

**An Analysis of the Corridors of Freedom: The Spatial Planning Policy Implementation on
the Empire-Perth Development Corridor**

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Declaration

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

A handwritten signature in blue ink, appearing to be 'B. S. S.' followed by a flourish.

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Abstract

In recent years, the City of Johannesburg (CoJ) has introduced the Corridors of Freedom (CoF) spatial policy, as one of its instruments to alleviate spatial inequalities inherited from the apartheid regime through mass public transportation. This policy is focused on providing the CoJ with corridor transit-oriented development (TOD), facilitating property development to increase densities around transport stations and bring people closer to education, leisure, and their places of work. The Corridors of Freedom identified several corridors that will transform that part of the city, with the Empire-Perth Development Corridor serving as the case study for this research report.

Essentially, this research report discusses the theories of corridor development, transit-oriented development, and property development. In addition, the report also discusses the spatial policies of the CoJ in relation to these policies' theories. These discussions were necessary to analyse and observe how the policy implementation was carried out on the Empire-Perth Development Corridor; this is compared to the goals and objectives stated in the Strategic Area Framework for the Empire-Perth Development Corridor itself, as well as other related integrated spatial planning policies for the CoJ. The case study has chosen the Empire-Perth Development Corridor (EPDC) as an example of policy implementation, demonstrating various dynamics within the geographical area between officials, property developers, and professional consultants.

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Abbreviations/Acronyms

ADB:	Asian Development Bank
AfDB:	African Development Bank
ANC:	African National Congress
BRT:	Bus Rapid Transit
BRT-OD:	Bus Rapid Transit-Oriented Development
CBD:	Central Business District
CoF:	Corridors of Freedom
CoJ:	City of Johannesburg
DA:	Democratic Alliance
EFF:	Economic Freedom Fighters
EPDC:	Empire-Perth Development Corridor
GIS:	Geographical Information Systems
GDS:	Growth and Development Strategy
HCA:	Homes and Communities Agency
IDP:	Integrated Development Plan
JDA:	Johannesburg Development Agency
LAMATA:	Lagos Metropolitan Area Transport Authority
NMT:	Non-Motorised Transport
PPDC:	Provincial Planning and Development Commission
RDP:	Reconstruction and Development Programme
REIT:	Real Estate Investment Trust
RSDF:	Regional Spatial Development Framework
SAF:	Strategic Area Framework
SDF:	Spatial Development Framework
SDP:	Strategic Development Plans
SDZ:	Special Development Zones
TOD:	Transit-Oriented Development
UDAC:	Urban Design Adjudication Design Committee

Chapter 1: Introduction to the research

1.1 Introduction

In 2013, former African National Congress (ANC) Executive Mayor of the City of Johannesburg (CoJ), Parks Tau, used the State of the City Address to announce his ambitious, long-term, and multidimensional spatial project called the ‘Corridors of Freedom’ (CoF). Aimed at ‘re-stitching’ the CoJ through a well organised, affordable mass transport system connected by interchanges, it emphasises mixed-use developments along the Corridors, such as high-density accommodation, office buildings, shopping centres, public services amenities, and greenfield parks for recreational activities (CoJ, 2014). The term ‘Corridors of Freedom’ arises from, “giving our residents increased freedom of movement as well as economic freedom – liberating them from [the] apartheid spatial legacy characterised by informal settlements, poor schooling and limited recreational spaces.” (Ibid.:1) This would be achieved by directing all spatial planning mechanisms to the production of a compact and livable city that will achieve the revival of the social and economic needs of residents, focusing on boosting jobs and increasing housing opportunities for Joburg’s 2040 Growth and Development Strategy (ibid., 2016).

The CoF endorses Transit-Oriented Development (TOD) principles of high-quality transit, diverse mix of land use, and minimal carbon emission levels (Harrison and Rubin, 2019). One of the CoF principles is to increase accessibility and human interaction in public areas, where it has been challenging to achieve in urban environments which are more socially and economically separated by car-dependency (Curtis, Renne and Bertolini, 2009; Mtshali, 2018). This led to the introduction of the Bus-Rapid-Transit (BRT) element of the Corridors, a bus system with unique public vehicles, operating at a high frequency and speed, using custom and separate lanes, possessing an extraordinary capacity and ability to reduce the general cost of travelling (Stojanovski, 2013). Ballard, Dittgen, Harrison, and Todes (2017:139) emphasise that, “the Bus-Rapid-Transit (BRT) system, called the Rea Vaya, forms the backbone of the Corridors building on the belief that an effective and interconnected public transport system will improve people’s access to amenities, facilities, work, and leisure activities.”



Figure 1. 1: The Rea Vaya BRT system (Vukeya,2014)

1.2 Background

The spatial footprint of the CoF is vast and circumnavigates a large geographical area across the city, along with different socio-spatial arrangements:

Three ‘corridors’ were identified for development: Empire-Perth, which actually stretched from Soweto in the south-west and ran east to the Johannesburg Central Business District; the Louis Botha Corridor, that ran from the CBD in the south, through several suburbs, past Alexandra township into the financial hub of Sandton; and the third ‘corridor’ was more of a polygon and incorporated the suburb of Turffontein and some surrounding neighbourhoods, which form an older and economically declining part of Johannesburg. (Rubin, 2019:24–25)

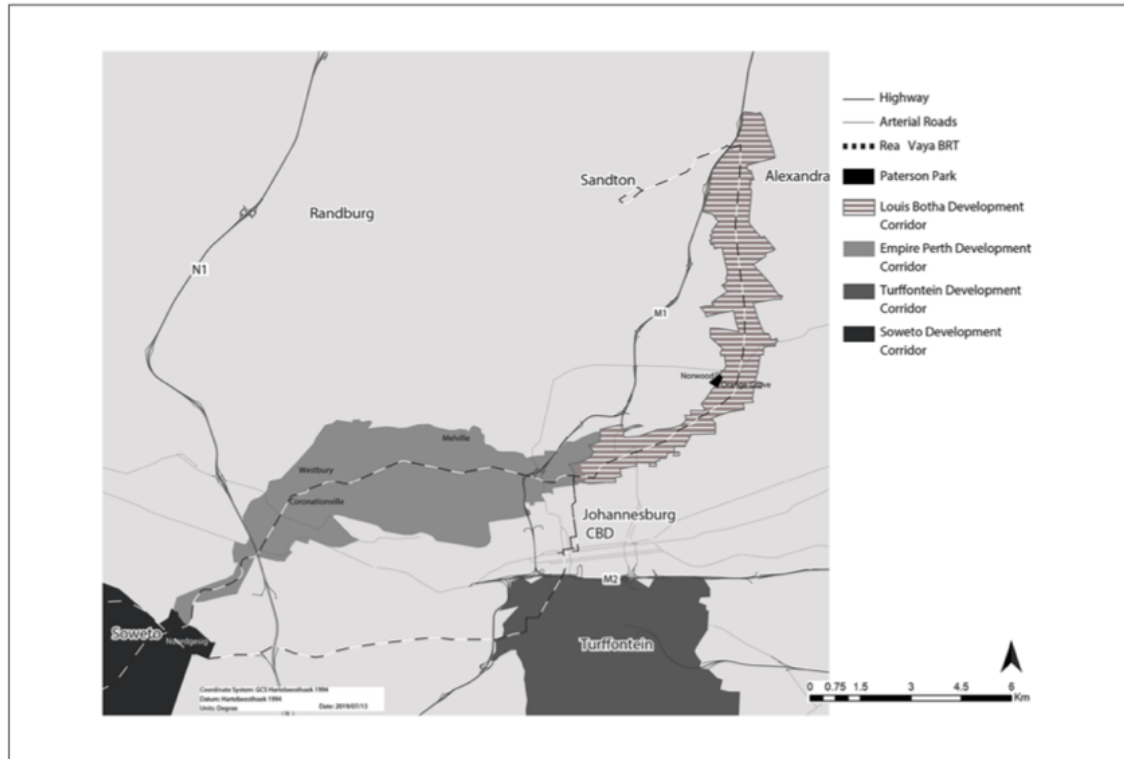


Figure 1. 2: Johannesburg's Corridors of Freedom (Harrison and Rubin., 2019:5)

Looking more precisely at the Empire-Perth Corridor, which (according to the CoJ (2014)), is in Region B of the CoJ. The CoJ (2014) states its positioning northwest of the central business district (CBD) has made it a local and international node with healthy economic activity. Thus, it attracts diverse user groups as a living and working environment due to its various land uses (Ibid.).

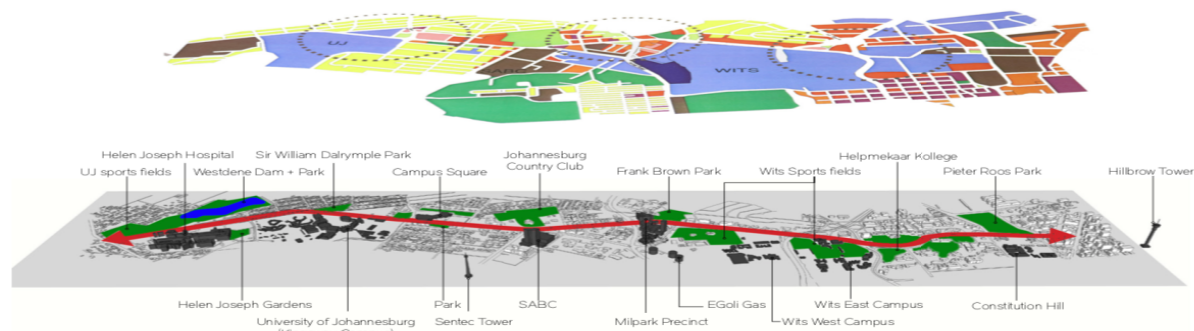


Figure 1. 3: Complex and diverse system on the Empire-Perth Corridor: key structural elements, built-form, open spaces, and existing land use (Mtshali, 2018:18)

When considering the prospects of the COF, the CoJ recognises that it would need more than its significant amounts of resources to realign the spatial, social, and economic integration in the city for the CoF to prosper. Hence, one of the main significant concerns is attracting private sector developers into the Corridors by creating new partnerships and incentives (Harrison and Todes, 2017). According to Harrison and Todes (2017), the motives of private sector developers to build new high-density developments on the Corridors were to attain beneficial incentives from the CoJ, which would work against rigid development rights and stringent parking requirements.

This research analyses the Corridors of Freedom, specifically the spatial planning policy implementation on the Empire-Perth Development Corridor (EPDC). It examines how three related theories (corridor development, transit-oriented development, and property development) were adopted to alleviate apartheid spatial planning, facilitate mass public transportation, and incentivise property development; to potentially achieve ‘live-play-work’ settlements within the City of Johannesburg.

1.3 Problem Statement and Rationale

The legacy of South Africa’s past continues to upset the country’s drive towards compact cities. Turok (2011) explains that the distress derives from apartheid spatial planning, which influences the current geographical construct of Johannesburg, which also persists in governing resource

distribution, spatial use patterns, and social connections. Post-apartheid (1994), one of the main priorities of the South Africa government has been to implement urban spatial policies that will counter spatial inequalities and halt sprawling patterns of development. However, Todes and Robinson (2019:302) highlight that expansion on the peripheries deliberately continues to expand, through the “... government’s Reconstruction and Development Programme (RDP) housing projects, mainly free detached housing for low-income South African earning under R3 000 per month.” On the one hand, factors such as unequal income earnings, scarce open spaces, limited amenities, and rigid land use restrictions have driven housing prices upward within the city, forcing people to set up residences out of town or on the peripheries (Bhatta, 2010). Hence, the embedded spatial planning legacy and ambitious spatial policies have struggled to align policy intention to actual implementation. This is due to an inability to fully comprehend the spatial reality of the areas for which they have planned interventions (Mtshali, 2018).

Policies do not automatically triumph due to the goals and objectives they propose or the issue they address. Instead, their forward movement is reliant upon the process of implementation (Hudson, Hunter, and Peckham, 2019). The full throttle required to implement projects on the CoF was drastically interrupted by an unexpected bombshell that hit the ANC, when it lost the 2016 local government elections for the CoJ, to their opposition, the Democratic Alliance (DA) (Harrison and Rubin, 2019). Harrison and Rubin (2019) elaborate further, stating how the new executive mayor Herman Mashaba’s coalition with the Economic Freedom Fighters (EFF) (in a bid for political survival) as one of the main reasons for the severe drop in infrastructure investment and the failure to implement the CoF. Therefore, explaining Priemus’ (2010) theory that any abrupt political shifts during the execution of megaprojects (as in the case of the CoF), can result in unintended or inconsistent connections to spatial planning policy objectives.

While mayor, Herman Mashaba redirected spatial planning policies and political interests to his ambitious inner-city agenda, geared by the consolidated capital programme funded by Diverscity Urban Property Fund (Harrison and Todes, 2017). Mashaba’s move tarnished the little trust private developers had towards the City of Johannesburg, leaving them to question the validity of the promised fast track application processes and property development incentives through the CoF. As a result, the interaction between potential developers and the CoJ can be described as a broken

telephone sending mixed messages, creating CoF uncertainties, and affecting the required long-term partnerships needed to achieve policy goals (Harrison and Todes 2017).

Hudson et al. (2019:3) indicates that if policymaking continues to be developed in ‘distinct administrative silos’, it will continue implementing policies in a manner that will have broader implications for external parties. Implementing agencies or agents of the Corridors of Freedom have had instances where they have acted without consulting with the beneficiaries, believing their plan and course of action will improve the citizens’ livelihoods; however, in those instances, the outcome resulted in more damage to the beneficiaries and their livelihood. Rubin (2019) explains greenfield projects, such as constructing the Bus Rapid Transit (BRT) infrastructure have been implemented smoothly and have created temporary jobs in that period. However, the construction of the Rea Vaya bus lines and bus stations in some sites has “badly affected” some small businesses, as customers can no longer access closed roads. Rubin (2019) furthermore mentions how tensions became elevated due to the manner in which jobs and contracts were awarded to entrepreneurs who were not from the community earmarked for development. These two incidents have led to some businesses closing permanently. Some of these contractors have delivered services and products below quality, inevitably worsening the relationship between the local government and the intended beneficiaries.

Despite the state's significant effort and investment, it is uncertain if a developer-led megaproject’s objective has been achieved. Guaranteeing the private sector's cooperation in building these developments for affordable rental housing is only based on the understanding that they will get the incentives that they were promised (Todes and Robinson, 2019). However, this requires an uninterrupted interest in the CoF from the CoJ, which has already broken by the transfer of power from the ANC to the DA. The BRT goals include, “affordable fees; safe and secure public transport system; promoting social inclusion instead of isolation; better economic development at and around the nodes, as well as long mobility spines; and reduction of pollution,” (Arrive Alive, 2020).

Spatial planning policies have well-meaning goals, yet it can be challenging to implement these. The Empire-Perth Corridor, Strategic Area Framework, is an example of this when the

developments it has implemented over time are considered. The CoF is a megaproject, and according to Ballard et al. (2017), these require a long-term period for implementation, especially as they encounter various mutable factors such as politics, economics, and social norms. Bornstein (2010) also states that new elements are common in implementing the megaproject; however, their newly felt presence tends to change the project in unpredictable ways.

The unexpected appointment and subsequent early resignation of Herman Mashaba as executive mayor of the City of Johannesburg after just three years (Mvumvu, 2019) have impacted the CoF Policy's viability. It has affected the relationship between the private sector and the CoJ, tied up with continuous development incentives and most of the political power residing with one party (Harrison and Todes, 2017). There has been a misconception of plans for mixed-use developments aspiring to Curitiba's high-rise Corridors. Current evidence shows that CoF supports informal densification to medium levels of densification (Ibid.).

Other issues have arisen, such as how the dependency cars in cities is pushing maximum capacity and is having a negative environmental effect (Curtis et al., 2009). Therefore, they are contributing to climate change and excessive gas emissions to the environment. In response to the outcry from social interest and climate change groups, the CoF had been seen as fixing one problem, but simultaneously creating two more questions. Mtshali (2018) refers to the well-located Rea Vaya UJ Sophiatown Res station and how it is poorly linked to other modes of transport and their surroundings. This has resulted in an underestimated use of the BRT, failing to attract the primary target market of users for whom it was created (Ibid.).

This research is necessary to analyse the spatial planning policy and implementation on the Empire-Perth Corridor, by analysing the CoF's driving forces, such as political stability, consistent private sector developers buy-in, mixed-use development aspirations and BRT delivery services desires. It will deduce what has occurred during the implementation process, and it will identify whether implementation was able to match policy or a policy-implementation gap.

1.4 Objectives

According to Harrison and Rubin (2019), carrying out the CoF essentially requires a long-term period of 15 to 20 years. Also, it needs consistent support from top governing officials during that long-term period, who will champion the CoF as a flagship project (Ibid.). It has been seven years since the announcement of the CoF. Recently, with the unravelling of events in the 2016 local government elections with the DA win of the City of Johannesburg and the redirection of interests to the rejuvenation of the ‘Inner City’ agenda (Harrison and Todes, 2017). Nonetheless, this has raised questions of the purpose of the CoF and whether it will be implemented consistently over a long-term period to demonstrate its impact (Ibid.).

The objective is to analyse the Corridors of Freedom’s policy implementation on the Empire-Perth Development Corridor (EPDC). The report examined three theories (corridor development, transit-oriented development, and property development), the City of Johannesburg’s spatial policies, and the context of Strategic Area Framework for the Empire-Perth Development Corridor (EPDC) against primary observations made on policy implementations on the EPDC:

- Whether significant strides have been made in the implementation of mixed-use developments as promised in the policy mandate
- Analysing whether the BRT infrastructure made daily travels and activities for use on EPDC more accessible
- Identifying the challenges that have been faced in implementing CoF project outcomes
- Whether private sector developers are happy with the current implementation rate

1.5 Research Questions

Has the CoF spatial planning policy achieved policy implementation on the Empire-Perth Development Corridor?

- How have officials and agents, property developers, and consultants responded to the Empire-Perth Development Corridor?
- Has Corridor Development assisted in mitigating the apartheid spatial planning legacy in the Empire-Perth Development Corridor?

- Has the Empire-Perth Development Corridor achieved a Transit-Oriented Development?
- Has the Empire-Perth Development Corridor met all the intended requirements of a Property Development?

The report was primarily based on document reviews working together with case study interviews conducted with public officials, property developers, and spatial consultants. The reports' expected findings impress on spatial policy goals and objectives that have not reflected in the developments implemented and become apparent in the Empire-Perth Development Corridor policy-implementation gap.

1.6 Research Context

There are five essential concepts in analysing the research topic. The first three are conceptual underpinnings, while the last two help to conceptualise the study in time and space. The first concept is to comprehend the theory relating to **'Corridor Development'**. The second concept is to focus on the idea of **'Transit-Oriented Development'**. The third is to explore the notion of **'Property Development'**. The two remaining concepts are not related to theory; however, they look at spatial planning policies: a broad focus on the **City of Johannesburg spatial planning policy** related to the theoretical concepts. Lastly, the fifth concept centres explicitly on the **Strategic Area Framework for the Empire-Perth Development Corridor**.

The research context is posed through understanding the drivers that encouraged the adoption of the CoF spatial planning policy, where a solution can be delivered towards addressing the mismatch between written policy paper objectives and practical implementation outcomes. The research is relevant due to the CoJ's context of bridging corridor development theory and property development configuration by using transit-oriented development (TOD) as the bridging tool for future transit routes and urban development in the city. Therefore, it is vital to analyse the spatial planning policies, specifically for the Empire-Perth Corridor and how it affects the area, and a consideration of whether the concept of TOD will be implemented or whether it just stands as another concept for the megaproject and does not take into consideration the issue of property development.

1.7 Chapter Outline

This research report comprises seven chapters.

Chapter 2 discusses the theoretical concepts of corridor development, transit-oriented development, and property development. This chapter begins by defining the concept of corridor development and outlining its evolution. It then unpacks and explores the types and objectives of corridor development, tethering the concept through investigating the required characteristics of corridor development. It then explores the definition and origins of transit-oriented development (TOD). The chapter then outlines the characteristics of TOD, and finally studies the required ‘6Ds’ elements in TOD implementation. The discussion of property development initially provides clarification between property development and property developer. The chapter proceeds to highlight the important players involved in property development, while also providing an overview of the types of property development and the general characteristics contained in this concept.

Chapter 3 provides an overview of the research methodology and methods used to obtain the necessary answers to the research questions. The chapter discusses the research strategy and the design that is used: a document analysis via case study research. The various sets of data required, and the research methods used to obtain the information are outlined. This includes key respondents’ interviews and document analysis. The sequence in which the research was conducted is discussed, and finally, all ethical considerations are presented.

Chapter 4 focuses primarily on the discussion of the existing spatial policies in the CoJ, based on the theoretical concepts discussed in the previous chapter. The chapter analyses how all the spatial planning policies from the Johannesburg Growth Development Strategy 2040 integrate within each through geographical scale, most importantly, how they share and maintain the same spatial objectives and visions, specifically from a broad metropolitan and long-term strategic point of view.

Chapter 5 provides an understanding of the contextual characteristics present in the Strategic Area Framework for the Empire-Perth Development Corridor study area, based on the analysis presented by the Johannesburg Development Agency and approved by the council on 4 September 2014. The analysis for the Empire-Perth Development Corridor will be elaborated upon through the analysis of figures, maps, and tables. This will provide a foundation in understanding the study area's key issues and opportunities related to corridor development; the prioritisation of structuring elements; local area implications, and the proposed implementation area for the Empire-Perth Development Corridor.

Chapter 6 observes the Strategic Area Framework for the Empire-Perth Development Corridor document, intended to be implemented on the case study area; in addition, it takes into consideration the theocratical principles discussed in Chapter 2. The observations will be expanded upon using responses gathered from the key respondents' interviews. The chapter will provide an illustration of what key respondents perceive to be on-the-ground policy implementation against the Strategic Area Framework for the Empire-Perth Development Corridor document.

Chapter 7 is the final chapter of the research report, and which provides an overall analysis of the information acquired from document analysis, key respondent interviews and case study observations in the research report. Several recommendations are then proposed as a way forward for policy implementation on the Empire-Perth Development Corridor.

1.8 Conclusion

The chapter provides an overview of the context of this research report. The background and the research question provide an explanation of why this research was chosen and facilitates the development of the sub-questions that helped to guide the research. It outlines the existing literature on the relevant theories and expounds upon the importance of conducting this research. Lastly, the chapter concludes with a brief outline and explanation of each chapter in the research report.

Chapter 2: Constitution of Corridor Development; Conceptualisation of Transit-Oriented Development; Configuration of Property Development

2.1 Introduction

The chapter reviews local, African, and international literature on spatial planning theories relevant to the research study. The first section establishes the concept of corridor development by grasping the definition and evolution of the theory. The section goes on to identify the different types of corridor development and the objectives linked to them. Lastly, the section unpacks and explores the required characteristics of corridor development.

The second section conceptualises transit-oriented development (TOD) by understanding the definition and origins of the concept. The section proceeds to determine the various characteristics of TOD. After determining the characteristics, the section analyses the required ‘6 Ds’ – the elements within TOD implementation. Lastly, the section identifies the difference between targeted densification and densification by default in the BRT.

The third section starts by clarifying and defining the difference between property development and a property developer. The section continues to explain the different types of property development methods found in the system. Using the first two sub-topics to understand property development foundations, the section further talks about the property developer's role and responsibilities, and other actors involved in property development. Lastly, the section looks at the different characteristics in achieving ‘sustainable’ property development in a megaproject such as the Corridors of Freedom (CoF).

2.2 Constitution of Corridor Development

2.2.1 Definition and Evolution of Corridor Development

According to the Provincial Planning and Development Commission (PPDC) (2007:18), a corridor is, “a broad (commonly in the order of at least a kilometre wide) band of mixed-use activity

identified around one, or more commonly, an interlinked system, of transportation routes of different lengths.” Priemus and Zonneveld (2003) also refer to corridor development involving multiple and different infrastructures that connect two or more areas. Figure 2.1 illustrates the “strings of beads” concept, which underpin corridor development. The concept indicates that nodes and sub-nodes happen along the main trunk, and that high density and mixed-use developments happen around the nodes (Warnich and Verster, 2005).

