2008: 1) people tend to not use the sky-bridges or overpass "even when they are there because pedestrians generally don't want to climb two flights of stairs on each end just to cross a street; they will take the shortest path". They do this over and above the risk of being knocked down by a speeding car on the road. Cervero (2014: 15) states that "the visually prominent skywalks that connect to BRT stops create lengthy, circuitous walks, can be noisy (resonating like steel drums during peak traffic conditions, by some accounts), and can be difficult for the elderly, disabled, and semi-ambulatory individuals to negotiate". The best way to solve the problem is to design both for pedestrians and cars on-grade so that neither is unduly inconvenienced by the system using pedestrian safety measures such as a median or island, traffic light or elevated walkway (Alpert, 2008). According to Jacobs (1993) one of the qualities of a great street include the sharing of public rights-of-way between cars and people on foot.

The City's Attempt to Bridge the Pedestrian Gap

Under the auspices of the Johannesburg Development Agency (JDA) the City has made an attempt, through intervention, to increase pedestrian safety In the study area of this research. As show on the image (FIGURE 2c) the intervention was in a form of a bridge or 'skywalk'. According to Toffa and Gantner (2016) this proposed bridge was meant to allow students and other users to walk or cycle between the university, Campus Square Mall, restaurants and neighbouring residences. The project was halted upon the realisation that it has many flaws. As per Toffa and Gantner's (2016: 1) critique, "It's long, non-descript ramps afford little consideration for pedestrian behavioural patterns, which currently exist along sidewalks which are undersized, in disrepair, or in many cases non-existent". He further states that less than a fraction of the resources used for the bridge could be used to improve the already existing bridge that is only 400metres away from the intersection, there was no consideration of the existing informal public transport systems such as taxis as the design is not linked to any of the stops and drop-off zones.

Although this concept is championed as an attempt to create a pedestrian-friendly environment it seems to favour the car, as it makes it more difficult for pedestrians to move from one side of the road to the other while cars continue to operate the same way they used to. As stated by Toffa and Gantner (2016) "conceiving of the space on the ground as sacred for cars, and making it the role of pedestrians and cyclists to get out of their way". In addition, the concept also proposed the use of fencing to militarise the sidewalk and prevent pedestrians from jaywalking. Over and above these critiques, most locals utterly rejected the proposal and called for a more pedestrian-friendly and sound design, above and beyond the fact that most of them are middle-class and use cars.



Figure 2c: Proposed skywalk (Toffa extracted from JDA, 2016)

METHODOLOGY: A TOOLKIT FOR OBSERVING REALITY DIFFERENTLY

The methodology of this research will be guided by Holston's (2008) idea of realm of ethnographic present which is prerequisite to the process of using "what exists to achieve what is imagined" (Sánchez, 2014: 2). This study will employ the qualitative method of research. Research or fieldwork will be carried out in the form of interviews with key respondents, mapping, document analysis and observation. Added to this, is the narrative enquiry which is classified as an analytical and descriptive qualitative research method as it seeks to understand and explain the interaction between social and spatial aspects (Sandelowski, 1991). It captures the reality from the perspective of the respondents. As explicated by Etherington (2013: 3) "narrative inquiry is an umbrella term that captures personal and human dimensions of experience over time, and takes account of the relationship between individual experience and cultural context". The researcher will also engage in document analysis by critically examining the suitability or appropriateness of urban design guidelines proposed for Empire – Perth.

This research strategy will be aided by the use of maps, plans, sketches, conceptual diagrams and photographs. As stated by Al-Kodmany (2002) visual information is an easy-to-understand common language which is also an inherent human preference.

Sources of data

This research will utilise both primary and secondary sources of data. Secondary sources will be newspaper articles, past dissertations, academic journals, urban design frameworks/reports and archives. Some of these will be requested from key role players who are involved in the Corridors of Freedom project such as the Johannesburg Development Agency (JDA), Iyer Urban Design Studio and the City of Johannesburg; others will be retrieved from the Wits Library.
Primary sources will also be utilised as sources of credible and up-to-date information.

For the purpose of this research primary sources are two-pronged. The first one entails conversations with officials from the CoJ and JDA as well as urban designers and architects who were directly involved in the production of Strategic Area Frameworks. This first group of primary sources will provide responses to technical questions. The second method involves qualitative observations of local residents, students, street traders, pedestrians, commuters, employees and the like. This group will also help produce maps in the form of spatial narratives, showing how they use the space.

Conclusion

This chapter, in an attempt to understand key concepts around the idea of BRT-OD, has surfaced a number of questions that can only be answered by way of providing alternatives in subsequent chapters. Moving forward, a number of guidelines have also been established;

- The BRT systems needs to be localised to suit the local context.
- The everyday presents a theory which enables the observation and examination of the relationship between a physical environment (setting) and the patterns of behaviour that that takes place in it.
- Human activity – also referred to as the human body – provides relevant, richer and more appropriate view of the human needs.
- A new urban imagination needs to be adopted to counteract positivist and technocratic ways of thinking, in order to devise context specific urban design solutions.

CHAPTER 3

THE URBAN DICTIONARY
+ PRECEDENTS

LEARNING FROM PRECEDING MODELS

The previous chapter provided a strong theoretical foundation as background to the study. The following chapter looks the successful application of urban design tools and principles in preceding projects from different contexts around the globe. The second section of this chapter is the urban dictionary of good streetscapes setting parameters for the design stage.

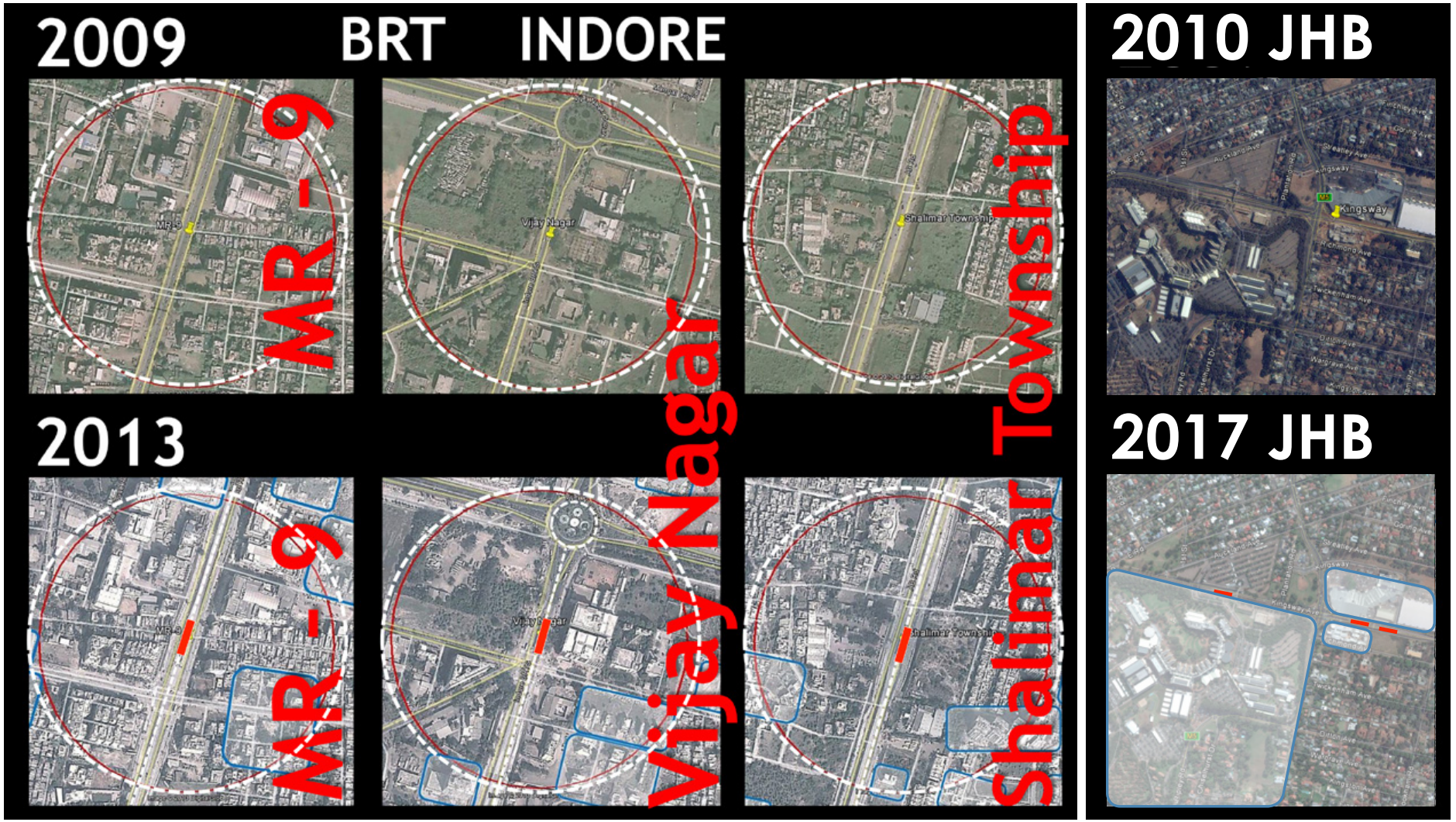


Figure 3a: The location of BRT in Indore in relation to Johannesburg

Bus Rapid Transit - Oriented Development

Vergel-Tovar (2014) illustrates the importance of land-use and transportation integration in the context of Indore the largest and most populous city in Indian state of Madhya Pradesh and Ahmedabad former capital and largest city in the state of Gujarat. As illustrated in the last graphic, Johannesburg also followed a similar pattern by locating stations close to important land-uses. In recent decades much focus has been placed on the efficiency of the bus system and its technologies with little consideration on their starting points and ending points.

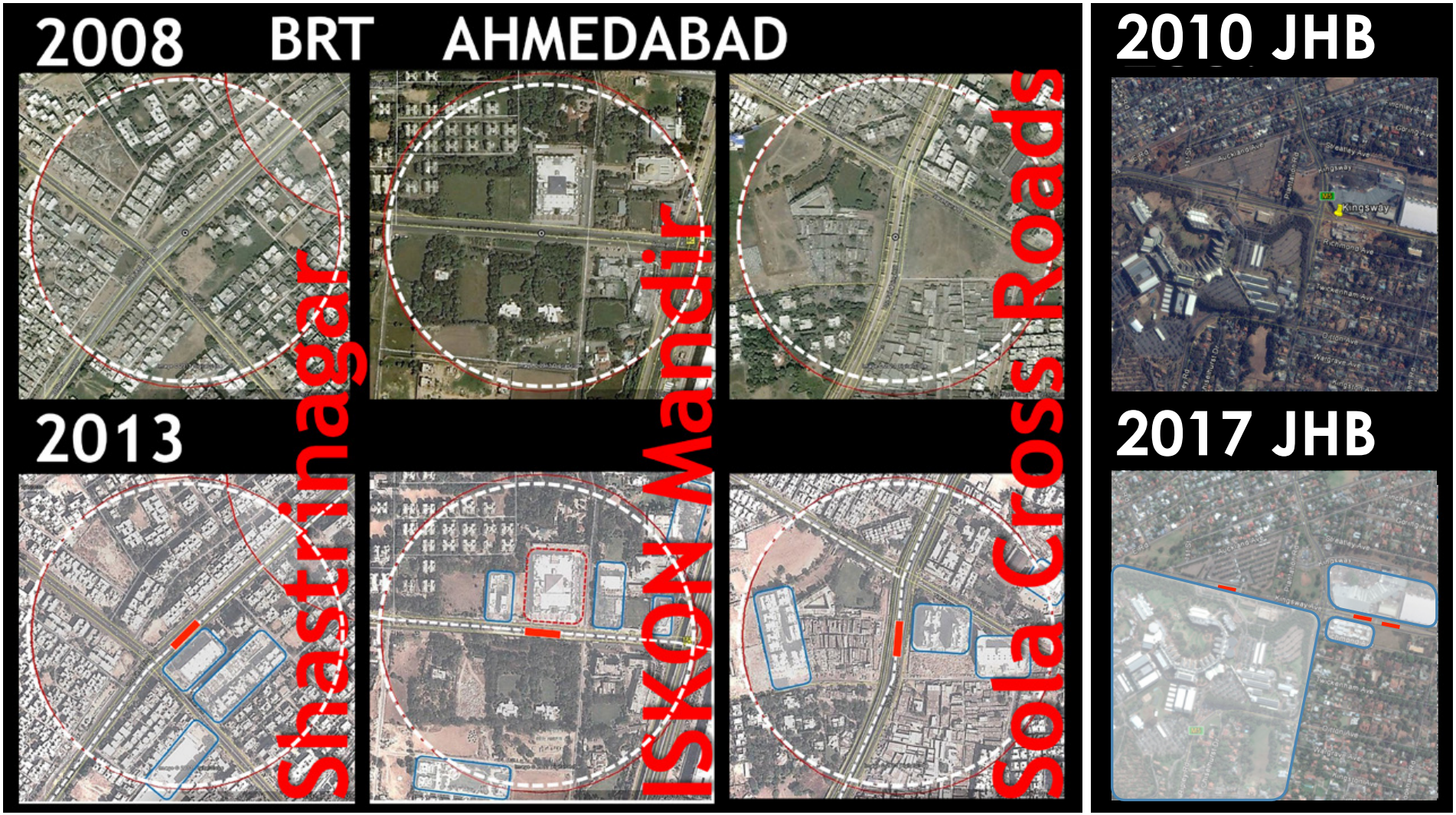


Figure 3b: The location of BRT in Ahmedabad in relation to Johannesburg

Mixed-Use Development

On the right are images of a mixed-use development known as Bedford Square. They were taken at different times of the day, the one above shows that the precinct remains active and well-lit even during odd hours of the day. The precinct consists of up-market apartments on top floors and high-end shops and restaurants on the ground floor.

Mixed-use is one of the critical elements of BRT-OD, most important around public transit stations to conveniently give people access a wide variety of basic needs often summarised as **LIVE, WORK, SHOP, PLAY** and **STUDY** (in the case of this research).

Mixed-use environment have a number of immediate and long term benefits, these include:

- Less dependence on private cars, which translates to less gas emissions
- Encouraging healthy living through the promotion of cycling and walking
- Save on traveling or transport cost
- Create an opportunity for the co-existence of diversity and cohesion
- Preservation of open space and natural resources through compaction
- "Promote balanced level of transit ridership throughout the day" (Clarion Associates, 2014: 6).



Figure 3c: Bedford Square Apartments situated above the mall (Commercial Property News, 2013)



Figure 3d: Bedford Square Apartments situated above the mall (Gumtree, 2017)

“Sweet to People” Spaces: London Oxford Circus

London’s Oxford Circus is also a good precedent illustrating how a modern city can be successful by deprioritising the car, and a good example of best urban design practice that promotes shared space. There is an urgent need to create spaces and streets that will make people feel that they were designed for them, not cars, assuring them that the use of a bicycle or walking is a conscious and positive choice, not a necessary evil (Brown, 2014). The love affair between people and cars is slowly eroding, at least in progressive cities like London, making way to people-centred urban spaces. In congruence with the philosophy of the everyday Jan Gehl “promulgated the need to look at the life of cities beyond buildings themselves” (Brown, 2014: 1).

Like the UJ Kingsway intersection, London’s iconic square was also a dangerous and heavily trafficked gyratory before it was turned into a responsive, enjoyable, accessible and performing iconic square. This was a bold experiment but proved to be successful. According to Brown (2014: 1) it does not happen overnight “it takes considerable skill, time and effort”.

“London’s Oxford Circus, before and after the new pedestrian scramble. Cars allowed, but no longer king.”

- Toderian in Brown, 2014



Figure 3e: London’s Oxford Circus before the conversion (Welch, 2017)



Figure 3f: London’s Oxford Circus after the conversion (Welch, 2017)

Corridor to a Boulevard

Well-designed and carefully thought through boulevards are less of high speed conduits but more of streetscapes and vibrant multi-modal thoroughfares that exude:

- People-friendly street scenes
- Engaging public spaces
- Sense of community
- Green medians designed as walking, public art display and gathering spaces

Sustainable streetscapes or Boulevards have a critical role to play in enhancing the visual image of a city or neighbourhood and assist in creating sustainable, accessible, liveable and safe urban environments for all users. They are also vital components of the public open space system and should be treated as such.

In the same vein, this research is about re-configuring aspects of the Empire-Perth Corridor to optimise its current use through urban design mechanisms or tools. The section of Empire-Perth which dissects the site is designed exclusively as a traffic conduit and feels like pedestrians are forcing themselves onto to a system that is designed to alienate them. In response to these spatial challenges, some of the strategies employed will aim to slow down cars, rework the corridor to accommodate non-motorised transit systems that already exists (such as pedestrians of whom the largest proportion are students, people on wheelchairs, people pushing baby strollers), create a scenic environment while fostering integration between different but complementary transit systems.



Figure 3g:Transformation of a flat corridor into a multi-use walking-biking-motor boulevard (Oneill, 2017).

Public Space + Squares

As stated by Memluk (2013: 513) “public squares are one of the significant public spaces in an urban environment”, as they reflect communities’ identity and cultural background. Moreover, since ancient times, public squares have always been places of gathering, where public life takes place. They positively contribute to the prestige and image of the city, if well-designed, used and maintained.

In ancient times, a public square (known to Greeks as the ‘Agora’) was established at the intersection/crossroad of important trading routes (Memluk, 2013). The Agora was deemed as an important place were economic, political and social gatherings took place, as well as other events and activities such as musical and athletic games, retailing, commercial activities, theatre performances and political meetings.

With urbanization, and the increasing popularity of a car the 19th century saw the deterioration of the freedom of pedestrians and public squares. This was coupled with the emergence of department stores, shopping streets and shopping arcades (Memluk, 2013). In the 20th century most developing countries turned urban squares into crossroads. The main strategy of this report is to turn a crossroad into a square.

Designing urban squares should be a part of urban design, otherwise they become disconnected and meaningless, rather than being an integral part of the city

- Memluk, 2013: 514

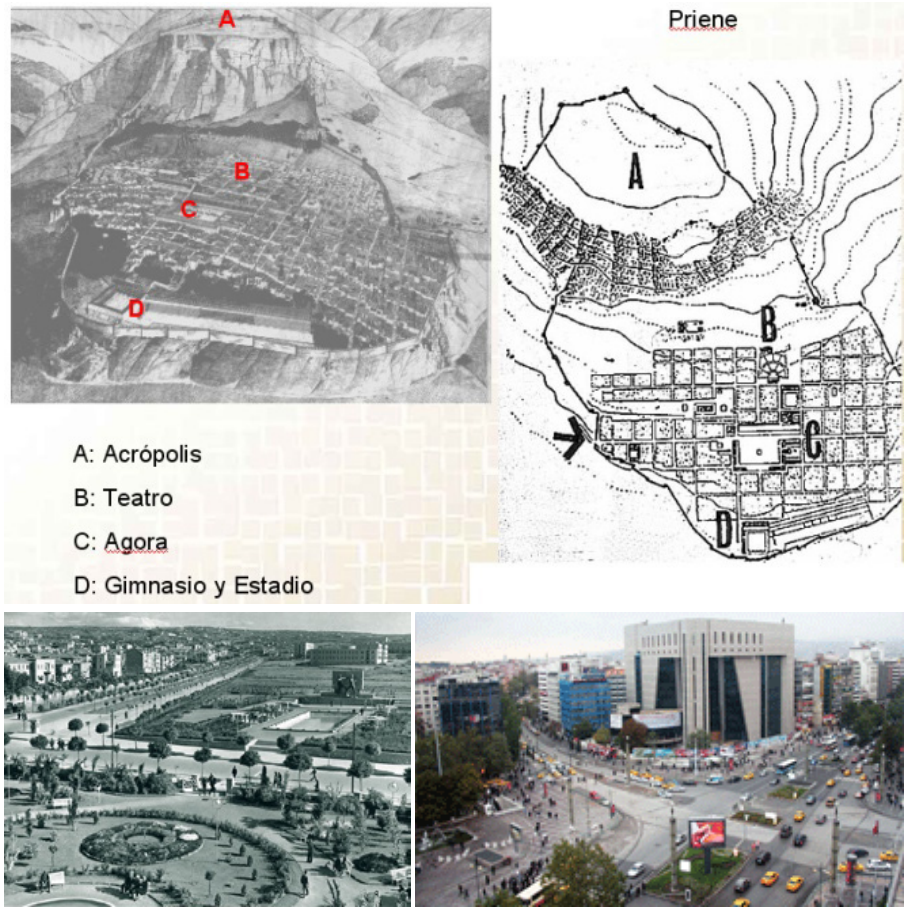


Figure 3h: Ankara, Kızılay Square in 1940 (left) and 2013 (right)

Public Space + Squares

Due to the diversity and multipolarity nature of today's urban environments there are no universal design principles for squares, however there are basics which can be used to guide the design process. These will serve as a guideline for the concept development of this research.

According to Carr et al in Memluk (2013) public places should be:

Responsive

Serve the community's needs and provide space for active and passive recreation/engagement, allow discovery and relaxation.

Democratic

Accessible to everyone

Meaningful

Allow people "to make connections between the place, their lives and the world"

Memluk (2013: 521)

A public square can take many forms such as circle, square, triangle, rectangle or amorphous, however the most emphasized requirement is the **sense of enclosure**.

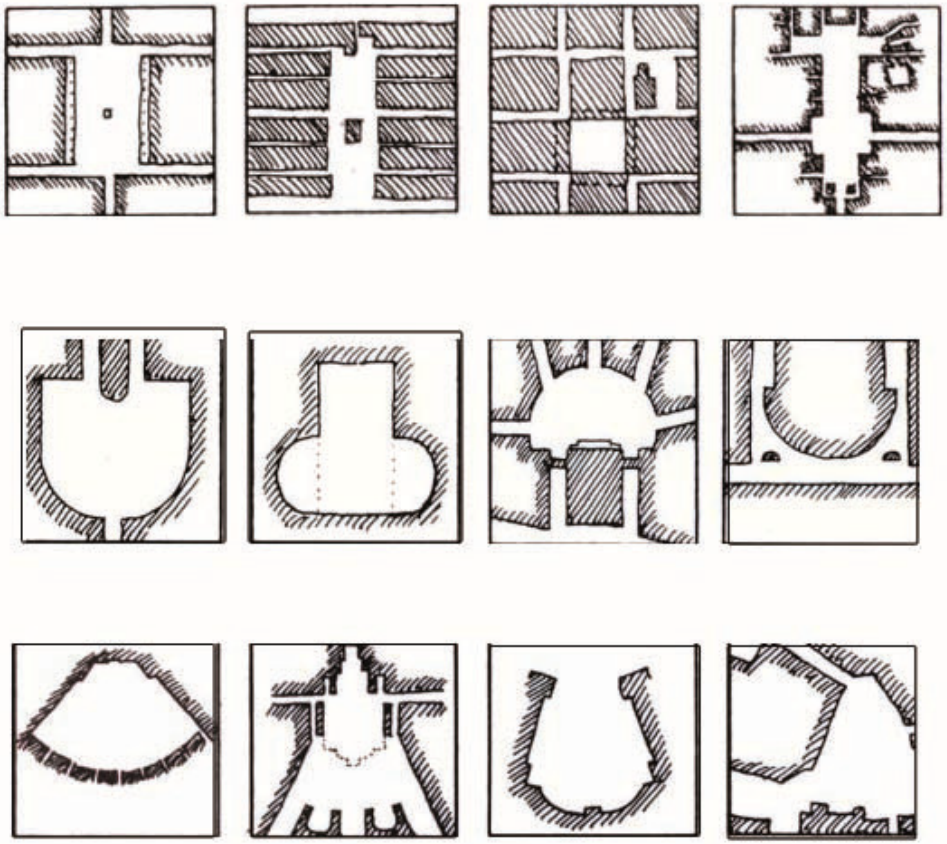


Figure 3i:Typologies of squares(Memluk, 2013)

BRT Stations (Guangzhou BRT)

In addition to good-case examples are two Chinese cities - Seoul and Guangzhou are identified as good models for high-quality walking environments around BRT stations and along BRT corridors. According to Cervero (2014) the high quality design of access and integration between the BRT system and surrounding areas shows that pedestrian access was a primary consideration. BRT stations in Guangzhou are seamlessly connected through “gently sloped footbridges and same-level integration with the second floors of adjoining commercial buildings” (Cervero, 2014: 22). As shown on the plan, some stations have at-grade pedestrian crossings. According to Cervero (2014) this successful combination of good quality pedestrian environment and connections to stations, high-rise commercial development and high quality BRT services led to the increase in real estate prices by 30 percent within the first two years of operation.

