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How is Planning Managing Urban Growth in Region ‘A’ of the City of Johannesburg?

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How is Planning Managing Urban Growth in Region 'A' of the City of Johannesburg?

by

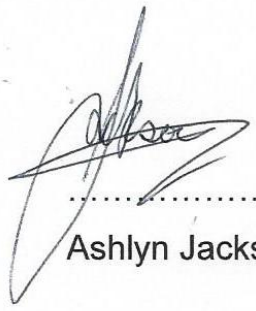
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A research report submitted to the Faculty of Engineering and the Built Environment, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the Honours Bachelors' degree of Science in Urban and Regional Planning.

Johannesburg 2015

Declaration

I, Ashlyn Dana Jackson, declare that this research report is my own unaided work. It is being submitted to the Degree of Honours for Urban and Regional Planning to the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination to any other University.



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Ashlyn Jackson

...10TH..... day of .NOVEMBER.., ..2015.....

Abstract

This study attempts to understand whether or not Johannesburg is reaching its objective of becoming a ‘compact, sustainable’ city and whether or not it is able to combat sprawl; questions pertaining to the management of growth, in the metropolitan, therefore became of key concern. Initially this study was set to continue the annual review reports conducted on the GMS which came to a standstill in 2012. However, due to the limitations associated with this study the initial purpose of the study could not be carried out. Therefore, the study shifted in its perspective and began to focus on how the City and its planners manage growth and whether or not it is effective. It continues to analyse the 2008 GMS; the Urban Development Boundary; the spatial development framework as well as the regional spatial development framework for region A. Therefore it aims to provide an understanding of how these strategies and frameworks work simultaneously and in terms of effectiveness and whether or not planning is working successfully, within the City.

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List of Acronyms

Acronym	Description
CBD	Central Business District
DFA	Development Facilitation Act
GCR	Gauteng City Region
GDS	Growth and Development Strategy
GIS	Geographic Information Systems
GMS	Growth Management Strategy
GSDF	Gauteng Spatial Development Framework
GTI	Geo Terra Image
IDP	Integrated Development Plan
ITMP	Integrated Transport Master Plan
LACDC	Lanseria Airport City Development Company
LDF	Local Development Framework
LEDI	Lanseria Economic Development Initiative
LPA	Local Planning Authority
LUMA	Land Use Management Act
MUL	Metropolitan Management Act
PRASA	Passenger Rail Agency of South Africa
PSDF	Provincial Spatial Development Framework
RDP	Reconstruction and Development Programme
RMA	Resource Management Act
RSDF	Regional Spatial Development Act
RSS	Regional Spatial Strategy
SDF	Spatial Development Framework
UDB	Urban Development Boundary
UDF	Urban Development Framework

Chapter 1: Introduction

1 Introduction:

"We have inherited urban sprawl as a legacy of apartheid planning, with people pushed out to the periphery. We can't draw them all back into the centre, but we can reconnect them better to each other and to opportunities." - Kevin Roman (Former Chair of the Board of the Cape Town Partnership)

Since the 1980s a large amount of discourse and focus has been placed on the concept of urban sprawl. However, despite this long-lasting discourse on the concept there is still no clear definition or overall consensus of what urban sprawl is. Even though this challenge persists some theorists argue that it is best to define urban sprawl "as an ongoing development from compact to...scattered" (Future Cape Town, 2013: 1). Sprawl is therefore positioned against the ideal of a compact city which encourages high densities and centralised development consistent of mixed-use functions – it is therefore seen to be "a continuum of more compact to completely dispersed" (Chin, 2002: 3). In other words, sprawl is considered to be "a matter of degree and not an absolute form" (Chin, 2002: 3) and therefore includes urban forms such as: leapfrog development; continuous development at a low-density; and ribbon development (where housing developments are located near roads or networks of communication).

In response to the growing nature and form of urban sprawl - the concept of growth management was introduced as a tool or mechanism to aid in the management and control of urban growth. It is a concept that is approved of and practiced by many countries around the world. Its first highly recognised inception took place in 1973 - Oregon, USA which is considered to be the home of the first successful growth management tool known as the 'urban edge'. Its core objective was directed at preventing sprawl and protecting rural and 'prime' agricultural lands from the ever-encroaching urban landscape. This led to the inception of the method, as a growth management tool, across many states in North America. As a result a large amount of international literature is based on growth management in most parts of North America but despite the USAs leading role many other countries across the world, over the last few decades, have adopted and introduced growth management tools including: New Zealand, the Netherlands, the United Kingdom, South Africa and so on.

In the case of South Africa, many of its cities have inherited and been faced with numerous challenges associated with the consequences of apartheid spatial planning. Apartheid legislation was intent on the strategic placement of people based on their race and as a result enforced policies that aided in the regulation of movement and the settlement of non-white people in urban areas (Future Cape Town: 2013). This meant that most of the non-white population were placed on the outskirts of urban areas and therefore points to the fact that apartheid planning practices played a crucial role in planning and accelerating urban sprawl across South African cities (Future Cape Town, 2013: 3).

Johannesburg, after apartheid, is argued to resemble *"the kind of disjointed, diffuse city... long ago termed a 'galactic metropolis': a sprawling, boundless megalopolis, consisting of...disconnected fragments...linked together to form a contrived, illusory whole" (Murray, 2011: 179).* It is believed that the urban transformations that City of Johannesburg Metropolitan municipality has undergone, since the demise of apartheid, has generated "contradictory patterns of growth and development" (Murray, 2011: 179). Sprawling developments have been characteristic of the north of the metropolitan region as a result of and since apartheid. The approval of planning applications under the apartheid government, and before the inception of a "unitary metropolitan government" had a significant influence on development in the city well into the 2000s (Ahmad and Pienaar, 2014: 102) - encouraging its sprawling nature.

In response to the growing urban form of the city - the Spatial Development Framework (SDF) was introduced in 2002 in order to improve efficiency, sustainability and accessibility. Further, the SDF defined an urban development boundary (UDB) aimed at curbing urban sprawl and at redirecting "resources towards priority areas for densification and economic development" (Ahmad and Pienaar, 2014: 102). The SDF also introduced a concept of growth management but the brief definition and use of this concept within management documents no longer sufficed with the increasing nature of development. Therefore, the Growth Management Strategy (GMS) was drawn up for the purpose of detailing "where, and under what conditions, growth could be accommodated for in the greater city region" (GMS, 2008: 4).

Growth management in Johannesburg works to counter the effects of the emergent sprawling development on the natural environment whilst trying to positively transform the spatial form of the city in order to improve the living conditions of those in marginalised areas.

1.1 Rationale:

Urban sprawl is an ongoing phenomenon that leads to the horizontal growth of cities resulting in multiple negative externalities. Johannesburg has been described by theorists as being a “sprawl city”.

With the growth of the North of the city and a concentration of public sector funded/ driven improvement in the South, understanding how planning is managing current growth of the North is important.

1.2 Problem Statement:

Planning has played an important role in its focus on the development of previously marginalised areas in the South of the Johannesburg. To what extent has planning played a role in the development of the North of Johannesburg since the end of Apartheid? Is it a successful tool in terms of managing growth? What is the nature of development in the chosen case study and what has planning contributed to that development? Finally, what is planning’s active response to development in South Africa and what should it be doing, if it should be doing something different?