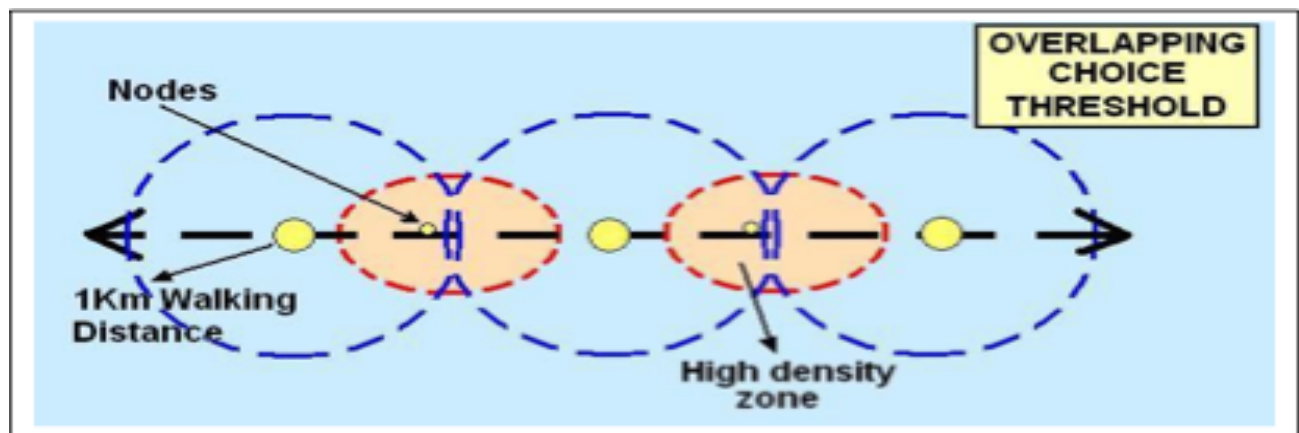


Figure 2. 1: Strings of beads concept (Cape Metropolitan Council, 1996:43)

However, Arnold (2006) is against the notion that corridor development is just a simple transport corridor. Arnold (2006) argues that corridor development can be either a physical component or a functional component, by involving the connectivity of one or more routes that connect centres of economic activity; while on the one hand aligning with common transfer points and connecting to the same service nodes and the end nodes as getaways that allow traffic with sources or destinations outside the corridor to enter or exit. Building on this notion, the Asian Development Bank (ADB) and the African Development Bank (AfDB) expand the definition of corridor development, by stating it is also seen as an economic corridor that increases social and economic development within a specific geographic area (African Development Bank, 2013; Brunner, 2013). When the multiple and different infrastructures develop along and adjacent to the corridor, they will generate social and economic development along and adjacent to the corridor.

2.2.2 Types and Objectives of Corridor Development

Corridor development can either be transport corridor development, a trade development corridor, freight and industrial corridor development, agricultural corridor development, and economic corridor development. During that time, these corridor developments' objectives can be categorised into three tiers, which are national, bilateral, or multilateral objectives (Arnold, 2006). Furthermore, Hope and Cox (2015:4) describe specific goals for three sub-types of trade corridor:

- Domestic trade corridor – To promote internal trade and economic growth along the corridor.
- Foreign trade corridor – To promote the economic growth of the country through increased trade and competitiveness.
- Transit trade corridor – To promote regional integration and economic cooperation between neighbouring states.

It can be seen from the sub-type categories mentioned above that the CoF can be distinguished as a domestic trade corridor development, which aims to grow and become a more complex transit-economic trade corridor development. According to the CoJ (2014:17), "...the corridors aim to assist in restructuring (spatially and economically) the apartheid city – [to] make the city more accessible to all its citizens, curtail urban sprawl, promote densification and infill- development.". Martens (2001) mentions that corridors can range from the local level to the regional scale level. Kunaka and Carruthers (2014) continue by separating the general corridor development objectives into four sub-objectives: to reduce average times and costs of transport, to reduce variability of times and costs of transport increase trade, as well as the aspects to reduce costs of the national economy too. Taking the above into consideration, domestic corridors such as the EPDC can be perceived as aspiring to achieve what is known locally as "planned corridors" (Freeman and Ziv,2001). These are emerging as initiatives that need broader support from metropolitan-wide strategies, as well as a greater awareness of the immensity of the task of [radically] altering existing land use patterns and land use-transport relationships (Ibid.).

2.2.3 Characteristics of Corridor Development

The Planning and Development Commission (PPDC) (2007) highlights important corridor development characteristics, such as land uses, modes of transportation, scale, linkage and connectivity, forms of attraction, and integration. These characteristics are considered the fundamentals of understanding corridor development workings and recognising them as a policy-implementation approach. All corridor developments have various land uses that combine to form their character, varying from residential, commercial, retail, office, industrial and mixed-use. This re-emphasises and confirms Warnich and Verster's (2005) "string of beads" concept (Figure 2.1), namely that corridor development should provide land uses with high residential densities (seen in Figure 2.2) that later become focal points for land uses of intense non-residential application along the spinal route, as it grows (seen in Figure 2.3). Jordaan (2003) concludes that land use of a corridor should incorporate a diverse approach for developing density projects. "A corridor relies on both the 'minimum density of uses' and should 'generate a high density of populations and economic activities' through the [mix] of land uses," (Ibid., 2003:18 as cited in Simões, 2014:33).

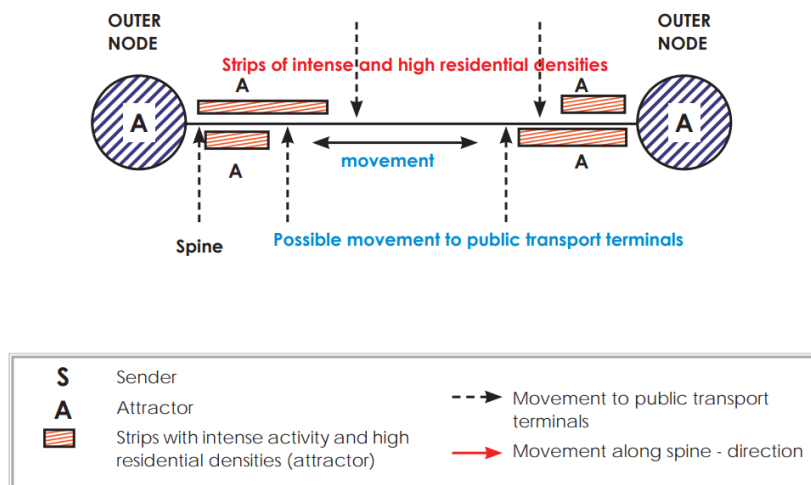


Figure 2. 2: Land uses with high residential densities (Khoza and Willemse, 2013:53)

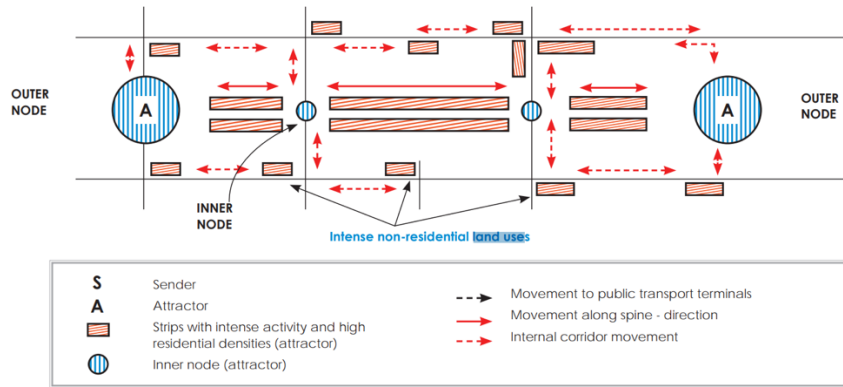


Figure 2. 3: Focal points for land uses for intense non-residential developments along the spinal route (Khoza and Willemse, 2013:53)

Corridor development is distinguished by the mode of transport it generally uses, through the transportation and movement options it generates. The PPDC (2007) expressed the critical need for transport interconnections and interchanges, as these points allow for different levels and speeds of transport and movement between various roads. Corridor developments will naturally attract different modes of transport and activities, which will inevitably guide the architecture or form of mixed use and transport routes, interchanges, and interconnections. Thus, the hierarchy of mode of transports and activities requiring smaller corridors is the initial plan of intervention needed for the advancement of corridor development; however, the intersections and routes intervention is developed concurrently as a method of strategy (Ibid.). Therefore, it is important to note that not only should there be concentrated planning and investments on high residential land-use densities and their main transporting routes, but they should be on intense non-residential land uses (schools, clinics, libraries, shopping centres and office centres), as they will boost and entice pedestrian movement along these corridors.

There are numerous reasons a corridor is utilised to link specific areas, and these linkages occur at different scales. Simões (2014) stipulates that corridor development's natural accordant scale relates to regional, metropolitan, and local scales. With specific reference to the research topic, Curtis and Tiwari (2008) highlight that corridor development activity can be characterised at a metropolitan scale. It focuses on higher-density development and a multimodal transport system that connects to inner activity nodes. Lastly, corridor development activity can also be

characterised at a local scale, where it focuses more on pedestrian movement, a sense of place and belonging, and building a vibrant community (Ibid.). These can be seen as the reasoning behind the CoJ's full support of the theory of corridor development, as a means of mitigating socio-economic issues that are apparent due to spatial dysconnectivity. As stated in the scale characteristic, corridor development is utilised to link places and nodes, such as a township connecting with a CBD, residential land-use areas or non-residential land-use areas. The PPDC (2007) also contributes by stating that corridor development is not based on the linkage of one local area, suburb, metropolitan or region; however, it can be found in the linkage and connectivity of one local area to another local area. Simões (2014:38) reiterates that a corridor development, "must have a decisive interaction and connectivity between the nodes within it and on its extremes," as this will contribute to the rise of a higher quality economy and better job opportunities.

Corridor developments can be characterised by the kind of forces they possess in attracting people to attain success on the corridor. Simões (2014) indicates significant factors to consider when achieving attraction on a corridor development, such as land uses and entertainment aspects. The PPDC (2007) describes how a corridor development can have single or multiple attractors, where numerous attractors are fashionable by means of a typically considerable corridor or activity strip or street attractor. The most important factor towards achieving forces of attraction is the intensity of activities on a corridor development; however, it should be noted that some activities vary and are uneven due to their clustering and accessibility (Ibid.). The other two factors, extreme activities and higher accessibilities, must work together to achieve the attraction forces necessary for corridor development. The PPDC (2007) expresses that increasing the accessibility of a corridor development will supply a long-term benefit. Therefore, corridor development is critical to supply activities, as well as various land uses on both sides of the corridor development spinal route. This will develop a cluster of intensive activities; however, it must formulate safe pedestrians crossing the corridor development (Ibid.).

The last characteristic – integration – emphasises that urban transportation's spatial planning can no longer be planned and implemented in isolation. Himanem et al. (2004:64) state that "transport plays an intricate role in any quest for global sustainable development." Corridor development has

been linked to sustainability through integrated transportation, connected to various land uses such as higher residential densities, land uses, and intense non-residential land uses (schools, clinics, libraries, shopping centres and office centres). According to Curtis (2008), this reduces the need to travel with privately-owned passenger automobiles and will lead to the promotion of public transportation; moreover, it encourages a healthy environment or lifestyle through the use of bicycles and pedestrian walkways. Therefore, spatial planning and land use can be integrated and used with transportation to sway corridor development towards implementation. Through a strategic spatial planning mechanism, where every component works in one organisation, the planning will produce different spatial scales for multiple land uses and transport networks, which will escalate accessibility and sustainable development (Ibid.).

2.3 Conceptualisation of Transit-Oriented Development (TOD)

2.3.1 Definition and Origins of Transit-Oriented Development

Transit-oriented development has a broad definition that can be broken into three categories: urbanisation, mixed land uses, and non-motorised transport, all of which work together. However, this research focuses specifically on the second TOD category. Calthorpe (1993:43) states that mixed land-use TOD are based on “moderate and high-density housing along with complementary public use, jobs, retail and services concentrated in mixed-use developments at strategic points along with the regional transit system,” (as cited in Oviström, Bengtsson and Vicenzotti, 2016:169). Belzer and Aulter (2002) indicate that there is no universally accepted definition for TOD; however, it can be satisfied that TODs’ core function is around the concentration of transportation within a city expansion. Simões (2014) points out two primary factors in understanding TODs’ origins: understanding and elaborating the distinction between nodes and places.

Knowles (2012) indicates that TOD is not a recent phenomenon, highlighting early examples in the mid- to late-19th century, in Manchester and New York. The TOD in Manchester was designed to encourage commuter housing for better-paid workers employed in the city's rapidly growing central business district (Ibid.). While the TOD design in New York “used a 50-cent uniform fare

to encourage people living in overcrowded lower Manhattan, to move out to purposely developed suburbs in upper Manhattan, the Bronx, Brooklyn and Queens,” (Ibid.:251). This demonstrates that the TOD concept can be applied for the convenience of human settlements or using incentives such as low flat fares to counteract the cost of distance in a city dealing with urbanisation. TODs’ origins are still central today and continue to evolve; As in the United States, a broader smart growth approach to urban development includes urbanism, urban infill, urban growth boundaries, historic preservation, affordable housing, and inclusionary zoning (Ratner and Goetz, 2013).

2.3.2 Characteristics of Transit-Oriented Development

Belzer and Autler's (2002:4) broad expression that “[a] TOD is [the] right place and can therefore be measurable based on specific functional characteristics, such as: choice of transportation modes, housing types, lifestyles, access to jobs and services, fewer negative impacts of the automobile, and a high degree of satisfaction in residents and visitors.” It provides a fundamental understanding of why TOD does not have a universally acceptable definition owing to its diverse characteristics. Despite that, sustainability has recently become the defining characteristic in TOD towards achieving these sub-functional characteristics (Simões, 2014). This is evident in how the idea of sustainability is injected into policies, strategic plans, and government agendas for the development of transit-oriented programmes (Curtis et al., 2009). With the TOD concept in the corridor development concept umbrella, both concepts share the basic notion that diverse land uses are crucial for any urban development. However, under the TOD concept, the focus is more on providing various transportation choices (Curtis et al., 2009). Holmes and Van Hemert (2008) concur that TOD strives for sound public transport and other transportation forms, by increasing and including various access types to residential, commercial, mixed-use, and parkland uses.

According to Simões (2014), the chief characteristic is public transport, and this could be a public railway station, metro station or a public bus. Chen, Hamilton, Kindel, Macek and Pinch (2007) explain that this characteristic encompasses high-density development around it, decreasing as it emanates from the centre. Its primary objective is to reduce privately-owned passenger automobiles for reduced traffic congestion, carbon dioxide emissions, and better air quality by providing an efficient and effective public transport system that will increase public transit

ridership (Ibid.). Holmes and Van Hemert (2008) stress the previous sentence by emphasizing that quality control of this characteristic must meet citizens' needs and requirements in urban development. Also, the public transport system provides quality connections to intense non-residential land uses (schools, clinics, libraries, shopping centres and office centres). Therefore, by “improving the competitiveness of alternatives to the car, by increasing flexibility” (Curtis et al., 2009:5) and enhancing public transportation; it also reiterates Simões’ (2014) position that public transport is the chief characteristic. Additionally, this could contribute to successful modes of non-motorised transportation. Simões further posits (2014:41), “density is greatest around the transit station and then begins to decrease, but always with a mixture of land uses.” Chen et al. (2007) state there is a prerequisite for TOD to possess higher densities around the transit station with approximately an additional 100–150 metres. The density only starts to decrease approximately 150–500 metres from the transit stations. After the 500-metre distance to the end of the transit-oriented development, it will be evident that the density decreases further, and the land uses are shared with the encircling areas (Ibid.).

2.3.3 The required ‘6 Ds’ elements in TOD implementation

The CoF have primarily been influenced by TOD principles, aiming to develop high-density, mixed-use, integrated developments along transit corridors, interchanges, and stations (CoJ, 2013b). Ogra and Ndebele (2015:541) highlight planning and implementing TOD requires the role of the ‘6Ds’ elements (Diversity, Density, Design, Distance to Transit, Destination Accessibility, and Demand management) in order to avoid missing anything in the implementation of TOD. These elements are considered pivotal in achieving the goals of TODs in the CoF and are explained below.

Diversity means access to a wide range of amenities and activities within a given area, which is a crucial component to achieving successful TODs (Ibid.). Talen (2006) further elaborates that diversity within TODs can mix different uses, including a varied physical design, the public domain, and various social groupings of other races, ethnicities, genders, ages, occupations, and households. As was mentioned previously, a significant difficulty facing policy implementers and urban planners is insufficient integration of urban land uses and spatial area intervention; in other

words, prolonging the alignment of policy intentions to actual implementation or producing retrogressive outcomes. To stop and reverse these patterns, potential urban land and spatial areas that have been identified need to be planned so that intended diversity use matches the required density (Dempsey, Brown, & Bramley, 2012).

Van Wee (2002:263) defines density as, “the number or concentration of opportunities per square kilometre or another surface indicator, such as dwellings, households, people and jobs.” High-density developments aim to locate residential products along major transport routes to improve convenience to workplaces and amenities, reduce car dependency in high-density areas, and to create alternative sustainable transport modes, such as public transit, walking and cycling (Buys and Miller, 2011). This design must connect transit ridership with the high-density developments and other surrounding built environment dimensions along the transit corridors. According to Suzuki (2013:14), design in these urban areas is, “carefully articulated land-use mixtures; safe and smooth accessibility to transit stations (enabled by footpaths, cycle paths, and streetlights); and amenities such as benches, parks, landscaping, and libraries – which all contribute to the development of a good built environment.”

The distance to the transit role is a crucial role that must not be disregarded. It could result in either positive or negative policy implementation outcomes of a public transit's viability and effectiveness. Mamun (2013) argues that measuring the distance, proximity, and accessibility to a transit station to potential new built environment dimensions and high-density developments, will assist in evaluating existing transit services around the urban area, allocating transportation investment more efficiently, and lead to effective decision-making on land developments. Suzuki (2013) also states that cities with TODs are designed to reduce travelling distance and promote cycling and walking lifestyles and public transport systems. However, these options are affected by various factors, such as, “land factors, psycho-social and cultural factors, habitual or automatic behavioural processes, and practical or instrumental factors,” (Buys & Miller, 2011: 295). This shows the intricacy of implementing TODs, as proximity and accessibility are not the only core factors that should be considered when it comes to transit systems. The role of destination accessibility strives to close this gap by providing greater mobility through moving people around the city faster, rather than bringing the urban activities and amenities closer (Suzuki, 2013).

Wirasinghe (2013) reaffirms this argument by demonstrating how BRT has provided well-organised and successful public transport, which increases ridership transit usage and attractiveness in the specified corridors in both developing and developed countries. Nonetheless, Chandra (2013) argues that the lack of accessibility to the transit system, such as the BRT system or different destinations, often stops many citizens from using the bus. The last role, demand management, is a response to the late 20th- and recent 21st-century climate change and energy issues (Tal and Cohen-Blankshtain, 2011). Rahman and Al-Ahmad (2010:179) describe it as “...any activity, method or program that reduces vehicle trips, resulting in more efficient use of transportation resources.”

2.4 Configuration of Property Development

2.4.1 Definition of Property Development and Developer

Property development is more than a function that works on improving land functions by regulating and changing land. Moreover, property development is more than buying and selling land for a profit. According to Martínez-Ávila (2018:18):

Property development can be generally described as an industrial production process that involves the combination of various inputs, such as land labour, labour, materials, and finance to achieve an output or product, such as the change of land use, building use or a new building over a large time frame, building type, location, and constant public attention.

Property development also intentionally incorporates social, economic, and environmental issues throughout a project's stages to achieve a built environment that reflects broader society's needs and interest (Martínez-Ávila, 2018). Profitability is still seen as the most critical success factor in property development. However, today, success cannot only be judged based on potential profit or loss margins. The definition adopted for this literature review is that property development is “a process that involves changing or intensifying the use of land to produce for occupation” (Wilkinson and Reed, 2008:2). The research report is concerned with property development that

involves building activity for higher residential densities land uses and intense non-residential land uses (schools, clinics, libraries, shopping centres and office centres).

Dewey (1997:8) traces the definition of a property developer's decision-making back to the traditional assumptions that the 'private' developer is worried only with 'profit' and must be 'regulated' by the appointed public planning officials and elected officials. However, today the developers' interests are more complex, as they could depend on state-led priorities and returns (Hsing, 2010) or the invitation to spatial planning plans (Fainstein, 2008). Although this differs from one country to another, the private developers' interest still has the final say as to whether they will invest in public spatial-planning policy opportunities.

2.4.2 Actors in Property Development

According to Isaac, O'Leary, and Daley (2016), no development is precisely the same as another, and the combination of actors and the roles that they play will differ to an extent each time. The different actors include the developers, the local authority, statutory bodies and government agencies, and funding institutions.

There are different types of developers from the public, private and non-profit sectors. Isaac et al. (2016) expresses that those developers can implement property development projects to sell off as a finished project for profit. Developers can implement and invest in completed property development by retaining the project within these sectors. Some private developers changed to Real Estate Investment Trust (REITs) to benefit from tax advantages, naturally focused on developing major office, residential, industrial, and retail developments, and characterised as having huge, diverse property portfolios (Ibid.). According to Sari, Utomo, and Rahmawati (2020:2), "REIT is a trust fund collected from many investors by issuing shares or certificates of income, real estate investment management by specialized investment institutions, and distributing income as regulated to investors." In contrast, traditional developers have not accumulated substantial property portfolios associated with REITs and do not practise the same business operations. Therefore, traditional developers are more flexible when choosing in which developments to be involved and to implement, compared to REITs that are compelled to evaluate

economic conditions and assess whether the development links to the company's operating ethos before engaging in it (Ibid.).

A further key actor are the local authorities that practise administrative and representative functions. The administrative function supplies goods and services, and the representative function involves citizens in determining specific local public needs and how these local needs can be met. Isaac et al. (2016) explain that every local authority will have its local plan that provides the criteria for pre-application consultations and follows negotiations with the developer. The local authority aims to guide development towards policy compliance. However, it is accepted that no development proposal can meet all policy expectations (Ibid.). Furthermore, Isaac et al. (2016) explain where a gap exists between what a developer wants to do and the local authority's policy objectives; it can possibly be linked by requiring the developer to enter into a planning agreement. Lastly, the authority has the core responsibility and duty to investigate local objectors' comments regarding the development application; however, “the authority is not bound to reject a development just because there are obligations, but it must explain what weight was given to the objections in its decision-making process,” (Ibid:14). Thus, a developer needs to submit proposals that are as good a fit as possible with local plan policies.

Outside of the local authority, there are numerous statutory bodies and government agencies involved in the built environment. These entities supply their team of practitioners with information and regulations related to property development within the area, who will communicate with a developer during the implementation of a property development project (Isaac et al., 2016). Isaac et al. (2016) use London's Homes and Communities Agency (HCA) as an example and state that when there are development proposals for big greenfield or brownfield developments, the HCA becomes the implementing agency, the Greater London Authority. The HCA is also a facilitator between the private and public sectors and creates a private-public partnership. The HCA is also seen taking a financial institute's role by allocating start-up funding to small enterprises or disturbing grant and loans to low-income citizens.

There are two types of funding institutions in property development: commercial banks that offer short-term loans, and the second is corporate property investors, which have long-term interests in

the investment performance of property development (Isaac et al., 2016). Corporate funding institutions can also be referred to as financial institutions, including pension funds and insurance companies (Ibid.). Financial institutions are more inclined to employ a property developer as a project manager for them to carry out the work to be done. Isaac et al. (2016) describe that during these conditions, the financial institution will have sustainable control over the developer decision-making. Consequently, the financial institution is more likely to lower profit margins due to its involvement in the project.