This model is important for this research as it demonstrates how station areas are contextually designed in favour of pedestrians, and illustrates the successful use of more than one linkage strategy to connect the station to abutting functions for the benefit of a pedestrian without inconveniencing motorists.



Footbridge pedestrian crossing (Fjellstrom, 2010)



Figrue 3j: At-grade pedestrian crossing (Fjellstrom, 2010)





Figure 3k:Footbridge pedestrian crossing (Fjellstrom, 2010)



Figure 3l: At-grade pedestrian crossing (Fjellstrom, 2010)



Figure 3m: Escalators connecting the side-walk with the footbridge (Fjellstrom, 2010)

Pedestrian Crossing and Crosswalks

According to Alpert (2008: 1) people tend to not use the sky-bridges or overpass "even when they are there because pedestrians generally don't want to climb two flights of stairs on each end just to cross a street; they will take the shortest path". The best way to solved the problem is to design both for pedestrians and cars on-grade so that neither is unduly inconvenienced by the system using pedestrian safety measures such as a median or island, traffic light or elevated walkway (Alpert, 2008). According to Jacobs (1993) one of the qualities of a great street include the sharing of public rights-of-way between cars and people on foot.

Transit-Oriented Development is best expressed by Jharkhand's TOD Vision 2026. First and foremost a good illustrated urban design strategy is that which creates fluidity and porosity that allows for pedestrian viscosity in the public realm, as illustrated in the vision image. The government of Jharkhand aims to have "public transport, walking and cycling as predominant modes of transport accounting for over 80% of the city trips" thereby decreasing the need for private cars (ITDP, 2017).

In the South African context much focus has been placed on pedestrian bridges because of the fear of interfering with the biggest force on the road. Johannesburg can learn from a number of design elements incorporated in Jharkhand's scheme. For instance, **PEDESTRIAN CROSSWALKS** on the road are raised to be on the same level as the sidewalk and bus station, creating preference of pedestrians over cars while creating a seamless pattern of pavement for easy access by commuters. Secondly, the stations are bordered by **POROUS AND PERMEABLE BUILDING FACADES** creating a safe and vibrant public realm.



Figure 3n: Wide pedestrian crossing at big intersections



Figure 3o: At-grade pedestrian link between the station and sidewalk
Transit-Oriented Development Vision 2026 Jharkhand ITDP (2017)

If the problem is on the ground, we need to solve it on the ground... Mkhabela
The separation of people and cars does not work, it just creates other problems... Hansen

Urban Design Elements

As illustrated by the Get-Ready-To-Connect Rapid Bus project landscape elements and urban design treatments in the design of stations and station areas, curb-running segments and median areas (Horn, 2015). Fiscal realities and budget constraints should not be disregarded as key determinants of the project's outcome.

According to (Horn, 2015: 3) urban design elements that are critical for stations and station areas are:

hardscape/pavement treatments;

- shelter area layout and design scheme;
- urban landscape (softscape) treatments;
- site furnishings and station amenities (such as benches, bike racks, trash receptacles, seatwalls/raised planters, lighting/illumination, ticket vending machines, way finding and bus arrival signs, etc.);
- art in public spaces; and
- "green"/sustainable design initiatives.



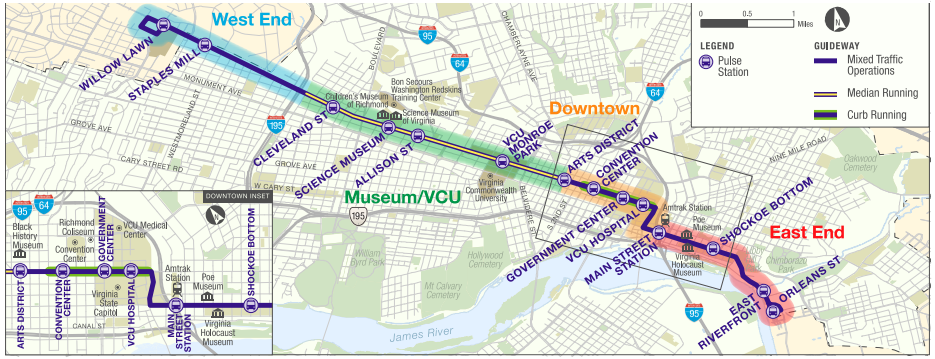


Figure 3p: The location of BRT in Indore in relation to Johann Get-Ready-To-Connect Rapid Bus project

Trees

Trees are critical features for all streets and have a diversity of economic, environmental and social benefits. They do not only provide shade but also improve the urban atmospheric environment by decreasing the Heat Island Effect (HIE) (Bhattacharjee, 2013). More than making places look more attractive; tree planting along streetscapes enhances the liveability of urban streets. Trees also have a calming effect which causes traffic to slow down as motorists subconsciously consider that where there are trees there are often children playing or pedestrians (Dunn, n.d.).

According to Crabtree (n.d.) Trees have economic benefits such as increasing property values, reduce cooling costs, enhances sense of place, reduce expenditures on gray infrastructure, reduce stormwater runoff and longer pavement life. Tress also create sound and visual buffers.

According to Jacobs (1993: 91) “trees move and modulate light”. Placing importance on trees in the public realm is not enough, their placement, planting and maintenance are as important (Jacobs: 1993).

Deciduous trees are preferable over evergreen trees as they allow sunlight to penetrate and reach the street or sidewalk, as they are less dense (Jacobs, 1993). Jacobs (1993) asserts that the most effective tree spacing ranges between 4.5 and 7.6 metres apart, but also suggests that closer is better. They should be 12 to 15 metres away from a corner for auto-safety.

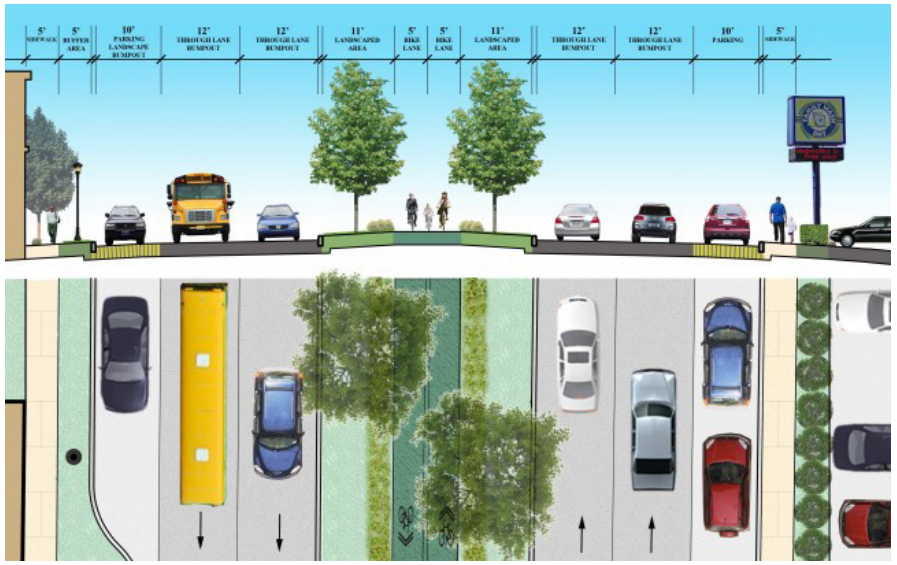


Figure 3q: An example of a good quality boulevard with trees: St. Laurence Road to North Carol Boulevard Cross Section (Panzak, 2017).



Figure 3r: Evergreen (Author, 2017).

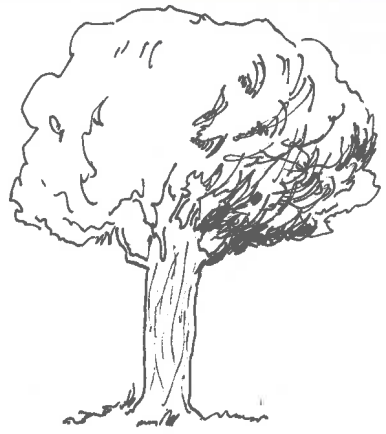
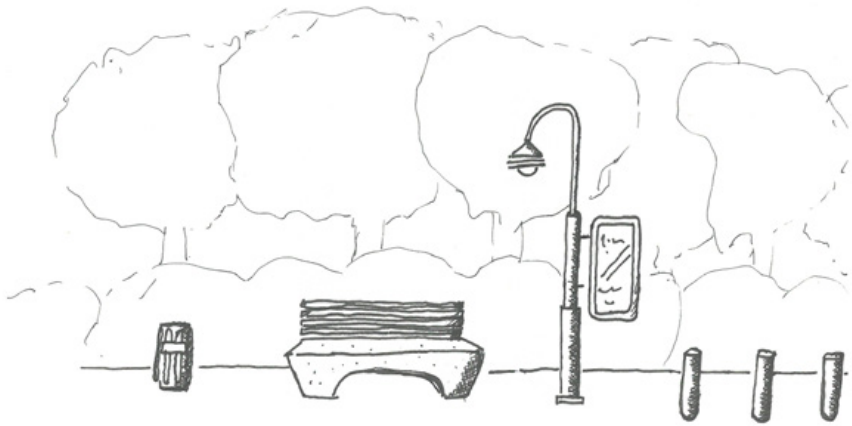


Figure 3s: Deciduous (Author, 2017).

Furniture

Public amenities such as signage, bins, benches, lighting, bollards etc. help dress the sidewalk enhancing pedestrian safety at different times of the day while improving traffic safety. Well-furnished sidewalks make for “convivial urban realm for all users” that are inviting for people to use the space, pause, linger and enjoy (Healthy Spaces and Places, 2009: 4). These elements create a sense of place by changing spaces to places where life occurs.



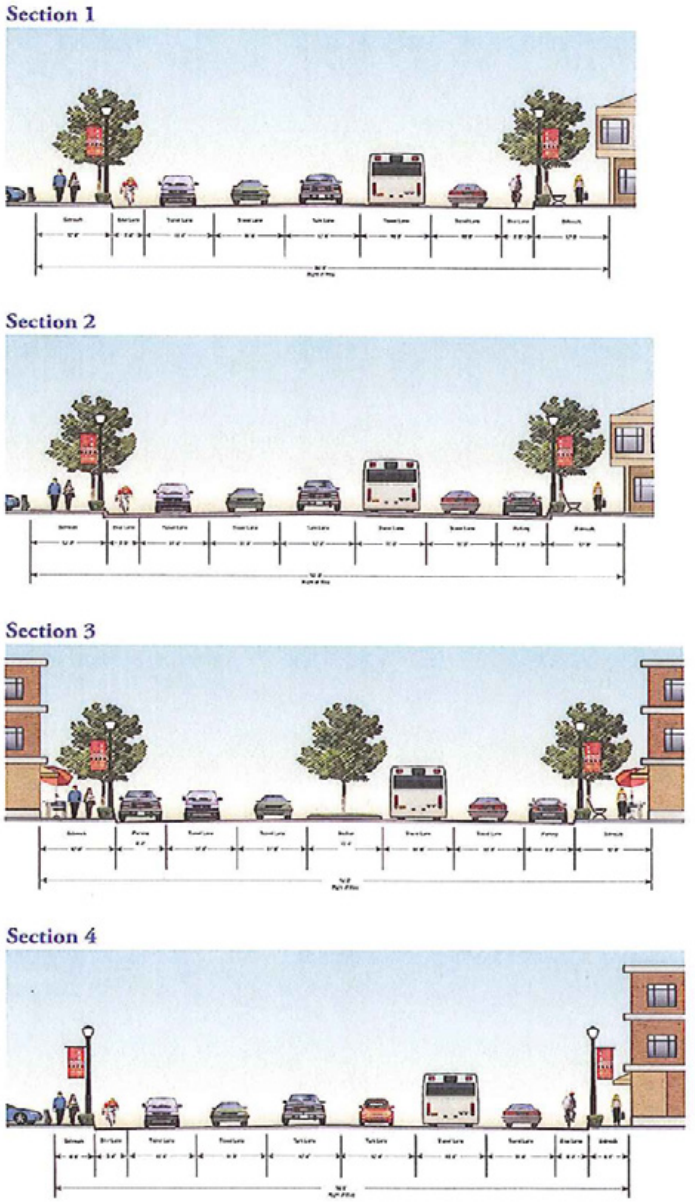


Figure 3t: An example of a well-furnished street: Kelso West Main Street (City of Kelso, 2015).

Building definition, articulation & envelope

A Street is defined by the walls or buildings that flank it on either side. They have a great impact on the character and success of the street or public realm in neighbourhood (Issar, 2010). According to Acosta et al (2015: 5) “buildings are the most pronounced elements of urban design”, thereby playing a huge role in defining the edge condition, shape and articulate the public realm. In terms of building definition, Iyer (2017) asserts that public spaces which include streets should be defined by supportive building edges that provide surveillance, enhancing the character and vitality of spaces.

The envelope consists of three categories identified as the base, middle and top – these are also recognised as tripartite articulation which breaks up the flat surfaces of the façade (City of Edmond, 2014). The base is the most critical as it contributes to the quality of the public realm through visually and physically permeable edges, high quality material, lighting and so forth (Issar, 2010). The middle part should have material typology that is visually consistent with the top and base. In the same vein, the top floor, after the 4th storey, can be setback or recessed to create a more human scaled podium.

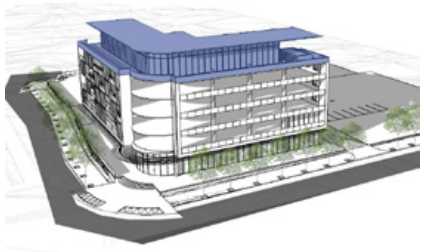


Figure 3u: An example of a recessed building after 4th storey (Iyer, 2017).



Figure 3v: An example of a positive interface between space and form (Iyer, 2017).

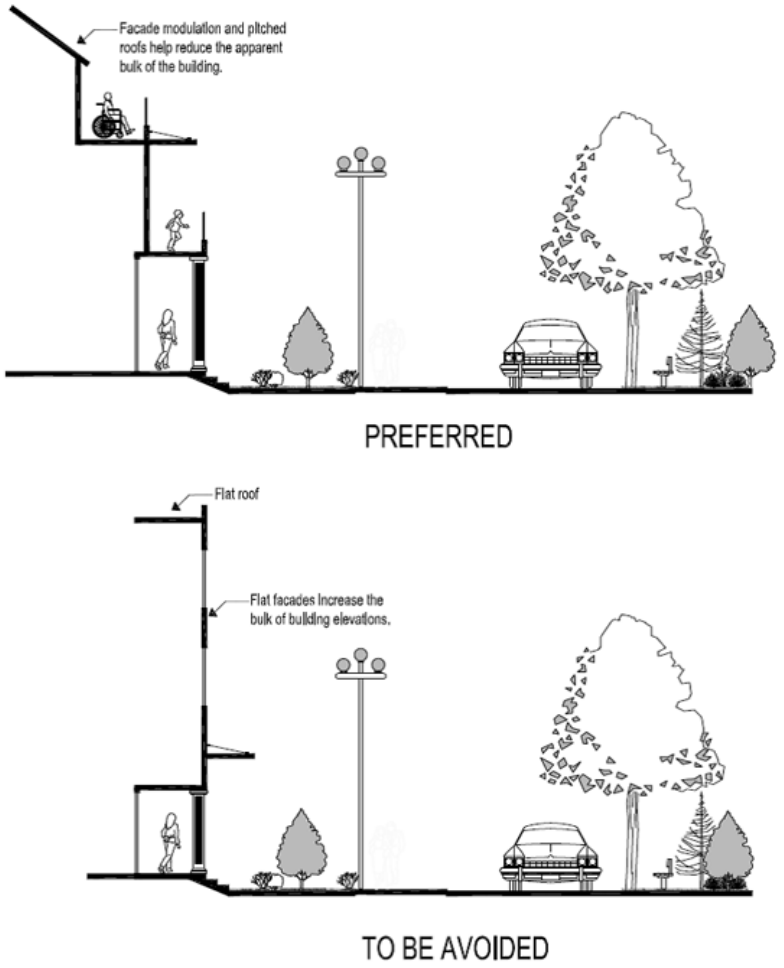


Figure 3w: A typical cross section of tripartite articulation and the ‘Built-to-Lines’ approach which minimizes the distance between form and space (City of Edmond, 2014).

Edge Condition

The edge condition of the walls or buildings that frame the street has a direct impact on the perceptions of safety, particularly for pedestrians on the sidewalk. Removing concealing boundary walls and setbacks increases the level of visibility between the public and private realm, the inside and outside, space and built form thereby creating 'eyes on the street'. The base or ground floor, which is a key element of the tripartite articulation, should be porous, responsive, vibrant and active with retail use.

This urban design approach, as a result, allows people inside to see what is happening on the outside (sidewalk or pavement) thereby passively decreasing the chances of any criminal activity. According to Iyer (2017: 24) "it is important that building edges are designed to encourage natural surveillance". The most effective way to achieve this is to ensure that fenestration allows for regular openings facing the public space

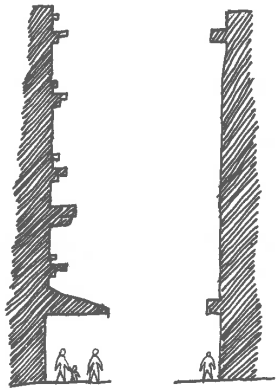


Figure 3x: Edge conditions (Author, 2017).

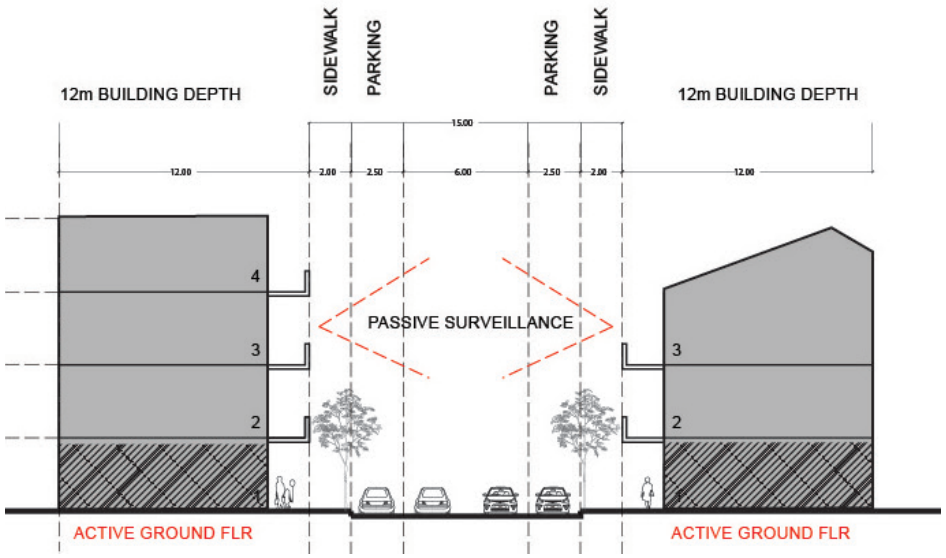


Figure 3y: Example of Passive Surveillance of a street (Iyer, 2017).

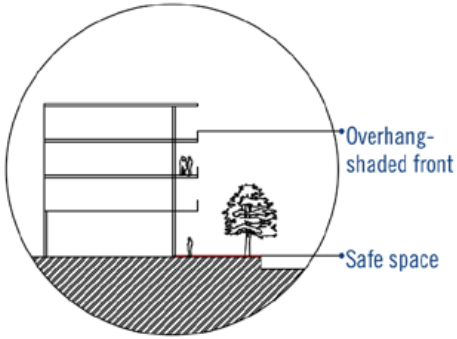


Figure 3z: Example of Passive Surveillance over the sidewalk (Iyer, 2017).

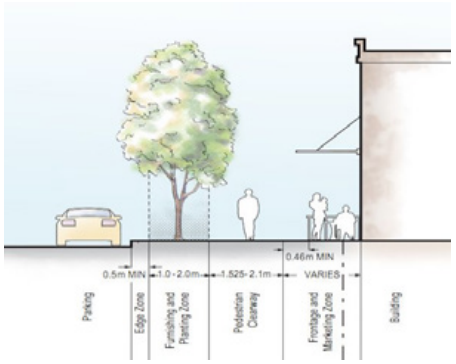


Figure 3aa: A typical cross section illustrating good edge condition (Pinterest.com, 2017)

Land-Use & Densification

Mixed-use development, whereby the ground floor is dedicated to retails use and the top floor accommodates related office or residential use, helps create a vibrant atmosphere along the street at different times of the day. Mixed land use development has other benefits such as the reduction of travelling time and costs, promotion of walking and cycling, while “encouraging social interaction as people fulfil more of their needs in their local area”(Healthy Spaces and Places, 2009). Mixed land-use development coupled with densification has other environmental benefits such as the reduction of car dependency as everything is located within close proximity or walking distance. This kind of compact development is in support of public transport corridors if well integrated.

Improved safety is also a secondary outcome of mixed land-use development as it keeps an area busy during the day and at night, thereby ensuring an almost 24 hour natural surveillance.

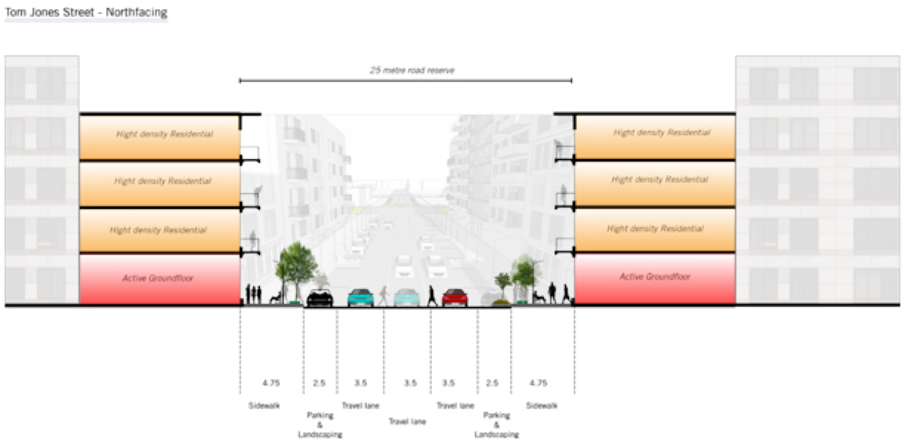


Figure 3bb: An example of vertical mixed-use (Iyer, 2017).