1.3 Research Question:

How is planning managing growth in the North of Johannesburg?

1.3.1 Sub- Questions:

1. How has development in the North of Johannesburg evolved since the end of apartheid?
    → With particular reference to development that has occurred since the implementation of the Growth Management Strategy in 2008.
2. How does planning attempt to manage growth in the North of Johannesburg?
    → What tools, mechanisms or instruments are being used in order to manage growth and urban sprawl in northern Johannesburg?

3. Is growth in northern Johannesburg consistent with what is stipulated in spatial policy? If not, why?

1.4 Importance of this Study

It is therefore important to explore growth management in the City of Johannesburg, how it plays a role in managing growth in Region A of Johannesburg, and whether or not it is effectively being used? Region A is an administrative region which came into effect in 2000 when the City of Johannesburg Metropolitan Municipality was created. It is one of seven region and is responsible for the delivery of health care, housing, social development, and any other local community-based services. Region A located in the north of the metropolitan municipality (refer to Fig. 1). It is an area that is experiencing a high level of growth both economically and socially. More and more people are moving into the region in search of economic opportunity along with a better form of living away from the city centre. It is important to understand the way in which this growth is happening in order to ensure correct planning policy and regulation is being adhered to and whether or not these polices, frameworks and strategies are having an effect on the region.



Fig. 1: Location of Region A

Growth management refers to regulatory policies which have been implemented in order to guide how growth may occur within a particular region. Growth management influences density, the amount of land available for development, land use, and the timing of development. It is a mechanism which is used in order to accommodate growth in a rational manner and not to prevent or limit it (Downs, 2003). In this regard the research being conducted will look closely at the Growth Management Strategy of 2008 in order to evaluate the effectiveness of the city's growth management approach. To understand this approach it will be important to research and understand the various approaches to growth management that are used internationally as well as the tools and strategies used within these approaches to make them effective.

Previous work conducted on this topic has included annual GMS assessments. Records of these assessments up until the year 2012 which examined data for the

year 2011 however no further assessments have been noted since 2012. The research initially aimed to take these assessments further and to try to understand whether or not the GMS was having a real impact on growth management in the region. Due to the difficulties in gaining access to necessary information and data the research shifted in its focus and revealed how strongly the City believes in the effectiveness of its GMS in collaboration with its UDB and how planning is using these mechanisms to manage and control growth. It has also shed light on the political influence on development in some contexts and how this severely constrains the validity of growth management strategies when they are overridden by 'power' or authority.

1.5 Methodology

In an attempt to understand whether or not Johannesburg is reaching its objective of becoming a 'compact, sustainable' city and whether or not it is able to combat sprawl; questions pertaining to the management of growth, in the metropolitan area, became a key concern. In this study the validity of planning and the use of its tools and mechanisms to manage and channel growth and development was the main focus. In order to do so, the Growth Management Strategy (GMS) is delved into to provide insight on whether or not the City of Johannesburg is successfully managing growth in a sustainable manner. Initially this study was set to continue the annual review reports conducted on the GMS which came to a standstill in 2012. However, after trying several times to gain access to the necessary data, and after numerous referrals from one person to another with no communication from anyone working at the CoJ, it was found that the CoJ no longer has the necessary data for spatial trend analysis – or the employees in CoJ no longer have any knowledge of it. Therefore, the initial study could not be carried out and the study turned to what was available - GTI data - that was provided by the Gauteng City-Region Observatory (GCRO). GeoTerraImage (GTI) is a private company that provides geographic information services to numerous public and commercial sectors for business and planning decisions. GTI extracts information from satellite imagery and aerial photography in order to produce digital spatial datasets. The study therefore uses the data to measure how the City and its planners manage growth. It continues to analyse the GMS of 2008 along with the Urban Development Boundary (UDB) at the local level

and the spatial development framework as well as the regional spatial development framework (RSDF) for region A.

The research started off with the collection of data from various sources including: the GCRO and the City of Johannesburg (CoJ). However, the available data from the City was not as useful as the data obtained from the GCRO. This data was translated onto GIS maps through the use of GIS software (ArcGIS) which was provided by the University of the Witwatersrand. Once the available data had been mapped – an analysis of the spatial form and trends, in terms of growth, was done.

In order to understand the nature of growth and development in the selected case study (Region A) two interviews were conducted at the City of Johannesburg Metropolitan Municipality. Both interviews were conducted with city planners working in the Department of Development Planning (City Transformation and Spatial Planning) which develops, monitors and manages spatial policy and development applications made to the City. These interviews provided a background to the purpose of the spatial policies in place and how successful they are considered to be by the City – in it objective of creating a compact, sustainable city. The process of collecting relevant data and information proved to be difficult. The City has no knowledge about the Trends Analysis System (TAS)/ Land Information System (LIS) that was implemented with the inception of the GMS. This system was developed in order to track development applications and spatial trends but was not known of by any employees that were approached in the CoJ. It also proved difficult to connect with and contact planners working for the City.

1.6 Chapter Outline:

Chapter two looks into the existing literature on growth management both internationally and locally. It presents a brief understanding of sprawl and its effects on growth and the City as well as how urban growth is both positive and negative and the views and opinions of various theorists on the pros and cons to growth. The reviews of the literature provide an understanding of how urban expansion occurs and why; and how it is addressed by policy and regulation by the varying political administrations around the world.

Chapter three explores the relevant policies and frameworks that both inform the Growth Management Strategy of 2008 and provide guidance for growth in the City but with particular reference to the case study of Region A. It introduces the case study and provides a brief review of the case study in question. This chapter looks at what is being said by the Regional Spatial Development Framework (RSDF) for region A in order to see and understand what the key issues and thus development objectives for the region are.

Chapter four provides the findings of the question at hand. It provides both graphic evidence (in the form of GIS maps) as well as written evidence from interviews which were conducted with planners who work on policy and frameworks in the City of Johannesburg.

Chapter five examines the findings of chapter four and provides an initial understanding of what is happening in the case study. This chapter explores the believed success of both the RSDF and GMS in guiding capital investment effectively as well as the efficient implementation of interventions as a result of the GMS public investment directing. It analyses the maps provided in Chapter four to draw initial conclusions on the nature of growth and development and whether or not this growth is consistent with what is stipulated in spatial policy.

Chapter six concludes the research paper through the discussion of findings and what has been drawn from doing the research.

Chapter 2: Growth Management: A Solution?

2 Introduction:

Currently, urban growth and urban expansion is a common phenomenon experienced around the world, and it is occurring at an exponential rate particularly in developing countries. Rapid urbanisation and high levels of in-migration of people into cities within developing countries is contributing to greater levels of horizontal growth resulting in a need for the management of its growth. This chapter looks into the existing literature on growth management both internationally and locally; it presents a brief understanding of sprawl and its effects on the growth of the city as well as how urban growth is perceived both positively and negatively. The reviews of the literature provide an understanding of how urban expansion occurs and why; and how it is addressed by policy and regulation by the varying political administrations around the world.

2.1 Understanding Sprawl and the Purpose of Growth Management

Urban sprawl describes the ongoing expansion of human populations in a haphazard spatial configuration, away from central urban areas to areas which were previously classified as being 'remote' or rural. Sprawl is characterised as being low density, automobile dependent land development emergent on the edges of urban centres. It requires government funding in order develop basic infrastructure to accommodate it and in some cases, it may require private funding as in the case of a development that is approved beyond the urban development boundary on the grounds that infrastructure will be privately funded.