2.4.3 Types of Property Development

According to Botha, Adendorff, and Collier (2016), property development can be described in its broadest sense as any activity that changes the state of land and can be identified under the following three categories: erection of new buildings, demolition of existing buildings and their replacement with new buildings, and improvement of existing buildings by improving their state of repair. These types can be brownfield development, residential development, commercial development, and mixed-use development.

Adams, Disberry, Hutchison, and Munjoma (2017) explain that brownfield development previously used land or areas of industrial or commercial facilities to upgrade. These developments can require less investment, especially by the state due to building on sites with existing infrastructure. These developments can lead to less planning time required, and the permission required to start is easier to attain. However, brownfield developments can create the negative environmental issue of contributing high levels of pollution. This can incur a significant expense for the developer in terms of rectifying the development in order for it to meet the necessary environmental standards (Ibid.).

Residential development is mainly for living purposes. Residential development has the highest demand of all categories, in normal or abnormal market conditions, as everyone has the fundamental right to adequate and affordable housing. When land is designated as residential, several factors must be considered to ensure that it attracts potential homeowners or tenants. Castro-Prietoac, Martinuzzi, Radloff, Helmers, Quiñonesc, and Gould (2017) mention that the

right soil conditions and security are key factors to consider when determining the right piece of land for a residential development. Nevertheless, developing a piece of land in the wrong area or at the wrong time in the property market could be risky and costly (Ibid.).

Murphy (2017) describes commercial development as buildings or land developed to generate profit, either from capital gain or rental income; at the same time, this type of development is well-situated around economic hubs and transport nodes of significant cities. The benefits to this category are that, in general, they generate higher rent per square metre, compared to residential developments. However, commercial development requires a more advanced implementation level. The developer needs to handle multiple and long-term leases concurrently, while maintaining unique building spaces, such as shopping centres or office buildings regarding their public safety concerns (Ibid.).

The shift is towards a mixed-use development that is more integrated and connected, better served as an economic, environmental, and social model for developing cities. The World Economic Forum (2017:5) lists the solutions mixed-use developments can achieve, such as:

- Integrated, digital urban planning, transparent land-use planning, monitoring and management, and clear property rights allow for the development of shared spaces.
- Denser, integrated, and mixed-use communities close to transport nodes, e.g., transit-oriented development.
- Multifunctional buildings are optimising floor space 24/7.
- Next-generation building codes using digital design and nanomaterials to radically reduce embodied carbon in production.
- Just-in-time off-site, pre-, and modular fabrication improving construction efficiency and flexible, reusable building parts.
- Smart residential and commercial building management reducing costs of inefficient energy and water use.

2.4.4 Sustainable Property Development Characteristics

Wilkinson and Sayce (2015) point out the characteristics of evaluating whether a property development is considered 'sustainable'. Furthermore, they briefly note what developers control and contribute to property development in terms of sustainability. These characteristics can be land use, urban form, and urban quality; environmental protection and enhancement; location and transport; and resources use.

Urban design/place-making: “The creation of spaces which inspire individuals and encourage and facilitate safe pedestrian movement and that link logically and respectfully to their contexts complementing existing features are all qualities which will not only make a development successful economically, but which will promote longevity and hence sustainability,” (Ibid.:10).

Reuse of land and buildings: The preference for using brownfield sites over greenfield sites is accommodated in some countries' spatial planning policy. Wilkinson and Sayce (2015) state that the reuse of previously developed land can reduce dependency on transport and ignite more compact settlements. "It is not just land reuse which is a sustainability consideration; much of current thinking is the promotion of retrofit and refurbishment of buildings," (ibid.:11).

Pollution to air, water, and land: Wilkinson and Sayce (2015) state that the initial construction activates, and ongoing building activities create harmful pollutants to humans, wildlife, and land; therefore, for a development to be deemed sustainable it must consider practices that minimise, mitigate, or avoid the creation of harmful emissions during construction activities and the period of ongoing building operations.

Location and access: Wilkinson and Sayce (2015) express that successful property development is linked to successful locations; however, accessibility is a fundamental element within the general location characteristic. “Access via a variety of modes of transport is increasingly important to provide flexibility if use[d] in the future and in the light of planning policies favouring public transport, although this will depend on the type of development and its overall location,” (Ibid.:12). Wilkinson and Sayce (2015) continue to state that access to local facilities will be crucial to office employees. This contributes to qualified young professionals' favourable attraction due to greater proximity and accessibility to facilities, such as neighbourhood retail stores, restaurants, gyms,

and schools. “Some of the issues of proximity to local amenities may be overcome by including these within the scheme, but a lifestyle on spending the entire working day within the confines of a single building is increasingly recognised as unhealthy both physically and mentally,” (Ibid.:12).

Energy-efficient design: According to the Department of Environment and Climate Change NSW (2013), energy efficiency is the most vital component in improving the characteristic of resource use in sustainable buildings. Because it is a measure that is used to reduce carbon dioxide emissions, mitigating the impacts of global warming and climate change (Ibid.). Lastly, Wilkinson and Sayce (2015) also mention that developers have adopted energy-efficient practices to use new technologies to avoid energy waste and track energy consumption during the occupation.

Renewable energy: “Renewable energy (solar, wind, water, biomass, ground and air source heat pumps) has the dual benefits of being both zero carbon and perpetual, depending on climate conditions. It can either be captured for use in grid systems for wide distribution or produced on-site,” (Wilkinson and Sayce, 2015:13).

Low impact building materials: According to Wilkinson and Sayce (2015), the materials’ environmental impact must be considered when designing a building. “Therefore, the minimization of finite resources is a sustainability ambition and the substitution of finite resources with materials that be reused or recycled, thus prolonging the life cycle and reducing the burden of materials sources,” (Ibid.:13–14).

Minimising waste to landfill: In recent years, the growing concern of material waste going to landfill sites has increased. Wilkinson and Sayce (2015) recommend that waste be reduced in the design phase by specifying which material can be reused or recycled, and thinking ahead to ensure that material can, in life, be used. Waste can also be reduced during the construction phase by acceptable working practices, such as off-site and on-site manufacturing and waste sorting (Ibid.).

2.4 Conclusion

This chapter has provided an overview of the literature relevant to this research. It is interesting to note that the characteristics associated with the three theories are very similar, and it led to a discussion of close repetition in all characteristics of the sub-sections in each theory. A fundamental consolidation of the corridor development is that it emphasises and promotes a mixture of land uses along the corridor, provides different modes of transportation, and provides an integration of promoting more intensity in the movement and accessibility. The core function of transit-oriented development is the concentration of transportation within a city expansion by implementing long transportation, routes utilised by a bus rapid transit system; and to lead to the mitigation of private car ownership, long-distance travelling and the cost of travelling within that city. Lastly, property development is focused on attention to detail and judgement that guides developers, and in the case of this research, it would get the best densification and still meet their financial and social obligations and responsibility.

Chapter 3: Research Methodology

3.1 Introduction

This chapter provides a discussion of the processes and research methods utilised to approach the research questions. It begins by explaining the research strategy on which this research is based: document analysis research; then it explains the sequence in which the research was conducted, and lastly highlights the ethical considerations for the research.

The research focuses on understanding the theoretical aspects of corridor development, transit-oriented development, and property development, before it commences with implementation analysis. The type of research that is best suited for this is primarily qualitative research. An outline of the type of research and data required and from whom it was needed is provided. The information required with regards to the sub-questions of the report is based on the theories of corridor development; transit-oriented development, and property development.

3.2 Research strategy and sequence

The first set of data required was document analysis, a useful tool for data checking, and often combined with analysis of project records and interviews. According to The Monitoring and Evaluation Toolkit (n.d.):

This technique can be used in theory-based evaluations. By analysing critical documentation and reports relating to your project and its problem, you can better understand the context and the factors that are causing the problem. You can also triangulate your findings and check your assumptions by asking whether they are borne out in the documentation.

The document analysis for the research comprises two elements: the spatial policy analysis and the case study's implementation analysis (Strategic Area Framework: Empire-Perth Development Corridor). The policy analysis is based on policies and frameworks in the City of Johannesburg,

and they were analysed against the Strategic Area Framework: Empire-Perth Development Corridor policy to understand how these spatial policies present in the City of Johannesburg's influence and integration of one another for policy implementation:

- Joburg 2040: Growth and Development Strategy
- Integrated Development Plan
- Spatial Development Framework
- Corridors of Freedom
- Strategic Area Framework: Empire-Perth Development Corridor

The second set of data required was derived from a detailed case study's implementation analysis as mentioned above, focusing specifically on the Strategic Area Framework Empire Perth Development Corridor policy. Implementation analysis is an essential component of impact evaluations. According to *Mathematica* (n.d.), "the descriptive findings of an implementation analysis can help contextualise the impact findings and generate hypothesis about why the program did or did not a positive impact." Yin states that (1994:14) a case study is "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not evident."

However, to successfully answer my research question and sub-questions, the case study was further enhanced through semi-structured interviews. According to Russell (2018:62):

Semi-structured interviews are the most common type of interview in qualitative research and entail a limited number of prepared questions related to issues that the interviewer wishes to examine. As the use of broad questions, the interviewer wishes can probe further with additional questions and steer the respondent in a direction likely to address the research question.

The third set of data was obtained from in-depth key respondent interviews with three main groups: CoJ officials, consultants/professionals, and property developers. These three groups were selected as they were the main role players in the spatial planning policy implementation on the Empire-

Perth Development Corridor. The final Strategic Area Framework for the Empire-Perth Development Corridor was used in this research report to understand how the Empire-Perth Development Corridor policy implementation was influenced and integrated by the CoJ's spatial policies and officials, consultants, and property developers. The Empire-Perth Development Corridor was analysed based on theories and spatial policies of the CoJ. The research will also utilise secondary sources of data, such as newspaper articles, past dissertations, article journals, academic journals, and spatial planning reports (where necessary).

In this research report, the primary research method was qualitative in its approach. It was achieved by performing semi-structured interviews with key respondents. Interviewees were chosen according to their affiliation with the policy implementation on the Empire-Perth Development Corridor, such as the City of Johannesburg officials and agents. Furthermore, interviews were conducted with the property developers who erected private developments during the Empire-Perth Development Corridor implementation, to gain insight into their experience and for further information on the developments. Finally, interviews with consultants/professionals were carried out for their specific involvement and general views on the Empire-Perth Development Corridor policy implementation. The research will also use GIS, remotely sensed data, and any complementary reports received from interviewees where necessary.

Table 3. 1: List of interviewees

Organisation	Interviewee Name	Position	Focus
City of Johannesburg: City Transformation and Spatial Planning	Dylan Weakly	Senior Specialist: Strategic Urban Planner	Policy and Implementation in the City of Johannesburg
Atlas Studios	Jonathan Gimpel	Director: Developer and Architect	Residential Development in the Empire-Perth Development Corridor

			(New Braamfontein Lofts)
Atlas Studios	Ariella Gimpel	Architect	Residential Development in the Empire-Perth Development Corridor (New Braamfontein Lofts)
Africrest Properties	Anonymous Developer 1	Property Developer Administrator	Mixed-use Development in the Empire-Perth Development Corridor (Stanley Studios)
City of Johannesburg: City Transformation and Spatial Planning	Minenhle Maphumulo	Strategic Spatial Planner Officer	Policy and Implementation in the Empire-Perth Development Corridor
Sticky Situations	Jennifer van den Bussche	Director: Project Manager	Consulting for City of Johannesburg in Empire-Perth Development Corridor
Dreyer Dynamics	Wynard Dreyer	Director: Civil Engineer Consultant	Consultant on the Empire-Perth Development Corridor
Johannesburg Development Agency	Sharon Lewis	Former Executive Manager: Planning and Strategy of Corridors of Freedom	Implementation of Empire-Perth Development Corridor

Abland	Tinus Potgieter	Head of Department: Town Planning	Commercial Development in The Empire-Perth Development Corridor (Hill on Empire)
The University of the Witwatersrand	Hannah Le Roux	Associate Professor	Consultant on the Empire-Perth Development Corridor
City of Johannesburg: City Transformation and Spatial Planning	Monyake Moteane	Former Strategic Spatial Planner Officer	Policy and Implementation in the Empire-Perth Development Corridor

3.3 Ethical considerations and clearance

The current COVID-19 pandemic has made document analysis an adequate method to conduct the research. The South African Government's initial national lockdown restricted movement and activity, limiting access to the Wits Library and the opportunity to conduct face-face interviews. Nevertheless, the vital documents can be retrieved through the use of email and employing digital media platforms such as Skype or Microsoft Teams to conduct interviews with key respondents. However, after the 2020 winter season passed, the country started to relax the lockdown level restrictions allowing the research to analyse the Empire-Perth Development Corridor from a physical perspective. Also, the researcher could conduct face-to-face interviews and access developments in the area.

The research does not deal with any vulnerable or groups or an aspect that raises significant ethical concerns. Therefore, there are no severe ethical aspects to consider beyond permission to utilise information and consent to the data collected through key respondent interviews.

The interviews required prearranged voluntary consent from the interviewees, along with the prior provision of information regarding the nature and content of my research and how I planned to use the information they provided (see Appendices 2 and 3 – Participation Information Sheet).

Furthermore, confidentiality and anonymity agreements were provided to respondents should they have opted for this, thus ensuring their identity and information were protected (see Appendix 4 – Consent Form). However, all respondents consented to be recorded during the interview for their identities to be used, and their interviews to be quoted in this report. The information attained from the interviews has been used for academic purposes, and none of the informants has been put in any compromising positions due to the information they provided. The Wits Human Research Ethics Committee (HREC Non-Medical) provided the required ethical clearance in August 2020 (See Appendix 1 – Ethical Clearance Certificate).

3.4 Conclusion

The chapter outlined an analysis of the key definition terms, research methodology, research methods and design, data collection techniques, sampling procedures, data analysis methods and ethical considerations in detail with academic literature writing underpinning the process. Through this process, it was identified that a qualitative approach with a combination of document analysis and case study analysis would best suit the collection of data through semi-structured interviews.

Chapter 4: City of Johannesburg: Spatial Planning Policy Analysis

4.1 Introduction

The research focuses on the Strategic Area Framework (SAF) for the Empire-Perth Development Corridor (EPDC). However, from a spatial planning policy perspective, the SAF does not exist in isolation to other planning levels, although it is considered the critical component within other broad spatial planning policies in the CoJ. This chapter is divided into two sections. The first section is illustrated in Figure 4.1 analyses other CoJ spatial planning policies that contributed to SAF EPDC, by arranging the city policies' scale, the specific scope of each of the policies, and their relationship to one another in achieving an effective package of plans.

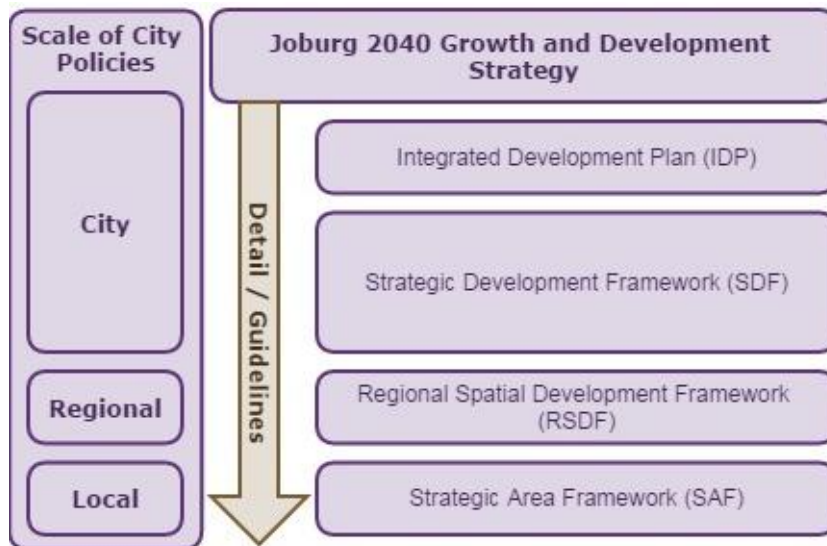


Figure 4. 1: The interrelationship between the different policies at varying scales in the CoJ, as guidelines and details change (Simões, 2014:48)

The second section of the chapter examines how the SAF for the EPDC is a steppingstone in achieving the overall CoF spatial vision, by focusing on the CoF implementation plan through its required elements of institutional mechanism and developing strategic interventional and key actions for it to truly succeed.

4.2 Joburg 2040 Growth and Development Strategy

The CoJ developed the Growth and Development Strategy 2040 (GDS) to align with national objectives, and more specifically, to enable the metro to achieve a more resilient, sustainable, and livable society for its citizens (CoJ, 2011). The GDS has nine themes, including: “livable communities, resource sustainability, health and poverty, governance, transportation, community safety, the environment, economic growth, and the smart city,” (Ibid.: 11). Thus, the GDS can be seen as the CoJ broad and futuristic vision for its society. This is because the GDS is neither a statutory plan nor spatial policy, as it does not indicate where and how the vision will be achieved. However, it is seen as a primary guideline for medium-term statutory and spatial plans of, “different sectors in the city (transportation, housing, and infrastructure) that provide strategic directions of the medium-term plans within the city,” (Ibid.:8, cited in Simões, 2014:49).

Six main principles reinforce the GDS, including: “eradicating poverty; building and growing an inclusive economy; building sustainable human settlements; ensuring resource security and environmental sustainability; achieving social inclusion through support – enablement; and promoting good governance,” CoJ, 2011: 34–35). The GDS has four outcomes that it aims to achieve by 2010; these include (Ibid.: 9):

- Outcome 1: Improved quality of life and development-driven for all
- Outcome 2: A resilient, livable, sustainable urban environment – underpinned by infrastructure supportive of a low-carbon economy
- Outcome 3: An inclusive, job-intensive, resilient, and competitive economy
- Outcome 4: A leading metropolitan government that proactively contributes to and builds a sustainable, inclusive, locally integrated, and globally competitive Gauteng City Region

As a result, all the above principles and objectives are committed to reaching this vision (Ibid.: 2011:35): “Johannesburg – a World Class African City of the future – a vibrant, equitable African

city strengthened through its diversity, a city that provides real quality of life; a city that provides sustainability for all its citizens; a resilient and adaptive society.”

According to Simões (2011:49), the GDS is a ‘prerequisite’ strategy that works alongside the city's medium-term development strategy – the Integrated Development Plan (IDP). Every five years, the GDS analyses new opportunities and challenges encountered by the CoJ during that period and evaluates the long-term strategy of its principles and outcomes to improve the city (CoJ, 2011). Therefore, the GDS is a vital mechanism, “to develop an open-ended and holistic city strategy that provides a ‘rough consensus’ of strategic choices, to guide future development,” where the strategies are used to, “meaningfully inform a range of long-term strategic plans and programmes,” (Ibid.:6).

The GDS has specifically identified public transportation as a tool to decrease privately-owned passenger automobiles in the CoJ. The GDS stresses effective and efficient alterations to the current spatial form of apartheid-era CoJ, by investing and scaling up mass public transportation to achieve a desirable city that improves connectivity linkages for citizens who still reside on the peripheries of the city and in disadvantaged communities (CoJ, 2011). The GDS addresses this issue with a vision of “ensuring the affordability of municipal services, public transport and social facilities,” (Ibid.: 33). Hence, Simões (2011) continues by stating that GDS highly advises that the provision of the Rea Vaya BRT system gives “opportunities for corridor development and transit-oriented development,” with multiple nodes already identified recognised (CoJ, 2011:71).

4.3 Integrated Development Plan

According to the CoJ (2011), the Integrated Development Plan (IDP) is a municipal policy implementation that occurs every five years, and it plans the facilitation of achieving both medium-term goals within those five years and the long-term goals for the 2040 Joburg Growth and Development Strategy. In other words, the GDS provides a futuristic vision for the City of Johannesburg, and the IDP is the tool that delivers the GDS ambitions. Therefore, the GDS, “frames the IDP, charting long-terms ambitions, strategies and overarching decisions relating to prioritised areas of focus,” (CoJ 2011:5).

The 2013/2014 IDP review begins with the statement on the cover page, “Corridors of Freedom: Re-stitching our City to create a new Future”, therefore, indicating that the CoF policy is the principal objective in this IDP policy (CoJ, 2013a:1). On the second page of the document, the IDP’s vision is the same as the GDS policy’s, highlighting that the IDP is facilitating two spatial planning policies within its incremental five-year period plan.

The main approach to achieve the spatial vision is by recognising the key broad infrastructure categories required for corridor development, such as water and sanitation, waste, energy, electricity, transport, and social infrastructure (CoJ, 2013a). Further, it would achieve this by undertaking “ongoing expansion of the Rea-Vaya BRT,” as well as, “restructuring and integration of public transport modes,” to achieve transit-oriented development in the CoJ (Ibid.:36). Lastly, the City is committed to ensuring that all city households have access to essential services and amenities within their property development division (Ibid.). Therefore, there needs to be a drastic shift in priorities, such as redundant construction and maintenance of infrastructure, roads and property development services and amenities for upper-market development nodes, and more attention towards the construction of ‘all-inclusive developments’ for any resident with any income bracket in any area of the city.

The GDS developed four long-term outcomes; however, the most relevant is outcome 2. As seen in the IDP 2013/2014 review report, the plan aligned its development priorities with those of outcome 2 of the GDS. According to CoJ (2013a:54, cited from Simões, 2013:52), “one of the priorities is to achieve spatial transformation of a compact city by improving infrastructure and economic growth projects driving transit-oriented development.” Simões (2013) continues by stating that the TOD plays greater importance in the 2013/2014 IDP review. TOD is seen as the instrument that can unite “the urban form together through mass transit (goods and people) along corridors that strengthen the connectedness of different parts of the city,” (CoJ, 2013a:91). The TOD major priority in the 2013/2014 IDP review can also be seen as a tool that activates GDS outcome 4. “These corridors will be developed to support inclusivity (varied residential typologies, tenure options, income groups) and high intensity mixed-use developments to reduce commute times and cost,” (Ibid.:91.).

The 2013/2014 IDP review mentions the corridors identified in the Corridors of Freedom in the medium term and identifies the Empire-Perth Development Corridor in relation to this research. According to the CoJ (2013a:92), all the identified corridors will consist of “mixed-income housing, schools, offices community facilities, cultural centres, parks, public squares, clinics and libraries,” where the TOD, “will change entrenched settlement patterns in the City” that will “consist of high-rise residential developments growing along with transit nodes, gradually decreasing in height and density as it moves further away from the core.” This is evident in the 2015/2016 IDP review report cover page, which highlights the Corridors of Freedom as one of the main flagship projects implemented to achieve the GDS’s outcome visions. According to the CoJ (2015:16), in 2016, the City would have achieved the following:

- Eighty percent implementation of the CoF programmes aligned to improving density and mix priority precincts;
- Priority corridors implemented, including Empire/Perth, Louis Botha and Turffontein corridors;
- Land assembly for priority corridors; and
- Compact, integrated living spaces supported by infrastructure investment.

4.4 Spatial Development Framework

The CoJ (2013a) states that the Spatial Development Framework (SDF) provides policy guidelines that help implement development strategies to combat the city's current development challenges. The SDF specifically, “provides the policy basis for assessment and determination of development proposals and applications that fall outside the scope the prevailing Town Planning Schemes,” that provide a “citywide perspective of spatial challenges and interventions within the City,” (CoJ, 2010:2, cited from Simões, 2013:54).

The most current SDF policy is 2016/2017, which was approved in July 2016, and is titled “Spatial Development Framework”, reiterating its connection and contribution to the GDS broader visions and outcomes. According to the CoJ (2016:14):

The future polycentric Johannesburg will bring jobs to residential areas and housing opportunities to job centres, rather than simply transporting people between the two. It will create complete nodes where people can live, work, and play, efficiently connected by public transport. It will bridge spatial and social barriers and build a framework for a spatially just city (shown in Figure 4.2).