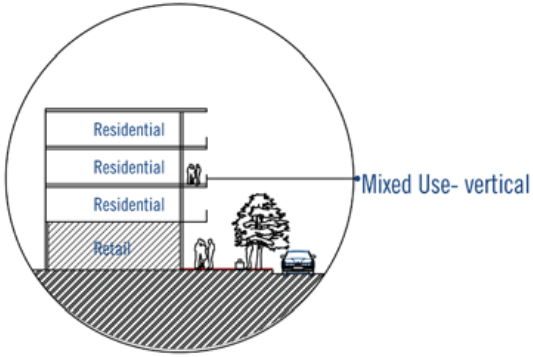


Figure 3cc: An example of vertical mixed-use (Iyer, 2017).

Landscaping

Most foreign designs would incorporate a landscaping zone as a key feature defining the sidewalk whilst contributing to the making of a good quality urban environment. In the South African context a street trading zone at regular intervals along the street, as a hawking zones in Mumbai, Shanghai, is also an essential element of the hybrid zone. According to Bhattacharjee (2013: 4) “it increases street activity while providing safety”, particularly for pedestrians. Landscaping is also associated with key urban design sustainability measure such as the use of bio-swales, bio-infiltration beds and permeable paving. These help prevent seasonal flooding and help increase groundwater infiltration.

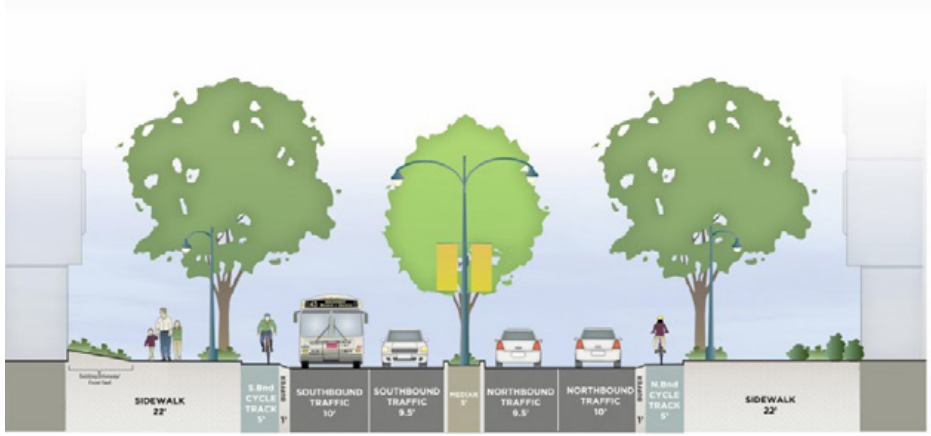


Figure 3dd: A typical cross section of a landscaped Boulevard (Pinterest.com, 2017)

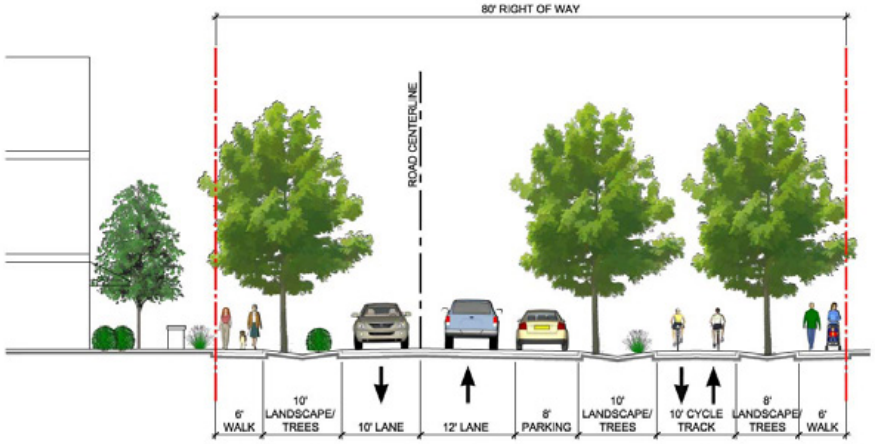


Figure 3ff: A typical cross section of a landscaped street (Clavelle, 2013)

Conclusion

Chapter 3 has dealt with the extraction of a wealth of information from precedents. While guiding the next stages of the report, this information has the potential to impact the concept or proposed design in chapter 5 of this research. It is important to look at preceding examples, existing ideas and projects to learn and ultimately enhance the quality of design thinking. From this chapter the following criterion was formulated.

Safety

Great stations have the "power to enhance good service" and are usually preferred when they look 'nicer' and are considered safe by commuters (Jaffe, 2015: 1). Stations are different from stops; they are presumably enclosed and safer. Like the Johannesburg BRT stations, they have controlled access points and are enclosed by a light transparent glass façade.

Integration

It is of critical importance that BRT stations are seamlessly integrated into their surroundings through pedestrian-friendly and good quality streetscapes supported by building flanking facades and well-considered sidewalks.

According to (Jaffe, 2015: 1) it is cheaper to build one station in the middle that caters for two direction traffic than to build two on either side along the curb for each direction. Where stations are built determines the quality of urban design that is needed to integrate the station with the surroundings.

Urban design treatment and landscape elements

Hardscape design

Hardscape elements in and around stations such as connecting walkways and sidewalks, platforms, walls and steps should be sensitively and appropriately integrated to create a convenient, safe, easy access and comfortable walking environment for boarders or commuters and pedestrians or in general. Since the stations are located on the median, pedestrian crosswalks should be highly visible for motorists for safety purposes.

Softscapes

Softscapes, which include bio-swale, trees, groundcovers, shrubs and other plantings, are also important elements as they provide aesthetic and environmental benefits. They also create great civic pride (Horn, 2015).

Design

The Johannesburg BRT stations are characterised by a light modern glass design. According to the ITDP (Institute for Transportation and Development Policy) stations should be "wide, well-lit, and weather protected" (Jaffe, 2015: 1).

Stations should be designed as enclosed structures especially for cities with harsh weather conditions so as to minus weather from the commuter's or rider's equation (Jaffe, 2015: 1). Design should follow function as opposed to fashion.

Pedestrian adaptability

Pedestrians' movement and use patterns are key indicators of how public space should be designed or used. As shown on the image pedestrians give a clue of how the road or the entire intersection could be reconfigured or re-designed to accommodate both motorised and non-motorised transit systems.

CHAPTER

4

UNDERSTANDING THE LOCAL SCALE

UJ SOPHIATOWN RES STATION + STATION AREA

"...an effective way to better evaluate neighbourhood commercial streets would be to examine how the streets are able to fulfill everyday needs and provide aesthetic and interactional pleasures. This can be done by empirically studying the interrelationships between the characteristics of the street, including its uses, physical characteristics, and the management of the uses and the street space, and the behaviours (actions) as well as attitudes (feelings) of the users."

- Mehta, 2013: 115 -

Introduction

The previous chapter provided a detailed description of qualities of good streets and boulevards, thereby establishing an urban dictionary which can be used as criteria for the site appraisal at the local scale. Elements covered in the previous chapter will be used as a reference point for the subsequent analysis and concept development.

At this point, the research is narrowed down to one station and its station area as well as abutting land-uses. These have the potential to become a BRT-OD node, as per the requisites stated in preceding chapter. This chapter promises an in-depth analysis of the site of focus located at the intersection of Kingsway Avenue running east-west on Empire-Perth and University Road running north-south. It is imperative to first show the importance of the intersection in linking key nodes in the city.

The analysis will be carried out using Barker's (1968) theory of behaviour setting (Figure 4a) to understand the nature of the relationship between the environment and people (their activities and behaviours) as well as other elements that shape the streetscape.

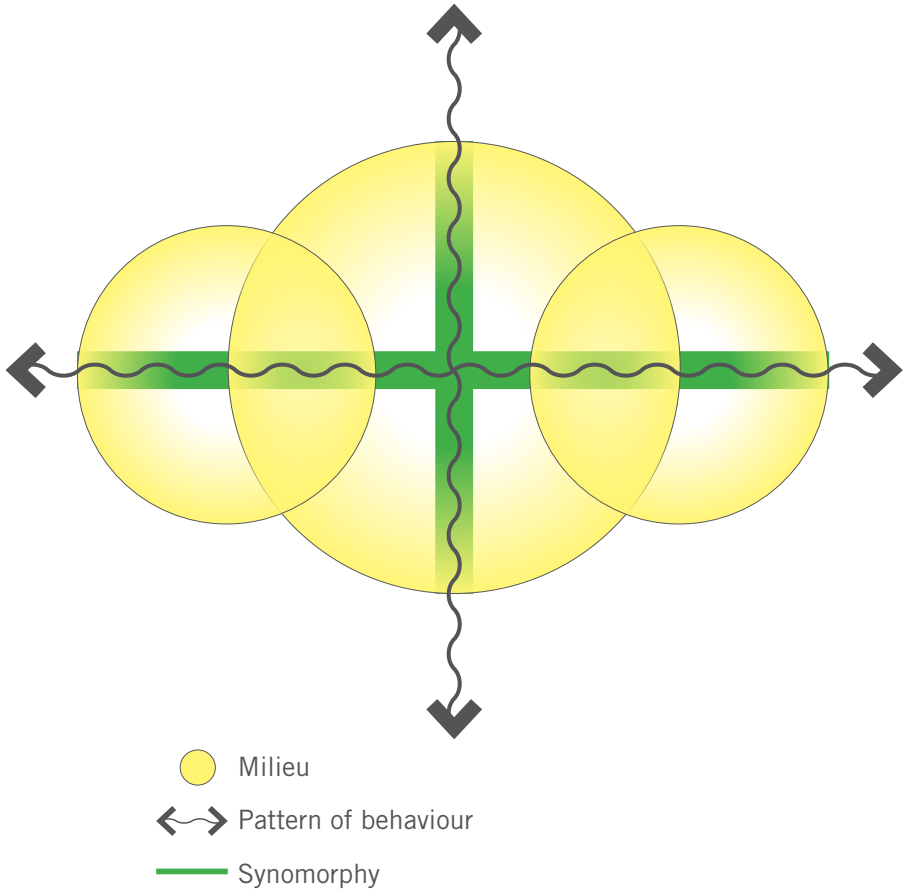
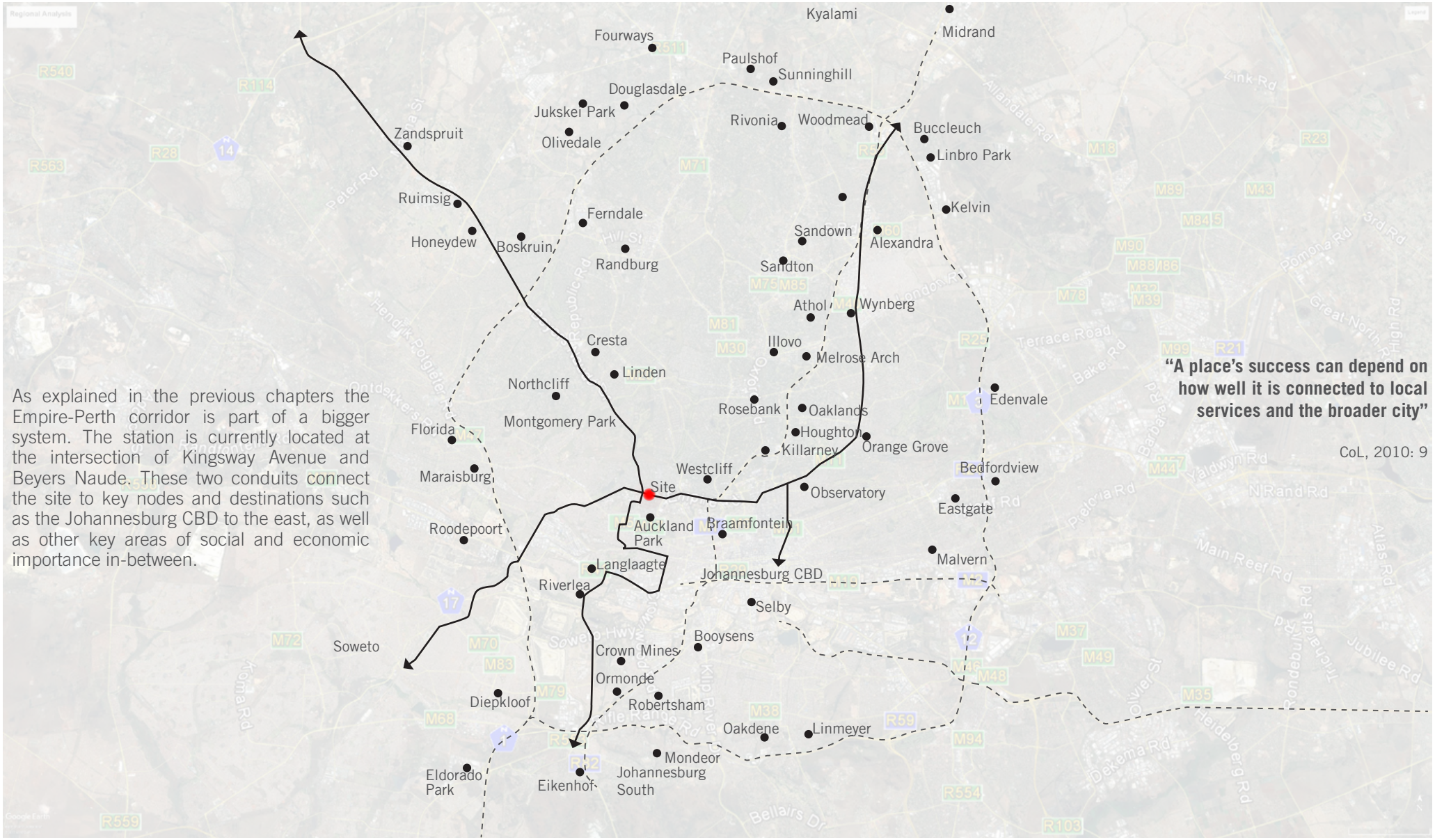


Figure 4a: Theory of behaviour setting diagram (Author, 2017)

CONTEXTUAL ANALYSIS: REGIONAL SCALE

As explained in the previous chapters the Empire-Perth corridor is part of a bigger system. The station is currently located at the intersection of Kingsway Avenue and Beyers Naude. These two conduits connect the site to key nodes and destinations such as the Johannesburg CBD to the east, as well as other key areas of social and economic importance in-between.



"A place's success can depend on how well it is connected to local services and the broader city"

CoL, 2010: 9

Figure 4b: Site context connectivity (Author, 2017)

EMPIRE-PERTH CORRIDOR ANALYSIS: WITS AND UJ LINK



The link between Wits and UJ has a total of 8 BRT stations, 3 of which are paired. The analysis will not only focus on the bus system but also the land-uses abutting the route since the corridors of freedom have been conceptualised as a combination of BRT and TOD – Bus Rapid Transit Oriented Development (BRT-OD).

This section looks at these stations, in context, as places of arrival, waiting and points of departure. According to (Naude et al, 2005) beyond their functional role as transport interchanges they are also key elements of the urban structure and therefore it is of critical importance that these are well-integrated into existing systems. In the same vein, this analysis seeks to unpack the level at which the BRT stations are integrated into the surrounding areas or land-uses. The BRT stations will be assessed according to a set criterion which includes safety, integration, design and functionality, landscaping, signage, etc.

Figure 4c: BRT station between WIts and UJ (Author, 2017)

As indicated by Cervero (2014) “a network of green connectors ensures high-quality **PERPENDICULAR CONNECTIONS** for pedestrians and cyclists reaching stations from two or more blocks away” are as important as the corridor itself in providing access.

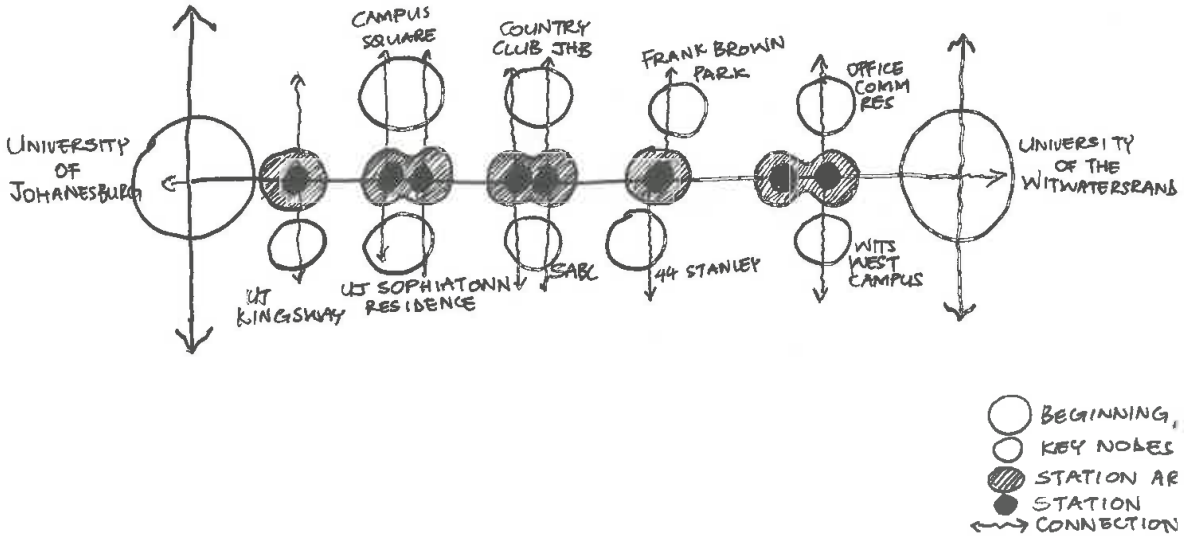


Figure 4d: Schematic diagram of the corridor link between UJ and Wits (Author, 2017)

a lot of focus has been placed on connecting previously marginalised areas to the city and less focus on connecting the neighbourhoods together

(Dittgen, 2017)

PREDOMINANT EDGE CONDITIONS AND KEY ACCESS POINTS

Plan view showing the edge condition of properties flanking Empire Road

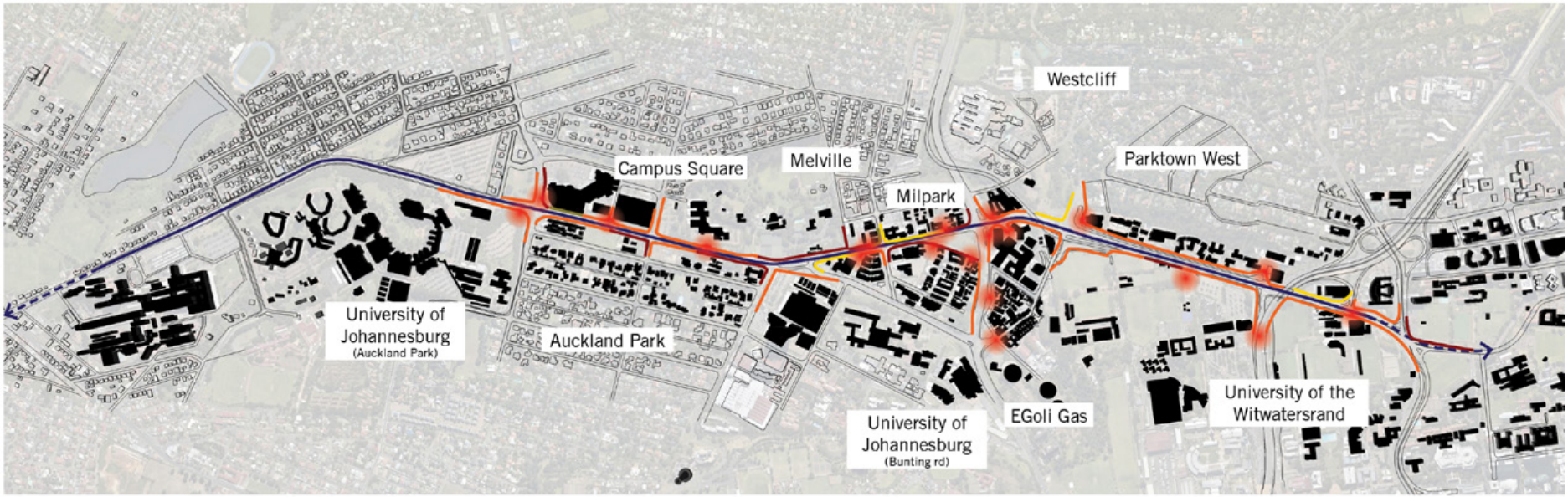


Figure 4e: Existing edge conditions and egresses along the corridor (Author, 2017)

ACCESS POINTS & ENTRANCES: STREET CHARACTER

This section shows a typology of access and entry points currently on Empire Road. A number of key facilities along Empire Road can be directly accessed from the main arterial, through controlled vehicle gates or pedestrian turnstiles. From this analysis it can be deduced that facilities along Empire Road are have a high access restriction and have no perceivable connection to the arterial beside that limited access. Some blocks have elements of good street design, boasting positive and good quality edges which can be further developed into porous edges.



University of the Witwatersrand Yale Road vehicular and pedestrian entrance.



Unused Wits direct access to Empire.



Turnstile entrance to Yale student accommodation.



Direct pedestrian entrance to an office park.



Direct pedestrian entrance to an office park.



Access to the Garden Court.



Unused Lancet Laboratories entrance.



Direct access to the car dealership.



Positive edges of convenient food stores and restaurants, also used as entrance.



Unused entrance to private property.



Controlled access to Media24.



University of Johannesburg entrance from Empire Road

Figure 4f: Access points and egresses along the corridor (Author, 2017)

EDGE CONDITIONS: STREET CHARACTER

This section is a visualization of the edge condition currently existing along the Empire corridor.



University of the Witwatersrand has a double edge a palisade fence and steep hill.



Visually permeable edges with electic fencingsystem



Hard edge on a private property



Visually permeable hard edges, a dominant edge along the corridor.



Trees and palisade as low intensity edges.



Highway infrastructure, a hard edge between Empire Road and adjacent properties



Soft edges (bollard) around Frank Brown park - a public amenity.



Soft edges around Frank Brown park - a public amenity.



Fence between a raised sidewalk and Empire road.



Open space steep hill as a hard edge.



Wire fence, a barrier along a median.



A hard wall between Campus Square and a BRT station.

Figure 4g: Edge conditions (Author, 2017)

Bus Rapid Transit - Oriented Development

Reflecting the attributes of BRT-OD, the site consists of the main station (UJ Sophiatown), as well as key adjecnt anchors such as the Campus Square Mall, UJ Sophiatown student residence, University of Johannesburg - Kingsway Campus and UJ open space, ABSA call centre (within a 400 raidus).

This combination of pedestrian traffic generating land-uses explain, to a degree, the presence of a lot of informal public transport stops and justifies the need to improve the pedestrian environment.

The UJ Sophiatown Res station, including other key formal and informal elements of the site, have the potential to contribute to making the intersection a successful and performing transit-oriented node that is anchored by the key land-uses mentioned above. This potential is crippled by a number of negative spatial elements such as the disintegrative fence on the island/median which separates the lanes, narrow and fragmented pedestrian pathways, hard and impermeable edge conditions etc. These and more will be illustrated and discussed further in this section.