Urban sprawl is a concept and issue that has been extensively discussed within the planning profession over the last several decades. Sprawling cities exist across the world and have been associated with air pollution and traffic congestion; it has also been linked to the development of land which is earmarked for agriculture (usually prime agricultural land) as well as development which occurs on floodplains which can be extremely hazardous to the lives of those who live on it.

Sprawl is viewed as a consequence of unplanned development driven by the growing popularity of private vehicles and the ability of people to move further away from the congested nature of the city. It has been suggested that modernist planning

practices or ideas of urban development have favoured lower density living conditions (driven by the creation of the automobile) than that of old inner cities and have had a significant implication for the nature of many city forms and patterns across the world. Horn (2010: 42) notes that “sprawl and its associated consequences” have been linked to the 1920s era when “central cities began to lose favour”. She argues that during the time of both the world wars overcrowding and slum dwelling within cities became a common phenomenon and resulted in living conditions that were poor and hazardous. After the Second World War rising incomes and affordable transport meant that more people moved to suburban areas surrounding central cities as cities were seen to “embrace restructuring, growth and expansion” (Horn, 2010: 42). However, this mass movement resulted in the reluctance of many suburban residents to return to downtown for consumer goods which therefore encouraged the movement of market places to the suburbs – leaving central cities in a state of disarray. Urban sprawl was seen to encompass multiple cities around the world – more especially after World War II including that of: London, a few other major cities in the United Kingdom (Birmingham and Manchester) as well as most of North America’s biggest cities (such as New York and Los Angeles) (Garreau, 1991).

Urban sprawl is inextricably linked to the negative connotations associated with urban development. It is viewed in contravention to the notion of sustainability and sustainable living as it encourages horizontal development and often encroaches upon prime agricultural land. In some cases it can lead to hazardous living conditions and environmental impacts as it is seen to increase carbon footprints and, in certain cases, positions people in areas of dangerous geographical features such as floodplains which could potentially risk the lives of those living in such locations (Anthony, 2004). The cost of urban expansion and urban sprawl is vast. Consequently, the land intensive nature of expansion has caused increased costs for: infrastructure provision, travel, and automobile dependency. It has also placed a considerable amount of strain on the physical environment and in so doing awakening cities to the realisation that this form of development can no longer be sustained.

However, there are views that go contrary to popular belief which argue in favour of urban expansion and sprawl, such as the associated affordability of land for the

home owner or entrepreneur - which may be viewed as a lowered cost of living. Where sprawl is caused by 'strip-development' (economic activities that occur along major highways and roads) there is believed to be an associated benefit as like activities are seen to concentrate along easily accessible routes (PERC, 1999). In this case, Angel (2012: 290) argues that there is no optimal size to cities and that all cities are experiencing levels of growth and that "as heroic and justified as it may be, containing the oncoming global urban expansion is much the same as holding back the tide" (Angel, 2012: 291). Angel views urban growth as natural and inevitable and that trying to contain and constrict it is essentially impossible.

2.2 What is Growth Management

"...mega-urban regions have experienced rapid urbanization resulting in development in the cities' hinterlands; amorphous and amoeba-like spatial forms, with no established geographical boundaries; and leapfrog development that puts new towns, industrial estates, and housing projects onto formerly agricultural lands." (Moldenke, 2000: 11).

'Growth management' was introduced as an approach with the key objective of ensuring that the forecasted growth of any population and its economy is well provided for in terms of service and infrastructure provision whilst meeting the expected socio-economic and spatial objectives of the country concerned. It was increasingly used at an international scale because of the growing criticisms against urban expansion and the validity of positive urban growth.

International literature on growth management points to the fact that the world is struggling to manage urban growth. It is clear that "towns, cities, metropolitan regions and urban settlements across continents have identified the need to look at ways to manage the sustainable growth of urban areas" as a result of the problems induced by the outward expansion of residential settlements (Gauteng Provincial Government: 2014: 29). Urban sprawl is the main contributor to the need for a growth management strategy due to its believed negative connotations and its resulting impact of 'urban disinvestment' and the loss of vibrant urban spaces due the haphazard, indefinite patterns of development; increased traffic congestion as well as the higher cost of public goods and services. This prompted the need to create more sustainable, compact living environments in cities, towns, metropolitan

regions and urban settlements across the world (Gauteng Provincial Government, 2014: 29).

2.2.1 The Evolution of Growth Management

Anele Horn (2015) revisits the concept of growth management in her paper *Urban Growth Management Best Practices: Towards Implications for the Developing World.* In this paper she argues that spatial policy reinforces the concept of urban growth management in order to counter the perceived environmental and social effects urban expansion was having on urban sustainability (Horn, 2015: 131).

A key feature of some of the largest cities of the early twentieth century was seen to be increasing "dominance of low-density suburban and peri-urban landscapes" (Horn, 2015: 131) which some have argued to resemble 'sprawl'. In developed countries, their urban form is argued to be influenced by market-driven development raising questions about how sustainable that form of development truly is. Horn argues that until recently the debate surrounding urban growth management has been influenced by evidence on the implications of urban expansion for infrastructure, travel and the amount of fuel required to travel those distances and then more broadly by ecological, social and economic concerns. The idea of creating a more compact city has gained popularity during the last century resulting in the emergence of urban growth management.

The first notable emergence of urban growth management is stated to have occurred in response to the post-World War II industrialising city. This was seen as the earliest form of urban growth control and was enforced through the implementation of a greenbelt which demarcated a boundary beyond which urban growth would not be allowed (Horn, 2010: 45). This growth management tool was implemented in England as part of its regional policies. The purpose of the greenbelt was to protect agricultural land, to separate "major conurbations from surrounding settlements" (Horn, 2015: 132), and in order to redistribute large populations from the south east to other parts of the country. Its inception can be traced back to the pioneer of the 'Garden City' movement, Ebenezer Howard, in the late nineteenth century (Horn, 2015). The formalisation of the greenbelt as a tool for urban containment, in the UK, occurred in 1947 in accordance with the Town and Country Planning Act where the use of the greenbelt was often accompanied by the development of 'new towns' (Jun

and Hur, 2001). New towns are essentially towns that were predetermined in terms of development, before their construction.

The enforcement of the greenbelt approach has been witnessed in many European countries including: London, Amsterdam and Copenhagen (Horn, 2015: 133), many other countries across the world have also been noted to adopt the approach including Korea, San Francisco, and Dunedin to name a few, in order to curb the implications of urban sprawl. Horn (2015) argues that these cities have all experienced various degrees of success with the tool. Critics argue that the green belt in fact encourages leapfrog development which could be seen in the location of the 'new towns' and the self-enforced inefficiencies they created due to their distance from economic opportunities.

The second form of urban growth management is noted to have started in the 1970s. At this point it was realised that urban growth management tools needed to monitored and adapted in alignment with forecasted urban growth (Horn, 2015). A critical feature of this period in time was the decentralisation of planning from centrally planned government to a form of 'bottom-up' planning system where local authorities were established and assumed a greater amount of responsibility in terms of spatial policy and urban growth management (Horn, 2015: 134). This form of growth management was seen with the inception of the urban edge or urban growth boundary as introduced in many North American cities including: Oregon, California and Boston as well as the UK and Sydney. These edges or boundaries are institutional "with the purpose of containing physical development and sprawl and re-directing towards a more integrated, compact and efficient urban form" (Horn, 2015: 134). Oregon was the pioneer in establishing and enforcing state-wide growth management policies.