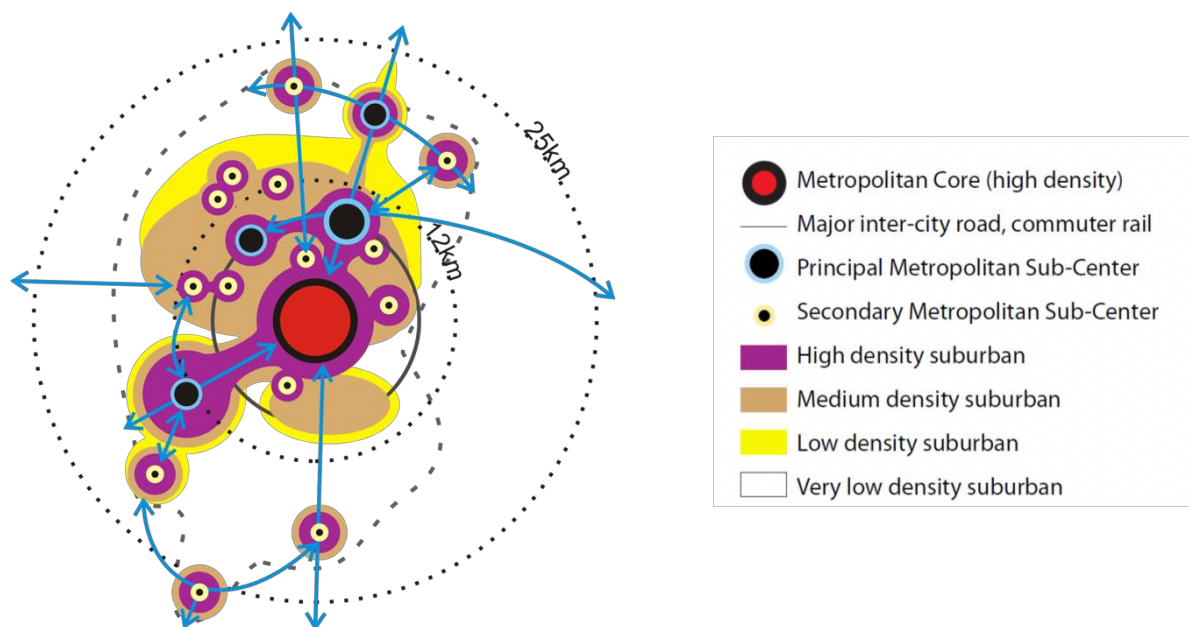


Figure 4. 2: Johannesburg Future City Model: Compact Polycentric Urban Form (Ibid.:14)

The 2016/2017 SDF policy has identified five concepts to facilitate the spatial transformation needed in the city. Of these concepts, there are two concepts that are most relevant. These are “Compact city – combining density, diversity, proximity and accessibility, reducing distances, travel times and costs, bringing jobs and social amenities to single-use, marginalised residential areas, reducing energy consumption and infrastructure costs,” (Ibid:14), which can be seen as a policy guideline to the second concept, which is the “Connected city – enhancing public transit and ICT infrastructure at provincial and urban scales to re-connect the city, starting from ‘the Corridors of Freedom’ to the street and neighbourhood-level barrier,” (Ibid:14), which can be seen as an implementation guideline. Thus, combining these two concepts with the most significant importance to this research is policy-implementation analysis.

One of the central themes of the 2016/2017 SDF, which is relevant to this research, is consolidating, “appropriate growth and development opportunities around existing and future transport nodes, starting with the Corridors of Freedom,” (CoJ, 2016:99).

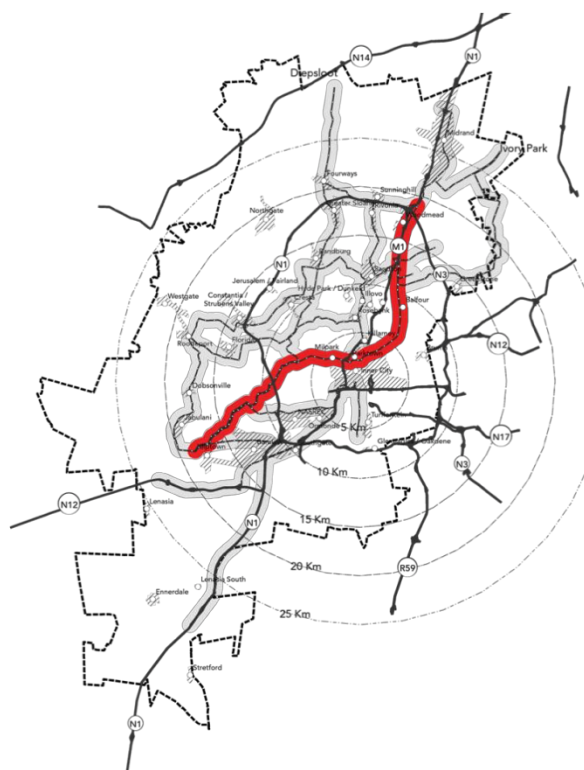


Figure 4. 3: Conceptual Representation of the Soweto – Sandton Corridor (Ibid.:99)

Thus, for the CoF to fully support the ideology of compact and connected cities, they must distinguish themselves from customary transport corridors, which have a single objective, of serving as a mass-transit movement function, or where development should not occur along their entire length. Therefore, the SDF 2016/2017 emphasises that the CoF’s future-built environment must be a “mixed land-use type dominated by high-density accommodation options, supported by officials and social facilities, retail and commercial development and opportunities for leisure and recreation,” (Ibid.:99).

According to Simões (2013), the Regional Spatial Development Framework (RDF) supports policies that provide the overall structure for an area defining key structuring elements and broad

zones. In essence, the RSDF translates the SDF spatially into a clear framework for a specific region, thus, requiring a detailed assessment of the overall area across various sectors. It is essential to recognise the RSDF as a spatial planning policy and its relationship to the SDF; however, the RSDF review has not been released for 2016/2017. Therefore, the Region B 2010/2011, which the Empire-Perth Development Corridor falls underneath, does not comprise all the elements emphasised in the GDS, IDP, SDF, Corridors of Freedom, and the Strategic Area Framework. Since the reviewed Region B RSDF policy is not available, it will not be discussed in this research.

4.5 Corridors of Freedom

The CoF is a more integrated and developed spatial planning vision for the CoJ based on the concepts of corridor development, transit-oriented development, and property development. The CoF's fundamental characteristics are that they “will consist of high-rise residential developments growing around transit nodes, gradually decreasing in height and density as it moves further away from the core,” (CoJ, 2013b:2).

The Corridors of Freedom and their priority precincts will be a focus for the City's investment programmes over the next decade, which include (Johannesburg Development Agency (JDA), 2014:9):

- Investing in bulk infrastructure to accommodate a significant increase in development densities
- Releasing and developing municipal land to achieve the precinct development vision
- Expanding and improving transit infrastructure and facilities
- Investing public funds in public environment upgrades and provision of public amenities and community facilities to serve larger and more intensive mixed-land uses
- Capturing the value generated through proximity to improved transit facilities by introducing special rating districts where appropriate
- Implementing place-making interventions to ensure that the precincts are activated

As stated, the CoF's spatial vision is in line with the Joburg 2040 Growth Development Strategy, and it is seen as the implementation policy that takes those principles and objectives and translates them to spatial and physical interventions. Crankshaw (2017) pinpoints that due to the state's limited resources' capacity, the CoF is designed explicitly for the CoJ to strategically invest in essential bulk infrastructure, producing an environment where private investments are more likely to contribute. "Thus, the state – as an enabler – further needs complementary policies for this strategy to be successful," (Ibid.:27).

The CoF uses the TOD concept to help restrict the city to create more accessible and quicker connections between residents' jobs and their homes. As a result, the CoJ pays close attention when implementing TOD infrastructure, as they use location surroundings and their use of public transportation services, such as the Rea Vaya, is a critical success factor to increase the mobility of people safely and affordably along the corridors (CoJ, 2013b). The CoJ initially identified three corridors' developments and numerous potential connections routes to key nodes of importance that will transform the city, and which were identified as medium to long-term spatial visions. The main planning concepts used to develop spatial vision are that "the most efficient urban form is compact, mixed land-use with an extensive public transport network that includes high-intensity movement corridors," (Ibid.:4).

The development corridor selected for this research report – Empire-Perth – stretches from Soweto to the CBD, consequently covering both previously disadvantaged areas and economic opportunities offered by the inner city. CoF policy implementation emphasises environmentally friendly development considerations regarding, "the built environment, urban layout renewable materials, waste recycling, efficient use and recycling of water, irrigation and energy management and generation," (JDA, 2014:79). The Empire-Perth Development Corridor provides guidelines, regulations and instructions for various developments and design elements. It states that the "architectural and urban ethic aims to create a built fabric that responds to the principles of 'sustainable' and 'green' architecture," (Ibid.:69).

4.6 Strategic Area Framework: Empire-Perth Development

According to the Strategic Area Framework (SAF) for the Empire-Perth Development Corridor (EPDC), “the Strategic Area Framework provides the basic (spatial) mechanism for planning and implementation of the Corridors of Freedom. The document outlines the desired spatial response to the intent of the Corridors of Freedom vision, and the projects and programmes required to realise this spatial vision,” (JDA, 2014:14). Thus, reinstating the first statement mentioned in this chapter, that the “SAF does not exist in isolation to other levels of planning, but it considered rather as a key component within a broader package of plans,” (Ibid.:18).

The main aims and priorities discussed in this section of the document will influence the focus used in the implementation section of the SAF. The SAF for the EPDC begins by outlying all the elements and approaches presented in the CoF policy, discussed previously. The JDA (2014:8) distinguishes that the SAF for the EPDC is focused on an ““approach to re-stitch the city together, using the philosophy of Transit Oriented Development” and “corridor development to transform space.”

The SAF provides a discussion of the characteristics of a corridor that facilitate their growth in an urban context (Ibid.:10):

- Corridors are fundamentally origin and destination driven.
- Corridors are generally made up of a series of multi-stranded movement systems, predicated on some form of public or mass transit, with stations within walking distance.
- The streets that link the different movement systems together, the “rungs” of the ladder, are integral to the broader corridor system, often developing as “high streets”.
- The intersection points of cross streets and the major corridor elements become significant nodal areas, with the propensity to become major metropolitan and regional nodes, depending on the system's generative capacity at these points.
- The proposed BRT systems, and related forms of transport, will form the backbone to the corridors, adding significant economic and social value.
- The development of the study area needs to be directed in such a way as to attract private investment, while not compromising the public realm and associated social amenities.

- The study area will be approached on both a macro and micro scale, analysed through the larger-scale forces that draw land uses into the corridor, and finer-scale forces of attraction, which draw users between one point and another.

The CoF policy illustrates great importance on transit-oriented development in the SAF for the EPDC. The framework uses it to influence the Rea Vaya BRT System's implementation in redeveloping the existing urban form to accommodate transit nodes that provide greater density and mixed-land use. Nevertheless, the JDA (2014) expresses the dire need for a pecking order of TOD centres to be made available to check if their success is genuinely viable, as not all the transit hubs and nodes have the same potential.

In most cases, successful TOD is characterised as (Ibid.:13):

- A vibrant mix of land uses, including residential, employment, social services, and retail activities, stimulating economic activity and significant provision for public or civic spaces.
- Moderate to higher density, with housing typologies that engage with the public environment.
- Prioritised pedestrian orientation/connectivity, including safe neighbourhoods designed for walking and cycling with sufficient facilities and attractive street conditions.
- Transportation choices, but with the discouragement of the use of private vehicles.
- A road network laid out in the form of a topologically open grid.
- Convenient transit stops and stations; extend to an easy walking distance radius of 400 m–800 m.

In essence, the SAF for the EPDC aims to achieve multiple outcomes able to provide long-term advantages. Initially, the framework can be seen focusing on improving fundamental urban efficiencies by providing “viable public transport service; reduced car dependency and shorter trip lengths; more people closer to work, shopping, and leisure opportunities; efficient service provision; accessibility to economic and social opportunities,” (JDA,2014:16). Thus, the framework moves on from its real success and becomes a facilitator and enabler of social and

spatial transformation by creating, “connected neighbourhoods; integrative development that a benefit area the limit of the study area,” (Ibid.:16).

The Precinct Plan is one of the supportive policies that provide specific design details for local areas, nodes, or corridors, and it falls under the EPDC framework policy. According to the JDA (2014:15), it, “extends beyond land use guidance and deal specifically with overall urban form and public space intentions. Maybe re-referred to as an Urban Design Framework and include [an] Action or Implementation Plan for projects within the study.” In essence, the Precinct Plan spatially translates the SAF for the EPDC into a clear framework for a specific local area, thus requiring a detailed assessment of the overall area across various data indicators.

Characteristics of a Precinct Plan Policy Framework (JDA, 2014:15):

- Requires a detailed base data, including topographic conditions, such as a land audit
- Should include preliminary traffic layouts
- Delivers detailed use, desired urban directives, building guidelines and public space intentions

It is essential to recognise the Precinct Plan as strategic spatial planning and the importance of its relationship to the EPDC, however, there are numerous framework versions for the different local area, which fall under the EPDC. The SAF for the EPDC has identified a total of 16 local areas (although this is not an exact number). However, the research will focus on areas where policy implementation of corridor development, transit-oriented development, and property development has occurred in line with the SAF for the EPDC.

4.7 COF Implementation Plan through the SAF for the EPDC

According to the SAF for the EPDC, although the overall implementation mechanism is still in the early stages of unfolding in order to reach its spatial vision for the CoF, specific projects and a proposal have resulted from this physical intervention by putting forward a specific range of functional requirements that must be addressed if implementation on the EPDC is to triumph.

These institutional mechanisms include project planning, project implementation, urban management, and development facilitation

4.8 Conclusion

This chapter discussed all the main spatial policies in the CoJ, namely the Joburg 2040 Growth and Development Strategy, Integrated Development Planning, Spatial Development Framework, Corridors of Freedom, and Strategic Area Framework Empire-Perth Development Corridor. These spatial policies discussed their relevance and importance in the strategic spatial planning policy implementation for the CoJ; their emphasis on public transportation and compact city living being the future for Johannesburg. The policies discussed the importance of implementing corridor development, transit-oriented development, and property development to mitigate spatial segregation, the use of privately-owned transportation, unattractive obstacles reducing private investments in inner cities, and the inconsistent opportunities for ‘live, work, and play’ settlements that currently exist in the CoJ.

As stated before, all these policies primarily brought up the need to focus the development of the city on improving and upgrading mass public transportation through the Rea Vaya BRT system. Secondly, the policies stressed the upgrade of basic infrastructures, such as water and sewer utilities, electricity distribution, social and healthcare amenities, and stormwater drainage to accommodate the corridor's new densification. Lastly, the policies focus their attention by becoming an enabler for maximising land use by rezoning land, speeding the application process, and introducing tax-relief incentives to increase property development activity in the corridor. Thus, the implementation of the transit-oriented development will facilitate compact nodes that provide densification of mixed uses and high-rise residential developments, office buildings, shopping centres, public services amenities, and greenfield parks for recreational activities. All the spatial policies discuss these planning elements, with some policies highlighting their implementation approaches specifically to Corridors of Freedom.

In essence, the SAF for the EPDC was influenced by all the spatial policies discussed in this chapter, in one way or another. The Corridors of Freedom influenced the SAF most fundamentally,

with many of the other spatial policies' planning elements and principles also influencing the SAF. However, several principles were not present in the SAF for the EPDC discussed above, requiring further emphasis in the study area. Nevertheless, the CoJ's spatial policies have done more than influence the SAF for the EPDC; they have also integrated within one another from a hierarchical scale perspective. As one policy goes down the scale, it becomes more detailed and specific for that particular geographical area, through medium-term objectives without losing the fundamental long-term spatial vision for the CoJ. As a result, the most integrated policy to the SAF for the EPDC is the Corridors of Freedom, as the policy stressed for the Rea Vaya BRT System to become the backbone of the CoF, thereby creating and implementing transit-oriented development in the EPDC.

Chapter 5: Strategic Area Framework: Empire Perth Development Corridor

5.1 Introduction

According to the Strategic Area Framework (SAF): Empire-Perth Development Corridor (EPDC) document, the study area has, “the location and regional accessibility of strategic uses along the corridor, such as the media centre of the SABC, the tertiary education centres and its proximity to established economic and business nodes of the CBD, Rosebank, Randburg and Parktown have resulted in the area becoming a sought-after destination attracting a high influx of people,” (JDA, 2014:22). This corridor was identified as a ‘Corridor of Freedom’, not only due to its strategic location, but also due to the potential for mixed-land use intensification, as it has the “potential to restructure the City and bridge the development gap between south and north while creating opportunities for accommodation related to tertiary education and other economic and social intuitions in the area,” (Ibid.:23).

Based on this explanation, the Empire-Perth Development Corridor (EPDC) was identified as one of the corridors of the CoF policy. This chapter will focus on understanding the context and attributes of the EPDC as the study area, in the form of a document analysis research approach. It is essential to understand and analyse the EPDC functions regarding policy implementation of corridor development, transit-oriented development, and property development within the study area to provide a more concise and accurate conclusion and recommendations in Chapter 7. There are four sections in this chapter that cover the EPDC in several divisions. The first section is an area concept assessment, based on connecting the information provided in the literature review by assessing and identifying the related concept attributes of the EPDC towards corridor development, transit-oriented development, and property development. The second section will unpack the theoretical components of the strategic framework plan, by analysing and understanding the EPDC's structuring elements and development guidelines outcomes. The third section is a brief section on the local area implications, where it breaks down the EPDC into its priority precincts. The fourth section covers the proposed implementation plan by considering the capital programme and critical success factors, as it will be utilised in Chapter 6 for the policy implementation observations.

5.2 Area Concept Assessment

As stated previously in the literature review, the CoF is primarily influenced by transit-oriented development principles to develop high density, mixed-use, integrated developmental along transit corridors, interchanges, and stations. The Empire-Perth Development Corridor (EPDC) undertook a comprehensive study seen in Table 5.1's analysis as part of the SAF process, such as the one conducted by Ogra and Ndebele (2015) in framing the '6 Ds' principles (Destinations, Density, Design, Distance, Diversity, Demand Management) for corridor development, transit-oriented development, and property development. The process is elaborated upon in the table below (JDA, 2014:26):

PRINCIPLE	DESCRIPTION	ASPECT TO BE ANALYSED AND IMPROVED
DESTINATIONS	Coordinate transportation and land use by concentrating development along reasonably direct corridors, so that most destinations are 'on the way' to other destinations. When transportation and land use are well coordinated, transit, walking and biking can provide more people with fast, direct and cost-effective access to more destinations.	• Trip attractors • Movement
DENSITY	Encourage more intensive development near frequent transit (transit service that arrives every 15 minutes or better) to enable liveable, walkable, and resilient neighbourhoods. To function well, higher density development should be combined with the other principles of good transit-oriented development, creating a compact community with a connected street network, well-designed buildings and public spaces, a mix of land uses, and managed demand for private vehicle travel. In this corridor, more intense land use will relieve development pressures on suburban and rural areas by attracting development to in the corridor that can be well served by a variety of modes.	• Population density • Housing • Public transport facility
DESIGN	Create streets and public spaces that are carefully designed with the needs of people in mind. The public realm should be safe, comfortable, and inviting for people of all abilities and ages. To achieve these objectives, transit-oriented neighbourhoods have complete streets designed to meet the needs of a range of users, and they provide inviting public spaces that welcome lingering, gathering and celebration. Development in transit-oriented community development also reinforces the distinct history, culture, and character of the corridors' various neighbourhoods using context-sensitive design and enhancing the pedestrian environment.	• Grid analysis • Residential life cycle • Environmental • Heritage • Topography
DISTANCE	Implement complete streets policies and develop a holistic transportation system within the corridor, finding ways to maximize the capacity to move people by developing environments that encourage people to walk, bike and take transit, rather than driving for all trips. A well-connected street network shortens travel distances, making it possible for people to walk or cycle to transit service quickly and conveniently from places they live, work, shop, and play and supporting walking and cycling as everyday transportation options. Implementation of the complete streets network will require coordination between work at street level and the need to consider upgrades to utilities to support new development.	• Road hierarchy • Public Transport • Non-motorised transport
DIVERSITY	Create an internally diverse and vibrant mixed-use community through the provision of a range of housing choices, services and facilities which improve the quality of life for residents and businesses.	• Land use • Social facilities and open space • Housing and population • Travel modes
DEMAND MANAGE-MENT	Develop a comprehensive systems approach to parking and travel demand management. This will include developing the corridor in a way that allows residents of the area to meet many of their needs within the district, avoiding the need to travel longer distances for basic life needs. Combined with the emphasis on high quality, convenient, reliable and competitive transportation choices, these policies can have a wide range of positive benefits, including reducing traffic congestion and air pollution, making better use of existing capacity and infrastructure, increasing traffic safety, and improving public health.	• Network capacity • Travel Demand Management

Figure 5. 1: Focus of the Empire-Perth Development Corridor Concept Assessment (JDA, 2014: 26)

5.2.1 Study Area Key Issues and Opportunities related to Corridor Development

It is fortuitous that the similar strategic assessments identified in the literature review are utilised in the study area; however, what is significant is that the SAF for the EPDC has gone further by providing key areas of assessment. The outcome of this process is summarised as Key Issues and Key Opportunities (Ibid.:27):

Key Issues:

- There are several large properties with fenced-off boundaries such as the university campuses and hospitals, acting as barriers between northern and southern portions of the corridor, severely affecting trip distances and the movement patterns of pedestrians.
- The degradation of certain older areas currently serves as a detractor for investment.
- BRT trunk route versus high vehicle mobility versus accessibility – the functionality of Empire Road as a high order road (mobility). There is a need to balance mobility and accessibility functions of the corridor along Empire-Perth.
- North-south linkages are very weak due to the historical development of the corridor to the north of the mining belt and rail network.
- Pedestrian infrastructure along the BRT trunk route is visibly inadequate, despite new improvements to this network.

Key Opportunities:

- Proximity to different transit stations and routes (Gautrain, Rea Vaya, Metro Rail) linking local and regional focus.
- Strategic location – proximity to the CBD and the diversity of land uses within the area means travelling distances support non-motorised and public transport.
- Agglomeration of numerous employment opportunities, excellent social and health facilities promote live, work, and play and TOD principles.
- Under-development in large proportions means that the future can relate better to the streets and improve walkability and safety in public environments.
- The dominating low-density residential areas provide an opportunity to intensify development and re-define built form.
- The corridor can create an intense mix of uses and growth opportunities to support the educational and institutional uses.
- The area within the City context elevates the potential to restructure the City and bridge the development gap between south and north, while creating opportunities for accommodation related to tertiary education and other economic and social intuitions in the area.

- Public transport and non-motorised transport are already established transport modes, i.e., they accommodate 64% of all trips to work and school. There is, therefore, an opportunity to establish a more balanced street network and improve ridership.

From the above key issues and opportunities, comprehensive analysis using the ‘6 Ds’ corridor development framework identified where its strengths and weaknesses for the study area. For the SAF for the EPDC to become a thriving development corridor of the ‘Corridors of Freedom’, it is noted that the key issues must be initially addressed to complement the potential opportunities it possesses before it progresses and not hinder any roll-out of developmental initiatives in the study area. Furthermore, the outcomes must be highlighted because most of the key opportunities are still in their dormant state. It therefore means these opportunities will not automatically occur; however, consistent, and precise planning, cooperation, and implementation are required to unlock their complete potential characteristics before they become vital issues from misdirected interpretation.

5.2.2 Optimising BRT

According to the SAF for the EPDC, minibus taxis and rail transport have the most significant use of the existing public transportation mode share; however, BRT stations are the key generators of potential growth, and it is around these points that the SAF needs to identify and unlock their inherent potential (JDA, 2104).