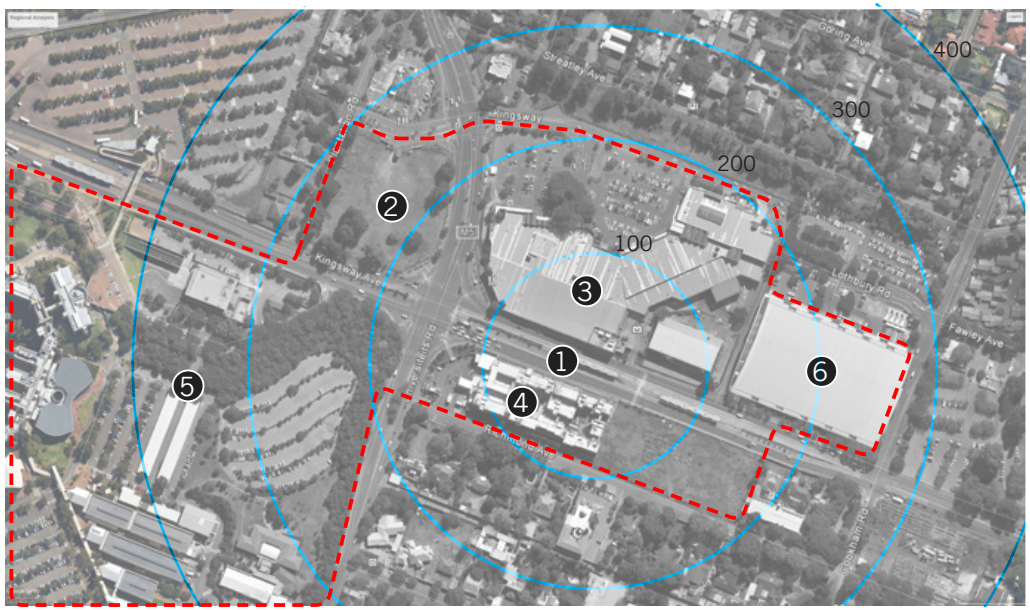


Figure 4h: Plan view of the UJ Sophiatown Res Station site/intersection, with major land-uses (Author, 2017)



1. UJ Sophiatown Res Station



2. Open space owned by UJ



3. Campus Square Mall



4. UJ Sophiatown Res



5. UJ Kingsway Campus



6. ABSA Call Centre

Figure 4i: Major land-uses (Author, 2017)

Corporate Geo-Informatics Parcel information

Property ownership has a great impact on what transpires and what does not happen on that particular piece of land. The intersection is predominantly utilised by students of whom the largest proportion are pedestrians. The walk between the institution (3), UJ Sophiatown student residence (4) and Campus Square (2). This has not done much to influence the design of the public realm, edge condition, transition spaces and the interface between the private and public, as well as the rest of the pedestrian environment. Development on this intersection mainly serves the interest of major property holders such as the University of Johannesburg and Campus Square PTY LTD.



Figure 4j: Plan view of the UJ Sophiatown Res Station site/intersection, with major land-uses (Author, 2017)

1. Open space owned by UJ

Township	AUCKLAND PARK
SG ID	T0IR00290000000008050000200
Land type	ERVEN
Status	REGISTERED
Stand number	2/805
Region	B
Ward number	69
Area(mÂ²)	13172.56943566
Market value	3090000
Owner	RAND AFRIKAANS UNIVERSITY
Zoning	Educational



2. Campus Square Mall

Township	AUCKLAND PARK
SG ID	T0IR00290000000011140000500
Land type	ERVEN
Status	REGISTERED
Stand number	5/1114
Region	B
Ward number	69
Area(mÂ²)	56944.15161177
Market value	120900000
Owner	CAMPUS SQUARE PTY LTD
Zoning	Special



3. UJ Kingsway Campus parking lot portion

Township	AUCKLAND PARK
SG ID	T0IR00290000000080900000RE
Land type	ERVEN
Status	REGISTERED
Stand number	RE/809
Region	B
Ward number	69
Area(mÂ²)	56812.41256497
Market value	0
Owner	UNIVERSITY OF JOHANNESBURG
Zoning	Educational



4. UJ Sophiatown Res

Township	AUCKLAND PARK
SG ID	T0IR00290000000008090000100
Land type	ERVEN
Status	REGISTERED
Stand number	1/809
Region	B
Ward number	69
Area(mÂ²)	16777.01907691
Market value	24800000
Owner	UNIVERSITY OF JOHANNESBURG
Zoning	Educational



Figure 4k: Corporate Geo-Informatics Parcel information (Coj, 2017)

Edge Condition

The eastern adjacent landuses have harsh hard edge facing the station. The mall has high blank walls facing the station, the street and the sidewalk. The student accommodation has a double edge which consists of an outer clear-vu fence (with an electric fence) and an internal wall. As stated by CoL (2010) “the built form has an immense impact on the character of the space and its success in a neighbourhood”. As shown in the two sketches the built form has formed hard edges which has a negative impact on the character of the street, which creates a tunnel effect. Currently, the rhythm and materiality of the built form does not support the envisaged quality of the public realm.

According to CoL (2010: 11) “the Base (or ground floor) should contribute to the quality of the public realm, having active frontages (windows with transparent glass providing views to the interior), porches, awnings, lighting and high quality materials”.

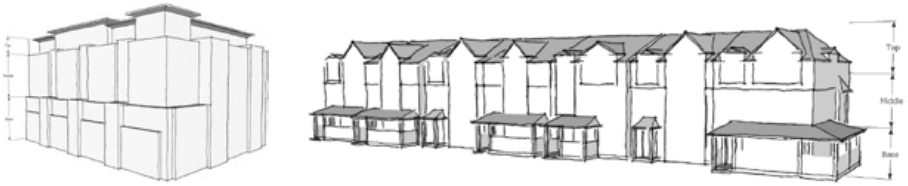


Figure 4l: Images illustrating the desired edge condition



Figure 4m: Existing edge conditions (Author, 2017)



Figure 4o: Campus Square hard edge



Figure 4p: UJ Sophiatown Student residence clear-vu fence and internal hard wall.

Edge condition | facade and interface

According to CoL (2010) street elements such as “corners, main entrances, unit entrance, balconies, porches, patios, appropriate signage, awnings and lighting are important in the design of facades and interfaces”. They should reinforce the public realm, while ensuring that it is aesthetically pleasing to enhance or improve the pedestrian experience, particularly properties abutting the BRT station.

Comfortability and free movement in the pedestrian environment around the station is hindered by a number of street elements which include light poles placed in the middle of narrow sidewalks, blank facades, trees, planter boxes, inactive edges and fencing that creates a tunnel effect and a hostile enclosure (sketch 3) as shown on the sketches.

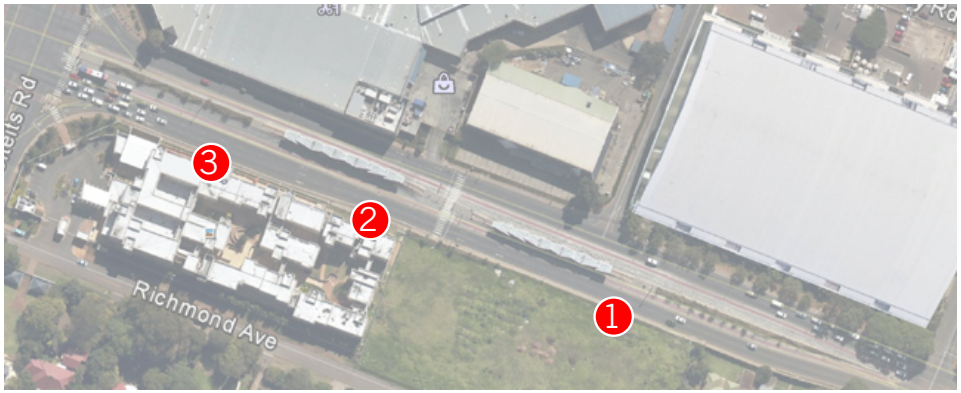


Figure 4r: Plan locating the sketches (Author, 2017).

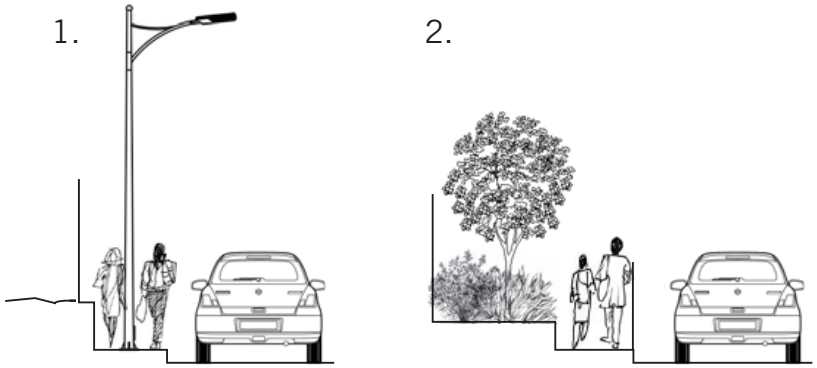


Figure 4q: Cross sections of the currently existing public realm interface (Author, 2017).



Figure 4s: Edge condition sketches (Author, 2017).

Edge condition

Palisade fencing and trees with canopies impede physical and visual interaction between private and public spaces within the site.



Figure 4t: Plan locating the sketches (Author, 2017).

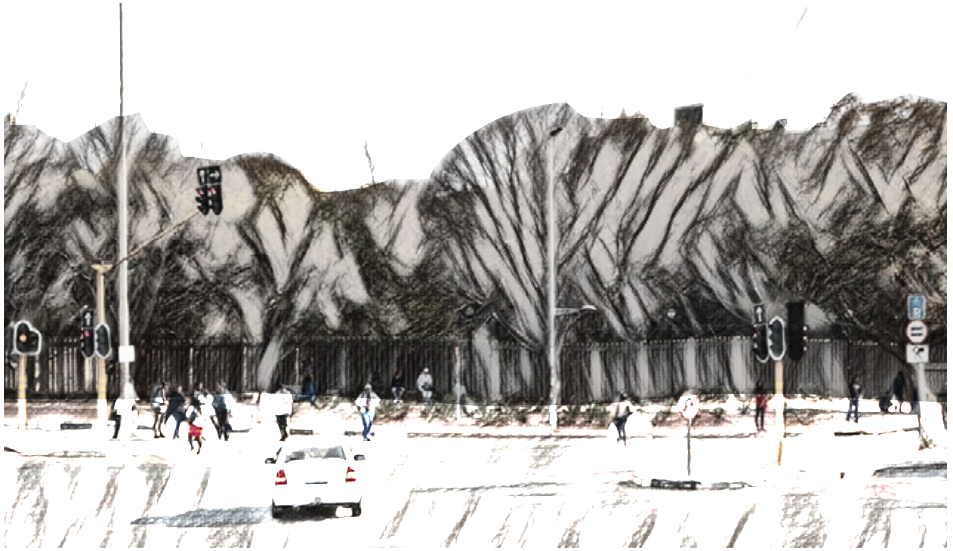


Figure 4u: UJ Kingsway concrete pallisade fence with dense deciduous tree (Author, 2017).

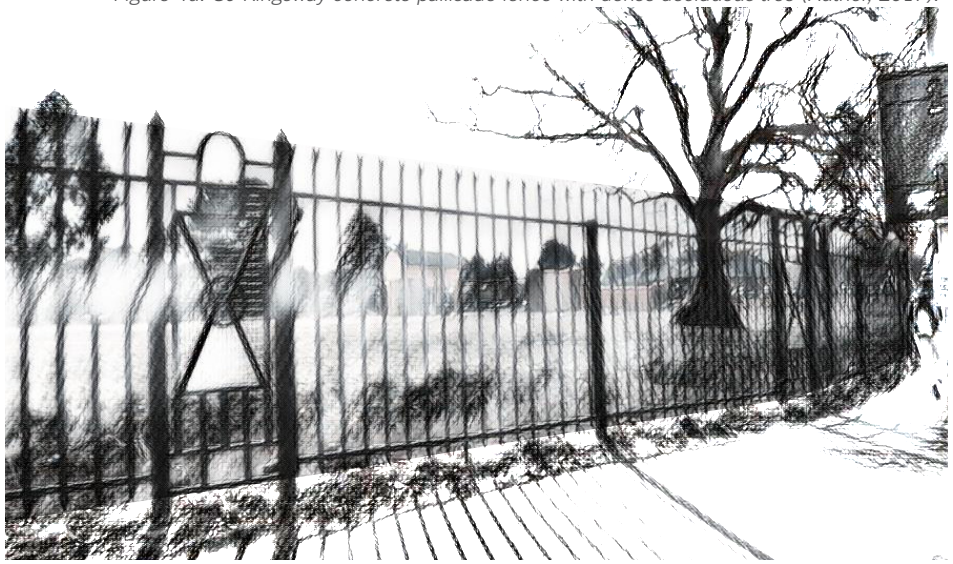
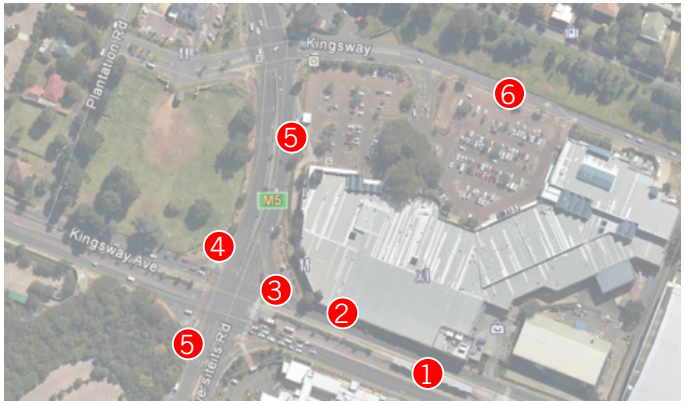


Figure 4v: Vacant land pallisade fence (Author, 2017)

Public transit formal and informal stops

Reflecting the attributes of Bus Rapid Transit-Oriented Development, the site consists of the main station (UJ Sophiatown Res station), as well as key adjacent anchors or critical mass such as the Campus Square Mall, UJ Sophiatown student residence, University of Johannesburg - Kingsway Campus and UJ open space, ABSA call centre. As shown in the images the site is well traversed by a wide variety of public transport systems which include





1. UJ Sophiatown Res BRT station





2. Informal Metro bus stop



3. Informal taxi stop



4. Informal taxi stop



5. Informal taxi stop



6. Tuk-Tuks wait for passenger behind the mall

Figure 4w: Existing formal and informal public transport stops (Author, 2017)

Pedestrian environment

More than anything, what can be observed on site is the pedestrians blatant desire to walk the shortest distance or share the street with vehicles, over and above it being an uncomfortable experience. As reflected in these photos pedestrians do not cross on designated crossing zones, they cross in the middle of the road from the UJ side to the mall and vice versa.

According to Gehl (2008) understanding human (client) body, movements, senses, interaction and behaviour are prerequisites for planning.

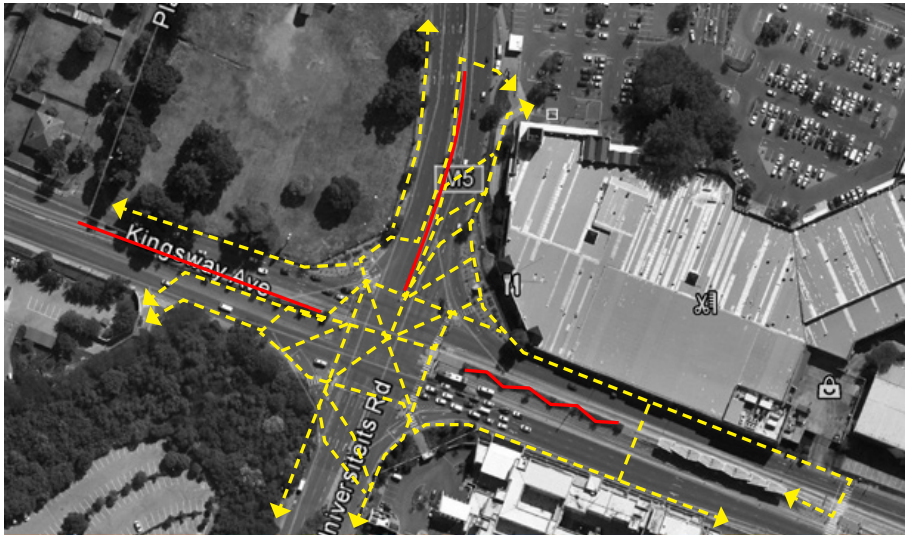


Figure 4x: Pedestrian movement patterns on site (Author, 2017).



Students jaywalking on the road due to the narrow width of the side walk on Universiteits Road



Figure 4y: Students crossing the Universiteits Road on an undesignated area (Author, 2017)

Pedestrian environment

As shown on the top photograph the island/median is very narrow and is occupied by a clear-vu fence which separated the two sides of the road. These fences, to a large extent, limit the mobility of pedestrians, particularly when crossing from one side of the road to the other.

The second image also shows the student's unwavering desire to share the roadspace with cars as the walk on a narrow path between cars and the median. The median also has hard rocks which makes it impossible for pedestrians to walk on the median.

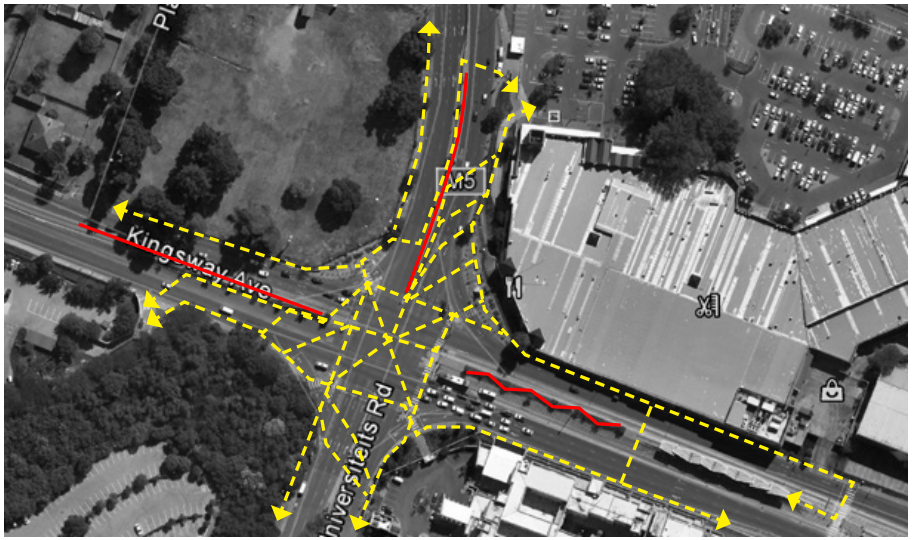


Figure 4z: Pedestrian movement patterns on site (Author, 2017).



Students walking on the road due to the narrow width of the island on Universiteits Road



Figure 4aa: Students crossing the Universiteits Road on an undesignated area (Author, 2017).

BRT Station

- The UJ Sophiatown station on Kingsway is flanked by a student residence to the south and a retail centre/mall to the north, and a university to the west. This is a good land use mixtures (student accommodation, mall & university)
- Low-quality pedestrian environment
- Lack of coordination between transit and the built environment.
- The mall has a high blank wall facing the station and the student residence has small windows, rendering the edge visually impermeable, which creates a tunnel effect along the road. According to ITDP (2017: 12) “streets and edge conditions should prioritize the liveability, safety, and mobility of pedestrians and cyclists”.
- The transit system is not supportive to or integrated with the surrounding landuses. Before TOD mixed-land use development can be achieved the existing stations should connect and work better with the existing uses.
- The sidewalk between the road and UJ Sophiatown has a raised surface and is fenced on both sides, creating an uncomfortable environment for pedestrians.
- Landscaping elements and urban design treatments, which are not strong along Empire Road, contribute to making successful bus stations and station areas.

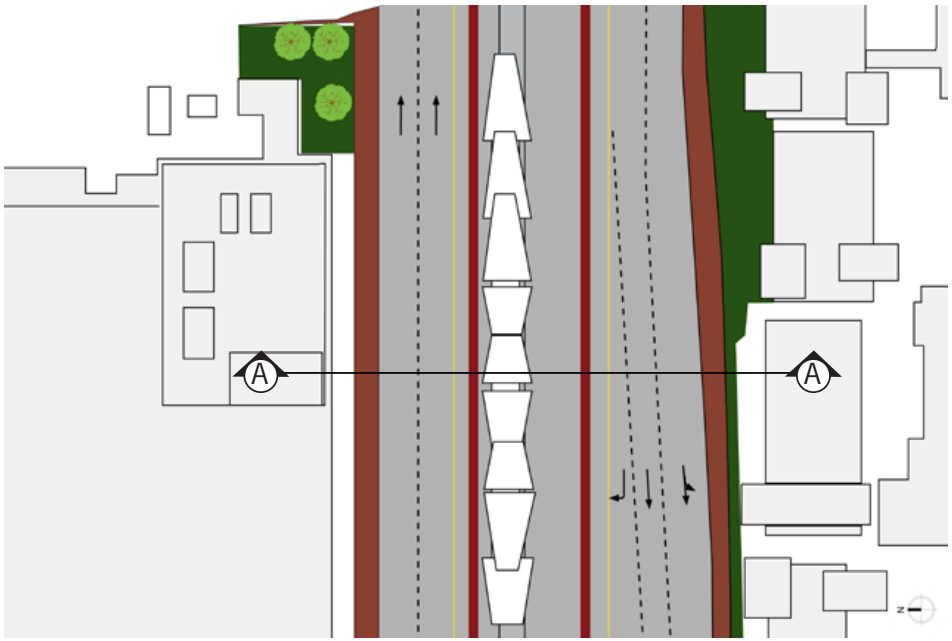


Figure 4bb: Sophiatown Res Station planview (Author, 2017)

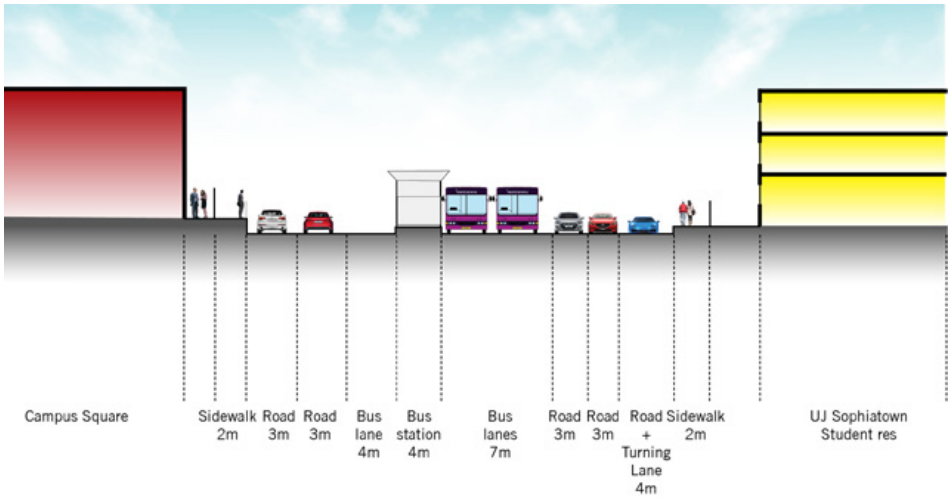


Figure 4cc: Sophiatown Res Station cross section A-A: Showing the relationship between the BRT station and the buildings on either side (Author, 2017)

BRT Station Areas

- There are a number of recessed corners which allow for the making of good public space. As alluded to by (Horn, 2015) although it is often suggested that the design of the stations should be uniform to create an over-arching image, it is also important “to try to reflect unique aspects of the various neighbourhoods or adjacent uses along the way” (Horn, 2015).
- Pedestrians’ movement and use patterns are key indicators of how public space should be designed or used. As shown on the image pedestrians give a clue of how the road or the entire intersection could be reconfigured or re-designed to accommodate both motorised and non-motorised transit systems.
- The lanes are separated by a clear view fence, on the median, which prevents pedestrians from crossing at different parts of the road, other than the cross section.
- The UJ entrance is the most used, particularly by pedestrians but has no deliberate link to the BRT station of mall, apart from the obvious, sometimes not effective, zebra crossing.
- As shown on the planview the intersection is well engineered but is still missing an urban design element to transform it from a space to a place.
- Like most parts of the corridor the road is abutted by properties with huge plots of land, adjacent to the road, dedicated to parking space. This increases the distance between the buildings and the road thereby limiting the possibility of having well-defined and articulated streetscapes and public realms.