The third form of urban growth management is known as the 'smart growth movement' (Horn, 2015). This movement is argued to be closely related to the second form but pays more specific attention to the creation of sustainable urban developments. This form of growth management emerged in the USA and is neither directed at stopping or slowing down growth but rather its goal is "to manage urban sprawl by prioritizing intensification and mixed-use development, providing transportation alternatives and housing choices, and preserving natural heritage

features, while still ‘promoting targeted economic growth to reduce per capita consumption of land and energy, lower the cost of infrastructure and make transit more viable’” (Horn, 2015: 136; Eidelman, 2010: 1220).

The current form of urban growth management discourse has emerged out of the debate on sprawl and whether the preferable solutions to counter it including the compact sustainable form and market driven urban development are suitable solutions to the controversial issue or not. This debate prevails and has led to the emergence of multiple solutions that Breheny (2002: 143) argues should swim with the tide (i.e. growth) instead of against it. Debates and counter-debates have led to a number alternative solutions including: urban renewal initiatives since the 1990s; polycentricism; and regionalisation (Horn, 2015). What is evident in the current debates over urban growth management is the strong “counter-discourse that a compact form is not the only way to” achieve sustainability (Horn, 2015: 138). In fact authors such as Geyer (2009: 168) and Angel (2012) argue that urban sprawl is not completely “bad, exploitative, unfair and unsustainable” (Horn, 2015:139).

2.2.2 What is the Purpose of a Growth Management Strategy?

“The problem is not growth itself. Growth is inevitable. The problem is how to manage growth in ways that both minimize costs and maximize benefits to the city at large and the people and economy that inhabit the city.” (Gauteng Provincial Government, 2014: 1).

Growth is an inevitable phenomenon and characteristic of urbanisation the question is how does one manage it? Growth management as a concept or mechanism is thus a common response to the growth of cities. There is an ever-growing need for regulation in preserving the natural environment, social protection - especially in the case of the urban poor, as well as the economic prosperity of the city in order to reduce the costs and expenditures associated with the provision of public goods and services that are associated and required with urban growth.

With this in mind it is crucial at this point to define what is meant by the concept of ‘growth management’. Growth management can be defined as “the application of planning tools in a coordinated manner to guide the development of cities and towns

toward favourable patterns of growth" (Gauteng Provincial Government, 2014: 1); others have defined it as a conscious effort by government to influence the form of development to take place in a particular location, at a certain cost and rate (Nelson & Peterman, 2000: 278). It can be seen as a measure that aims "to channel growth or manage its impact" (Nelson & Peterman, 2000: 278). It can also be defined as a mechanism that uses a combination of regulation and incentive to guide new development. In this regard, it must be acknowledged that growth management is not a mechanism used to limit the boundaries of an urban area but rather it seeks to redistribute growth or guide its location (Gauteng Provincial Government, 2014: 1). It is a component of urban planning and urban management that deals with the way in which growth is located and directed in differing environments. It has a significant relationship with both spatial planning and land use planning in that it deals with implementation in terms of how growth takes form.

Growth management must therefore be viewed as a tool to alleviate the impacts that are associated with growth including: the excessive costs of public infrastructure and service provision, the excessive consumption of land, the loss of prime agricultural lands and the natural resources of various regions, and the increased lack of access by those whom do not possess private vehicles.

Growth management, in this regard, is based on the theory that the "physical form of a community" has an impact on 'the quality of life' of those within the community (Nelson & Peterman, 2000: 278) where the quality of life referred to how much it costs to operate the community and how much it would cost an individual to live within the community. The direct costs include that of rates and taxes, and water and electricity; the indirect costs include the time spent travelling to and from work as well as the externalities associated with the health conditions a community may be subjected to. In this regard, the costs of living are seen to have a direct impact on economic development of an urbanising region. Growth management had an initial goal of reducing the environmental costs of development as a result of the emergent negative connotations the concept of 'growth' was beginning to be associated with. People began to realise that the expansion of the urban landscape was beginning to affect their way of living as they began to experience higher costs of living and increased travel time between home and work. However, despite the strong

argument of the impact of growth on the environment – it was simply not enough to change the notion that growth was good for the economy of a community.

2.3 International Case Studies of Growth Management – Oregon, the UK, and New Zealand

International literature is predominantly western originating from the USA and Europe. Literature on the nature of urban growth management in developing countries is limited and reduced to the implication the lessons learnt from developed countries have for the developing world and its adaptation to urban growth management tools of the west and large cities in the world. Literature on growth management in developing countries has proven difficult to find except in the case of South Africa.

2.3.1 Portland, Oregon

Growth management was introduced as a tool in many states of the USA, particularly Portland, Oregon as a response to the negative implications of sprawl on the natural environment and prime agricultural land. Oregon has been recognised as being the leader of growth management and rural preservation in the USA, since 1973 (Nelson & Moore, 1993). In the 1970s, Oregon's Governor Tom McCall along with a number of his supporters influenced the implementation of the first set of land use planning laws into the Oregon state legislature that would, in the future, control how much land cities would use. It was decided that cities would only grow as much as they needed to. This was instituted in order to preserve the countryside as well as the core, central business districts within the cities.

The objectives behind the enforcement and implementation of these laws were to inhibit the further expansion of the city and to control the effects of urban sprawl on the natural environment and prime agricultural lands. As a result of these planning laws each city and county within the state of Oregon had to produce a long-term plan which dealt with the future growth of their city or county that met the demands and goals of the local and state guidelines.

In order for Oregon to enforce growth management it developed an urban growth boundary around the Portland region which includes 25 cities and bordering

communities which are managed by a metropolitan centre and managed by state regulators. Urban development is only allowed within the boundary however beyond it – development on farmland and forestland is limited by state law. Land within the urban growth boundary is largely serviced with roads, water and sewage lines, police and fire stations, schools and parks. The urban development boundary is used as a tool to protect the land outside of it from urban sprawl and seeks to encourage an efficient use of land and public amenities found within the boundary (Oregon Metro, 2015).

The development boundary is monitored and re-evaluated every few years in order to ensure that the region has enough land to accommodate the region for another twenty years of growth. The growth boundary is expanded in accordance with projected growth patterns based on historical development and economic growth patterns in the region.

Portland, Oregon introduced numerous plans, strategies and mechanisms to counter the effects sprawl was beginning to have on the natural environment. This included the 'Urban Growth Functional Plan' (UGFP) which is a plan that provides the necessary tools to achieve the established goals of the 2040 Growth Concept and is Metro's "long-range growth management plan for the Portland metropolitan area" (Oregon Metro, 2015). The management of growth at the state level provides guidelines as to how to attain the state development goals. Local comprehensive plans are required by these guidelines and must be in line with the states' planning goals. These plans go under review in order to ensure consistency and when approved by the state the plan becomes a controlling document for anything to do with urban development. At state level, however, zoning and local planning approvals are not made.