The Empire-Perth Development Corridor forms part of Phase 1B of the Rea Vaya Bus Rapid Transit System. Empire-Perth will function as the trunk route along which services will operate between Soweto and the CBD, connecting with the existing Phase 1A service. Along this trunk route, buses will operate within the roadway's median, with segregated rights of way at a peak hour frequency of one bus per minute (Ibid.:29).

With the above-mentioned statement, the SAF for the EPDC (JDA, 2014) stresses that this public transport spine should be supported by complementary modes of transport, including conventional bus networks, taxis, as well as the commuter rail network that traverses the corridor area. There

are five supporting public transport systems in the EPDC: Gautrain Feeder and Distribution Bus Services, minibus taxis, rail services, Non-Motorised Transport (NMT), and Metrobus.

The Gautrain Feeder and Distribution Bus Services are located on the Parktown and Braampark areas, where they link to the important office and business nodes in Parktown and the Charlotte Maxeke Hospital (with Park Station) (Ibid.). According to the JDA (2014:32), it is essential for, “integration between the Rea Vaya and Gautrain Services as a large number of Gautrain users from Park Station could potentially access the numerous economic opportunities and institutional and educational facilities in the corridor utilising public transport.” The SAF for the EPDC (JDA, 2014) states that once the infrastructure is completed for the 1B Rea Vaya route, all existing taxi services operating on Empire Road will merge with the operational activities and associations of the BRT Operating Entity. As “the long-term role of taxi services within this corridor is likely to be that of localised feeder service, as the BRT trunk route will to a degree be a duplicate the services currently servicing the study area, and a strong aim of the system will be the removal of competing services and the creation of complementary, supporting services,” (Ibid.:32).

Rail services focus on integrating and improving linkages between rail, and the Rea Vaya stations are a crucial element in supporting public transport systems mechanisms, as this will increase the persuasion and reasoning of shifting from private transport to public transport (JDA, 2014). In retrospect, the Non-Motorised Transport (NMT) requires tremendous investment for pedestrian infrastructure to accommodate the needs and create a safe environment for pedestrians using these routes. The study area (JDA, 2014:34) had identified that, “walking distance from several Rea Vaya stations indicate the impact of large barriers such as the university campuses and the natural ridge within the corridor. Though situated no more than 400 m from the station, certain locations in Brixton are more than 2 km walking distance from the nearest station.” Thus, the SAF for the EPDC highlights the great importance of investing wisely in pedestrian infrastructures, such as connectivity and accessibility, sidewalks, and streetlights, as they will be a direct influence on route choice preference, ease of movement and legibility within urban environments (Ibid.). Lastly, there is Metrobus, for which the EPDC already has walkable bus stop stands along Empire Road. However, The SAF for the EPDC notes that with the rollout of the Rea Vaya, it aims to

align the MetroBus services with the BRT System just like the minibus taxi services, to optimise its efficiency and promote integrated public transport (JDA, 2014).



Map 5. 1: Public transportation accessibility levels (dark shading represents higher levels of accessibility to the system) (JDA, 2014:35)

The SAF for the EPDC not only mentions the various supporting public transport systems; however, but it also mentions arguably the essential function of all of them: Public Transport Accessibility Levels (PTAL). “PTAL can assist in analysing the accessibility of public transport facilities with the view to delineating areas suitable for densification on increasing with intense use. PTALs, therefore, provide an indication into The Walking Time – a point of interest to a public transport access point, and the number, availability and reliability of public transport services within a catchment area,” (JDA, 2014:35).

5.2.3 Development Infrastructure Assessment

The SAF for the EPDC explains that “the development of the optimal future corridor is dependent on the availability of functionality infrastructure to support economic and residential users. Infrastructure enables current functions and future expansions, which makes it [critical] to any

development. An assessment of the current infrastructure was done to determine its current capacity and the requirement for additional capacity in line with the projected developments,” (JDA, 2014:36). The development infrastructure assessment was conducted on the following infrastructures: energy, water, sanitation, and social facilities.

The energy development infrastructure in the area of study consists of seven independent areas called regions, which are accountable for the delivery of healthcare, housing, sports, social developments, and others (JDA, 2014). The assessment outcomes indicate that they will be an inadequate supply of electricity in the regions of Mayfair and Hursthill between 2012 and 2032. The assessment suggests conventions practices to resolve this problem, such as, “installing 2 X 88kV Busbars and bus-sections in Mayfair substation to increase firm capacity,” (JDA, 2014:37). However, the assessment interestingly proposes alternative solutions that have been unexplored and can be seen as futuristic.

Large parts of the study area are located on the natural gas pipeline map, and this source could meet a portion of future energy requirements. The system can produce three types of energy: hot water, space heating and conditioning. Natural gas is cost-effective, environmentally friendly, instant, and safe (when used according to specifications) (Ibid.:37).

These alternative solutions can be seen as ‘energy efficient opportunities’, which the SAF (on behalf of the EPDC) can use to attract future investment from different categories of investors, rather than implementing traditional solutions in which the government and agencies usually invest.

The water development infrastructure for the entire study area is currently serviced with water infrastructure to which water services are provided to all occupied erven. The assessment outcomes for the study indicated that there is some spare capacity available, except for the Yeoville Reservoir Parktown PRV2 water district, which has no extra bulk capacity available and would require upgrading (JDA, 2014).

Many infrastructure components must be upgraded or replaced to operate optimally for the water infrastructure system. There are two projects currently committed for the area: Johannesburg Central: Hursthill-Brixton District – upgrading water infrastructure with new water mains for the Brixton B Region (R8 000 000 – 2013/14); Perth-Empire and Rail Corridor Intervention to renew all water mains Johannesburg F Region (R25 000 000 – 2013/14) (Ibid.:38).

Thus, it can be that the SAF (on behalf of the EPDC) will require well-planned investment in the short- to medium-term to ensure that a full service can be provided to support potential future growth. The sanitation development follows a similar assessment procedure to the water infrastructure assessment. Also, like the water infrastructure, the entire study area is currently serviced with sewer infrastructure. The SAF (on behalf of the EPDC) declares that the usefulness life cycle of a sewer infrastructure can be between one and five years; however, this declaration of the age of the infrastructure is not always a true reflection of the remaining usefulness life cycle remaining on the sewer infrastructure (JDA, 2014). “The remaining useful life is determined theoretically through the asset register process and does not necessarily mean that the figure corresponds with the actual condition of the infrastructure. Operational and maintenance cost can increase time due to the age of infrastructure,” (Ibid.:38). According to the SAF (on behalf of the EPDC) (JDA, 2014), the estimated number of sewer consumers is taken as the total water consumers, which totals 11 944 consumers for this study area. Therefore, it can be assumed that sewer infrastructure investment for this study area must be closely aligned with the water infrastructure investment, as it is the most relatable infrastructure and uses the same measuring unit when it comes to consumers. Otherwise, an alternative for sewer planning investment can be done on the sewer corridor basin areas (Ibid.).

The social facilities development infrastructure assessment outcomes revealed that the study area has “segregated land uses with monotonous zoning and clustering of single-use erven, which are not transit-supportive. There is a clear need to diversify and densify land uses around new BRT stations,” JDA, 2014:39). The previous statement mostly speaks social facility development infrastructure, as the corridor has a shortage of quality open spaces, with various areas situated more than 2 km walking distance from the nearest park (Ibid.). Nevertheless, the assessment did present related corridor development characteristics of forms of attraction, indicating there is “a

diverse mixture of students and low-income earners. The corridor currently has a sufficient supply of social, education and health facilities based on the current population,” (JDA, 2019:39). In essence, the SAF (on behalf of the EPDC) understands that “similar to infrastructure, accessible social facilities should be a pre-requisite for future densification, as an increase in population will necessitate in population and increase in social facilities,” (Ibid.:39).

5.3 Strategic Framework Plan

The SAF for the PEDC presents key opportunities to address and successfully implement the development goals of the city, which have been mentioned in the Integrated Development Plan Framework in Chapter 3. The vision for the EPDC is embedded in the SAF and thus seeks to establish the principles of suitable urban environments such as, “creating access to opportunity by reducing distances between home, work and education; creating attractive environments for walking and cycling; creating a vibrant, people-centric city; promoting transit-oriented development with high-density residential development around transit stations; supporting mixed-use development that allows people to live, work, and play in the same place; and to discouraging the use of private cars by providing sustainable travel alternatives and managing transport demand,” (JDA, 2014:47).

This has resulted in the SAF (on behalf of the EPDC) creating an effective Framework Plan “around four key elements or mechanisms: A Movement Network, optimising connectivity within the corridor and harnessing connections with the City. A spatial economic structure identifies key nodal and mixed-use areas and integrates them into a future corridor system. An underlying structure of social infrastructure (social clusters) can grow and intensify over time to support growth within the corridor systems. An approach to guiding densification within the corridor that is appropriate to the existing structure and context, but also supports a high-level public transport system,” (Ibid.:47).

5.3.1 Structuring Elements

The first structuring element is ‘Movement Network’, where transportation solutions within the future corridor will be people oriented. The solutions proposed are “parking policies will adequately support development; however, they will be aligned with sustainable travel objectives. Public transport infrastructure will contribute to quality living environments and stimulate private to public transport mode shift. A diverse and connected street network that promotes pedestrian accessibility – good corridors connect communities,” (JDA, 2014:48).

From the transportation solutions mentioned above, it wishes to solve, the Strategic Framework Plan Assessment for the SAF (on behalf of the EPDC) has identified three key sub-elements that establish the Movement Network structuring element. The first sub-element is the public transport spine (trunk and feeder), which represents “the higher-order public transport spine, as defined by the Rea Vaya Route along Empire/Perth Avenue”; the second element is regional links that represent “key arterial connections with the broader city structure, connecting the corridor to key nodes, higher-level movement systems, and related city-scale”; and the third and last sub-element is key public connector (including NMT), which represents “the key public connectors – movement routes (both vehicular and pedestrian-focused) – that connect the Public Transport Spine and its secondary network with key activity foci, public facilities and existing areas within the corridor.”

The second structuring element is ‘Spatial Economy’ where the SAF (on behalf of the EPDC) strategy is to identify successful small to medium businesses in the study area and pursue them to participate in the intensification of already-existing high movement streets, such as Brixton, Westdene and Pageview, where this potential to accommodate a range of smaller businesses in mixed-use buildings. “Central in this regard is a focus on promoting mixed-use development in appropriate locations within the main area of influence of the Rea Vaya Stations: Existing and future activity nodes; existing retail and mixed-use strips; key regional/intersections,” (JDA, 2014:52). An example of such spatial economy areas is Milpark, which the SAF (on behalf of the

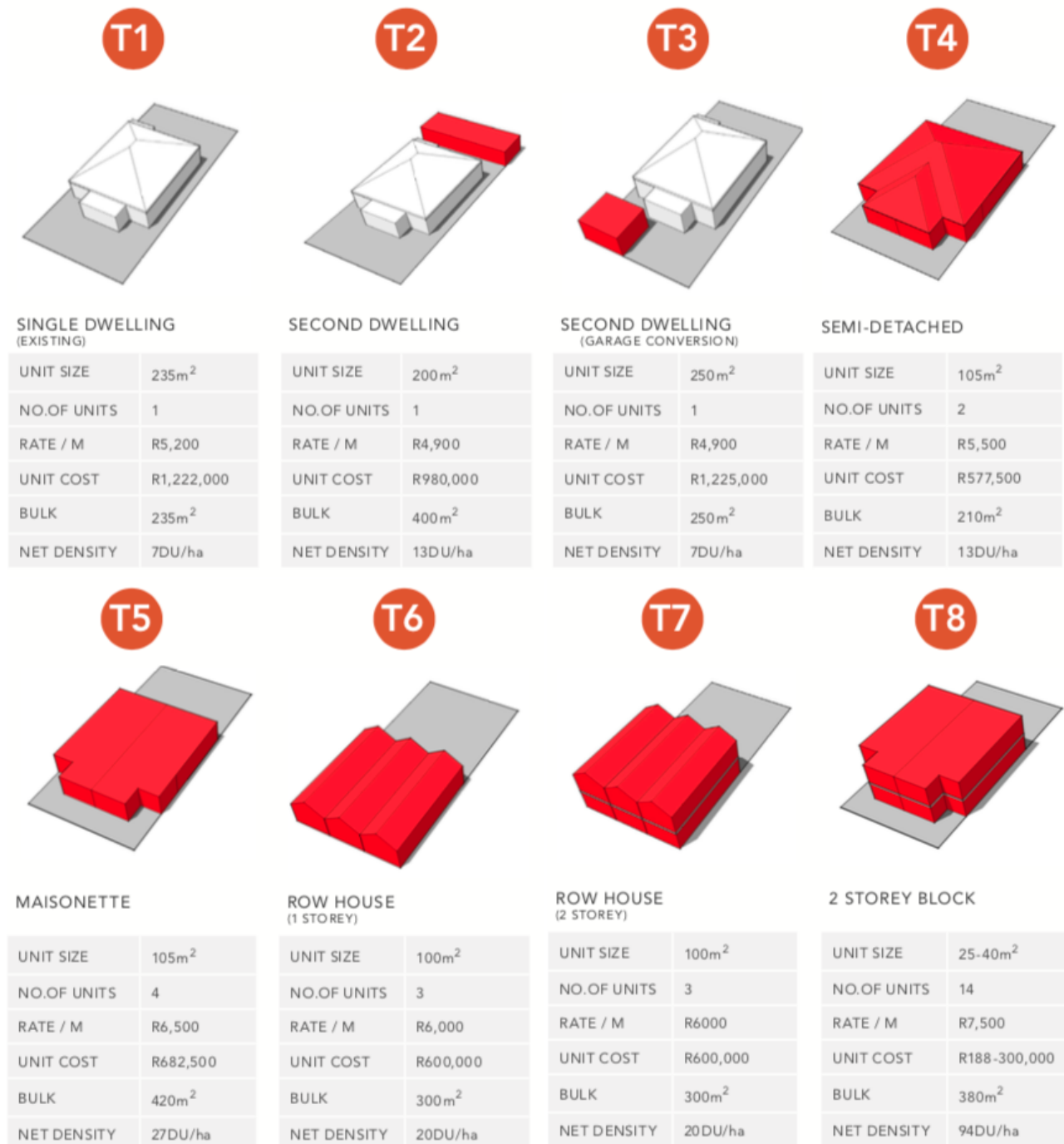
EPDC) has identified as a regional node within the corridor with the potential of producing economic and residential infill (Ibid.).

The third structuring element is ‘Social Clusters’, where social facilities represent a key strategy in providing a basis for growth and intensification within the study area. The principles underpinning this approach include (JDA, 2014:54): “Integration and multifunctionality: It is imperative to achieve integration of services, particularly in contexts of limited resources and foster[ing] multiple shared uses of facilities. Exposure: The location of facilities must be based on externalisation and ease of access and should never be embedded within local areas. The logic of location should be reinforced with the dominant public transport within the system. Clustering of activities: Explore opportunities for the “clustering” of services across the corridor to create a range of special places within the system. Marrying hierarchies: Explore opportunities for the twinning of similarly scaled facilities across sectors thereby increasing choice and enhancing the generative capacity within key clusters. “The fourth structuring and probably the most critical element is ‘Densification’, and according to the SAF of the EPDC, this element remains the cornerstone of a move towards a more sustainable structure and form of settlement,” (JDA, 2014).

Active densification of strategic locations within the corridor will actively support the following GDS development paradigms: Balanced and shared growth, facilitated by social mobility settlement restructuring. Promoting more intensive development patterns in appropriately located areas has several benefits for the city, including higher thresholds of support for public transport, more efficient service areas for infrastructure, and support for a broader range of social facilities within a walkable distance. Appropriate densification areas in board terms would include the following: Regional Connectors; Key Local Connectors; Within existing and future economic nodes; Around Key Public Transport Facilities; and Around Social Clusters (Ibid.:56).

Within the study area, densification will most likely be implemented through various methods, depending on the physical response of densification, which is determined by factors such as location erf size, land value, and development viability (JDA, 2014). It is vital to outline the critical typology responses, specifically for the SAF (on behalf of the EPDC), as they were envisioned, considering the existing structural elements, existing precedent, and existing and future potential

market responses (Ibid.). The implication of each typology in terms of density, as well as a high-level costing estimate based on specific parameters, is indicated in Figure 5.1.



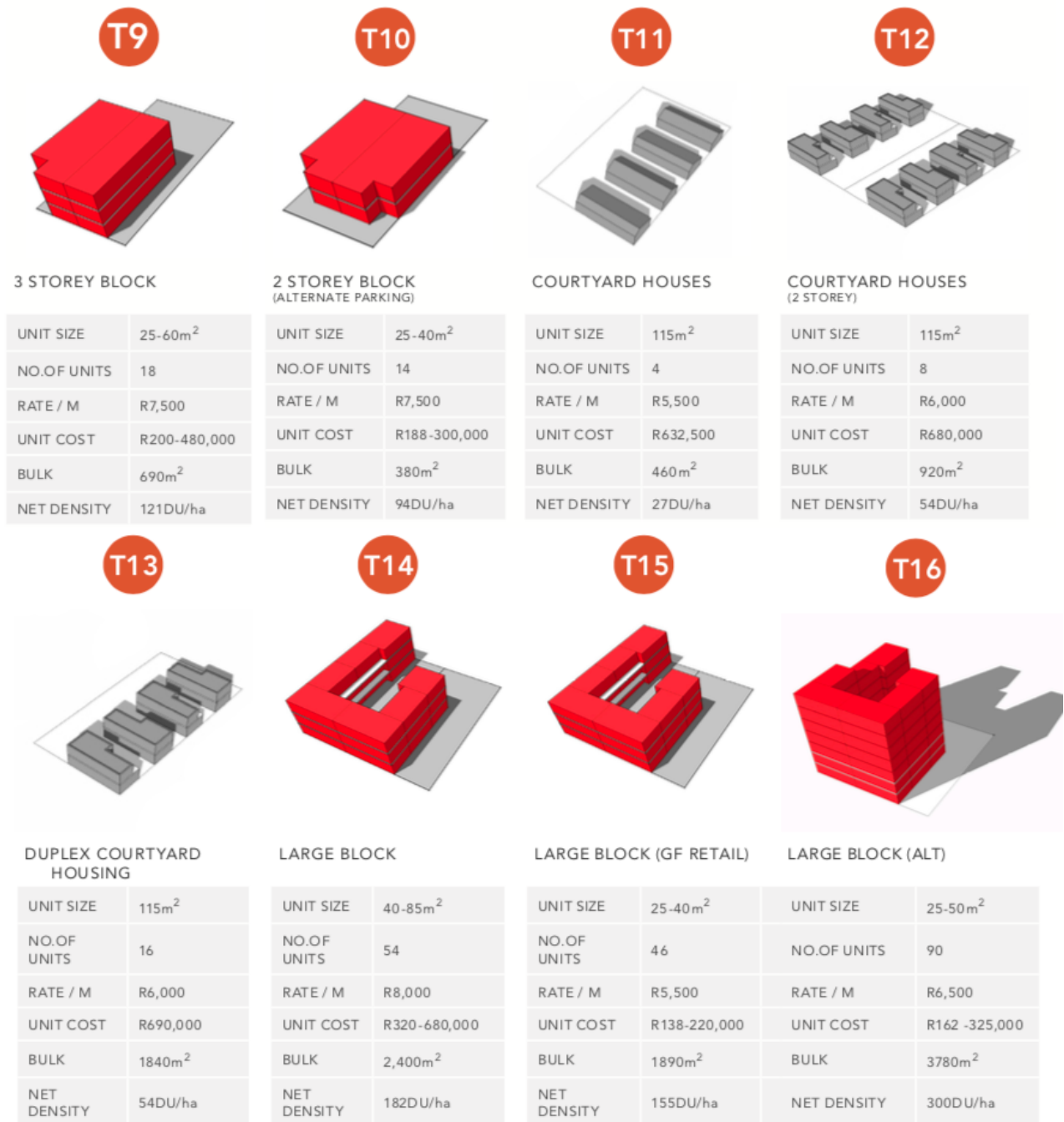
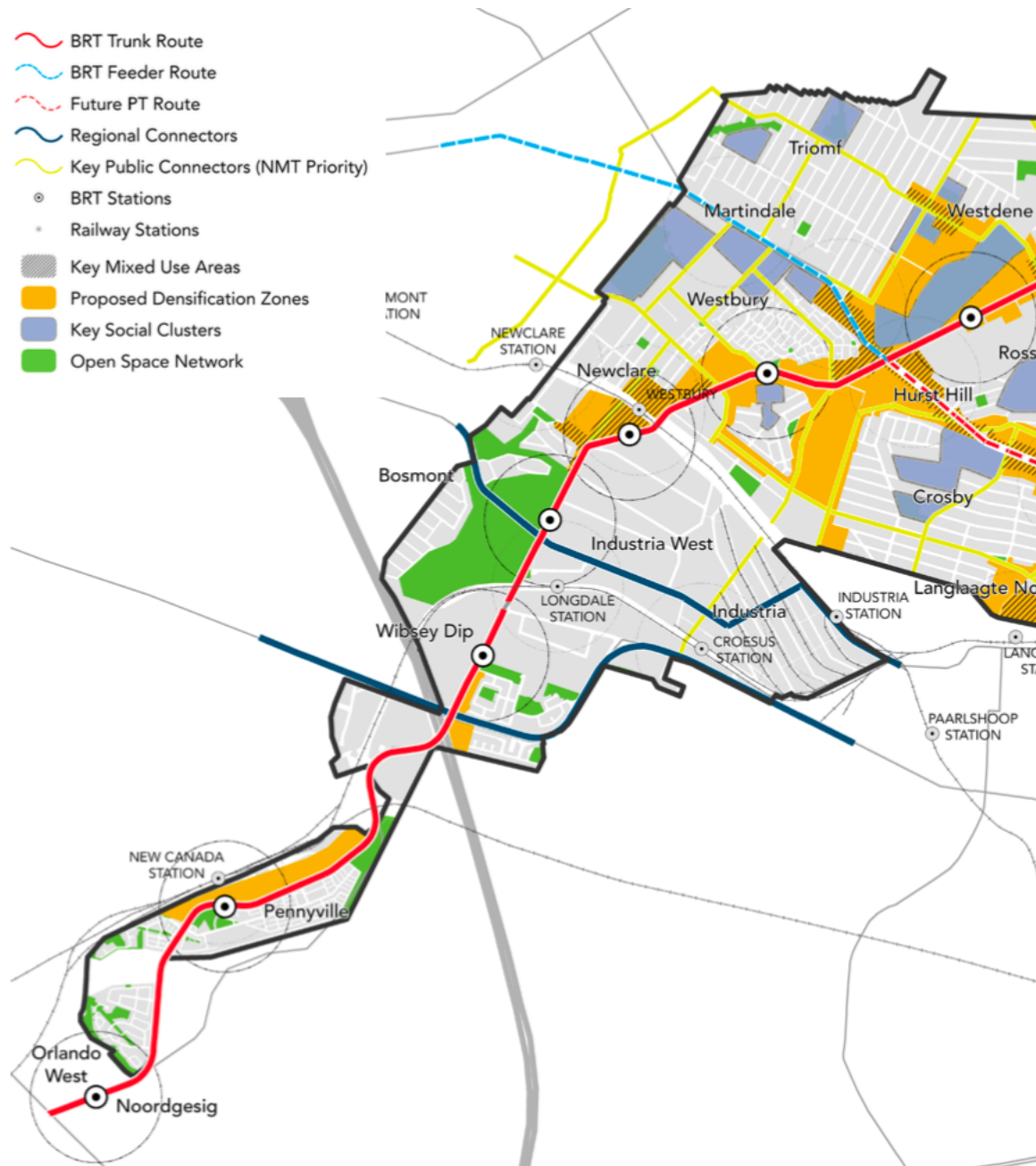
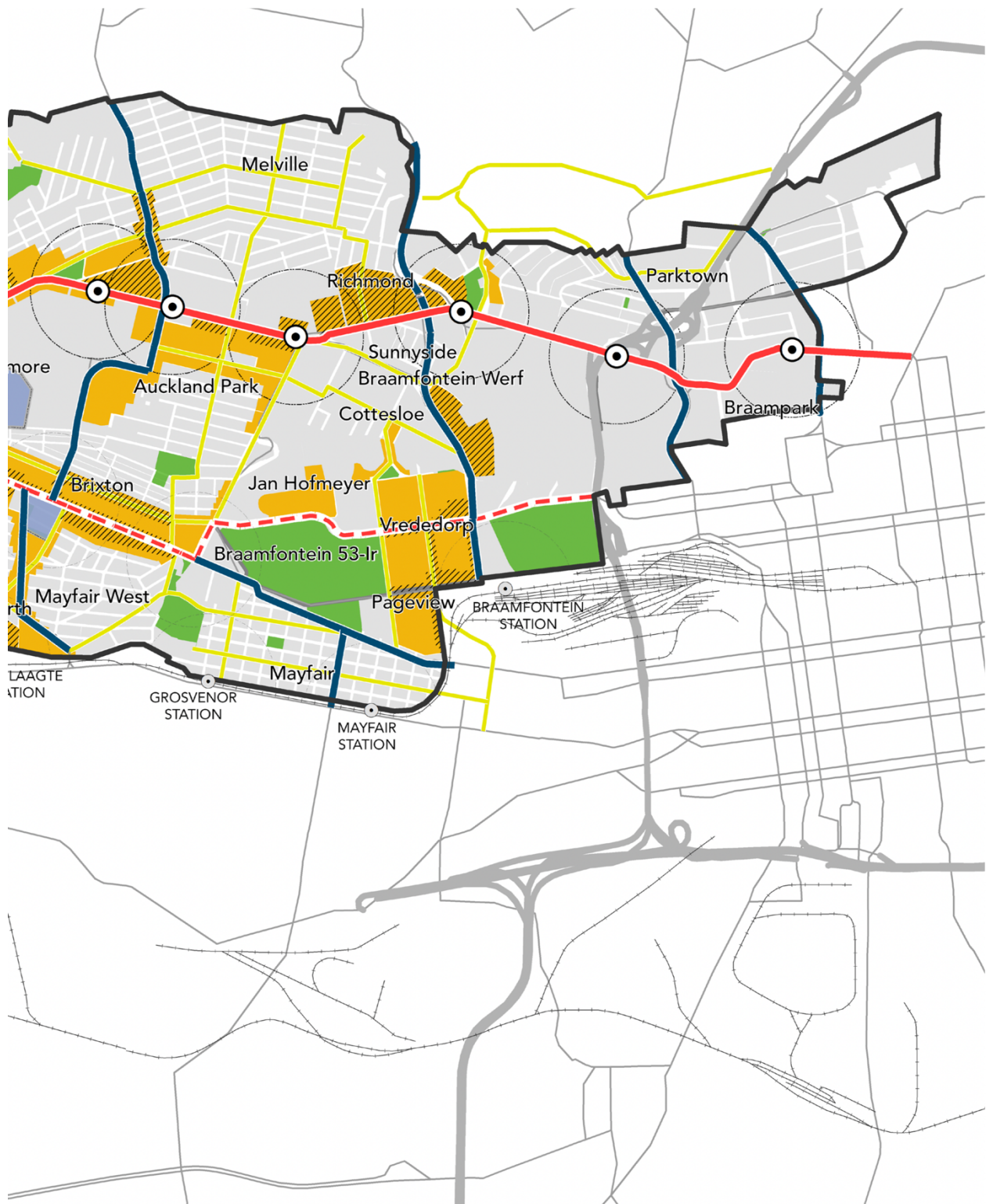