Trees make for good urban environment and have sustainability benefits but have limited the visual permeability between the road or sidewalk and the university.



Figure 4dd: UJ Kingsway Campus intersection planview (Author, 2017)

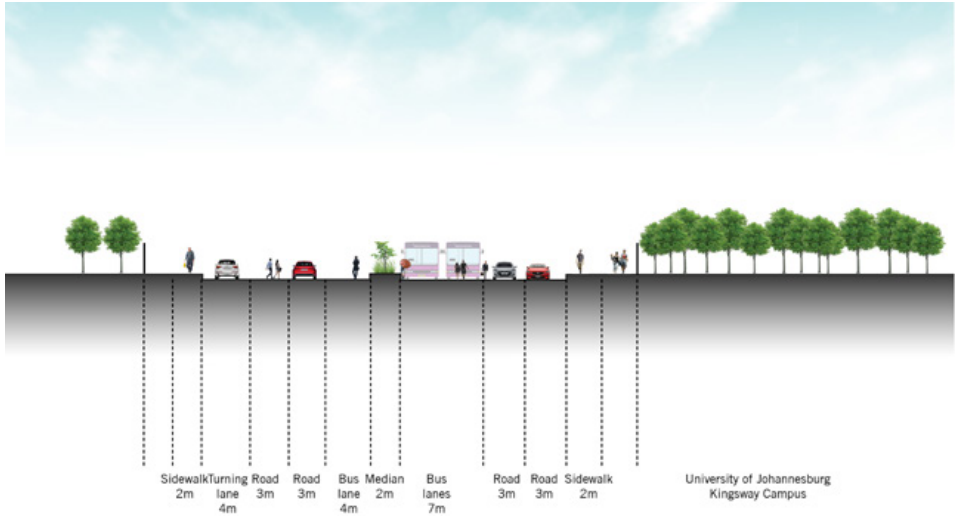


Figure 4ee: UJ Kingsway Campus Station cross section showing the relationship between the sidewalk, road and adjacent properties (Author, 2017)

Pedestrian environment

The station is somewhat disintegrated from its surroundings and seems underutilised, yet it is located in one of the busiest intersections on Empire Road. As shown on the images, this side of the intersection has the lowest level of activity.

The side of the road where the station is located is less accommodating to pedestrians, as shown in Figure (a)the robots (traffic lights) are not operating at most times, as a result the safety of pedestrians solely depends on the zebra crossing.

The design of the crossing between the station and the sidewalk gives way to the motorists (Figure b).

The station area is mostly used by people who are crossing over from one side to the other. As the pattern can be observed in the pictures pedestrians do not use the zebra crossing (Figure c).

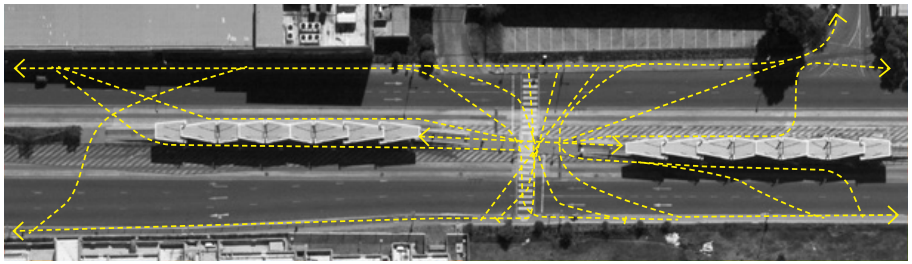
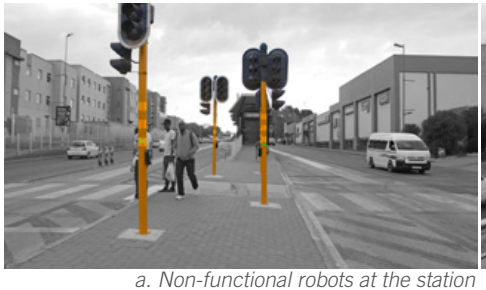


Figure: 4ff: Pedestrian movement around BRT stations (Author, 2017).



a. Non-functional robots at the station



Frame 1: A pattern of pedestrians crossing the station



b. Non-functional robots at the station



Frame 2: A pattern of pedestrians crossing the station



Frame 3: A pattern of pedestrians crossing the station

Figure: 4gg: Pedestrian movement around BRT stations (Author, 2017).

Pedestrian Convenience

The pedestrian entrance to the mall is far from the station, as a result people have to uncomfortably walk 360 metres to get to the mall whereas the mall is located directly across the street from the station. As cities have evolve they tend to prioritised the efficiency and speed of the movement of cars and goods, forgetting to **KEEP THINGS CONVENIENT FOR PEDESTRIANS**. As shown on the plan view of the site it would only take less than 3 minutes to get to the mall if the mall had an entrance facing the station.

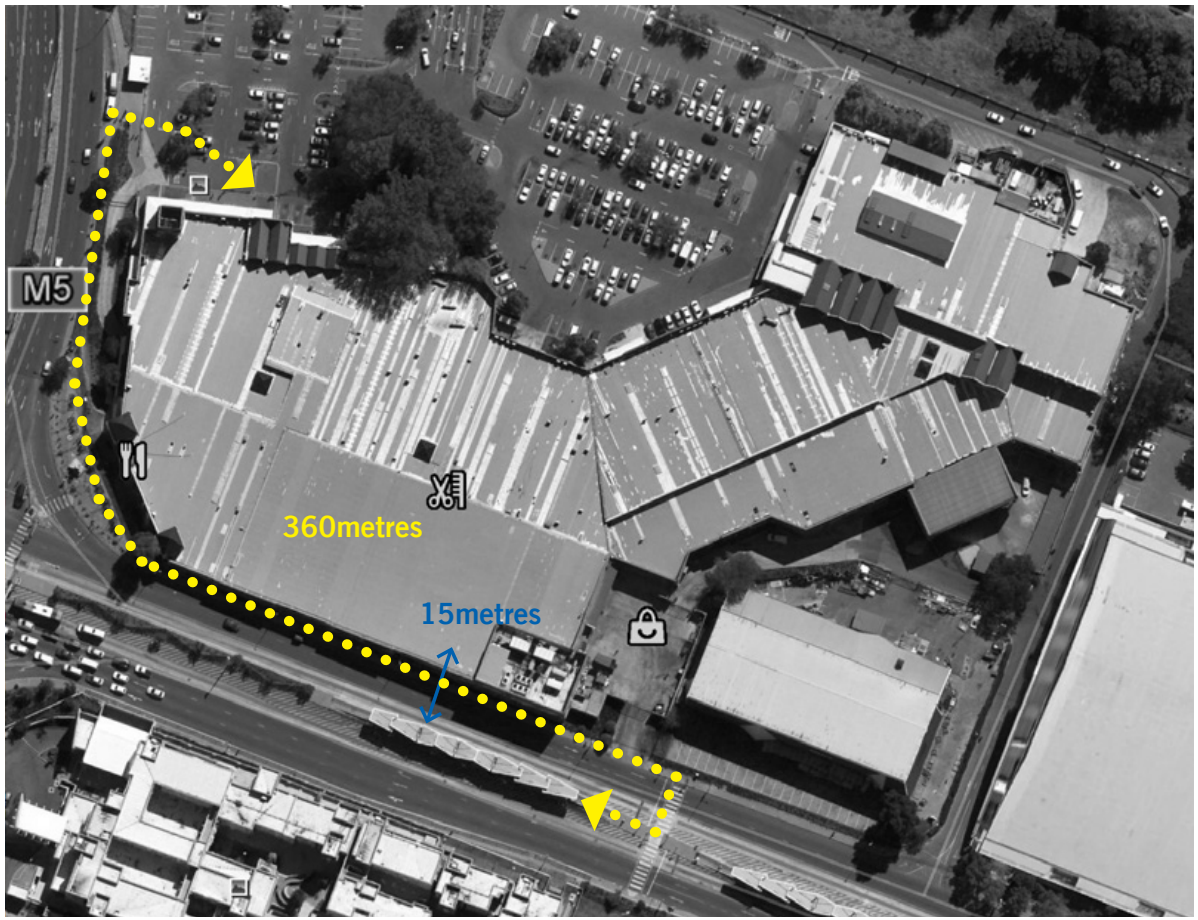


Figure: 4hh: Pedestrian convenience (Author, 2017).

Personal Connections

According to Robinson (2014) people desire personal connections in public spaces. People prefer going to places where they will meet or see or be seen by other people, thus making personal connections. Jacobs would call this the street ballet, as people watch business types, students etc move in some type of an urban dance (Robinson, 2014).

As shown on the second cross section, there is limited physical and visual interaction between the sidewalk, station and student residence.

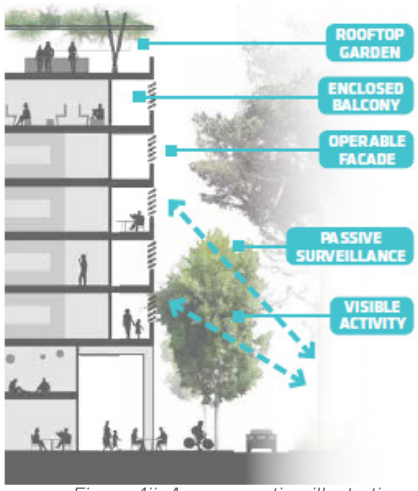


Figure 4ii: A cross section illustrating a responsive facade design

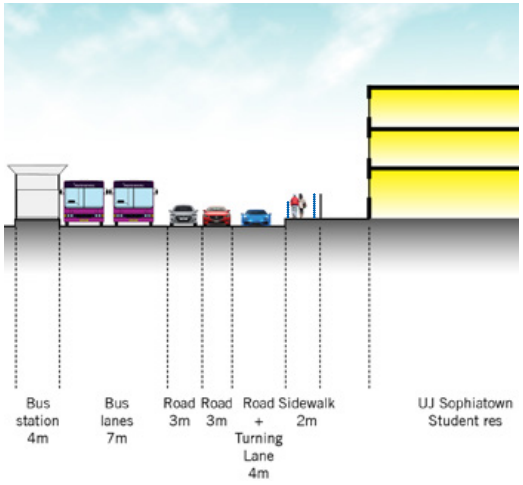


Figure 4jj: A cross section illustrating the currently existing condition between the station andUJ Sophiatown student residence



Landscape elements & Placemaking

Planter boxes enhance the sense of place and are also used for seating mostly by shoppers as a point of rest, also used as a space for social interaction. These elements can be better positioned to fit the framework. The current design seems very uncomfortable to sit on, as shown on the photograph (top right).

According to NU (2016) public artwork "enhances the distinct **SENSE OF PLACE AND IDENTITY** of the precinct, and must be of outstanding quality and reflective of the precinct's objectives and themes"



Figure 4kk: Planter boxes also used for seating (Author, 2017).



Figure 4ll: Planter boxes and a place-making elements (public art) symbolising knowledge or education (Author, 2017).

Informal economic activity

The site has informal economic activity at the pedestrian entrance of the mall and outside the university. As shown on the photographs the sidewalk is shared by street traders and pedestrians. In some instances, particularly during peak hours pedestrians are forced onto the road due to due insufficient walking space on the sidewalk.

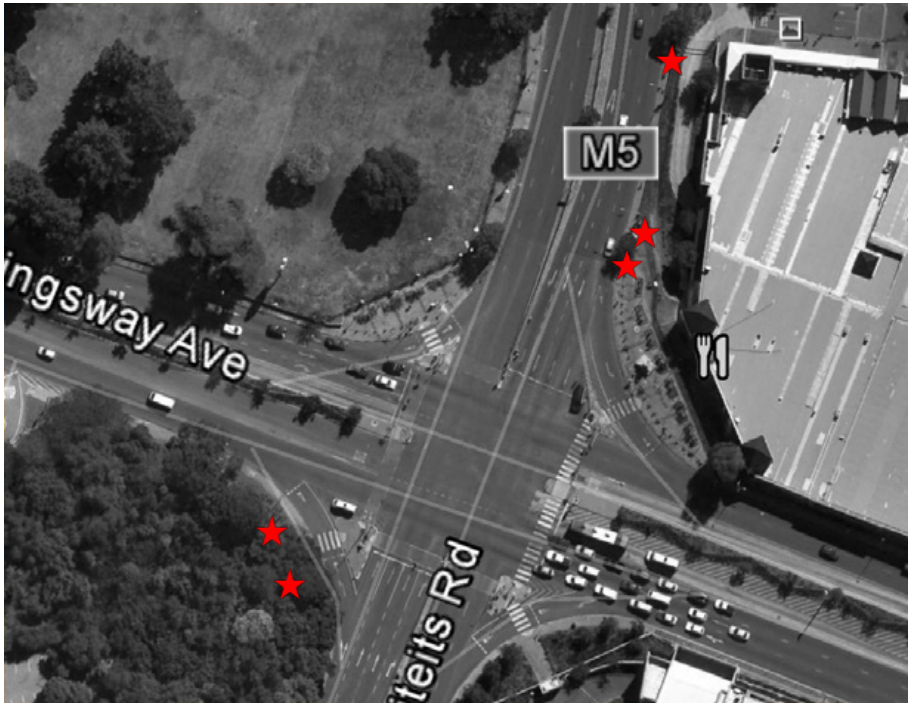


Figure 4mm: Street trading spots (Author, 2017)



Second hand clothes informal street trader, with clothes hanging on the palisade fence.



Street trader selling accessories on the sidewalk, sharing the space with pedestrians.

SWOT: SUMMARY

STRENGTH

Flanked by key supporting land-uses (horizontal) i.e. the University of Johannesburg, Campus Square, university residence, Rea Vaya bus stop.
Availability of a variety of public transport systems (mini-bus taxis, BRT bus, tuk-tuks)
Well traversed by pedestrians (Students, workers etc.)
Precinct public reflective of the precinct's themes and objectives
Vibrant public life

WEAKNESS

Poorly defined urban edge condition
Limited public space
High brick walls and palisade fencing limiting physical and visual interaction between the private and public realm
Poorly functioning/configured public space elements
Neglect of public space
Segregation of user groups (people and cars)
Key regional spine which might not accommodate non-motorised transit system, by virtue of engineering standards and road rules

OPPORTUNITY

Well-connected at regional and metropolitan scale (north + south)
Dissected by a variety of public transport systems
Availability of unused/undeveloped open space

THREAT

Dissected by high-speed roads (dangerous for pedestrians)
Inactive building frontages (no active ground floor, poor natural surveillance, prone to criminal activity)

Conclusion

As illustrated in this chapter the observation of the everyday is a prerequisite to understanding the context within which the project is sited. This is also solidified by Geddes' 'Survey before Plan' dictum which became a maxim guiding the practice of urban design and planning.

Many urban design issues were apparent in the observation and analysis of the site. These include the observation that the site is mainly walled by blank facades at the ground level which create a hostile environment for pedestrians discouraging them from using the adjacent sidewalk. This condition, as found in the analysis, eliminates the opportunity for passive surveillance and has a huge impact on the level of safety in the public realm. The intersecting roads - Kingsway Avenue and University Road - are designed or engineered as traffic conduits that do not harmoniously allow allow modes of transport such as cycling and walking.

There are a number of informal public transport systems that provide an opportunity for integration. Lastly, the station is not well-integrated with its surroundings thereby creating a movement and access challenge for pedestrians moving between the station and abutting land-uses.

CHAPTER

5

CONCEPT DEVELOPMENT + FRAMEWORK

"... synchronizing the everyday urban life with public transportation systems"

Stojanovski, 2013:3

Introduction

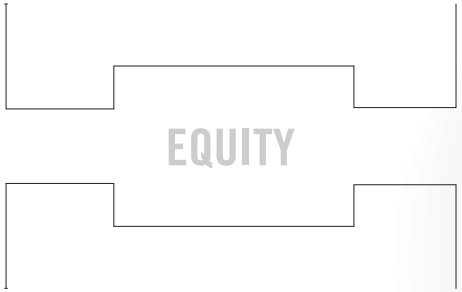
The previous chapter laid a solid foundation through the analysis of the existing conditions of the site. Chapter 5 is aimed at synchronizing the everyday of the study area with the concept of BRT-OD. The everyday is a starting point as explicated in chapter 2 because it reflects the true "attributes of the individuals—their age, gender, cultural affiliations, past experiences, needs and expectations, emotional condition and so on—as well as the characteristics of the setting—its location, access, configuration, condition, the amenities it provides, sensory qualities, activities and people in it and so on" (Mehta, 2013: 106).

Even though the focus is on the existing public transport systems and proposed land-uses, emphasis will be placed on the quality of the public realm. The resulting design of the public realm will aim to respond to the needs of current and future residents, workers, students and visitors. The design will allow the public realm to change and adapt overtime to become multi-layered and richer, accommodate new diverse characters. The chapter will show, in different forms of illustration, how it aims to make the streetscape more comfortable and safe for pedestrians and ultimately encourage social interaction and foster community spirit and solidarity.

URBAN DESIGN VISION

BRT-OD

The vision aims to reconfigure existing infrastructure - blocks, buildings, sidewalks and roads - on the Kingsway and University Road intersection into a more pedestrians-friendly/walkable, safe, sustainable and compact interchange environment. The vision is an urban design response to the currently existing conditions and daily formal and informal activities of the intersection which are summed-up as *the everyday*, give UJ a prominent face while maximizing the potential of the intersection.



Balanced movement between cars and pedestrians in the public realm



BUS RAPID TRANSIT-ORIENTED DEVELOPMENT CONCEPT

Figure 5a: An info-graphic illustrating the vision (Author, 2017).

KEY URBAN DESIGN STRATEGIES

1. CREATING A FUNCTIONAL GRID (smaller block structure)

To create a walkable, human-scaled and pedestrian-friendly environment. “Longer block faces allow higher vehicle speeds, placing pedestrians at higher risk” Welle, et al, 2017: 1. Long blocks only allow pedestrians to cross at intersections. More junctions mean more or frequent stops and slower speed for cars.

An urban structure of finer grain blocks enables greater permeability and access. An urban structure based on a pedestrian scale assists in walkability and reduces the dependence on private motorised movement.

BLOCK PERMEABILITY



Figure 5b: Human scale blocks and a functional grid (Author, 2017).

2. CONFIGURING A PUBLIC SPACE-BASED BUILDING FOOTPRINT (buildings designed to support open spaces and places)

The built-form should allow for maximum access and permeability through mid-block connections, while hugging the public spaces. The building setbacks are consistently aligned and recessed entranceways form a circular public space within the intersection. Each entrance is designed to create a memorable public space.

PUBLIC SPACE FRAMING | WALLING

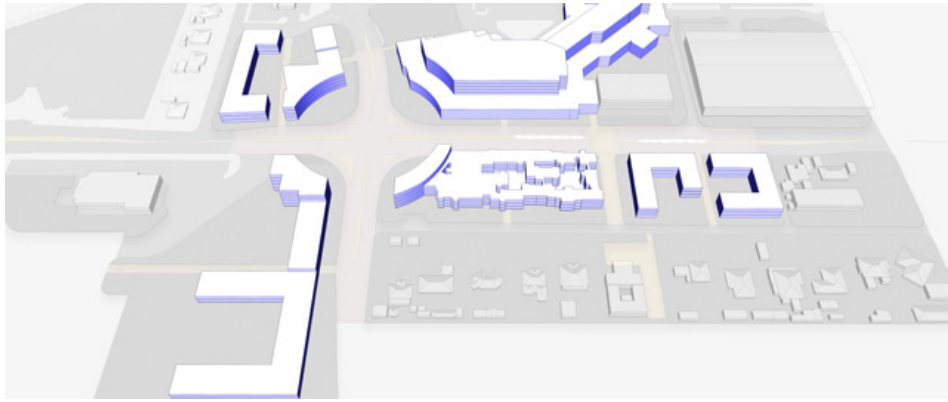


Figure 5c: Proposed building footprint and densification (Author, 2017).

3. CREATING A STREET EDGE DEFINITION

The edge condition of the built form should contribute to the enhancement of the public space and providing surveillance, from the ground floor to the top floors (balconies).



Figure 5d: Desired edge condition (Author, 2017).



Figure 5e: Desired edge condition and application on site (Author, 2017).

4. ACTIVATING THE PUBLIC REALM

Provide quality space for pedestrians and improve streets as places. This can be achieved through promoting equity (a balanced relationship between cars and pedestrians), the widening of some of the sidewalks and pedestrian refuges, furnishing the sidewalk with robust street furniture closer to the road so that they do not hinder pedestrian movement. These include street lighting, bollards, benches, trees, bins, signage etc. The public space can also be activated through allocating space for existing street traders where they can be visible and closer to pedestrian traffic in a way that does not hinder pedestrian movement.



Figure 5f: Pedestrian scale streetscape and quality public space (Author, 2017).

5. MAKING LINKAGES AND CONNECTIONS

"Traffic safety has much to do with the interaction among people, the street environment, and vehicles, and creating quality of life in cities" Welle, et al 2017:1.

The aim is to improve the condition of an already existing interaction between different modes of transport.

- Raised and treated (cobbled) intersection as a traffic calming measure to allow for safer crossing and the sharing of road space by motorised and non-motorised transit. (same level as the surrounding pavement.
- Widened/extended refuge islands, almost forming chokers to decrease crossing distance for pedestrians.
- Widened and landscaped medians
- Setback traffic lights



Figure 5g: A network of quality public space (Author, 2017).

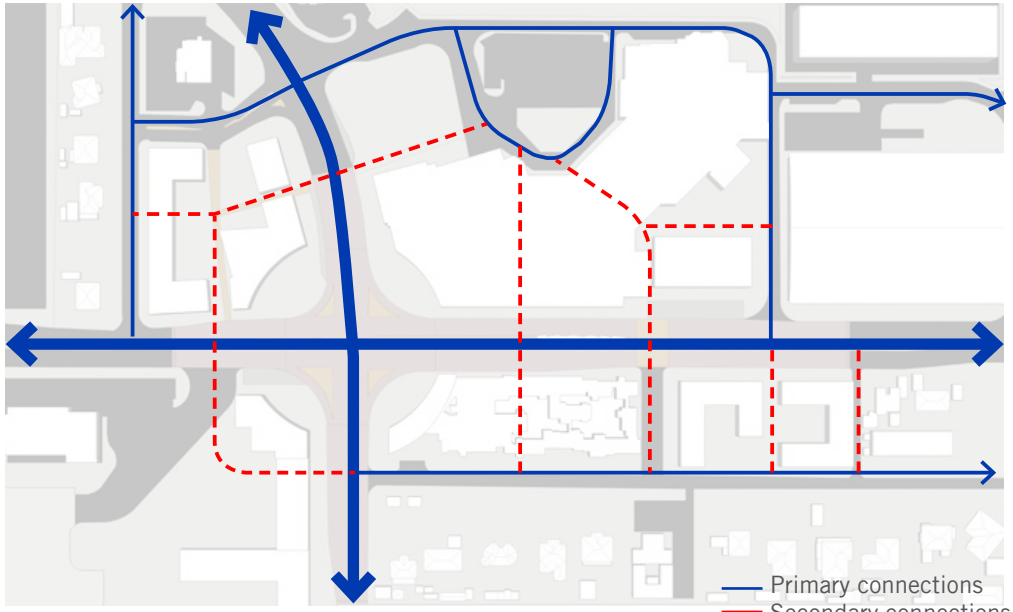


Figure 5h: Desired network system (Author, 2017).