Oregon's Regional Framework Plan

In 1978, a Metro was elected as the first regional government. Its purpose was to coordinate land-use plans for the region and all its jurisdictions as well as any other matters pertaining to the 'region'. The state made it the responsibility of the Metro to delineate a regional urban growth boundary and was enforced with the power to

make any decisions with regard to development within the boundary (Metropolitan Service District, 1992).

The purpose of the urban growth boundary was implemented to aid in:

- The separation between rural and urban;
- Supplying a sufficient amount of land to build on in order to accommodate expected growth for a 20 year period; and
- Protecting natural land from urban sprawl whilst maintaining land for the use of urban development

As a result the Metro established the Regional Framework Plan which provided an integrated set of planning policies in order to manage the forecasted growth. This plan was produced so that each city and county could follow it as a guideline alongside the 'local functional growth management plan'.

The Metro plays a significant role in researching and establishing the most effective strategies to manage urban growth and accommodate future population growth up until 2040. It uses various urban development tools and statistical prediction technologies to address forecasted changes, challenges and potentialities for future populations in the Oregon region. Metro predicts where, when and the possibility of how population growth and urban growth may occur and determines from that the most effective solutions to sustain a greater efficiency of the use of land within the region, protect the environment, provide various forms of transportation networks including cycle lanes and sidewalks, as well as to encourage different housing typologies.

In doing so, questions were asked as to whether the state or region felt if it was better to grow out or grow up and whether it was better to densify or spread out into a larger area (Nadim, 2012). In this sense, the Metro determines what the effects of each possibility will be on the consumption of land, the time and distance of travel, the quality of open space and air, as well as the cost of travel.

2040 Growth Concept

The Portland Metropolitan region developed a development plan for the duration of a 50 year period. It provides a long-term growth management goal for the region and is

focussed on creating better communities of the future. It has established urban growth boundaries for the purpose of containing future growth and has located a multimodal transportation system to ensure the efficient movement of people within the region whilst protecting the environment (Regional Planning and Policy, 2009).

Urban Growth Management Functional Plan

The urban growth management functional plan was the by-product of the 2040 Concept Plan. It was introduced in order to provide the necessary tools and strategies to help meet the goals of the 2040 Concept Plan.

2.3.2 Liverpool Development Control, England

The United Kingdom introduced growth management in the form of 'development control'. In contrast to the United States which focuses growth management at a local level, the United Kingdom has laws that specify a process which ought to be followed in terms of producing a plan for its cities and regions. Development control falls within the United Kingdom's mechanism of '*town and country planning'* where the local government has the authority to regulate and manage the land use and development of its given area. The mechanism is based on a 'plan-led system' which is used to create development plans and in so doing consults the public (Nadim, 2012: 75).

In England, it is of key importance that a specific process is followed to have a plan for its cities and regions and that certain documents are required when creating an urban growth plan. England strictly adheres to the Town and Country Planning Act of 1990 which defined the 421 Local Planning Authorities (LPAs) that exist in the United Kingdom. Each LPA is expected to produce a Local Development Framework (LDF) which contains development plan documents. The LDF works alongside the Regional Spatial Strategy (RSS) and thus makes up the statutory development plan for Liverpool (Nadim, 2012: 76).

The Regional Spatial Strategy (RSS) is prepared in order to enforce planning policies that are focussed on the development and use of land in the region. It is adapted to different regions of the country and provides a vision for the greater region as well as the sub-region and does so in order to guide growth in the region. It has policies which are used to enhance the economic potential for a given region. It

tries to stabilise the population, and in the case of Liverpool it aims to concentrate it into a core city and economic hub which connects to other regions of economic prosperity and areas of need.

Local Development Frameworks are prepared in the form a plan to show how Liverpool proposes its future development. It directs development to ideal locations in order to protect the environment and areas of historic significance.

2.3.3 Auckland, New Zealand

The current growth trends found within New Zealand "reflect the long-standing cultural preferences for low-density living, in peri-urban settings, dependent on easy access to private transport" (Schultink, *et al*, 2005: 63-64). If this growth trend is not controlled it could lead to the problem of sprawl. It has been noted that much of the growth experienced in New Zealand is concentrated on the urban fringe with the inner city experiencing a gradual population and economic decline.

Auckland, "a relatively small metropolis by global standards" (Schultink, *et al*, 2005: 64) faces the issue of a population that stretches over an extensive land area - equivalent to that of a large European city. This comes largely due to the fact that the region has an ineffective governing body which has been characterised as being fragmented and tends to overlap in government jurisdiction where multiple local authorities have developed their own set of development plans in isolation from other communities (Schultink, *et al*, 2005: 64). As a result of the lack of coordination and cooperation between these local authorities, one area or region may have a "negative impact on an adjacent community leading to a conflict" (Schultink, *et al,* 2005: 31). As a result, the region has faced numerous problems from poor decision making which can be linked to the aging water, power and transportation infrastructure (Schultink, *et al*, 2005: 64).

In response, the local government has "embarked on a strategic metropolitan growth management initiative" (Schultink, *et al*, 2005: 63-64). This was introduced as the new Local Government Act and was enacted in 2002. Its aim was to ensure that local government authorities would formulate and implement strategies that were focussed on sustainable development.

Responsibility for urban growth management, in New Zealand, rests primarily with elected regional, city and district councils. There is no national growth management strategy or a national land use strategy. This is due to the belief that land use regulation is of concern at a local level.

The Resource Management Act of 1991 (RMA) is the principle legislative instrument for urban planning in New Zealand. It provides a statutory framework for an integrated approach to environmental planning and management. The act was formulated based on the principle of sustainability and recognises that government has a significant role to play in environmental planning. It thus defines a three tier planning framework based on the assumption that decisions should be made as close to the level of community of interest as is possible. It is seen that local government in Auckland has been successful in developing a collaborative approach to address the issues pertaining to urban growth management.

Auckland Case Study

The vast, fragmented development that has occurred in Auckland has been stated to be as a result of the historical legacy associated with poor planning practice and a weak political structure. Auckland has now worked towards having "a stronger political commitment to addressing the issues of urban growth management within the metropolitan region" (Schultink, *et al*, 2005: 65). Growth pressures are noted to be most intense in the Auckland region. In 1988, the Auckland Regional Council was established which had the responsibility of managing growth, but was seen as unsuccessful in addressing growth management issues due to the presence of "local parochialism and pressures from vested development interests" (Schultink, *et al*, 2005: 65).

The regional council implemented the urban growth strategy for the purpose of addressing the growth pressures experienced at the regional level. It provides an urban containment strategy alongside a set of urban intensification policies at the local level of government. This strategy has been developed since 1995 and is implemented through a two-way process. First, it is worked through a 'regional policy statement' which was prepared in 1994 within the Regional Management Act. Second, it is worked through a 'non-statutory collaborative strategic planning initiative' that became effective in 1997 which essentially brings together the various

technical, political, public and private interests together. The initiative is known as the 'Auckland Regional Growth Forum'.

The Regional Policy Statement

The policy statement enforces a technique called the 'metropolitan urban limit' (MULs) which defines a boundary between the urban and rural parts of the Auckland region. The purpose behind MULs was initially to control growth so that infrastructure could be provided efficiently as well as to protect prime agricultural land but has been adapted to include the protection of sensitive natural environments from peripheral growth and to contain and intensify development within the urban areas.