Figure 5. 2: Density typologies for the EPDC (JDA, 2014: 58–59)

In essence, the SAF for the EPDC has broadly identified where densification and intensification of existing areas are proposed. Map 5.2 indicates suggestive density responses across the density. While these are not suggestive in terms of all possible densification areas, “they do provide a basic point of reference for understanding the approach to building form and location across the study

area,” (Ibid.:60). The Consolidated Framework, reflecting the overall intent of the Strategic Area Framework, is illustrated below:





Map 5. 2: Overall Spatial Concept (JDA, 2014: 64–65)

5.3.2 Development guideline outcomes

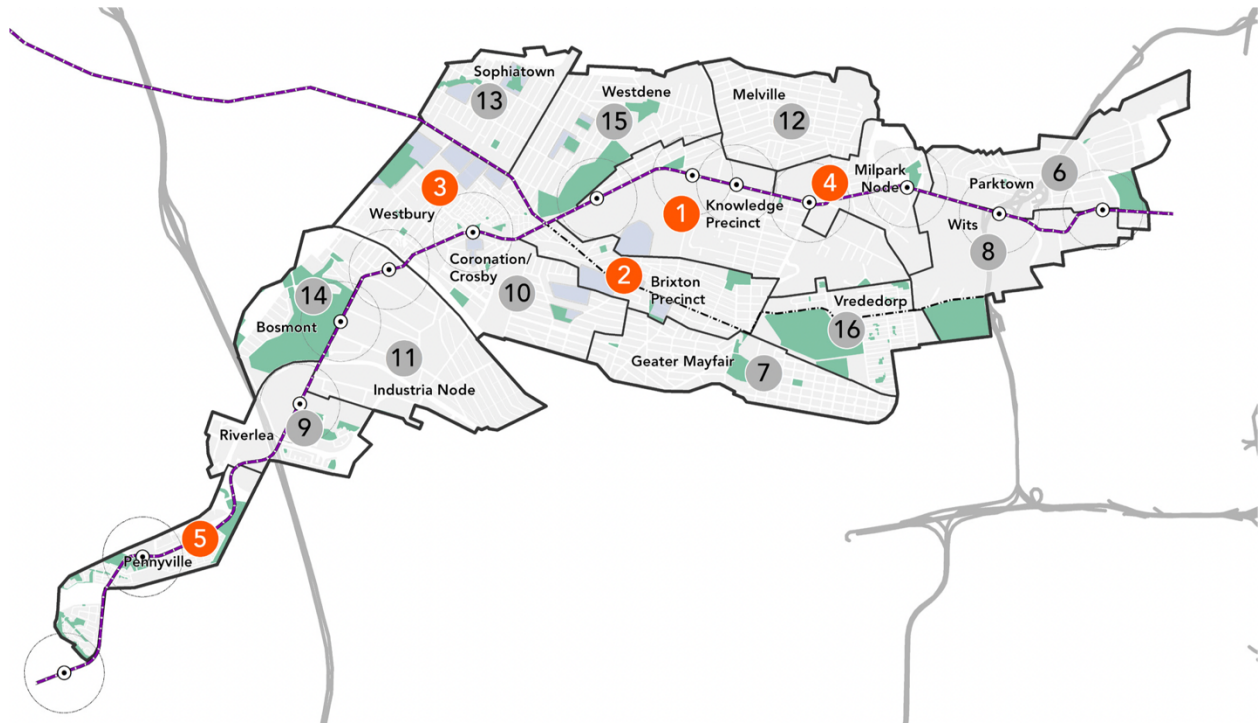
Five development guideline outcomes direct these structuring elements: Street – Building Interface; Transition to Neighbourhoods; Building Articulation and Aesthetics; Parking and Access; and Sustainable Innovative Urban Solutions Buildings, Infrastructure, Services.

1. The street-building interface outcome: Ensure a positive relationship between buildings and streets to secure natural surveillance and social interaction opportunities. The relationship of buildings to one another and streets and open spaces influences the amount of energy they consume, the comfort, safety, and delight of pedestrians at the street, and the quality of interior spaces. Buildings should frame streets and open spaces and preserve desirable views (JDA, 2014:68).
2. Transition to the neighbourhood's outcome: To provide a transition in height from mid-rise buildings to low-rise residential homes to reduce shadow impacts and negative perception of heights and maintain the views and sunlight penetration (Ibid.:78).
3. Building articulation and aesthetics outcome: To ensure that the aesthetic qualities of the buildings are maintained for positive and interesting experiences from the streets. The building's aesthetic qualities, façade, roofline, windows, and access points are all vital factors in how the public perceives a building and how that building impacts people's experience of the street (Ibid.:72).
4. Parking and access outcome: To manage the negative impacts of parking and servicing areas on the experience of the street-building interface and the safety of pedestrians. The objective is to reduce the use of private cars and related carbon emissions by promoting public transport healthy lifestyles through walking and cycling in pedestrian-friendly environments (Ibid.:74).
5. Sustainable, innovative urban solutions to buildings, infrastructure, and services outcomes: To create a built fabric that responds to sustainable and green infrastructure principles while promoting ecology-conscious considerations. It is desirable to incorporate design solutions as outlined in the Green Star Rating System and the City's guidelines for energy efficiency (Ibid.:76).

With all that said about the strategic framework plan for the EPDC, it is pivotal to keep in mind that site Development plans (SDPs) and building plans submitted to the corridor development proposals will be evaluated using the set of development guideline outcomes outlined above that want to be achieved. “Site-specific conditions will be considered in the application of these guidelines. The SDPs will further be assessed by the Urban Design Advisory Committee, to ensure that the built form outcomes envisaged in the corridor are achieved,” (Ibid.:77).

5.4 Local Area Implications

“The SAF for the EPDC report has identified a total of 16 local areas within the study area. Of these local areas, five were considered as priority precincts based on their potential to elicit short-to medium-term growth and intensification with the corridor. These areas are Knowledge Precinct (Auckland Park/UJ); Brixton; Westbury; Milpark Node, and Pennyville/Noordgesig shown in Map 5.3.



Map 5. 3: Local precincts within the Empire-Perth Corridor (JDA, 2014:81)

5.5 Proposed Implementation Plan

As stated in the introduction chapter, the CoF essentially requires a long-term period of 15–20+ years to realise its full potential and achieve its futuristic outcomes. “It is therefore critical to formulating an implementation strategy to guide the City's interventions and develop appropriate institutional responses, mechanisms and a development programme that can be refined over time to take this process forward,” (JDA, 2014:103). Therefore, the SAF for the EPDC provides spatial vision and guidance for physical interventions. The capital programme agenda is stated thus (JDA, 2014:113):

The interventions identified to support the CoF, which require capital funding will be packaged into the City's ten-year development capital investment plan, which is currently being developed. This includes civil infrastructure projects, public and social infrastructure, and housing projects. The phasing of projects to support priority precincts and consolidated project sequencing will also be addressed in the programme. The programme will reflect the City's projects, but all efforts should be made to incorporate local and national projects, as shown in Table 5.1.

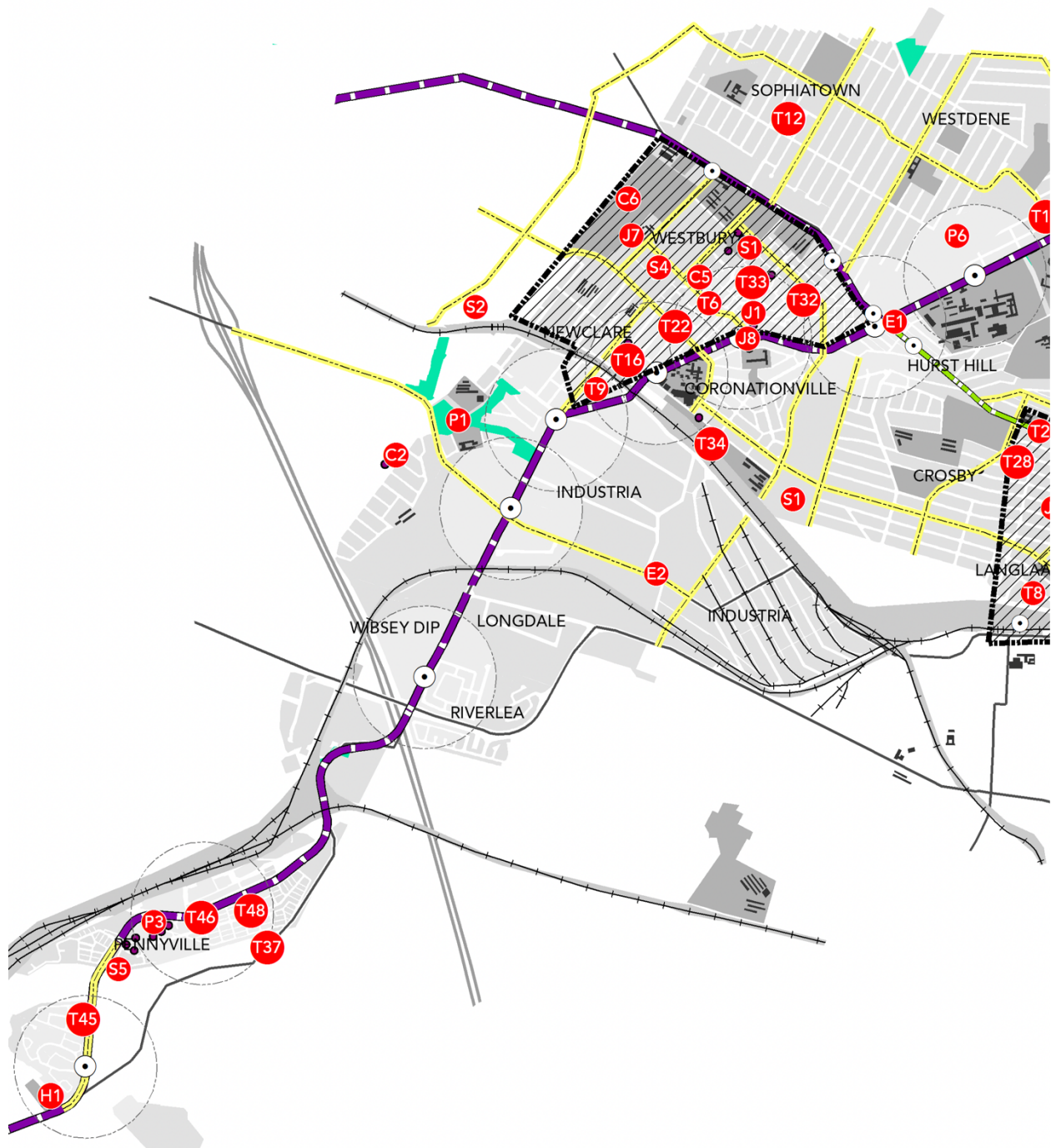
The SAF for the EPDC continues by mentioning that the City's Centre of Excellence had an essential role in consolidating the programme by possessing influential inputs and collaboration in the City's implementation departments and entities (JDA, 2014). Also, the BRT Phase 1B was finalised and began operation in October 2013. Thus, “the focus of the City's investment in the medium term is to improve the existing bulk infrastructure to support increased development, improve public environments and social facilities, as well as linkages to the public transport facilities,” (Ibid.:113).

Table 5.1: Project list for medium-term expenditure framework (July 2014–June 2017) (JDA, 2014: 114–115)

MAP REF	CIMS REF	NAME	ESTIMATED BUDGET	PROJECT CHAMPION
3	33830	Bosmont Park Upgrade	R 3,000,000.00	JCP
5	33832	New Park in Pennyville	R 4,000,000.00	JCP
4	33831	New Parks across the Corridor	R 13,500,000.00	JCP
7	29516	Development of Parks in Noordgesig	R 4,200,000.00	JCP
8	33833	Upgrading of Parks in Brixton	R 3,000,000.00	JCP
1	33829	Upgrading of Parks in Westbury	R 11,200,000.00	JCP
		Sophiatown Park	R 800,000.00	JCP
2	33801	Westdene Dam Upgrade	R 23,970,000.00	JCP
12	33840	Refurbishment of HurstHill Substation	R 91,400,000.00	Cpower
13	33839	Upgrade of Industria Substation	R 24,000,000.00	Cpower
11	33774	City Power Projects within the Corridor	R 74,969,000.00	Cpower
	33017	Industria Substation: Feeder Board	R 10,000,000.00	Cpower
		Naming and Branding	R 21,600,000.00	ComDev (JDA)
16	32960	Upgrading of Brixton Library	R 1,000,000.00	ComDev
20	32961	Upgrading of Coronationville Library	R 800,000.00	ComDev
19	33845	Upgrading of Bosmont Library	R 1,000,000.00	ComDev
17	33846	Upgrade of Westbruy Library	R 3,000,000.00	ComDev
18	33804	Additional Libraries within the Corridor	R 3,000,000.00	ComDev
29	33407	Upgrading of Coronationville Pool	R 2,000,000.00	ComDev
22	33409	Upgrading of Newclare Pool	R 4,000,000.00	ComDev
	31088	Upgrading of Noordgesig Pool	R 800,000.00	ComDev
26	33848	Reconstruction of Pennyville Sports Facilities	R 4,000,000.00	ComDev
24	33847	Upgrading of Bosmont Sportsfields	R 8,600,000.00	ComDev
27	33850	Upgrading of Brixton Recreation Facilities	R 5,000,000.00	ComDev
23	33851	Upgrade of Noordgesig Community Hall	R 4,500,000.00	ComDev
28	33849	Pennyville Multi-Purpose Centre	R 2,000,000.00	ComDev (JDA)
21	33450	Union Stadium Upgrade (Courts)	R 21,000,000.00	ComDev (JDA)
30	33680	Bosmontspruit Wetland Rehabilitation	R 3,000,000.00	
32	33529	Upgrading of Claremont Clinic	R 2,700,000.00	Health
33	33853	Noordgesig Clinic	R 24,676,000.00	Health
	33855	Upgrading of Langlaagte Pharmacy Depot	R 12,000,000.00	Health
31	33854	Upgrading of Westbury Clinic	R 17,500,000.00	Health
34	33773	Housing Projects within the Corridor	R 30,000,000.00	Housing
37	33858	Pedestrian Crossing: Auckland Park	R 41,000,000.00	JDA
35	33859	Pennyville Public Environment Upgrade	R 10,000,000.00	
36	33748	Westbury Public Environment Upgrade	R 36,400,000.00	JDA
38	33860	Westbury Pedestrian Bridge	R 20,000,000.00	JDA
43	33820	Pennyville Social Housing Project	R 5,000,000.00	Housing
45	33698	Upgrade of Pennyville Communal Rooms	R 8,000,000.00	Housing
44	33718	New Canada TOD Housing (Pennyville)	R 150,000,000.00	Housing

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MAP REF	CIMS REF	NAME	ESTIMATED BUDGET	PROJECT CHAMPION
39	33792	Sewer Projects within the Corridor	R 10,000,000.00	JW
40	26893	Upgrading of Water Infrastructure: Hursthill-Brixton	R 2,400,000.00	JW
41	33787	Water Projects within the Corridor	R 30,000,000.00	JW
	31283	Slovo Park Pedestrian Bridge	R 12,000,000.00	JRA
	33795	Social Development Projects within the Corridor	R 8,650,000.00	SD
		NMT Link: UJ to Inner City	R 39,200,000.00	Transport





Map 5. 4: Capital programme (JDA, 2014:118)

Lastly, the SAF for the EPDC indicates that through its medium-term budget, the City is already demonstrating its commitment to investing in the provision of infrastructure and services to support private sector initiatives. The critical success factors of the COF are dependent on the following (Ibid.:199): “Long-term political commitment, the rollout of the consolidated capital programme, implementation of institutional arrangements to drive development, and inter-governmental engagements and implementation.”

5.6 Conclusion

This chapter has provided a description of how the SAF (on behalf of the EPDC) is planning on implementing the spatial policy in the area. The EPDC is in a diverse area where at the top of the corridor in the Parktown Precinct is the economic hub with multiple office developments. In the middle of the corridor, there are two universities in the Knowledge Precinct functions. The lower the corridor connects to Soweto, where there are great opportunities for social housing developments in precincts such as Pennyville. The chapter identified the key issues and opportunities in the development corridor, where and how to optimise TOD infrastructure investment for the Rea Vaya BRT system, and the development infrastructure assessment required for the densities per hectare.

Chapter 6: Spatial Planning Policy Implementations and Observations on the Empire-Perth Development Corridor

6.1 Introduction

Initially a spatial planning policy implementation involves the connection of one infrastructure development investment with strategic spatial planning objectives for a project within a specific geographical area, such as transit-oriented development in Curitiba. Todes (2012) states infrastructure development, such as roads and other forms of transportation, fabricates the spatial forms of cities and helps these cities become more inclusive and sustainable. However, in the context of the CoF, it is not simply about connecting infrastructure development and spatial planning objectives, as it involves various concepts. The Corridors of Freedom project does not focus on one infrastructure development concept; however, it focuses on three concepts simultaneously (corridor development, transit-oriented development, and property development). Linking transportation routes with mixed-land uses through a strong transit-oriented development and public transportation system, such as the Rea Vaya BRT, is the core competency of the CoF. However, the CoF stresses high-rise buildings concentrated in the centre of the development, to promote internal trade and economic growth along the corridor. Also, the CoF depends on non-public investments to 'buy-in' into property development and sustainable investments economically, socially, and environmentally. Lastly, what makes the CoF project a complex policy implementation is due to the multi-disciplinaries involved and dynamic stakeholder relationships that have occurred. Todes and Robinson (2019:300) give an example by stating the following:

Significant tensions can exist between the interests of states, including planning objectives and those of property developers. These have been highlighted in planning objectives, including in South Africa. Planners often have a view of the realm of private development (Coiacetto, 2001), and Adams et al. (2012) argue that planning policies too easily assume a 'notional developer' who will fall in with their intentions, with little appreciation of what drives and shapes developer behaviour, leading to more conflictual engagements.

This chapter provides an analysis of the spatial planning policy implementation on the Empire-Perth Development Corridor, which have occurred to date. The chapter builds on the theories, concepts, and strategies established through the literature review. Furthermore, it considers the two previous chapters that analyse where the CoF falls in terms of strategic spatial planning for the CoJ and in-depth context of the Strategic Area Framework for the Empire-Perth Development Corridor. The case study observed, through semi-structured interviews from key respondents, the central factors concerning the policy implementation on the EPDC. In all the sections of this chapter, the report supports its argument of below-level policy implementation on the EPDC by referencing key respondents in urban planners, CoJ officials and agents, property developers, consultants, and professors. The chapter starts by setting out the ongoing perspective of policy implementation on the EPDC to measure what is generally expected from CoF project. The chapter continues by analysing policy implementation on each concept (corridor development, transit-oriented development, and property development) in its own section, and depicts interesting results and consequences leading to the current subpar policy implementation levels on the EPDC. Lastly, the chapter closes with a policy implementation gap on the EPDC section; due to certain events, multidisciplinary stakeholder interactions and the rollout of projects have affected the policy implementation on the EPDC.

6.2 Key respondents' perspective to the Corridors of Freedom Policy Implementation on the EPDC

Policy implementation in the case study is seen as the process of bringing written spatial plans, such as the Strategic Area Framework for the Empire-Perth Development Corridor into effect, through CoJ officials and implementing agents, built environment consultants, and property developers. Dreyer (engineering consultant on the SAF for the EPDC policy and densification; personal communication, 2020) expressed the idea that policy implementation requires energy and initiative from the policy implementer, which is a person or a group of people that puts a plan into effect. If the policy implementer, in this case the CoJ, wants the policy to be active and therefore implemented, it needs to put significant effort into it, and it needs to put enabling structures around it. The CoF had tremendous support from the ANC-led local government by making it their

flagship project, providing a significant capital budget annually, and appointing the JDA as the principal implementing agency.