6. MIXED-USED DEVELOPMENT AND DENSIFICATION

Mixed-use development occurs horizontally and vertically, promoting walkability and a sustainable use of resources. It offers a wide range of uses within a 5 walking minute walking distance.

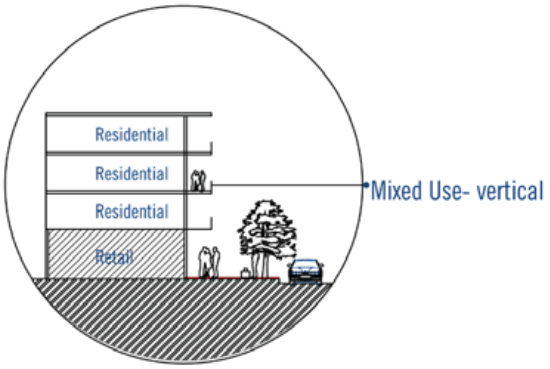


Figure 5i: Proposed mixed land-use (Iyer, 2017)

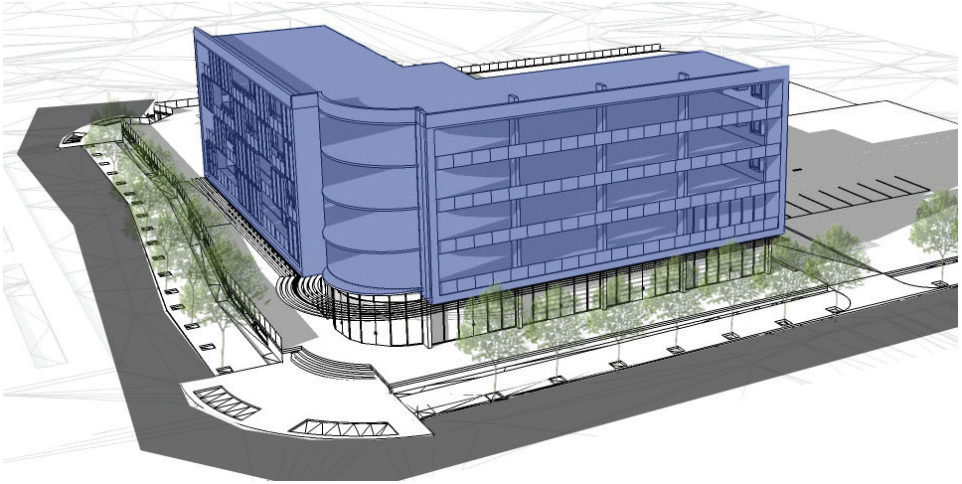


Figure 5j: Desired form of densification (Iyer, 2017)

7. ARCHITECTURAL VARIETY

According to Bentley et al (1985) is a critical element which comes after accessibility, its relevance is in offering a choice of experiences. In the same vein it is important to distinguish between variety of uses and architectural variety, The former has been dealt with in the previous strategy which entails a wide mix of uses that are functionally and economically feasible to have.

As stated by Bentley et al (1985) the quality must be perceived and utilised as a whole, this quality entails "a place with varied **USES**, varied **BUILDING TYPES**, of varied **FORMS**, which attracts varied **PEOPLE**, at varied times, for varied **REASONS** and **ACTIVITIES**"

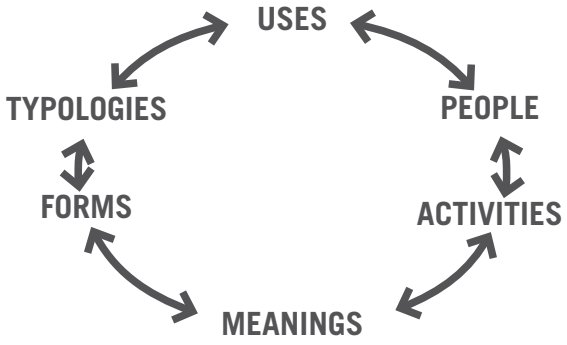


Figure 5k: Typology of variety (Author, 2017)

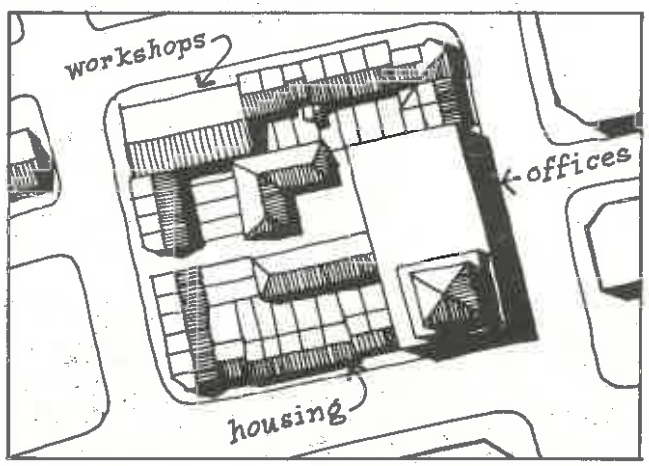


Figure 5l: Use variety (Bentley et al,1985)

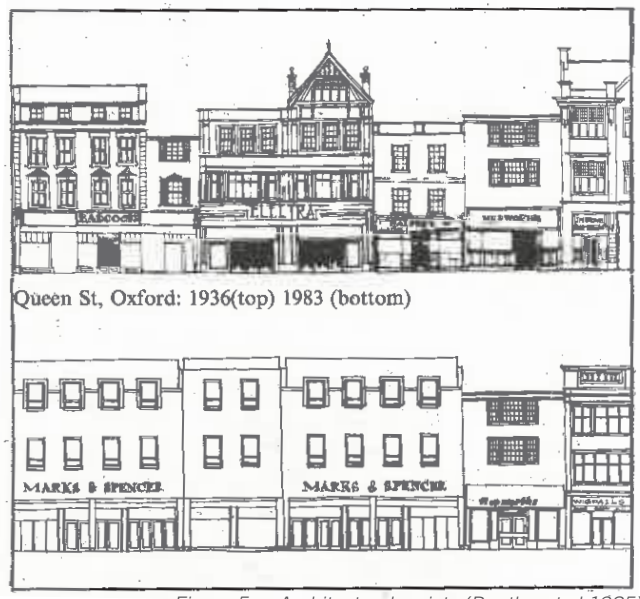


Figure 5m: Architectural variety (Bentley et al,1985)

OVERALL CONCEPT

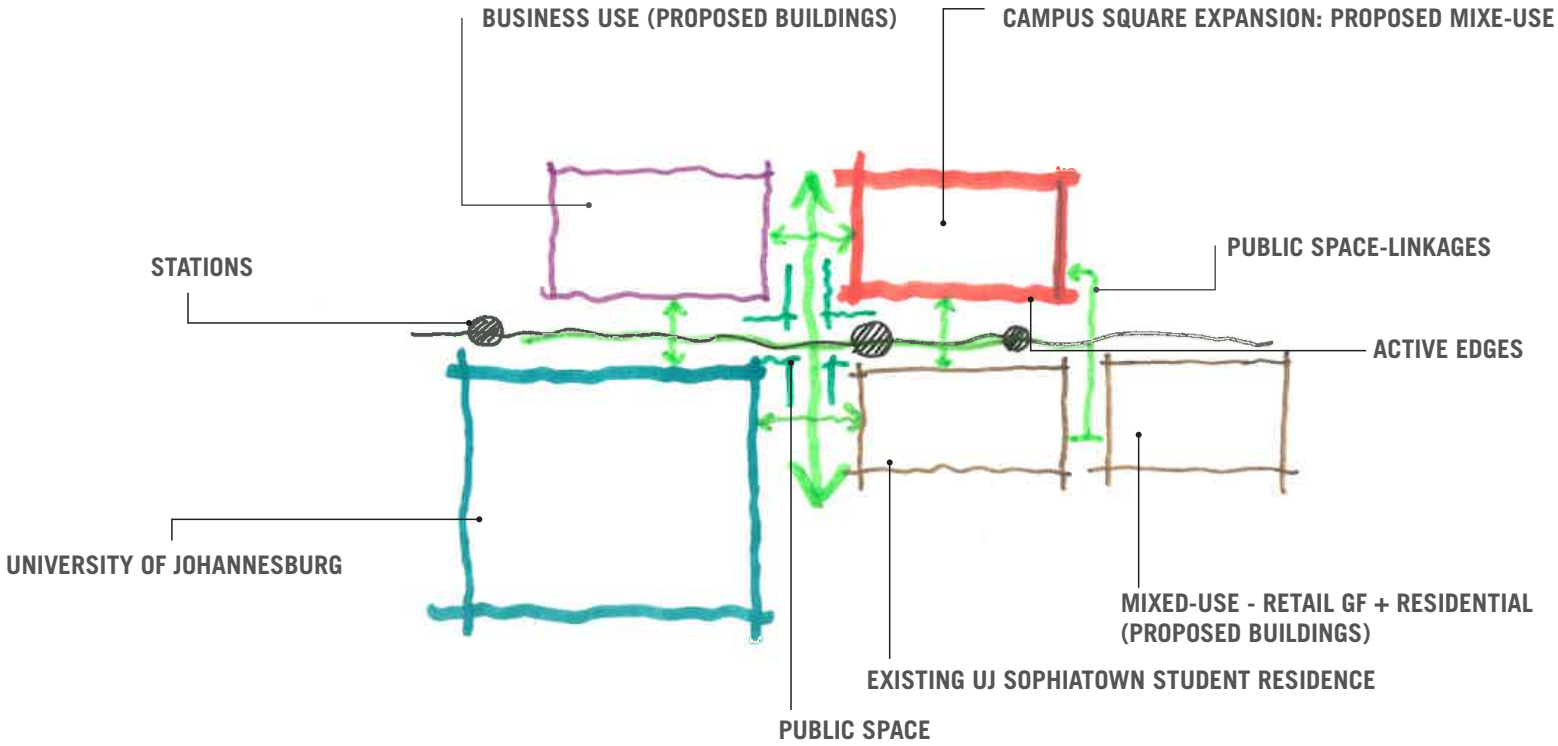


Figure 5n: Schematic diagram of the overall concept (Author, 2017)

URBAN DESIGN PRINCIPLES



ACCESSIBILITY/ PEDESTRIAN FRIENDLINESS

The UJ-Campus Square intersection offers access to a wide variety of both motorised and non-motorised travel alternatives. The design aims to raise and pedestrianize the intersection with a cobbled surface that will allow for the slowdown of traffic to allow easy access by pedestrians and other non-motorised transit systems. It also aims to remove physical barriers and carefully consider the interface between the street and sidewalk to allow fluidity and integration between the street and sidewalk.



ROBUSTNESS (AMENITIES)

The precinct will have robust amenities or public furniture to make it comfortable for people to use. Benches and other seating elements, which are comfortable to utilise on different weather conditions, will be placed on strategic locations. Lighting will also be used to light-up specific sections of the precinct particularly entrances and pathways that can also be used in the late hours.



COMPACT DEVELOPMENT

The design aims to create a sustainable active public space and intensify activity in one area supported by good public transit and non-motorised transit systems, with the use of Transit Oriented Development.



MIXED-USE DEVELOPMENT

A vertical and horizontal mix of high activity landuses such as retail along active pedestrian frontages on the ground floor, supported by passive recreation space and residential use on the top floors.



LIVEABILITY

Develop the transport terminal into a liveable square for community life which offers a wide range of landuses to promote a mixed-use development with the usually forgotten recreational public spaces. The site/study area itself is well located in close proximity to services and facilities that improve the quality of life by providing health care and education such as Pharmacies and the University.



VISUAL CONNECTION

Parking is not allowed on the street to maximise visual connection between pedestrians, cyclists and motorists. Pedestrians need to have a clear site of each other and such public space designs have the propensity of increasing safety in a public space. This will help create a visually satisfying precinct.

DESIGN CONSIDERATION HIERARCHY



PEDESTRIAN

The pedestrian is at the top of the hierarchy and at the centre of the design process. The pedestrianised design of the intersection is another attempt to reclaim the street for the pedestrian and other non-motorised transit systems such as wheelchair users.



NON-MOTORISED TRANSIT (TROLLEY PULLERS AND CYCLISTS)

Trolley pullers have become critical components of the nonmotorised transit network of the City of Johannesburg and urban recycling, therefore they come second in the hierarchy. The design also considers cycling, not only as a means of transportation but to also promote healthy lifestyles.



PUBLIC TRANSPORT (BUSES AND TAXIS)

Taxis are mostly probably the longest serving public transport system connecting Auckland Park to neighbouring suburbs and townships. They are critical in bringing people from the outskirts where buses cannot reach and other transport systems are expensive. The site is heavily traversed by a number of buses transporting students between institutions and places of residence as well as employees between home and work.



OTHER MOTOR TRAFFIC

Cars are at the bottom of the hierarchy, but their relevance and importance is minimised on the design to make alternative more desirable, safe and comfortable to access and utilise.

LAND-USE FRAMEWORK



Figure 5o: Proposed land-uses (Author, 2017)

- **Education and office**
- **Student residence**
- **Retail (Campus Square)**
- **Mixed-use (retail and residential)**
- **Mixed-use (business, residential and retail)**
- **Mixed-used (gallery and office)**
- **Parkade**

Diverse land-uses bring life and vibrancy to an area, as it brings together different people for different purposes at different times there by keeping the area active (Jacobs, 1993). The concept aims to promote walkability, sustainability and convenience by ensuring that complementary land-uses are within a 400 metre/5 minute walking distance. These land-uses include retail, office space and residential which may yield better profits for land-owners while benefiting the users.

BUILDING HEIGHT

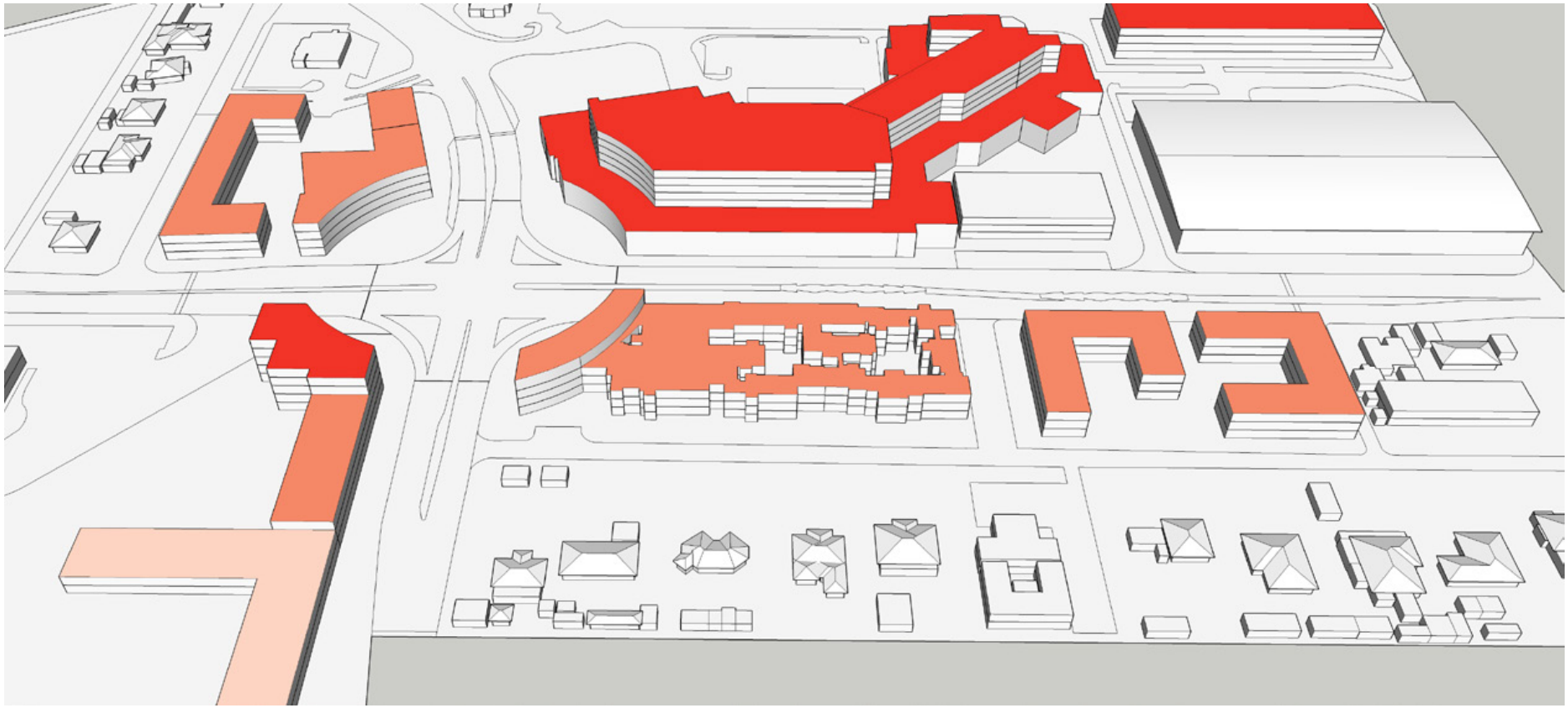


Figure 5p: Proposed building heights (Author, 2017)

1-2
3-4
5-6

The densification is aimed at creating a critical mass for the intersection to sustain the uses and existing public transit systems. The mix of uses also promotes compaction and convenience through ensuring that basic social and economic opportunities are within a walking distance.

VISION PLAN

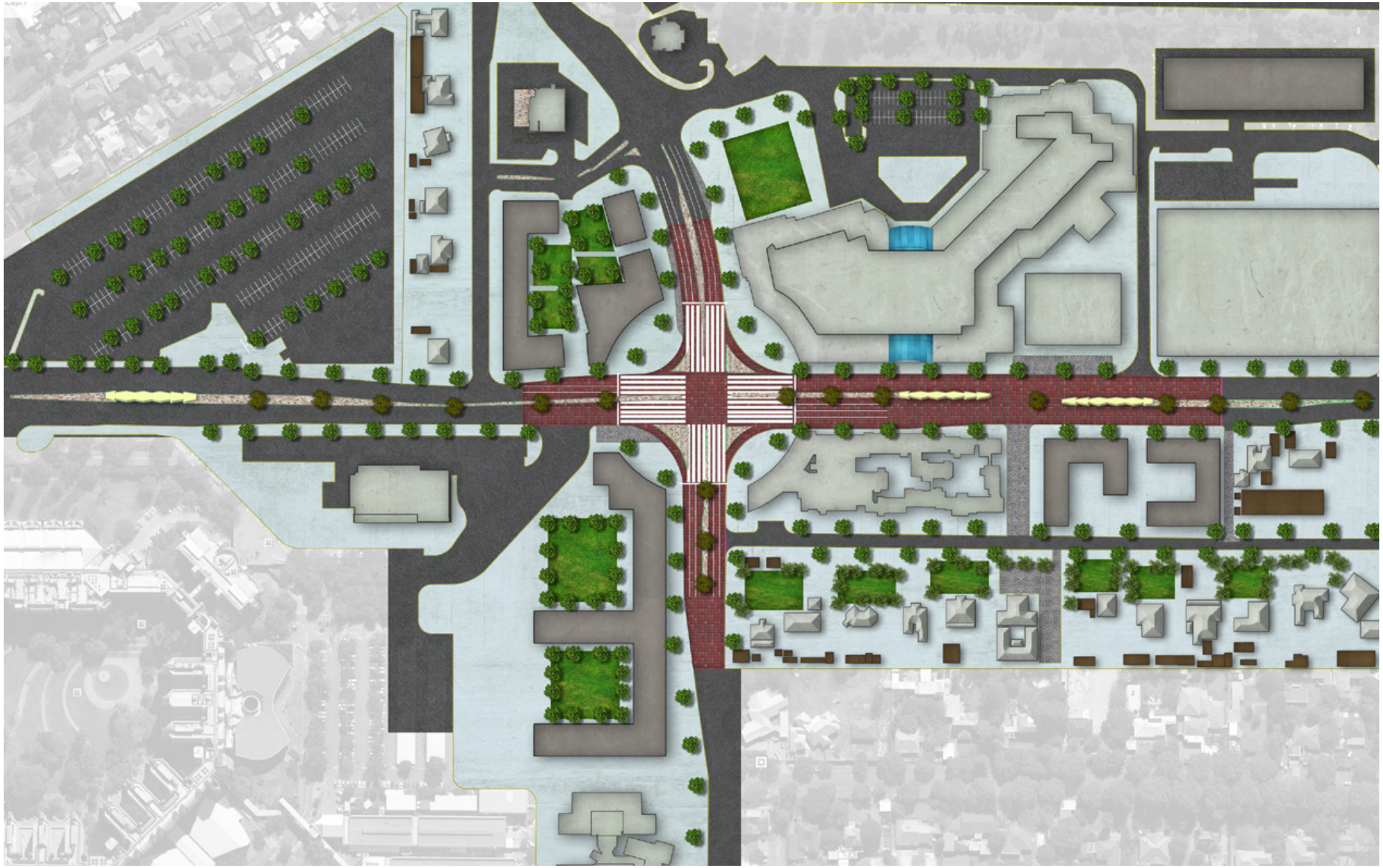


Figure 5q: Visualization of the vision plan (Author, 2017)

VISION PLAN FOCUS + ELEMENTS: ABACUS OF GOOD PUBLIC REALM ELEMENTS

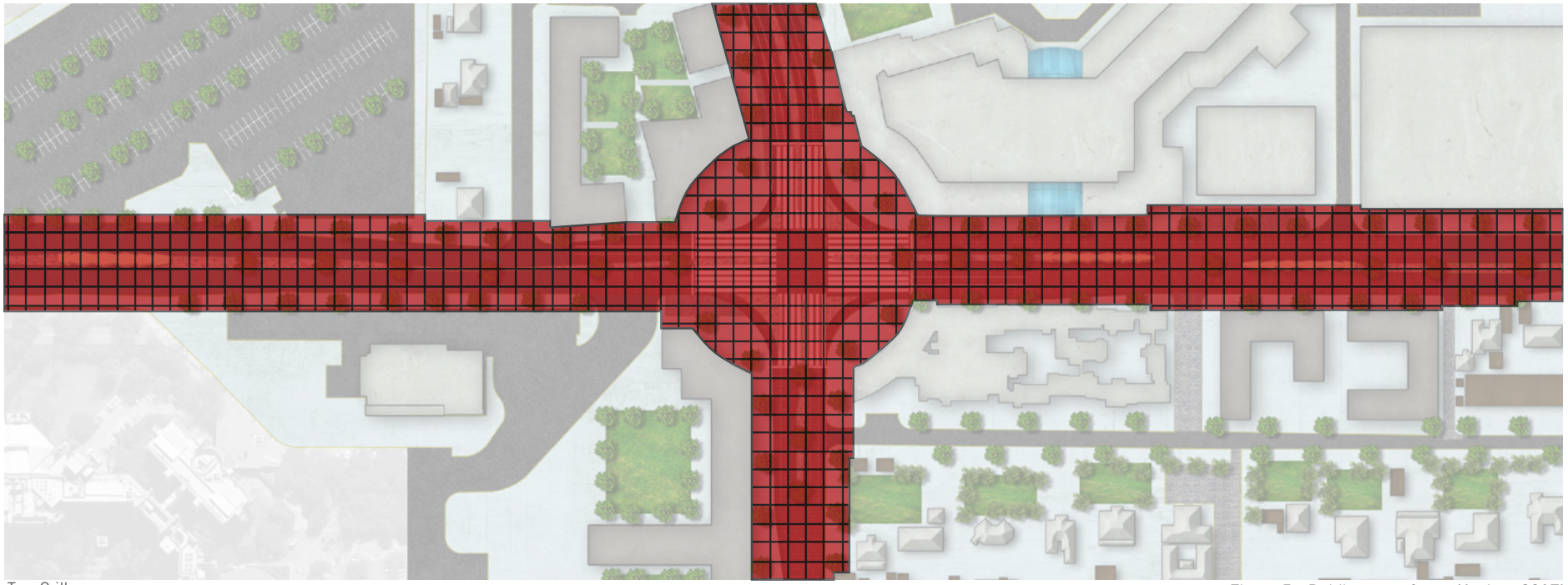


Figure 5r: Public space focus (Author, 2017)