The Auckland Regional Growth Forum

The forum was established in 1996 as a cooperative between the regional council, the local authorities, and other stakeholders who are involved in managing growth in Auckland. Its purpose was to examine alternatives for forecasted growth and thus to determine methods to manage its effects on the environment, local communities and public goods and services.

The forum has implemented a regional growth strategy, 2050, aimed at addressing the issues of urban growth in a more collaborative manner. The strategy promotes quality, compact urban environments and identifies:

- Areas where development should not occur;
- Opportunities for peripheral urban development and future intensification;
- Future locations for employment growth; and
- The implication for transport and other public infrastructure

Auckland is considered to be successful in creating a workable institutional arrangement for developing and implementing a strategy that addresses a wide-range of issues pertaining to the growing urban form. These issues are being addressed through the Auckland regional policy statement and the urban growth forum has resulted in the establishment of a strategy focussed on regional growth issues over a period of 50 years (Schultink, *et al*, 2005: 71).

Discussion

The cases chosen as part of this research begin with Portland, Oregon. This state is believed to be a pioneer of growth management tools and related successes in the world. The literature draws out some important conclusions and observations from Portland which include that there is a high coordination that occurs between the regional and local spheres of government which is important when trying to manage growth; the Urban Development Priority Plan effectively directs development and allocates development in terms of where and under what conditions development can be accommodated – this provides a clear guideline for how and where development should be; and finally the urban growth policies are strict and are focussed on a compact development ideal which determine specific locations to concentrate the most effective spots for development in order to maximise the utilisation of a given area. It can therefore be concluded that Oregon has a clear direction of where and how growth will occur it also introduced the Urban Edge of which it efficiently evaluates and monitors based on the rate of growth in the state and adjusts it accordingly. The main conclusion to be drawn is the collaboration between the regional and local authorities – it can be seen throughout the case studies that governance plays a crucial role in developing the state, if the different scales of government are not in-sync it can cause haphazard development.

In the case of Liverpool urban growth management is known as development control. Its introduction was essentially to curb sprawl in order to prevent environmental damage and to protect historical areas from expanding urban areas. The use of development control is strict and occurs at a local level. Local authority has the control over land use management and must produce plans. This form of control allows for a closer coordination with the public and therefore the local government is aided by a high level of public participation and can be considered effective.

Over time the reasons for the need for growth management changed and became congruent to the context it was introduced and implemented into. As seen in the case of Auckland – the largest metropolitan city in New Zealand - the need for growth management came as a result of a “fragmented, overlapping local government”. It was because of this that the practice of governance was extremely

constrained resulting in the “short-sighted decisions” being made which left the City of Auckland in a series of crises with regard to an old overburdened infrastructure system (Schultink, *et al.*, 2007:64). In this case, the key objective was to improve institutional arrangements and to promote collaborative planning among the varying local jurisdictions within Auckland through the application of a growth management process. The Auckland case study clearly demonstrates that – where there is a “plural land-owning democracy...an urban metropolitan region cannot be planned by a single regional authority alone” (Schultink, *et al.*, 2007: 71).

Therefore, it must be acknowledged that whilst growth management may have an overarching objective of managing growth - it must be remembered that one growth management ‘formula’ cannot fit varying contexts, particularly in developing nations, as argued by Angel (2012: 290) that “...growing cities need to employ quite different strategies for confronting their expansion than those championed in North America and Europe”. Horn (2015: 144) also argues that there is a growing realisation that “the application of western urban growth management practices in most developing countries” is not the best solution to their growth problems. Horn (2015: 144) states that the search for an ideal sustainable form to use as a guide needs to be changes to the search for “a number of sustainable urban forms that respond to different settlement patterns and contexts” and on urban forms that “support social and economic equity”.

The above case studies provide a broad understanding of the different reasons behind the need for growth management across the world – they also provide existing knowledge behind the application of differing growth management tools. Most cases are based on the western world such as North America and Europe with little research on what happens in the developing world.

2.4 Growth Management: Gauteng, South Africa

In the case of South Africa, urban growth has occurred in a polycentric, dispersed and uneven pattern along the edges of the city. This development has largely been attributed to both the apartheid regime and the economic boom that South Africa experienced during the 1960s and 1970s which enable wealthy white South Africans to move into suburban areas outside of the city centre.

The spatial configuration of cities in South Africa, with particular reference to the City of Johannesburg, emerged essentially as a result of the Apartheid governments' discriminatory and segregationist policies. As according to Harrison and Todes (2012: 16) the apartheid government introduced multiple policies that served as 'influx control' in order to prevent and limit permanent settlement of black people in major urban areas as well as to "confine them to 'homelands'". Settlement patterns were highly influenced by the apartheid regime as black people were relocated into 'homelands' on the borders of cities and towns. The Group Areas Act was also used to relocate black people to the urban periphery which affected the lifestyles of black people by creating long distances to work as well as poor access to basic human services and economic opportunities (Harrison & Todes, 2012). Therefore, the development of urban areas occurred in patterns characteristic of sprawl and dominated by low density, white suburbia.

Apartheid was therefore seen as a means to control urban growth and segregated the city along racial lines (Todes, 2012: 158). However, from the late 1970s Todes (2012) states that the policies and settlement patterns created and established during the apartheid era were seen to show signs of being dismantled. In the case of Johannesburg, since apartheid's demise, a significant spatial change has occurred. This is apparent due to: the expedient development of gated communities; new suburban nodes; edge cities; public housing settlements; growing informal settlements along the periphery; and the notable racial changes within the inner-city (Todes, 2012). As a result the city continued to sprawl and little was being done to manage it with planning mechanisms and institutional capacity showing signs of being incapable of doing so after the demise of apartheid (Todes, 2012: 158).

Spatial transformation since the end of Apartheid was largely aimed at rectifying the injustices of the past as influenced by the Apartheid government. It aimed at provided basic services and amenities to those who had been previously marginalised and discriminated against as well as to enforce the integration of previously segregated populations. The new democratic government of South Africa attempted to reintegrate previously marginalised and disadvantaged communities into urban areas and in doing so implemented a number of policies and legislation which aimed at rectifying the injustices of the past in terms of spatial patterns and by doing so hoped to provide more socio-economic opportunities to poor communities.

These policies and legislations included that of the Urban Development Framework (1996), and the Development Facilitation Act (1995). Despite numerous attempts at integrating previously marginalised settlements, low-income settlements remained situated along the urban fringe where the disparities and imbalances of past development trends were seemingly perpetuated (Horn, 2009: 89). The implementation of the Reconstruction Development Programme (RDP) was to be aided by the DFA in order to fast-track development of housing but was used as a tool for property developers in the private sector to fast-track development to a large extent in the northern regions of Johannesburg. Mini (2014) states that "the consequences of the Development Facilitation Act, Land Use Management Act 2006, and the Municipal Systems Act are many and are often in direct conflict with the intentions of the system". These spatial policies as well as others were implemented in order to spatially restructure the segregated morphology of South African cities (Tomlinson & du Toit, 2005). The DFA resulted in unintentionally benefitting higher-income, privately developed housing and has allowed for a lot of what the North/ or Greater Johannesburg metropolitan region consists of at present.

It is clear that this continued form of urban growth – apparent in many South African cities – has implicated the financial, social and environmental sustainability of the City. It is now recognised, by the City of Johannesburg (CoJ), as being unsustainable in the medium and long term. The result of this urban form is that poor families are no closer to improving their living conditions nor their socio-economic position due to the fact that they have to spend more on transportation because of their distance from areas with: employment opportunities, commercial services and public facilities (GSDF, 2001).