However, I identified that policy is only as good as its implementation. As spatial planning policy implementation is a concept that officials, property developers, and consultants in South Africa have been grappling with for many years, before focusing on corridor development, transit-oriented development, and property development for the CoJ. Potgieter (Head of Department; Town Planning at Abland; personal communication, 2021) explained this by suggesting that a spatial policy could be sensible and sound viable; however, “if the spatial council does not have the political will and funding to implement the policy, this will result in inconsistent performances and sometimes it dies a slow death.” The case study determined that the major change in policy implementation on the EPDC was due to the 2016 local government election results. With the newly elected DA-led regime shifting the majority of the focus to inner-city policy implementation, the CoF lost its continuous political support and its annually approved capital infrastructure budget support. Montane (Former Strategic Spatial Planner Officer of Region B for CoJ; 2021, personal communication) provides testimony to the previous statement by mentioning how concepts such as Special Development Zones (SDZs), which he spearheaded to attract new developers in the EPDC, gradually lost implementation momentum from moments such as the CoF not being mentioned by the newly elected Executive Mayor Herman Mashaba in any of his strategic plans for the CoJ, no budget allocation, and re-prioritisation of and human resources towards the inner-city from 2017 onwards.

The other issue I witnessed during my analysis is that the CoF did not always (which is mostly) live up to its promise of enabling property development incentives. The erratic issuing of developmental incentives was experienced by Gimpel and Gimpel (developers of New Braamfontein Lofts shown in Figure 6.1), who were residential developers who fell within the EPDC’s jurisdiction and met the requirements from the new terms of densifications stipulated in the SAF for the EPDC. The developers applied for the development incentives on the EPDC to the CoJ and respective agencies in the conceptual phase of the development, right through to the

completed phase of the development they were never awarded development incentives and to this day have not benefited from them. Gimpel and Gimpel (personal communication, 2020) did not receive “50 per cent discount on municipal rates and taxes first year, and we have never managed to take advantage of that.” What I recognised here is that developers do not rely on the policy implementation of the EPDC to deliver, even if it promises decreased development costs; however, developers appoint themselves to deliver on and meet their obligations and for ambitions to be met. This was perceived as another level of non-optimal policy implementation on the EPDC, thus, perceiving the purpose of the CoF project to be misaligned or redundant.

The analysis of CoF policy implementation on the EPDC acknowledges the three concepts from the literature review chapter (corridor development, transit-oriented development, and property development) and recognises the EPDC SAF to be a sound spatial policy. However, after its initial implementation in 2014, it certainly takes the shape of inconsistent policy implementation practices. Although, the case study takes into consideration that spatial policy, such as the CoF, cannot be determined to successfully implement within the medium term (2–10 years). Already encompassing three complex spatial themes into one, thus, a major spatial policy project like the CoF can only realistically provide visible and substantial evidence after at least 20 years. Therefore, the report final perspective is that the CoF spatial policy takes into the consideration the policy implementation on the EPDC has not realistically achieved policy implementation; however, it is on its primary stages and requires consistent policy attention from inception to completion. Also, the CoF spatial policy needs to be revised to meet changing spatial needs, monitor the progress, and optimally operate and deliver outlined incentives and objectives.



Figure 6. 1: New Braamfontein Lofts (New Braamfontein Lofts, 2021)

6.3 Corridor development interpretation on the EPDC

The analysis relates to the corridor development theme characteristics, such as land uses, mode of transportation, scale connectivity and linkage, forms of attractions, and integration for implementing corridor development on the EPDC is based on increased opportunities for all. According to Le Roux (Melville/Auckland precinct plan development consultant; personal communication, 2021), the objective was to shorten transit time between people living far away from urban opportunities and create residential and non-residential spaces in tight corridor development. Using these compacting mechanisms to increase social, economic, and environmental opportunities around people, the research recognises that the EPDC commuters were within the vicinity of office developments in Parktown, academic institutions in Auckland Park, retail, and commercial spaces in Milpark, and high-rise residential developments in

Pennyville. Thus, the CoJ reinstates this in the CoF tagline ‘eat-live-play’ with a better connection between places not so well connected, as stated by Montane (personal communication, 2021) in the direct statement below:

For example, the inner city, almost your economic engine, was not connected to Alexandra; it was not connected to Soweto. However, because we could find these networks of spaces where it made sense to do that, we could facilitate those vital connections. In short, it was twofold – walkable neighbourhoods with a range of amenities and then creating good connections between previously disadvantaged economic areas to more vibrant economic areas.

I agree that the general goals and objectives for corridor development on the EPDC (as mentioned in the previous paragraph) were sound; however, I disagree completely with the extend of the achievement or progress in implementing the concept. The research recognised the different types of projects that have been implemented and completed; however, the major infrastructure required is still in its infancy of implementation on the EPDC, such as electricity substations along the corridor. For instance, the majority of the CoJ officials/agents interviewed believed that they made great strides in achieving the goals and objectives, such as the quality of social facilities that have been provided now in Milpark. The upgrade of the Westdene Dam’s recreational area, and the green parks and the clinic in Westbury (Weakly and Montane, personal communication, 2020, 2021) (Weakly is Senior Specialist for Strategic Urban Planner for the CoJ) are seen as completed social facility development infrastructures. However, one CoJ official gives clarity to the struggles in implementing and complementing major infrastructure on the EPDC, by stating “... it takes an immense amount to invest in a single station, bus infrastructure, labourers, needs, and mapping out the route as well,” (Maphumulo, personal communication, 2020).

Thus, I believe what is hindering progress in implementing the corridor development on the EPDC is the misaligned prioritisation for major infrastructure, such as water and waste infrastructure for such a high-density area. The research viewed that the completed projects mentioned above are projects that should only follow and complement the initial implementation of major infrastructure. Without a solid implementation of successful major infrastructures, the minor projects completed

are seen to redundant and not operating at their full capacity. The consultants support corridor development on the EPDC as they participated in the spatial policy development phase; however, they do not support the manner of how the policy implementation has played out. Dreyer (personal communications, 2020) states that they had highlighted water supply issues and inadequate sewer systems on the EPDC; the City planners ignored those suggestions and enabled infrastructure for roads and public transport. While Le Roux (personal communication, 2021) viewed the corridor development objectives that have been achieved since its inception as minimal, by giving it the bus ridership on the Rea Vaya “20% of the capacity” and believed this was the manner in which many opportunities have been realised.

Another problem identified in the implementation of corridor development on the EPDC is that the CoF did not deliver the promised development incentives. The research recognised that property developers such as Abland agree with persuading or enticing prospective developers with developmental incentives on the EPDC; however, developers warn that these practices are likely to become ‘piecemeal’ if they do not have sustainable CoJ spatial planning council support. Potgieter (personal communication, 2021) states, “money plays a big role in the land price, that is your first input, and if it does not work out, it flips your feasibility, then, unfortunately, that also does not help.” This was evident in Gimpel and Gimpel’s (personal communication, 2020) property development process, which dealt with the lack of participation, communication, and knowledge from the municipal council, JDA agents or CoJ officials regarding their development incentives:

This project was worth R80–R100 million worth of work in our group, and it is on the CoF. We have other projects outside the CoF, and if we compare them, we are still paying standard rates and taxes. If somebody like us cannot get answers, how do ordinary people get answers? It makes no difference if you are small or big or just a lack of information

The research identified facilitation mechanisms to assist in policy implementation of corridor development on the EPDC, such as the Urban Design Adjudication Design Committee (UDAC), which analysed the SDP within the EPDC. Montane (personal communication, 2021) states that, “... with the UDAC, we all sit in one room, and you can easily make a decision that can fast-track

a process.” However, the research takes the stand that these facilitation mechanisms, such as the UDAC committee meetings had short-lived outcomes, as corridor development applications on the EPDC were only given special priority if the CoF spatial planning policy was supported by the ruling political party in the CoJ, which could secure funding for such a diverse project. I believe this made the buy-in of property developers to be quite hesitant as too much was based on the unpredictable local government leadership. Moreover, I found that the interaction and relationship between city agencies such as City Parks, Joburg Water, City Power, Johannesburg Road Agency and so forth, with regard to achieving the implementation of corridor development on EPDC to be unaffiliated with one another, as agencies worked mostly in silos and contested for greater capital budgets. Lastly, the CoJ also has different priorities focused on different parts of the city where infrastructure is severely lacking such as, Diepsloot, Orange Farm, and Alexandra.

There is a considerable dislocation with the dream of a corridor development and the review and reality of the necessary implementation for it on the EPDC. The research indicates that political instability creates the threat of a lack of continuity, because Mayor Parks Tau implemented CoF in 2014. However, Mayor Herman Mashaba put a halt on the CoF in 2016, and focused on his politician driven policies; nonetheless, another political shift happens in 2019, with then-Mayor Geoff Makhubo coming into office with no clear intention to the CoF. All of this political upheaval occurred in less than 10 years following the implementation of the CoF. Consequentially, I discovered that it is impossible to offer a cohesive agreement on what has been interpreted correctly or incorrectly regarding the corridor development on the EPDC. The most common factor to have effected corridor development on the EPDC is political instability, as this slows momentum, emanating from executive structures. However, the most interesting factor uncovered by the research is that bulk infrastructure was not prioritised; rather the focus was on numerous small projects, and this has led to inefficient corridor development on the EPDC.

6.4 Transit-Oriented Development Dynamics on the EPDC

The South African national government initially intended to lead the TOD innovation; however, the CoJ became the implementor of the TOD, since the execution of the CoF linked with the City's transport department and the JDA was the policy champion, which required an enhanced local

government level implementation strategy. For the TOD concept to prosper on the EPDC it was essential that it was approached through the strong inter-governmental arrangement and developer engagement, as the Rea Vaya BRT system was to become the backbone of the CoF. However, in this section, the research discovered that the most important aspect needed in the implementation of the TOD on the EPDC, was proactive collaboration between state-owned agencies, which was not at the level needed to implement such a complex concept in order to be seen as successful and measurable. For instance, there has been an immense outcry from all stakeholders involved in the implementation of TOD, to develop an integrated public transport card that public transport ridership can use on any many public transit services, and to reduce the complexity and negative stigma towards public transportation. According to Lewis (Executive Manager: Planning and Strategy of CoF) (Personal communication, 2020) "... only at the Gauteng provincial transit authority can integrate a single ticketing system for all the public transport entities such as the Gautrain, MetroBus, Rea Vaya, Metro Rail, and PUTCO." The previous statement is one of the research findings indicating a lack of cooperative interaction between inter-governmental agencies; as certain implementation authority such as carrying out a single ticket system is out of the JDA and CoJ jurisdiction, this reduces the potential of producing a more integrated and sustainable TOD.

Policy implementors of the CoF, particularly on the EPDC, have attempted to prevent miscommunications between provincial and local government agencies, and even between CoJ agencies, misuse of resources, and reach a common objective by being proactive and creating forums where different stakeholders share information. Montane (personal communication, 2021) states:

Coordination meetings were held at the Region B offices and then it would be different people from these sister departments that would sit in on these, including somebody from development planning, someone from Metrobus, someone from Gautrain in some instances, someone from Rea Vaya, someone from the Metro Police, a representative of City Parks.

However, I discovered that these coordination meetings were only around the spatial policy planning phase, rather than a continuous implementation stage of the TOD on the EPDC, to check local intergovernmental agencies' progress against each other, and whether the objectives were aligned and achieved. For example, this is evident in the taxis or even private cars I have seen using Rea Vaya bus lanes for their own personal advantage, and not leaving them alone for their intended use. This can be perceived as creating more problems than rather solving the current problems, as inadequate BRT systems are produced due to traffic congestion from illegal use of BRT lanes, or moreover, fatal car accidents from reckless driving creating a negative image for the Rea Vaya. Nonetheless, Maphumulo (personal communication, 2020) explains coordination meetings in spatial planning phase do not continue with policy implementation phase by stating the following:

These corridors were the initial CoFs; these Rea Vaya stations were the initial infrastructures, and they were BRT routes that were planned throughout the years. When these Rea Vaya stations and BRT routes are required to be redeveloped at a later stage, planners engage with other specialists of that technical team implementing the surrounding infrastructure, such as the Milpark Pedestrian Bridge, which falls underneath the social cluster.

Ironically, it is worth noting that Gimpel and Gimpel (personal communication, 2020) declare the Milpark pedestrian bridge mentioned in the statement above as an unsuccessful project implemented on the EPDC, in spite of the JDA building the bridge in the correct place.

It has been open for a year now, and we drive past it every single day. I have never seen one person cross that bridge. There is no traffic there. It makes no sense. However, half a block down the road is the Rea Vaya. They should have done [it] by the shopping centre called Rand Steam. The only people using that bridge are some squatters living under it, and they never utilise the pedestrian bridge in its proper manner (Ibid.).

The research uncovered that when the Milpark Pedestrian Bridge project started, R16 million was budgeted for; however, there were delays resulting in the project costing more than R20 million.

Rather than improving the geographical area, it seems that it has implemented irrelevant strategic spatial planning, misused the capital infrastructure budget, and contributed to more informal settlements. This proves that these coordinated meetings were underused and operated in silos, without including other stakeholders, such as property developers like Gimpel and Gimpel, who would have had the opportunity to share valuable information regarding the construction of the Milpark pedestrian bridge. On that account, the research views the TOD on the EPDC in terms of destination accessibility into the City as having not delivered to its set calibre. It is one thing to have a policy stating what it wants to achieve and how it will achieve it through various implementation methods. However, the policy has neglected to include basic social amenities and services, such as bus-stop benches, or CoJ police or precinct security patrolling around Rea Vaya bus station. In that case, it is unlikely for it to impact car dependency or enhance any potential property development on the EPDC. According to Potgieter (personal communication, 2021), an official for the Gautrain used to reside in Braamfontein due to its proximity to the Gautrain offices; however, he eventually relocated outside of the city because it was unsafe, and he was robbed on numerous occasions when walking to the office. Dreyer (personal communication, 2020) views the Rea Vaya successful only through the construction of the routes and stations. The transportation analysis report shows comparing the ridership figures that was initially projected to the actual ridership numbers; it is half the fraction of what is needed to make it viable. Le Roux (personal communication, 2021) also perceived the Rea Vaya as a naïve hi-tech bus system that only achieves optimal use during peak-hour traffic and believed there was a powerful taxi lobby with a very well-functioning taxi system already using the corridors.

However, the research noticed an interesting trend where developers on the EPDC were all using the Rea Vaya as a marketing tool to prompt their property developments. Anonymous Developer 1 (Property Development Administrator of personal communication, 2020) indicates the marketing of the Rea Vaya has resulted in attracting young professionals who work in the CBD, Soweto, and surrounding local areas, such as Auckland Park, Melville; also, postgraduate students who attend the University of the Witwatersrand and the University of Johannesburg. Nonetheless, Dreyer (personal communication, 2020) raised an interesting factor regarding the use of the Rea Vaya as a marketing tool, by highlighting how property values in the EPDC along the Rea Vaya since its implementation have not increased the same way as the Gautrain and all property

developments along the train track. This factor exposed one advantage and additional disadvantages regarding property values in the EPDC. The disadvantaged might be seen as no value for the property. However, I only expect this to change if there is more investment in major infrastructure. Also, it is advantageous, as these developments, which are modern designs, offer competitive rental prices and purchase prices, and the only way for the developer to go in terms of asset value is up in value over time.

I have taken into consideration that it is too soon to tell whether the Rea Vaya routes and stations have an impact on car dependency, economic opportunities, and accessibility into the city as yet; this is because projects like the CoF have a 20-year time frame before serious development and intervention are seen. Although there has not been a significant shift in private car dependency the case study noticed there had been a shift from mass private transportation to mass public transportation. Weakly (personal communication, 2020) verifies this statement by expressing that people have shifted from taxi use to Rea Vaya use in the areas of Soweto. Montane (personal communication, 2021) also emphasises the positive impact of the Rea Vaya, such as assisting physically impaired individuals with friendly and accommodative mobile disability units at bus stations and on the bus. Nonetheless, it is evident from the research findings that the TOD dynamics on the EPDC are premature problems in implementing such a concept.

6.5 Property Development Relations on the EPDC

The traditional decision-making process guiding developers is based on property feasibility study, land price, servicing land, bulk infrastructure costs, building costs, and environmental constraints. If the due diligence process produces positive results for the CoF, it is more than likely mainstream profit-driven property developers will leap at the opportunity and adhere to the conditions stipulated by the SDF. Potgieter (personal communication, 2021) elaborates that:

These properties would be aligned to the SDF and objectives of the CoF in terms of density, residential densities, linkage and connectivity of nodes, and the promotion of public transportation, which make it viable to pursue.

However, the research observed the Stanley Studios mixed-use development on 44 Stanley Ave, Milpark, seen in Figure 6.2 below, and how it had taken a different approach to the decision-making process. Rather than practising the traditional decision-making process of calculating the potential value of proposed developments against the proposed development itself, Africrest (the developer) looked at the value of the surrounding local areas and what it was bringing to their vacant office building. The property was located around the Atlas Studios, at the South Africa Broadcast Channel (SABC) headquarters in Auckland Park, Transnet on Empire Road, Metal Box, Santam, the University of the Witwatersrand Johannesburg, Campus Square, and the Rand Steam shopping centre.

Africrest aimed at attracting the young professional working-class and postgraduate students by tapping into their general notion of convenience, essential amenities, and affordable modern apartments as the three critical factors for them (Anonymous Developer 1, personal communication, 2020).



Figure 6. 2: Stanley Studios (Stanley Studio, 2021)

However, Van den Bussche (Project Manager Consultant for Pennyville Precinct, personal communication, 2020) firmly discounts the convictions of a detailed yet misleading feasibility studies report, rather advocating for a well-articulated spatial planning policy to have answers for unexpected events. The research also agrees with this notion and highlights that there are inadequate infrastructures on the EPDC to support the approved densities; nevertheless, the backlogging in service delivery due to lack of capacity in departments, political instability, and raising levels of corruption in the administration.

I think it is a significantly complex problem; there are many failures in the state, and the private sector needs to [intervene]. However, the CoJ need to open their arms and find ways for the private sector to step in and assist (Ibid).

According to Moteane (personal communication, 2021), they have several developers who had taken up the baton in developing on the EPDC and responded well to the development incentives. There are multistorey student accommodation developments around Wits and UJ along Empire Road, which have been developed during the CoF. More interesting is that the research has identified a trend where homeowners converted their homes into communes in Auckland Park or constructed small-scale developments on their plots in Westdene and Brixton. Even though these were not the densification unit per hectare EPDC was striving for, it can be recognised that these communes and small-scale developments delivered economic opportunities to generate a second income for local homeowners.

Regarding the process taken by the CoJ in influencing the cohesiveness of institutional arrangements to attract developers, it can be described as a multiplex process seesaw. Initially, development incentives for higher development rights were offered to make certain concessions around rates and taxes during the construction period; however, after some time, electricity and water strains occurred, consequently limiting the approved number of developers' applications. The implementation of these incentives was not aligned with other infrastructure agencies, such as City Power or Johannesburg Water within the EPDC, which is another indicator of misguided policy implementation on the ground. Nevertheless, there were conflict of interest moments, which

were evident in the negotiation process between CoJ officials, community park agents, and property developments regarding not having too much hard space, as there is a dire need for some greenery to remain.

Four of the eleven respondents interviewed had a different perspective towards the relationship between the CoJ and property developers. Maphumulo (personal communication, 2020) believes that there is a healthy relationship between parties. They assist in drafting spatial planning policies or building developments in realising the state's vision by sticking within the principles and parameters established by the City. Montane (personal communication, 2021) also accepts the idea that there is a good relationship between the two parties. However, he suggests the unique issues from traditional suburban residents and developers' notions towards city plans:

Traditional suburban residents hold the view that CoF is too intense and will result in loss of property value or loss of the amenity aesthetic in the local area. In contrast, developer's notions towards city plans generally view city plans as rigid and outdated, thus resulting in developer pushing the limits of the spatial plan (Ibid.).

Le Roux (personal communication, 2021) was seen as being in the middle of the table and waiting to be lured to the proactive side. “The CoJ is anything but cozy with big developers, rather than take more risks and encourage the private sector (small, micro, and medium) to do more innovative work because old models, such as Campus Square are not the intended outcome of the EPDC” (Ibid.).

However, Lewis (personal communication, 2020) has a diametric view to Maphumulo by addressing her concerns about developers' overconsumption and the CoJ having high chances of saying yes to any proposal even if it is not aligned with the CoF goals and objectives; meaning the current relationship is not beneficial EPDC. First, Lewis is frustrated by developers constantly demanding more development incentives. Developers are not being considerate in the fact that the CoJ has invested in transit service and transit infrastructure, which will essentially unravel property development and provide no additional subsidies or tax cuts. Secondly, the relationship between the City and property developers is exciting and complex from the regulatory perspective,

investment perspective and future urban realm of maintenance and management (Ibid.). In essence, building denser mixed-use developments in any geographical areas require an upgrade in bulk infrastructure, especially for the CoJ, since it was previously sprawl densification. This means it is hard for a synergistic relationship between the CoJ and developers, due to their difference in interest and obligations in development.

Seven of the eleven respondents interviewed all had a negative perspective towards the relationship between the CoJ and property developers, due to inconsonant implementation in bulk infrastructure and the uncertainty in development incentives. Investment in basic bulk infrastructure and urban management must be prioritised in spatial planning policies, such as the CoF, or the whole the EPDC could experience inadequate stormwater drainage and waste disposal, ineffective streetlights, poor implementation of sidewalks. Gimpel and Gimpel (personal communication) had similar implications for winning a tender contract for an urban upgrading initiative. They had identified the main link from Braamfontein Station to go down Smit Street along Solomon Street:

We put in a tender together with the deaf school across the road, many of these neighbours, and many of these initiatives, and we won the tender three years ago. It is called Streets Alive, to upgrade the roads, the lighting, to upgrade the stormwater. It was not us; it was the environment for the benefit of everyone. We won it. Three years, all that money that was given to them by the French government. *Dololo!* Paid consultants, but not one cent has hit the ground. So, you have got consultants, you have got French company consultant, you have got this (Ibid.).

This implication indicates that development incentives do not come easily as they are promised from the CoJ, which could be one reason why developers are not easily alluded to in such projects. Dreyer (personal communication, 2020) also has implications that assumed developmental incentives would increase developments profits by reducing the parking bays in Parktown due to the operation of the Rea Vaya. However, this initiative was not successful as citizens did not shift from their private cars to public transport. Therefore, the demand for parking remained unchanged. These developmental incentives, such as relaxed developmental rights or easy parking, have been

controversial topics on the EPDC. Potgieter (personal communication, 2021) on the one hand mentions that Hill on the Empire Office Park (Figure 6.3) building services, facilities upgrade on Empire Road were largely carried out by the Abland property developers themselves, and it has maintained aesthetically pleasing features and has increased the office development value. Therefore, by upgrading your building infrastructure and surrounding services with no intention of gaining from EPDC incentives, it is more likely for you to achieve development profits.



Figure 6. 3: Hill on Empire (Abreal Property Management, 2021)

6.6 Policy implementation gap on the EPDC

After discussing the previous sections within this chapter, it is with confidence that there is a policy implementation gap on the EPDC, due to policy uncertainty towards the CoF. Mordfin (2014), cited from Baker, Bloom, and Davis (2012), defines policy uncertainty that is relevant to this report, as follows:

Policy uncertainty is about who will make the policy decisions with economic consequences. During elections, party shakeups, or even revolutions, and when it is unclear who will end up in charge, people who have money to invest or businesses to run will likely pause before writing a [cheque]. Also, policy uncertainty is about what policy decisions the people who end up in charge will make. If businesses and investors see policy decisions delayed by political-party friction, problems hampered by a lack of ideas, or perhaps are waiting on clarity regarding tax policy, they once again may wait before making their own decisions.