Tree Grilles





Benches and Seating Facilities









Lighting





Bicycle Racks





Shrub tubs + Tree Boxes



Restroom



Bins



3D MODEL VIEWS

Raised intersection, clear medians and wider pedestrian refuges

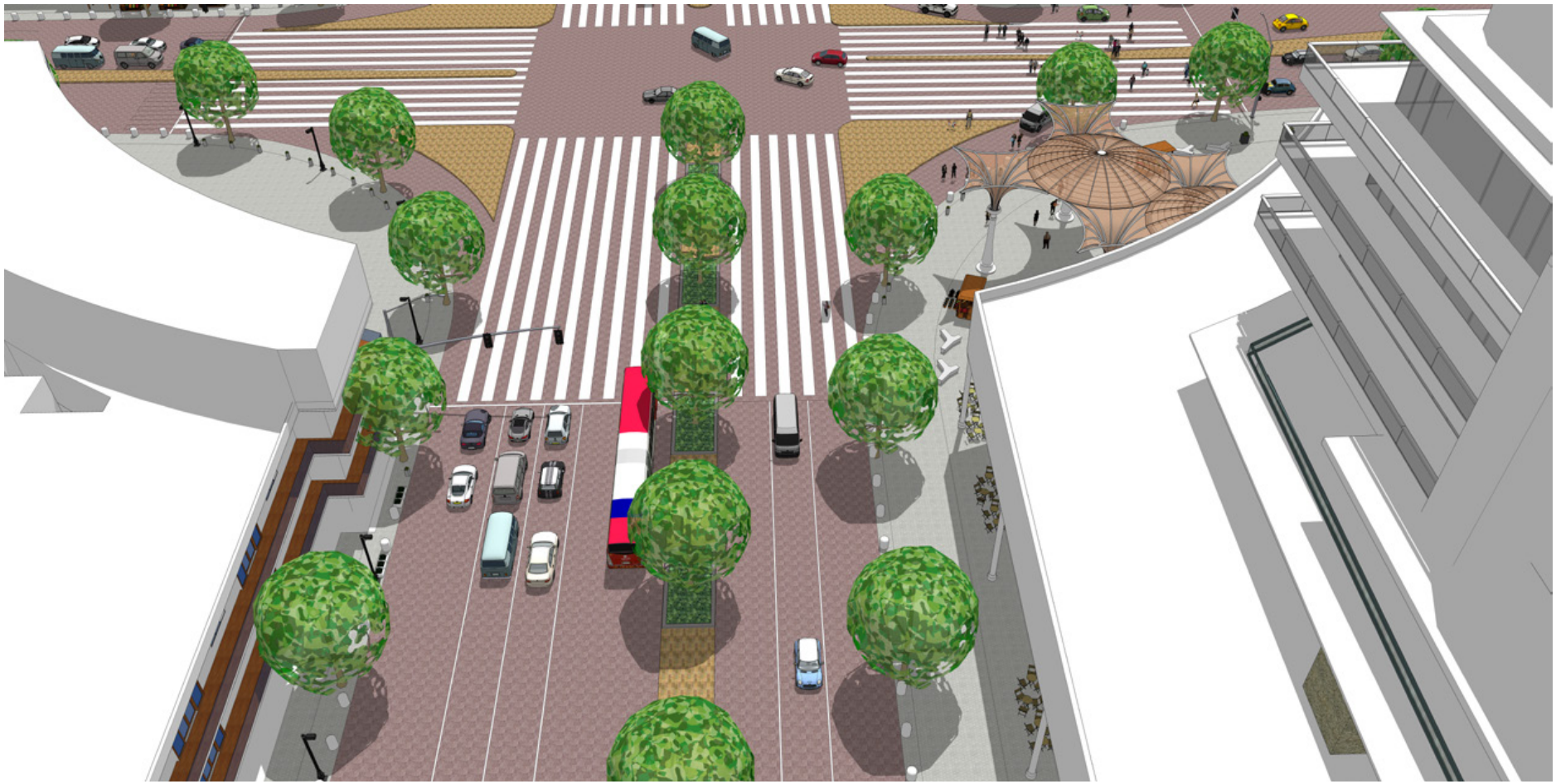


Figure 5s: View showing the desired public realm (Author, 2017)

The set back of traffic lights by 5 metres of more allows more or wider crossing space for pedestrians to crossover to the other side. The median is cleared of the fence barrier to allow pedestrians to pause and also cross freely without a barrier. This space can also be used for landscaping and WSUD.

3D MODEL VIEWS

Seamless and safer crosswalks, quality of the public realm and responsive edges



Figure 5t: View showing the desired pedestrian crosswalk (Author, 2017)

According to Jacobs (1993) one of the qualities of a great street include the sharing of public rights-of-way between cars and people on foot. Another important aspect that should taken into consideration is the access of handicapped people. These systems should be able to cater for people on wheelchairs. As stated by Jacobs (1993: 85) “the best streets have about them a quality of transparency at their edges, where the public realm of the street and the less public, often private realm of property and buildings meet”. They allow one to see what exists behind the edge that defines the street. Transparency is not only good for pedestrians but also benefits people inside the private realm as it gives them visual access to the public realm. The strategy also seeks to enforce a positive relationship between the street and building, ensuring active and lively building frontages between the private and public realm.

3D MODEL VIEWS

Public transport integration, informal stall, responsive edges and passive surveillance



Figure 5u: View showing the surroundings of the station (Author, 2017)

Informal taxi stops are formalised/upgraded and brought closer to the BRT station on the same street or precinct. The taxi facility is sheltered to protect pedestrians from harsh whether conditions (e.g. rain, sun etc.). The taxi stop is also supported by informal trade aimed at capitalising on the foot traffic that will be generated by proposed land-uses. “Street vendors have long been deemed the epitome of an active urban pedestrian sidewalk” (Clarion Associates, 2014: 26). The concept also seeks to provide spatial connections and encourage spatial continuity to achieve greater levels of integration between the proposed mixed-use buildings, the stations and other buildings across the road. The strategy also seeks to optimise visual connections along the edges and increase passive surveillance, by creating windows and balconies overlooking the public realm. Buildings located close to the street edge to define the street and encourage overlooking.

3D MODEL VIEWS

Setback traffic lights wider crossing space

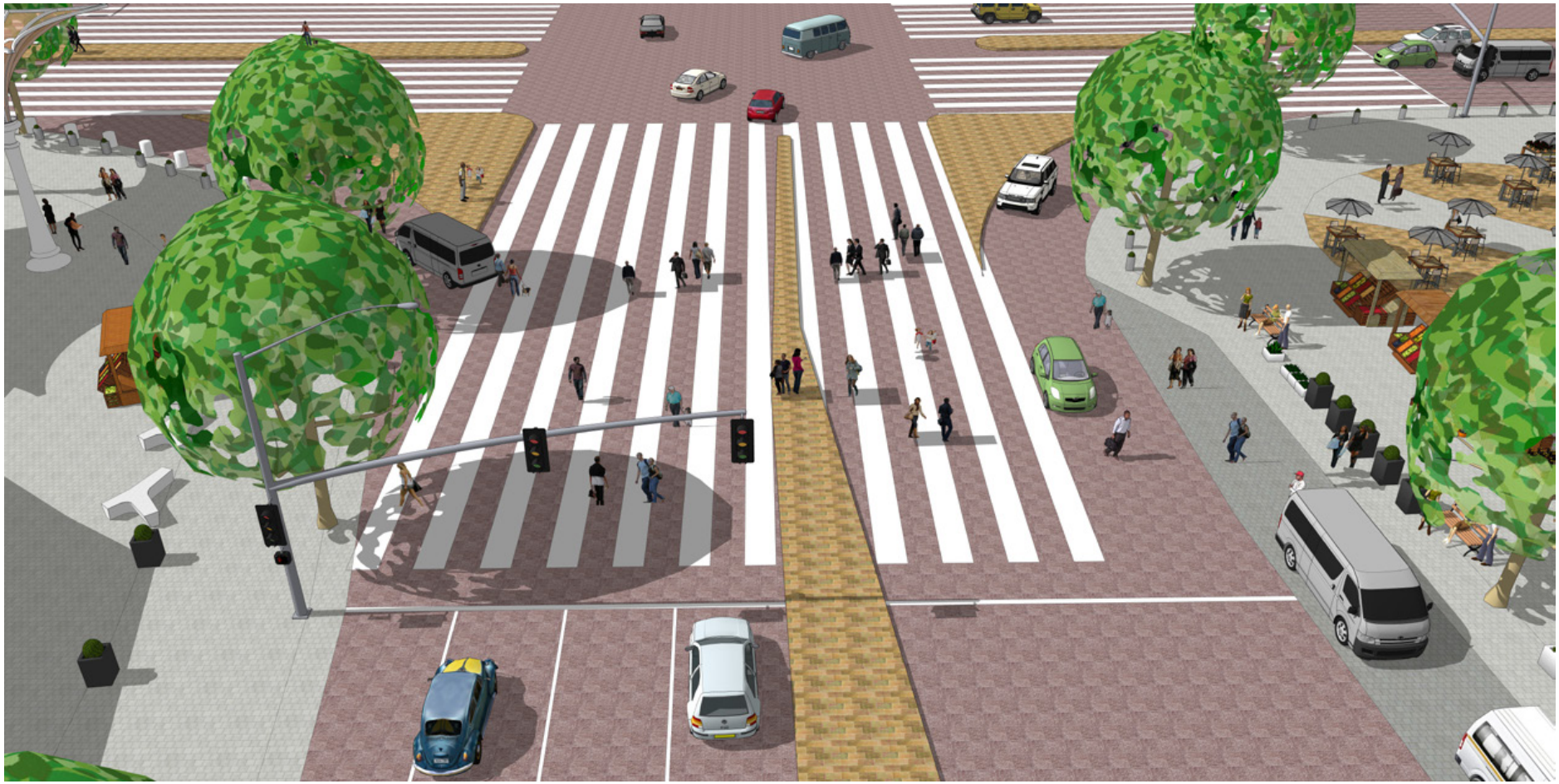


Figure 5v: View showing the quality of pedestrian crossings(Author, 2017)

Traffic lights are setback to allow more space for large groups of pedestrians to cross. Either sidewalk is well-furnished with supporting street infrastructure such as bins, benches, bollards, trees, lights and trading stalls to create a comfortable pace and improve the overall pedestrian experience. The median is cleared to allow pedestrians to cross comfortably at any point and create space for Water Sensitive Urban Design feature such as bioswales.

3D MODEL VIEWS

Restaurants and outdoor seating



Figure 5w: View of the public space (Author, 2017)

Building corners facing the intersection are setback or recessed to create an “outdoor room” and public spaces on each of the four blocks.

3D MODEL VIEWS

Memorable entranceways



A memorable entrance as an aesthetic architectural feature beautifying the square and providing easy access to the multi-use building.

3D MODEL VIEWS

UJ Public interface

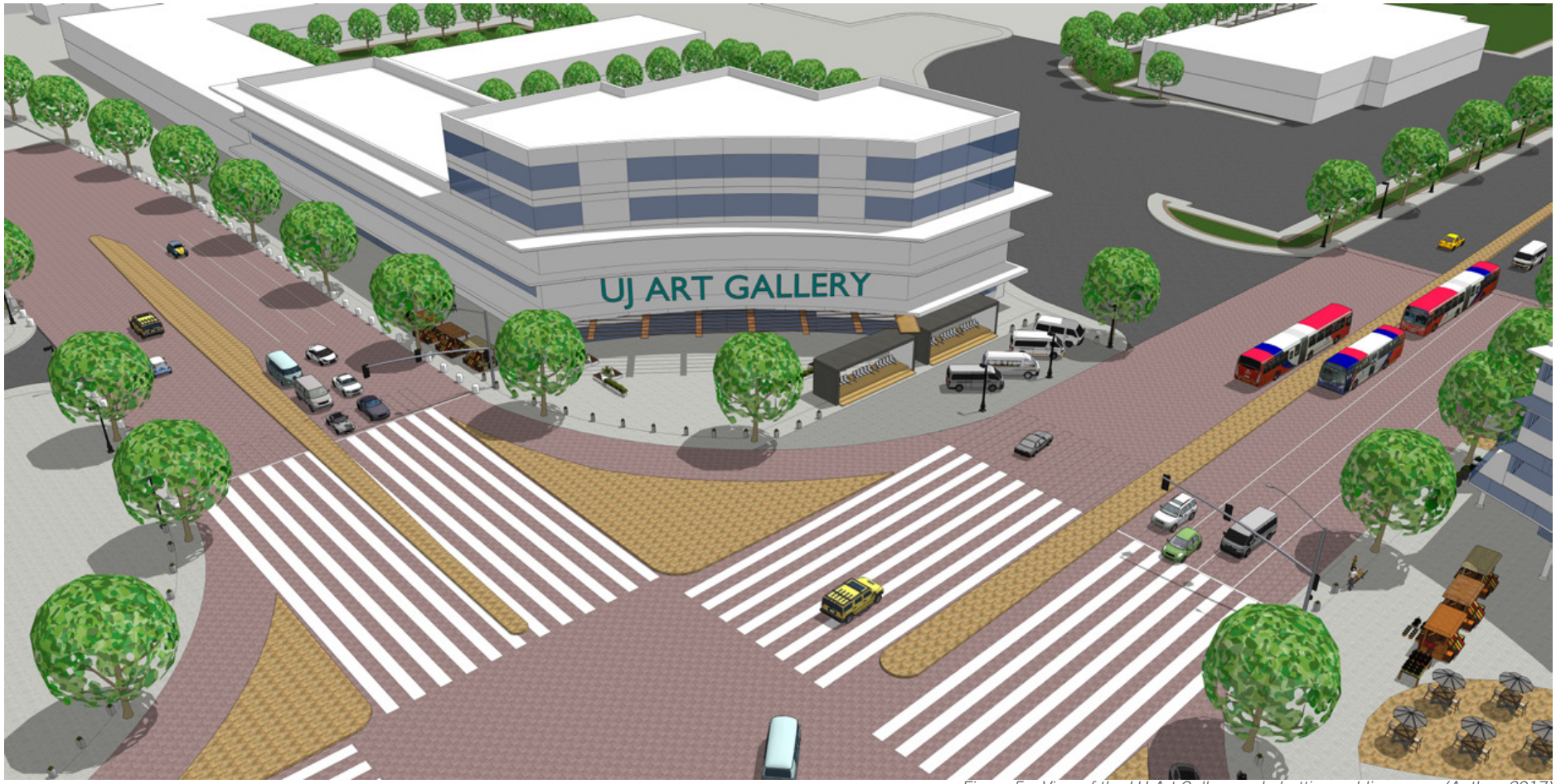


Figure 5x: View of the UJ Art Gallery and abutting public spaces (Author, 2017)

The existing gallery is could be moved or extended to the corner of university road and Kingsway to improve the interface, and utilise it as a private/public touchpoint. This is interfaced with a mini-taxi stop. The gallery is similar to the Wits Art Museum corner, which has similar characteristics offering a good view to the square from the cafe where visitors or students can seat and 'people-watch'. The ground floor is visually connected to surrounding blocks and offers passive surveillace to the public realm.

3D MODEL VIEWS

Informal street trading stalls juxtaposed with formal restaurants and shops



Figure 5y: View of the open public space with retail and public furniture (Author, 2017)

"Informality is a complex and inseparable part of our urban society which has particular implications for urban design and urban development" (City of Cape Town, 2013). Such complex realities of our urban society need creative responses from the built environment practitioners. The public environment is upgraded to allow for safer street trading which does not hinder pedestrian movement on the sidewalk. Located in front of the main entrance of the proposed building the stalls are juxtaposed with outdoor eating and seating area as well as an upgraded mini northbound taxi rank.

3D MODEL VIEWS

Internal space: Food court and resting place for shoppers and Tuk-Tuk waiting area



Figure 5z: View of the formalised tuk-tuk and uber pick drop off and up area (Author, 2017)

The framework deliberately encourages the conversion of some parking into public space in order to discourage the use of cars, and to provide safe parking spaces for other means of transport in close proximity to the back entrance of the mall.

3D MODEL VIEWS

Scenic rooftop



Figure 5z: View of the mezzanine floor outdoor recreation space (Author, 2017)

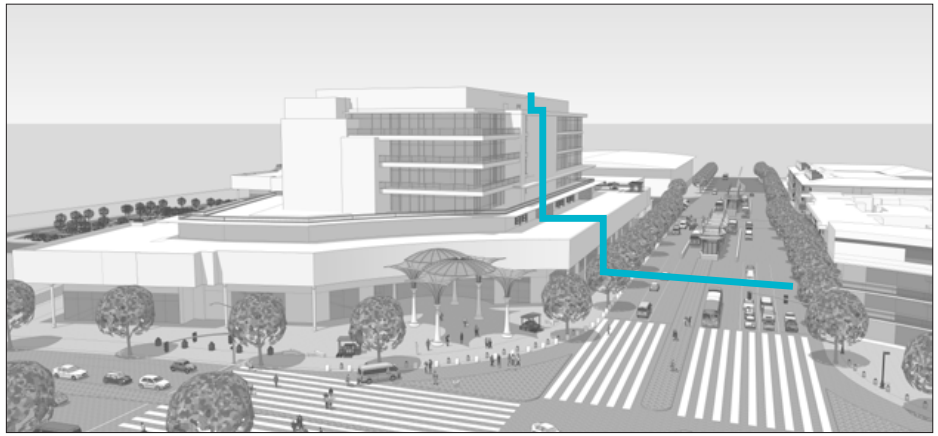
The rooftop corner of Campus Square has passive recreation facilities with other varying uses, offers a panoramic view of the city skyline to the east. This aesthetic feature can be accessed by tenants of the residential floors of the building and users of the mall.

3D MODEL VIEWS

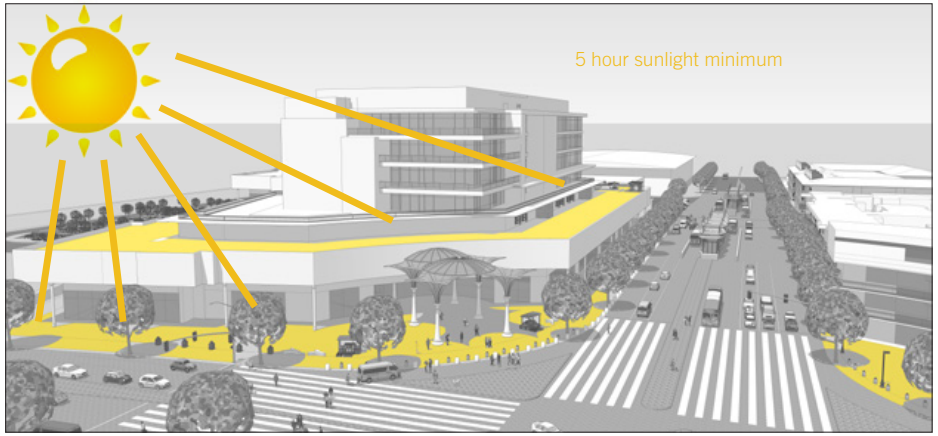
Trinary and building articulation



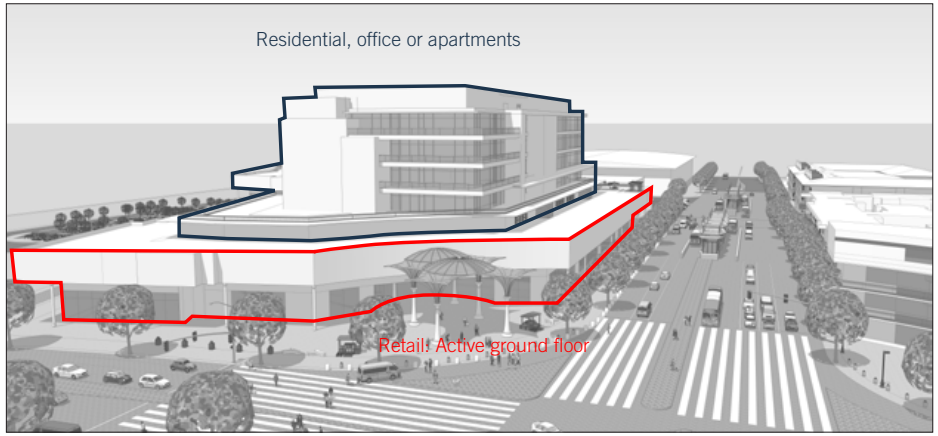
4 to 11 storey buildings along the road, wall that define the edge



Setback or recessed top floors to create a more human scaled podium.



Shorter buildings framing the street and setback top floors give an open view to the sky and bring maximum sunlight throughout the day



Mixed-use: Active, porous and animated ground floor. Residential and office use on upper floors.

Figure 5aa: Trinary articulation detail (Author, 2017)

The Cuban 'trinary' is a system which has provided precedents to the way in which the buildings are placed and designed in relation to the street and the station. According to Cervero (2013: 9) "a design element used to enhance transit accessibility in Curitiba was the "trinary"—three parallel roadways with compatible land uses and building heights that taper with distance from the BRT corridor. In a similar way, Campus Square is densified to a height which will still allow maximum sunlight into the street and the rest of the public realm throughout the day.