As a result of this spatial configuration the Gauteng provincial government saw the need to implement a solution. A proposal was made to contain growth within the province based on the fact that a more compact urban environment would allow for a higher access to the available urban opportunities, improved public transport, and good environmental conditions. In 2000, the Gauteng Provincial government published the Gauteng Spatial Development Framework (GSDF) which proposed the establishment of an urban growth management approach which became to be known as the '*Gauteng Urban Edge*' (Horn, 2010). However, this approach was reduced to a mere guideline and further some only view it as 'a-line-on-a-map'. The

urban edge was viewed as being a policy that had little regard for the “procedural and legal issues pertaining to the ideal of the ‘Urban Edge’” (Horn, 2010: 47).

In 2007, President Thabo Mbeki stated that the City of Johannesburg would need to accommodate “city growth of up to 9%” (CoJ, 2007: 1) during the years leading up to the 2010 Soccer World Cup. In an attempt to satisfy this goal the Department of Development Planning and Facilitation was instructed to create and implement a Growth Management Strategy which would determine the nature of development, where it would occur, and how the growth of the city would be accommodated for (CoJ, 2008: Annexure 1).

The Growth Management Strategy (GMS) was implemented in 2008. The emergence of the strategy came as a result of a clear disjuncture between infrastructure provision and development patterns notable in the Greater Johannesburg metropolitan region. There were also problems with regard to resource management in terms of energy shortages and flooding. The city was and still is faced with a constant challenge to restructure the spatial economy of the Apartheid settlement (CoJ, 2010). It has been noted that the city’s spatial development framework is working towards the densification of these peripheral growth areas and aim to prevent further urban sprawl (Planact, 2007). The GMS was established in order to direct the City in such a manner that it tightens the gap between the goals of the government and market driven development (CoJ, 2008; CoJ, 2015).

Conclusion

Urban sprawl is a critical phenomenon experienced by many countries, if not all, around the world. It is an issue that has experienced a high level of discourse of many decades particularly during the twentieth century. Much of the discourse surrounding the concept has been negative and looks at the disadvantages that sort of urban form has on the quality-of-life of any given population, as well as on the environment and the cost of living and service provision. In response to these emerging issues, there is a growing literature on how to manage and contain urban growth. Urban growth management emerged as the solution to the problem of urban growth taking various forms in various contexts. Its initial inception was through the implementation of greenbelts as inspired by Ebenezer Howard’s Garden City model,

later it emerged through the application of urban growth boundaries/ urban edges as experienced in the USA from the 1970s and later metamorphosed into the concepts of sustainability, compaction, and smart growth urban development. However, over the most recent decades, since the 1990s, a lot of discourse and counter debates have emerged to the idea that urban growth "is bad" and that the solution is compact, sustainable developments. There are many authors who argue that urban growth is inevitable and that containing it goes against its nature. These authors believe that instead of going against the nature of growth – cities should be embracing it and be trying to formulate solutions in line with it. Polycentricism and regionalisation have become popular concepts of discourse in the current era in terms of growth management and Horn (2015: 143) suggests that an alternative to urban growth management is beginning to emerge in "local planning practice". This alternative is believed to take into account "present-day reality; it is conscious of the power of the planning enterprise in societal evolution; and it is free from the enticements, self-deceptions and pitfalls that are attendant on the population-limitation approach" (Horn, 2015: 143).

The three case studies examined were based on countries in the developed world due to the fact that most of the literature on growth management is predominantly from the western world. What can be drawn from these three particular cases is that they emerged for similar but different reasons. Oregon introduced growth management and was the pioneer of the urban edge due to the fight to combat sprawl and protect the environment, Liverpool introduced it to protect the environment and historical landmarks, and Auckland introduced it in order to strengthen government collaboration and to stop sprawl. All three cases pointed to the need for strong government coordination due to the fact that if this is not effective, sprawling urban areas can be exacerbated by the differing developmental objectives - as seen in Auckland, New Zealand. These cases provide a clear understanding of what is required for growth management and what, in some circumstances, can instead of curbing it, encourage sprawl.

Finally, looking at Gauteng in its endeavour to implement growth management strategies as a result of the socio-economic and environmental impact urban expansion was having on the region. The provincial urban edge was introduced – but not without its challenges and critiques. It was not believed to be effectively

integrated into governing policy. Despite this reaction the urban edge is still employed by the province as a growth management tool since its inception in 2001. Municipalities were encouraged to establish growth management mechanisms to aid the urban edge in its endeavour to curb sprawl and thus the CoJ introduced the Growth Management Strategy in 2008 (this will be discussed more extensively in the next chapter).

Chapter 3: Understanding 'The Case'

3 Introduction:

"The City of Johannesburg is the largest city in South Africa with the highest concentration of service, industry, commerce and retail and as a result has one of the highest economic growth rates" (CoJ, 2008: 1). Consequently, the city faces a significant amount of development challenges which include:

- The prevailing pressure to continue proving economic opportunity and growth and in so doing remaining the top city;
- High in-migration into the city region;
- An increasing development gap between the provision of infrastructure and growth patterns;
- Power shortages;
- Transport network expansions; and
- The need for the city to invest in infrastructure on a prioritised basis due to financial constraints.

Growth management has always played a significant role in the guiding growth and development which is defined by the City's *spatial development framework* and its *integrated development plan* (GMS, 2008). However, the brief definition and use of this concept, which can be found in these management documents, was seen to be insufficient for guiding growth management. Therefore, the Growth Management Strategy (GMS) was drawn up as a response to the need for a more detailed growth management guideline in curbing the inevitable expansion of the city. Its purpose was to provide a detailed prescription as to "where, and under what conditions, growth could be accommodated" in Johannesburg (GMS, 2008: 4). The strategy explicitly states that "future growth must ensure that the population and economic growth is supported by complimentary services and infrastructure" (GMS, 2008: 5).

This chapter, therefore, explores the relevant policies and frameworks that both: inform the Growth Management Strategy of 2008; and provide guidance for growth in the City but with particular reference to the case study of Region A. It provides an introduction and overall discussion of the region. This chapter looks at what is being said by the Regional Spatial Development Framework (RSDF) for region A in order to understand what the key issues are and how they are being addressed by the

CoJ. It will look at the provincial and local urban development boundaries to differentiate between them and gain an understanding of where the City and Province stands with the use of them. The chapter provides a discussion of the City's SDF followed by a detailed discussion of the RSDF for Region A. The chapter finally explores the level of sprawl experienced in the region and how this is viewed by the CoJ.

3.1 Sprawl in South Africa

Sprawl is largely characteristic of most South African cities at present. This urban form is said to be as a result of numerous changes experienced in the political context - from apartheid to democracy. Firstly, black settlements were not placed in relation to social and economic opportunities but rather in areas that encouraged "high levels of poverty in the rural and peri-urban regions" of South African urban centres (Horn, 2010: 43). Secondly, economic prosperity of the 1960s and 1970s led to an increase of house ownership and generated a new rich, white, South African population who sought a better lifestyle beyond the congested city centres to the new suburbia (Horn, 2010: 43). The third reason, for the apparent sprawling nature of South Africa cities, was seen to be rooted in the development of new legislative frameworks, established by the newly elected democratic government, to address the previously segregated, marginalised communities of the apartheid regime. These frameworks included the: "Urban Development Framework (1996), Rural Development Framework (1997) and Development Facilitation Act (1995)" which were directed towards addressing "distorted spatial patterns" (Horn, 2010: 44). However, despite the good intentions of these frameworks, they led to the growth of low-income settlements along the urban fringes of South African cities thus exacerbating the urban form of the precious era (Horn, 2010: 44).