The research argues that the biggest contributor to policy uncertainty towards the CoF is political instability. Recent political events reinforce the view that high levels of policy uncertainty could harm socio-economic development. I concluded that once the ANC lost its ruling power of the CoJ Metropolitan to the DA in 2016, this set off numerous policy uncertainties towards the CoF, leading to a policy implementation gap on the EPDC. The research discovered that political instability affected the implementation of the corridor development concept when capital investment for major infrastructure for the CoF was reduced and redirected to the inner-city agenda, led by the newly elected Herman Mashaba. This created a policy implementation gap on the EPDC as projects that were already undertaken were not completed, or projects that were already completed were viewed as inessential as they did not have the necessary bulk infrastructure to support their purposes. The policy implementation gap on the EPDC caused by political instability has a policy uncertainty towards even the other development concepts on the CoF, such as transit-oriented development and property development, as Rea Vaya bus stations and route projects are not accelerated to achieve the needed ridership numbers to make the BRT viable, due to the shift in human resources and specialists to other concerning issues around the CoJ. This is also evident when developmental incentives for property developers are not awarded because the current leadership believes the property tax and levies should be redirected to the redevelopment of more disadvantaged areas within the CoJ. It is important to note that the research does not put all the policy implementation gap on the EPDC on political instability; however, it firmly believes that political instability is the root cause of any government-related policy uncertainties specific to the CoF.

The research does not find political instability as being the only contributing factor to the policy implementation gap on the EPDC; however, it finds the Corridors of Freedom project as its own potential ‘enemy of progress’ to a successful strategic spatial policy implementation due to its sheer scope of work, complexity, and the concepts required to carry it out. The CoF focuses on one developmental concept as well as on three complex developmental concepts. I found here that corridor development, transit-oriented development, and property development can be viewed as a set of triplets at the toddler stage, all seeking attention simultaneously from the CoJ and its contemporaries. Rather than figuring out which development concept should be initiated first and prompted to a stage where it is self-sufficient to generate its outcomes and only requiring routine maintenance upgrades, the CoF is found to be spreading itself too thin by using resources in the incorrect manner. The research found this as a contributor to the policy implementation gap on the EPDC because incidents were being implemented on masse and at once, leading to important processes and procedures being split among everything, as opposed to be directed to key areas; moreover, this resulted in the policy implementation outcomes being misaligned to original goals and objectives.

Furthermore, the research identified policy implementation gaps within each development concept. The corridor development concept mostly completes complementary projects rather than initially focusing on major infrastructure projects needed to enhance socio-economic development on the EPDC. Transit-oriented development has failed to create intergovernmental integration to produce sufficient ridership numbers required for a BRT system and lacking the construction of a comfortable and welcoming environment for mass public transport to reduce privately owned and mass private transportation. Lastly, the concept of property development on the EPDC being unable to mend the relationship between developers and policy implementors due to the argument disputes regarding property development, the poor consistency in enabling property development incentives promised for the CoF for its success, and the lack of bulk infrastructure to support greater densification and high-rise buildings. Thus, from the three paragraphs above, political instability and all the development concepts as a whole beneath the CoF or as individuals are seen as having a lack of clarity about policy matters and leading to policy implementation gaps on the EPDC.

6.7 Conclusion

From a spatial policy perspective, the CoF was sound as the policy implementation on the EPDC aimed to utilise its established avenues (such as the CoJ agencies) to implement the expenditure framework and champion projects to improve the EPDC infrastructure. It attracts a range of property developers, from emergent local developers owning small parcels of land to developers with a diverse property portfolio (commercial, retail, industrial, residential, and mixed-use property developments) through development incentives. Lastly, it attempted to tackle the inefficiencies of sprawl development and spatial separation inherited from the apartheid city, by advancing mass public transit, stimulating diverse property development typologies for housing, enhancing economic opportunities, and upgrading social infrastructure. However, my final perspective is that the current CoF spatial policy implementation on the EPDC has not achieved the policy implementation objectives. However, it is in its primary stages and requires consistent policy attention from inception to completion. Also, the CoF spatial policy needs to be revised to meet changing spatial needs, monitor the progress, and optimally operate and deliver outlined incentives and objectives.

The research believes what the policy implementor does to attract development on the EPDC will be based on its political positioning and actual fulfilment to ensure the policy does not lose support and become obsolete. The current factors contributing to the failure of policy implementation on the EPDC are challenging the policy's funding, with the lack of provision of the promised incentives, and the uncertainty of continuous policy support due to political shifts and local government elections every five years. The case study has considered that the policy implementation of corridor development on the EPDC has not been executed for more than consecutive ten years, and these projects need at least 20 uninterrupted years to show any results. Although policy implementation of corridor development is mostly delayed by prioritising bulk infrastructure of the Rea Vaya BRT System and smaller projects around the EPDC precinct, they need to prioritise making things clean and safe, making sure the lighting works, that the stormwater drainage is adequate, fixing the existing fundamental infrastructure and increasing its capacity

intake for the new density regulations approved, rather than focusing on elaborate, unrealistic, non-practical projects that waste too much money on professional fees.

The research also distinguishes the point of view that if you create a good policy, it will change the world, which highlights a naïveté about the impact of policy. Developers and the people with whom they work are creative agents who can either improve or negatively affect policy when it comes to implementation, because they are generally more practical than the policy developers. However, there is a gap between people who operate in the real world and who are answerable to people with everyday concerns and those who operate in the council's 'soft paper' world. I find that the relations between developers and implementation agencies need to close this implementation gap by ensuring they agree on ideology and implementation method from the beginning, the streets are clean and safe, making sure the lighting works, that the stormwater drainage is adequate, fundamentally fixing the existing infrastructure and increasing its capacity intake for the newly approved density regulations, rather than focusing on unrealistic, impractical projects that squander money on professional fees.

Chapter 7: Conclusions and Recommendations

7.1 Introduction

This research report focused on analysing how the Strategic Area Framework policy was implemented on the Empire-Perth Development Corridor, through the concepts of corridor development, transit-oriented development, and property development. This was achieved by initially understanding the three spatial developments concepts, the spatial policies of the City of Johannesburg (CoJ), and lastly, the Strategic Area Framework: Empire-Perth Development Corridor through literature review and document analysis. The case study area was provided to assist in analysing how policy implementation was conducted on the Empire-Perth Development Corridor. In essence, this research provided an insightful perspective on how policies, such as the Strategic Area Framework, are implemented. In addition, it was interesting to understand how decisions were taken regarding which strategic proposals and possible interventions would be used. It provided an understanding of how the decisions by political parties, CoJ officials, and property developers were taken in the policy implementation of the Empire-Perth Development Corridor. This chapter will provide an overview of the outcomes encountered in this research and provide recommendations to potentially improve the Strategic Area Framework (SAF), specifically the limitations encountered during this research, and perhaps provide suggestions for future research.

7.2 Overall Outcome of the Research

Chapter 1 provides an overview of why this research was chosen, how the research was conducted, and the existing literature on the chosen research. The Strategic Area Framework for the Empire-Perth Development Corridor was approved on 4 September 2014, making it valid to analyse the initial policy implementation of projects and structures on the Empire-Perth Development Corridor. A chapter description was then provided to understand how the evaluation was carried throughout.

The literature review discussed in Chapter 2, where unpacks the theoretical concepts of corridor development, transit-oriented development (TOD) and property development. The third chapter of this research report discusses several spatial policies in the CoJ. The policies encompass the Joburg 2040 Growth and Development Strategy, Integrated Development Planning, Spatial Development Framework for the Corridors of Freedom (CoF), and Strategic Area Framework of the Empire-Perth Development Corridor. Chapter 4 provides an overview of the research methodology used to obtain the necessary to answer the research questions. The chapter discusses the research strategy and the design used: namely, a document analysis through case-study research, through document analysis. The various sets of data required and research methods that were used to obtain the information are outlined.

Chapter 4 is focused mainly on discussing the existing spatial policies in Johannesburg, based on theoretical concepts discussed in the previous chapter. The chapter analyses how all the spatial planning policies from the Johannesburg Growth Development Strategy 2040 integrate through geographical scale and, most importantly, how they all share and maintain the same spatial objectives and visions from a metropolitan broad and long-term strategic plan. Chapter 5 provides an understanding of the contextual characteristics present in the Strategic Area Framework for the Empire-Perth Development Corridor study area, based on the analysis presented by the Johannesburg Development Agency and approved by the council on 4 September 2014. This will provide a foundation in understanding the study area's key issues and opportunities related to corridor development, the prioritisation of structuring elements, local area implications, and the proposed implementation area for the Empire-Perth Development Corridor.

Chapter 6 observes the Strategic Area Framework for the Empire-Perth Development Corridor document implemented in the case study. It aligns SAF with the theocratical principles discussed in Chapter 2, the spatial planning policy goals and objectives mentioned in Chapter 4, and most significantly, by observing policy implementation against the detailed Strategic Area Framework for the Empire-Perth Development Corridor itself. Chapter 6 is the final chapter of the research report and provides an overall analysis of the information acquired from document analysis, key respondent interviews and case study observations in the research report. Several

recommendations are then proposed as a way forward for policy implementation on the Empire-Perth Development Corridor.

7.3 Conclusion

This research study is concluded in that it has addressed the main objectives, which were indicated above as follows:

- Has the Corridors of Freedom spatial planning policy achieved policy implementation on the Empire-Perth Development Corridor?

The Corridors of Freedom spatial planning policy has not achieved policy implementation on the EPDC for various factors. The political interference was the first of many factors to derail and delay the CoF and the policy implementation on the EPDC. At the beginning of this research, it was mentioned that change in political leadership played a significant role and impacted the very stages of the implementation. I believe that politics influenced the policy implementation on the EPDC, and this was evident in the substantial change in the political leadership after the 2016 local government elections. This was clear in the prioritisation of capital for major bulk infrastructure, CoJ and its agencies' human resources, and enabling property development incentives for policy implementation on the EPDC being immediately redirected towards the new 'Inner-City' agenda. This resulted in potential investors and property developers delaying spending and investing until this policy uncertainty was resolved.

The other factor for policy implementation on the EPDC's lack of achievement is due to execution. The research recognises that the CoF project is a mega-project, and it would need a minimum of 20 years to show tangible results as to whether the policy implementation on the EPDC has been achieved. Even though it has been less than ten years since the inception of the CoF, I found my issue not with being how many years has passed since its implementation but rather *how* it has been implemented. The research identified that there is a policy implementation gap in when and how projects should be delivered on the EPDC. Furthermore, the research shows that there is inconsistent communication between intergovernmental departments and agencies, and that these should avoid working in silos and should rather monitor each other's progress and share new ideas.

- How have officials and agents, property developers, and consultants responded to the Empire-Perth Development Corridor?

At the beginning of the CoF, professionals saw an exciting and multi-faceted solution to all spatial planning problems and issues in the CoJ. Like everyone, they saw a concrete, foolproof, and sound policy, with significant socio-economic benefits for the entire value chain. However, things changed when they were implementing the policy and political shifts emerged. Various professionals lost hope when government commitment could not be confirmed in the implementation of the CoF. The struggle of the CoF to achieve the needed buy-in and commitment, coupled with confusion, endless council deliberations and a delay in general implementation, are all the factors that led to professionals rescinding their support for the implementation of the CoF.

- Has corridor development assisted in mitigating the apartheid spatial planning legacy in the Empire-Perth Development Corridor?

It was concluded by this study that the CoF policy and corridor development did indeed mitigate the apartheid spatial planning legacy, but only on paper. The CoF was aimed predominantly at diminishing the legacies of apartheid that existed in the CoJ. Practically, the policy experienced delays and did not fully address apartheid legacies. Although the policy was developed and established to better the lives of CoJ communities, it only brought further confusion and false hope to the people of Joburg. However, certain parts of the development and implementation were finalised, while other CoJ regions were either not complete or remained in their original state.

- Has the Empire-Perth Development Corridor achieved transit-oriented development?

The research acknowledges the establishment of the BRT system, stations, and routes on the EPDC; however, it does not believe that it has achieved a fully functional TOD. The CoJ is seen as mainly investing on the road infrastructure and neglecting other bulk infrastructure, such as electrical substations, bulk water supply and waste management for high-rise buildings, which are seen as enablers for generating pedestrian movement and relocation closer to BRT trucks and main

routes. This has not happened with the Rea Vaya BRT system, and this has negatively affected ridership volumes due to no mixed-use developments along the Rea Vaya. This shows a huge void, which needs to be reconciled through better planning and implementation by all implementors.

- Has the Empire-Perth Development Corridor met all the intended requirements of property development?

There are property development activities on the EPDC; nonetheless, it is not on account of the CoF policy. It can be seen from the previous chapter how private developers have not been motivated by CoF property developmental incentives, as they do their own feasibility studies based on what is needed in the current market and how they can supply certain opportunities. The biggest issue for property development on the EPDC is that developers cannot rely on the uncertainty of whether they will receive such incentives. Interestingly, property developers have utilised the Rea Vaya as a marketing tool more than promoting low property rates and levies to lure in potential homeowners and tenants.

7.4 Areas of Future Research

This study aimed to analyse whether the policy implementation on the EPDC was successful. The study was well anchored, and recent literature existed to support the study and its context. The areas of future research, including investigative measures to mitigate political influences on long-term strategic spatial planning policies. Moreover, other areas of further research pertain to identifying a turn-around strategy to prioritise corridor development infrastructure for the promotion of other developments, such as transit-oriented developments and property developments.

7.5 Recommendations

The recommendations from this study are as follows:

Policies should be developed and implemented with less political impact or influence. There is a need to ensure that a policy established to better the lives of communities can be implemented regardless of political machinations. Politicians need to understand the wider impact of their political disputes, particularly how these affect the lives of citizens. Ethics and codes of conduct should be strengthened in policy implementation. Policy developers need to consult with relevant professionals that will be involved in implementation. This would be done to ensure a specific policy is both pleasing on paper and practically possible. That element of practicality can only be achieved through consistent interaction with the relevant professional and their involvement in developing the policy. The government needs to extensively investigate its reprioritisation methods and budget changes or adjustments. This is mainly because many good policies and projects are reviewed, and what was originally intended changes and therefore so do the benefits too. The government must offer incentives to all private agents and employ these agents in spatial planning, because of its importance in reshaping South Africa and advocating for all apartheid injustices. The implementing agent for any policies must ensure that all stakeholders understand the policy being implemented and that there is no ambiguity in interpretation. There is a need to ensure uniform and consistent understanding and interpretation of the policy. The government and local municipalities should be careful in spatial planning projects because unnecessary projects cost more and result in unnecessary utilisation of public funds.

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Appendices

Appendix 1: Participant Information Sheet (Officials/ Consultants)

Greetings

My Name is Ndongela Bulumko Moko, and I am part of the MUS Sustainable Energy Efficiency Cities (SEEC) student group in the School of Architecture and Planning at the University of the Witwatersrand. As part of my master research project, in conjunction with the Research Report unit, I will be analysing the current spatial planning policy and its implementation outcomes on Empire-Perth Corridor of Freedom. This will be under the guidance of my supervisor, Professor Margot Rubin. This research aims to contribute to the knowledge of identifying the policy-implementation gap between the current policy objectives and implementation outcomes.

I am inviting you to be part of the study by agreeing to an interview. You have been selected to participate in this study due to your involvement in the practice of spatial planning policy and its implementation to the Empire-Perth Corridor of Freedom. The interview will take approximately 30-40 minutes of your time. I will ask you a few questions about your interpretation of policy implementation, and application in general terms, as well as an application specifically to the Empire-Perth Corridor of Freedom. Due to the current COVID-19 pandemic and The National Lockdown regulations, the interview will take place through a digital media platform such as Microsoft Teams or Skype.

Your participation in this interview is voluntary, you may refuse to answer any questions, and you may withdraw at any time. You will receive no payment or other incentive for your participation. There are also no foreseeable risks associated with your participation.

I commit to ensuring your anonymity as far as possible by only referring to you in generic terms (e.g., spatial planner consultant). However, full confidentiality cannot be ensured as I would like to be able to quote some of your responses. Furthermore, if you permit the name of your organisation to be revealed, there is a chance that others may associate you with these views. Please indicate whether I can use the name of your organisation and quotes in reporting on the analysis.

Please also specify whether I can audio-record the interview. If you indicate no, I will only take written notes

Further, any information that you share will be kept confidential – stored on a password-secured computer – and can only be accessed by myself. The results of this study will be presented as a Research Report at the start of next year and made available electronically on the University and made available electronically on the University of Witwatersrand's Library website to Wits staff, students, and researchers.

If you have any questions, concerns, or comments or if you would like a copy of the final report, please feel free to contact me at ndondela.moko1@students.wits.ac.za or Margot Rubin at Margot.Rubin@wits.ac.za

Thank you in advance for your interest.

A handwritten signature in black ink, appearing to read 'Ndongela Bulumko Moko', with a stylized flourish at the end.

Ndongela Bulumko Moko

Appendix 2: Participant Information Sheet (Developers)

Greetings

My Name is Ndongela Bulumko Moko, and I am part of the MUS Sustainable Energy Efficiency Cities (SEEC) student group in the School of Architecture and Planning at the University of Witwatersrand. As part of my master research project, in conjunction with the Research Report unit, I will be analysing the spatial planning policy and its implementation on Empire-Perth Corridor of Freedom. This will be under the guidance of my supervisor, Professor Margot Rubin. This research aims to contribute to the knowledge of identifying the policy-implementation gap between the current policy objectives and implementation outcomes.

I am inviting you to be part of the study by agreeing to an interview. You have been selected to participate in this study due to your involvement in the practice of spatial planning policy and its implementation to the Empire-Perth Corridor of Freedom. The interview will take approximately 30-40 minutes of your time. I will ask you a few questions about your interpretation of policy implementation, and application in general terms, as well as application to the Empire-Perth Corridor of Freedom. Due to the current COVID-19 pandemic and The National Lockdown regulations, the interview will take place through a digital media platform such as Microsoft Teams or Skype.

Your participation in this interview is voluntary, you may refuse to answer any questions, and you may withdraw at any time. You will receive no payment or other incentive for your participation. There are also no foreseeable risks associated with your participation.

I commit to ensuring your anonymity as far as possible by only referring to you in generic terms (e.g., property developer). However, full confidentiality cannot be ensured as I would like to be able to quote some of your responses. Furthermore, if you permit the name of your organisation to be revealed, there is a chance that others may associate you with these views. Please indicate whether I can use the name of your organisation and quotes in reporting on the analysis. Please

also specify whether I can audio-record the interview. If you indicate no, I will only take written notes

Further, any information that you share will be kept confidential – stored on a password-secured computer – and can only be accessed by myself. The results of this study will be presented as a Research Report at the start of next year and made available electronically on the University and made available electronically on the University of Witwatersrand's Library website to Wits staff, students, and researchers.

If you have any questions, concerns, or comments or if you would like a copy of the final report, please feel free to contact me at or Margot Rubin at Margot.Rubin@wits.ac.za

Thank you in advance for your interest.

A handwritten signature in black ink, appearing to read 'Ndondela Bulumko Moko', with a stylized flourish at the end.

Ndondela Bulumko Moko

FORMAL (SIGNED) CONSENT FORM

FOR GOVERNMENT OFFICIALS AND AGENTS

I, _____ consent to being interviewed for his study on the Corridors of Freedom. I can confirm that I have been informed of the purpose of the study and understand the nature of my participation. I have received, read, and understood the written participant information sheet.

I have also been informed that:

- My participation in this interview is voluntary
- I can refuse to answer any of the questions
- I can withdraw from the study at any time.
- The nature of this study and am aware that the results of the study will be reported in the form of a publicly available research report
- The transcripts of the interviews will be held in a password-protected site and will only be accessible to the core members of the research team who have signed confidential agreements. The reports will not include any of the transcripts but may use select quotes from the transcripts.

Please indicate whether we can audio-record the interview.

- I agree to the interview being auto recorded:

YES ☐ NO ☐

- I agree to the use of my name in the reporting of the analysis:

☐ YES ☐

NO

PARTICIPANT:

Signed: _____

Date: _____

RESEARCHER:

Signed: _____

Date: _____

Appendix 4: Consent Form (Developers)

FORMAL (SIGNED) CONSENT FORM

FOR DEVELOPERS

I, _____ consent to being interviewed for his study on the Corridors of Freedom. I can confirm that I have been informed of the purpose of the study and understand the nature of my participation. I have received, read, and understood the written participant information sheet.

I have also been informed that:

- My participation in this interview is voluntary.
- I can refuse to answer any of the questions
- I can withdraw from the study at any time.
- The nature of this study and am aware that the results of the study will be reported in the form of a publicly available research report
- The transcripts of the interviews will be held in a password-protected site and will only be accessible to the core members of the research team who have signed confidential agreements. The reports will not include any of the transcripts but may use select quotes from the transcripts.

Please indicate whether we can audio-record the interview.

• I agree to the interview being audio recorded: YES ☐ NO ☐

• I agree to the use of my name in the reporting of the analysis: YES ☐ NO ☐

PARTICIPANT:

RESEARCHER:

Signed: _____

Date: _____

Signed:

Date: _____

Appendix C: Interview Questions

Interviews with City of Johannesburg officials and agents

- 1) What is your background, and can you tell me a little about yourself?
- 2) What is your involvement in the Corridors of Freedom?
- 3) What is your general interpretation of the concept “policy implementation”?
- 4) What were the goals/aims of the CoF?
- 5) In your view, have they been achieved? What has or has not been achieved?
- 6) What has facilitated the implementation of the elements that have been achieved?
- 7) What have been some of the challenges to the COF E_P? How have these impacted on implementation?
- 8) How have developers responded to the incentives tied to the developing along the Corridor?
 - a. How much influence does the implementation of institutional arrangements to drive the development to attract developers?
 - b. How do you interpret the current relationship between the state and the private sector (developers) on implementation of developments?
 - c. Do you believe the CoF to be successful require some consistent participation from developers?
- 9) What are the current CoF implementation outcomes in association to the Bus Rapid Transit?
 - a. How far has inter-governmental engagements and implementation gone during the execution of the projects along the corridors?
 - b. How has the Rea Vaya public transport system and location its stations' impacted car dependency, economic activates and accessibility into the city?
 - c. What challenges and limitations are found in the implementation of Mixed-use developments to aligned with the Bus Rapid Transit-Oriented Development (BRT-OD) objectives?
- 10) Do you believe there is a policy-implementation gap in the Corridors of Freedom?

- 11) What would you consider as a method to close the policy-implementation gap?
 - a. What would it entail?
- 12) The future: In 2030 – what is your view of the Corridors of Freedom nodes and how would have the role of the policy changed?

Appendix 6: Interview Questions (Developers)

Interview with Developers

- 1) What is your background, and can you tell me a little about yourself?
- 2) What is your involvement in the Corridors of Freedom?
- 3) What is your general interpretation of the concept “policy implementation”?
- 4) What is your current view as a developer on Corridors of Freedom development project?
 - a. What is your opinion of government/municipality addressing shortage through the Corridors of Freedoms policy?
 - b. How realistic do you think the Corridors Strategic Area Frameworks from a developer’s perspective?
 - c. How has the political instability impacted the interest of Developers in investing the Corridors of Freedom
- 5) What boxes must be ticked in the developer's decision-making process must when it comes to Corridors of Freedom?
 - a. How much does the feasibility of the developer’s objectives impact the buy-in into the Corridors of Freedom?
 - b. Have developmental incentives such as relaxed developmental rights and easy parking requirements, increased developers profit margins?
 - c. In your view, what is the most efficient way the private sector (developers) meet can cause the housing shortage in the Empire-Perth Corridor?
- 6) What are the current Corridors of Freedom implementation outcomes in association to the Bus Rapid Transit?
 - a. Has the Rea-Vaya public transport system and its stations been ever seen as a marketing tool which developers can use?
 - b. How much influence would you say that the City of Johannesburg has directly and indirectly on developers interested in building high rise buildings along the corridors?
 - c. Are you aware of any projects that/have been unsuccessful in the Corridors?
- 7) Do you believe there is a policy-implementation gap in the Corridors of Freedom?

- 8) What would you consider as a method to close the policy-implementation gap?
 - a. What would it entail?
- 9) Covid-19 in the property development industry?
 - a. How has the pandemic made you reanalyze and strategize your business model with various stakeholders (e.g., tenants, local government, investors, community) in the Corridors?
- 10) The future: In 2040 – what is your view of the Corridors of Freedom nodes and how would have the role of developers changed?