3D MODEL VIEWS

PEDESTRIAN LINK

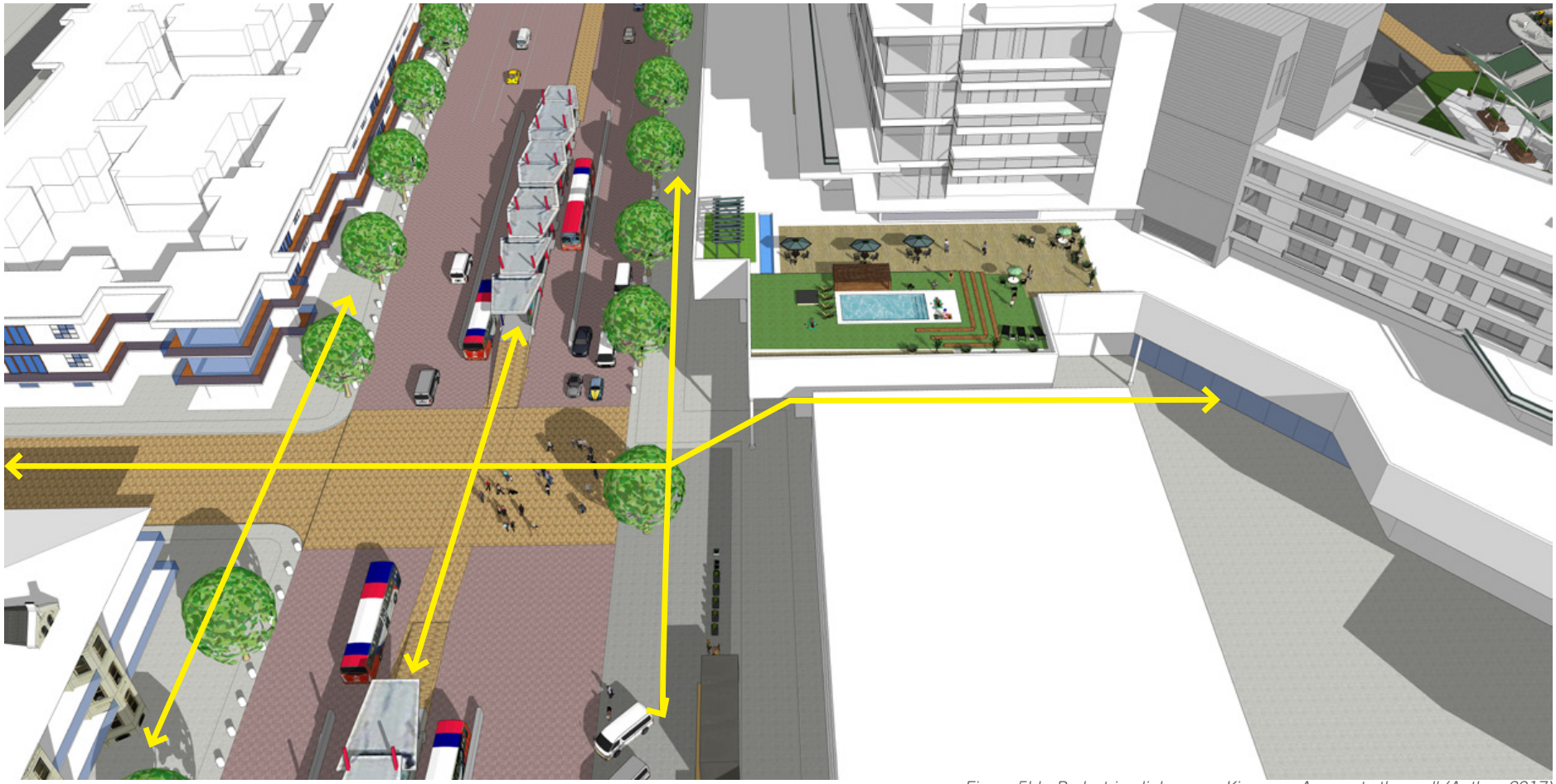


Figure 5bb: Pedestrian link across Kingsway Avenue to the mall (Author, 2017)

From a functional perspective, it is of critical importance to understand a street not only as a conduit but also as a utility that provides access to abutting uses (Jacobs, 1993). The concept proposed the opening up of different access points, mainly for pedestrians, to link the station with adjacent uses. One of the critical aims of the framework is to provide easy access to adjacent land-uses, and shorten the distance from transit stops, ultimately contributing to the making of a good pedestrian environment.

3D MODEL VIEWS

PEDESTRIAN LINK



Figure 5cc: Pedestrianised section of the link with a 'Maboneng feel' (Author, 2017)

The section of the pedestrian link that is flanked by the buildings abutting the stations is fully pedestrianised with parallel parking for cars (mainly visitors and access for goods drop off), the space is wide enough for open markets on weekends and also has outdoor performance space. Informal trading stalls are centred to emphasise the prioritisation of pedestrians and informal economic activity within the space and create a vibrant public realm. The public realm is flanked by responsive ground floors with cafes and restaurants. It also has a vista looking to the Mosque (a landmark - aeshetic architectural feature), from the station. The space is well furnished with quality softscape and hardscape street elements such as multi-purpose planter boxes, benches, trees, bins, lighting etc. This is a place, with the *'Maboneng feel'* where the everyday and everynight can be fully experienced.

3D MODEL VIEWS

PEDESTRIAN LINK



Figure 5dd: Porous edges of restaurants and cafes, well-furnished public space (Author, 2017)

View of the pedestrian link facing north - towards the mall.

3D MODEL VIEWS

PEDESTRIAN LINK



Figure 5ee: Bird's eye view of the pedestrian link (Author, 2017)

Bird's eye view of the pedestrian link, facing Kingsway Road and the Campus Square.

DETAIL

PEDESTRIAN LINK - CROSS SECTION A - A facing north

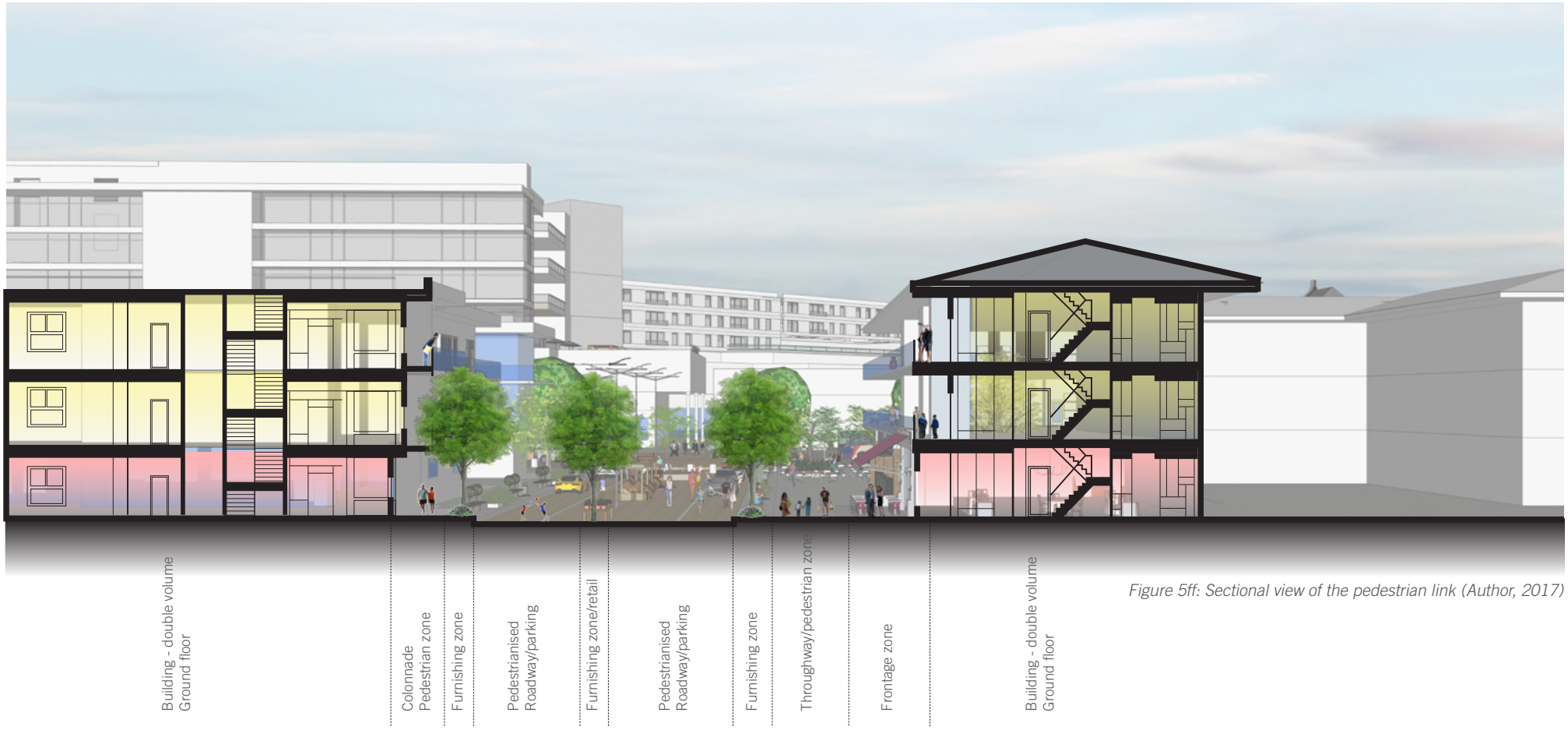


Figure 5ff: Sectional view of the pedestrian link (Author, 2017)

Frontage zone - an active or responsive threshold between the private and public realm. Mainly used for outdoor seating for cafes and restaurants as well as other amenities such as cafe railings, overhangs, awnings, planters, business signs, doorways etc.

Throughway/pedestrian zone - this zone is mainly for the mobility access of pedestrians. The surface must be evenly-paved and continuous without obstructions. Must be easily accessible by wheelchair users as well.

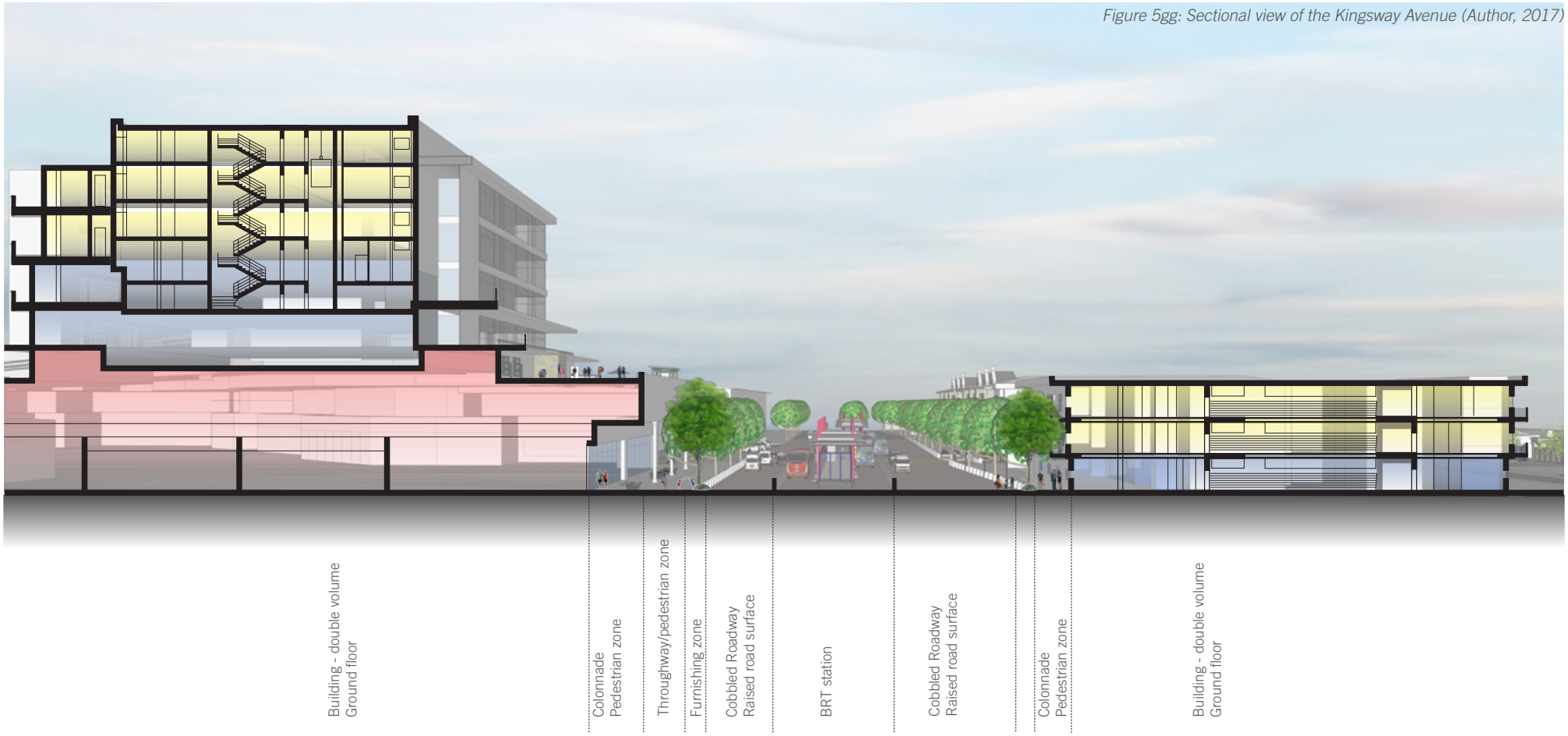
Furnishing zone - this is an area or buffer between the roadway and pedestrian pathway. It consists of both hard and softscape elements such as news racks signage, lighting, benches, trees etc.

The buildings flanking the public realm consists of retail on the ground floor and residential use on the top floors.

DETAIL

PEDESTRIAN LINK - CROSS SECTION B - B facing east

Figure 5gg: Sectional view of the Kingsway Avenue (Author, 2017)



Ground floor double volume space allowing maximum light to penetrate the building during the day. The ground floor is for uses that allow for active and positive edges and top floors are mainly for residential and other supporting use. The sidewalk has a good balance of soft and hardscape elements such as protective overhangs, continuous paving, bollards, benches, trees, lights and shrubs. The road is cobbled to improve the pedestrian-friendliness of the roadspace.

DETAIL

CROSS SECTION cuts plan view

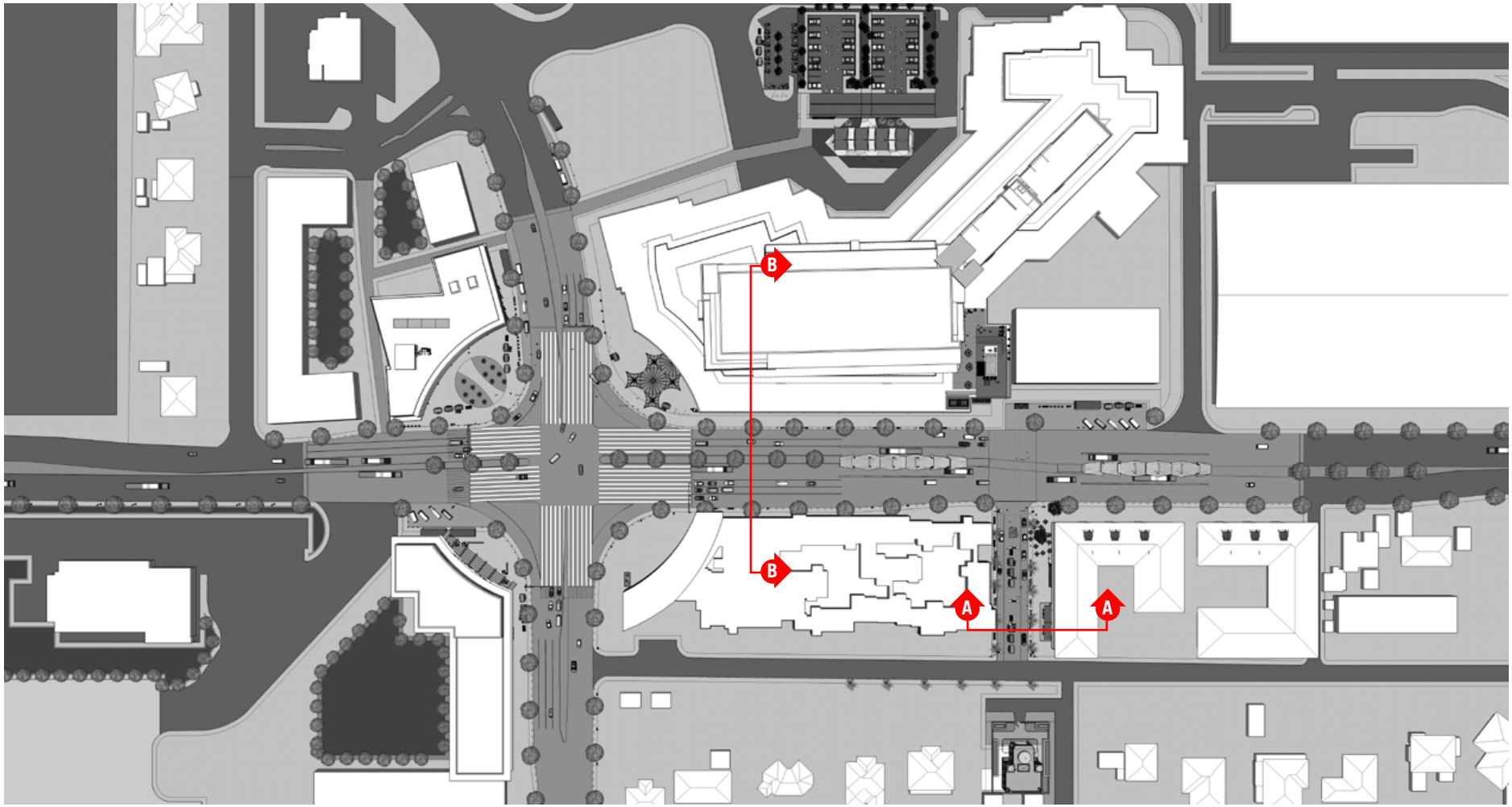


Figure 5hh: Cross section annotation (Author, 2017)

3D MODEL VIEWS

Traffic Controls



Figure 5ii: Traffic controls (Author, 2017)

Visible traffic control systems such as traffic lights, bollards, warning signs and signage to slow down traffic and protect pedestrians from motorised transit sytems, will be used to control traffic in and around the intersection.



3D MODEL VIEWS

Overall model view

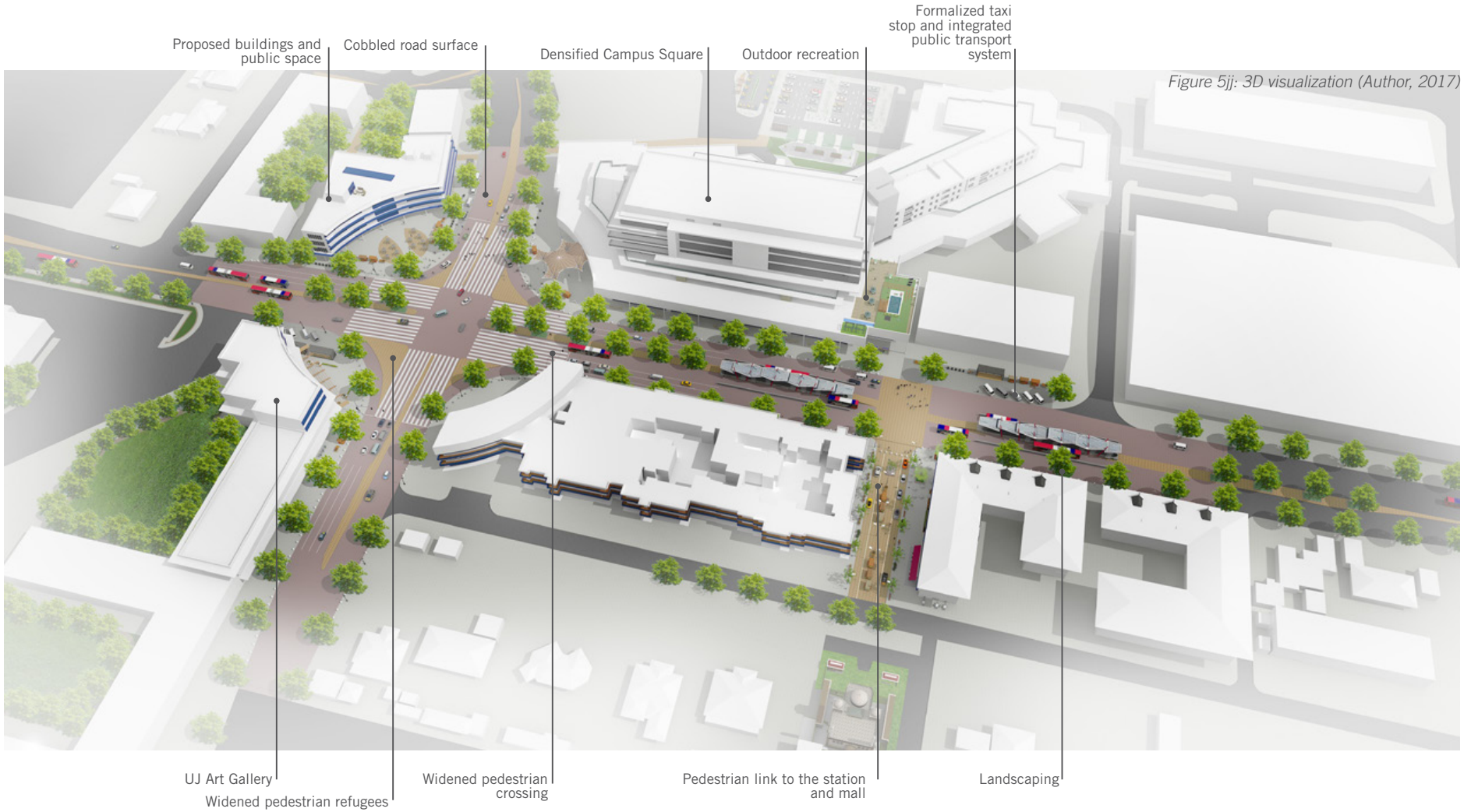


Figure 5jj: 3D visualization (Author, 2017)

THE EVERYDAY, EVENING AND NIGHT

The everyday, evening and night is the augmentation of the original 'the everyday' concept. This concepts envisages a 24 hour compact mixed-use linear node leading to the mall. This section of the proposal has the 'Maboneng-Precinct' feel, an active ground-floor with a good mix of eateries, cafes and restaurants, facing an open space that is used for Saturday and Sunday markets to support local informal economic activities and other seasonal events. The top floors have residences for students and workers.

This section adds to the broader concept which proposes a diverse range of uses, pedestrian-friendly environment, high permeability and visual connections, good public transport connections, spill-out of ground floor retail into external spaces. The lively pedestrian link is active at different times of the day and supports nightlife.

Robust and well-positioned public furniture such as benches, planters boxes, bins, public lights and trees add to the identity and ambiance of the space and encourages people to use pavements and the street more often.



Figure 5kk: 3D visualization (Author, 2017)



Figure 5II: 3D visualization (Author, 2017)



Figure 5mm: 3D visualization (Author, 2017)

VISUALIZATION



Figure 5nn: 3D visualization (Author, 2017)

Pedestrian link to the mall, with open space for seasonal events and temporary activities, flanked by active ground floors on either side with overhangs looking into the public space

VISUALIZATION



Figure 5oo: 3D visualization (Author, 2017)

Widened pedestrian crossings give pedestrians freedom of movement especially during peak time. Trees have long trunks that do not obstruct sight lines and allow maximum visual connections, at least at ground level.

CONCLUSION

As with the city of Joburg, there are cities which struggled with TOD projects which were slow to come about at many of the stations (Curtis et al, 2009). As a response to this situation, new players and tools were progressively added to the mix thereby yielding tangible results (Curtis et al, 2009). There needs to be a change of perspective about the role of large-scale infrastructure investments such as the Rapid Bus Transit System. The BRT needs to be viewed as something that is more than a mobility investment, as it also provides an often overlooked opportunity to re-structure the city in a manner that promotes sustainable urban growth, through providing a backbone for mixed-use and compact urban form, ultimately curbing urban sprawl (Cervero, 2014). The potential of good quality urban design for station areas should not be overlooked. This would yield the kind of environment, in urban centres, that discourages driving while promoting walking and transit riding.

As emphasised by proponents of people-centred urban space design, such as Jan Gehl, "promulgated the need to look at the life of cities beyond buildings themselves" (Brown, 2014: 1).

There is an urgent need to study human behaviour in order to understand context. In the same vein, the design project in this research was about democratizing the public realm in its entirety, giving people freedom by employing - Tompkin's "power of the pause" which resonates with the idea of creating a public realm for people are able to sit, walk, cycle, shop, meet, eat, people-watch and enjoy performances, or even day dream (Brown, 2014). To achieve this, the author relied on a credible toolbox equipped by…

Noero and Lefebvre's *'philosophy of the everyday'*

Sánchez's *'new urban imagination'*

Tompkin's *'power of the pause'*

Gehl's *'sweet-to-people spaces'*

Alberti's *'science of art'*

In final conclusion, this research proposes that the everyday approach should be used by built environment practitioners as a lens through which cityscapes can be observed, analysed and understood. The everyday is potentially a credible a frame of reference and truthful source of information as it offers in-depth and accurate clues on how people would like to use the space and the kind of activities they would like to engage in and with public spaces.

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