3.2 Growth Management in Johannesburg

This section looks at the various development policies and how they relate to growth management. The order of discussion is based initially on a larger, broader scale policy documents and then focuses in on more specific documents further on. The discussion starts with an understanding of the GMS and is preceded by the documents that led to its inception i.e. the GSDF, the GDS and the city's SDF.

3.2.1 The **GMS** provides a detailed definition of 'growth management' as being an international concept and tool that is used to ensure that growth accommodates the needs of "the population and that the economy is supported by the necessary services and infrastructure whilst meeting the spatial and socio-economic objectives of the country" (GMS, 2008: 8). However, in the case of Johannesburg it explicitly outlines that the GMS, as an assisting growth control mechanism, will go a step further as it will incorporate important interventions which are necessary for a sustainable future (GMS, 2008: 5). It aims to reduce the gap between:

- The goals of the government and the associated market driven development;
- Growth and service delivery; and
- To improve public transport (GMS, 2008)

The strategic objectives of the GMS include:

- Determining priority areas across the Johannesburg metropolitan region in order to focus capital investment in regions of highest need;
- Re-directing capital investment programmes to address short-term priority areas and areas that will benefit society;
- Limiting the development rights of the future until backlogs are addressed;
- Introducing incentives to promote and facilitate development;
- Establishing a monitoring and evaluation mechanism to review infrastructure hotspots.

The City, at the time of the strategy's inception, acknowledged the need to adopt a growth management approach in order for it to achieve its long term goal of sustainability (GMS, 2008: 22). Therefore, the GMS was established in order to determine development guidelines that would define the spatial priority of an area. The strategy was given the primary objective of: restructuring, reforming and sharing the benefits, generated by the city, in a sustainable manner (financially, socially and economically) (GMS, 2008: 22). The emergence of the GMS came as a result of numerous planning documents which provide critical planning principles and objectives that have informed the strategy. These documents are seen to "form a golden thread through the different tiers and documents of planning" (GMS, 2008: 10).

3.2.2 The first influential planning document was the **Gauteng Spatial Development Framework** (2007) which is characterised as being a generic planning platform that sees economic development as being necessary for reducing the rate of poverty and unemployment. It views the current sprawling nature of the Gauteng City Region (GCR) as being a consequence of the current residential urban form due to the excessive dependence on private transportation. The framework recognises that private transport is no longer a sustainable option for the future due to the fact that instead of minimising the effect of sprawl – it is encouraging it. Therefore, the SDF provides a strategic intervention for generating effective public transportation networks for the future. The GSDF also realises the significant need for densification to occur in urban centres in order for public transport systems to be effective and therefore introduces measures that will enforce it.

"Fundamentally, the GSDF is to be understood as directing urban growth in terms of 'the compact, complex city'." (Government, 2014, p. 20)

The GMS is informed by the GSDF. It is guided by the GSDF to create a new urban form for the City based on the framework's guiding principles.

3.2.3 The **Growth and Development Strategy** (2006) was another informant of the GMS. The GDS is based on six development paradigms. These paradigms form the foundation of the Growth Management Strategy. They include:

- Absorbing the poor;
- Balanced and shared growth:
    - The promotion of economic growth
- Social mobility
    - The establishment of a "bigger middle strata of society"
    - To help the poor out of poverty
    - To reduce social inequality
- Settlement restructuring
    - The acceleration of spatial restructuring to improve conditions developed from the distorted and divided apartheid style planning
    - Bring jobs closer to people
    - Create liveable neighbourhoods

    - Improve urban efficiency
- Sustainable and environmental justice
    - Manage environmental impacts of its own processes of urban production and consumption
- Innovative governance solutions
    - Internal efficiency improvements

3.2.4 CoJ SDF

In 2001, the **CoJ Spatial Development Framework** was approved and provided the first set of spatial policies for the city (Todes, 2014: 87). Its objectives were to create a sustainable urban environment, ensure efficiency, and enable access to opportunities and the city experience (Todes, 2014: 87). This was said to be realised through a number of strategic elements including:

- The urban development boundary – intended to contain urban sprawl and encourage densification, infill and redevelopment, and the efficient use of infrastructure;
- Improved mobility systems – to enable accessibility and to link nodes and activity routes;
- Strong nodes;
- Environmental management;
- Sustainable neighbourhoods; and
- Corridor development.

The spatial development framework, in accordance with the then 7 RSDFs, details the spatial planning policy of the CoJ. Its development has occurred over a period of nine years and provides a foundation for the assessment and determination of development applications and proposals which are considered to “fall outside the scope of the prevailing Town Planning Schemes” (CoJ, 2010: 2). It also provides a city-wide perspective of the spatial challenges exhibited by the city and the associated inventions with those challenges. The SDF and RSDFs are developed in accordance with the Municipal Systems Act, Act 32 of 2000, forming an integral part of the Integrated Development Plan (IDP).

The SDF is developed based on statistical information and spatial challenges identified within the City. The SDF and RSDFs were introduced in 2002 as a response to the spatial challenges faced by the City to manage, guide, and facilitate public and private developments, investment and growth occurring within it.

The SDF was cascaded into several RSDFs which provided more detailed guidance for the 11 initial planning regions – now 7 - and act as land development objectives in terms of the DFA (Todes, 2014: 88).

RSDFs are considered to be 'primary local implementation and management mechanisms' (CoJ, 2010). They serve the purpose of doing the following:

- Contextualising development trends and challenges within a regional context ;
- Prescribing localised development objectives and guidelines (e.g. density, land use, etc.);
- Providing a more detailed reflection of the SDF objectives, strategies and policies as they impact on local area planning;
- Reflect Localised Precinct Plans and Development Frameworks adopted through official Council protocols;
- Capture the most updated information in terms of regional developmental trends, issues and community needs; and
- Add substantive value to the budgeting and spatial development processes within the City by identifying local development interventions (CoJ: 2010).

The city level Spatial Development Framework and desired growth patterns are reflected in the Regional Spatial Development Frameworks (RSDFs). The RSDF is a key legislative mechanism as it provides an analysis of the city's spatial challenges and provides a number of interventions to guide both public and private investment. It consists of several development strategies including:

- The establishment of an efficient transport system;
- The creation of strong nodes;
- Strategic densification;
- Corridor development;
- Sustainable environment management;
- Sustainable housing in appropriate locations;

- Through the management of growth and the implementation of the UDB.

The *RSDF*, in general, provides an initial foundation for the GMS. The GMS takes the principles promoted in the RSDF and generates them into an urban intervention strategy for the purpose of guiding development of the future (GMS, 2008: 14).

3.3 The Urban Development Boundary (UDB) vs The Provincial Urban Edge

In response to "the growing sprawl in South African urban areas, the Gauteng Province took the initiative to deal with the growing pressure associated with sprawl to restructure its inefficient and inequitable cities" (Horn, 2010: 42). 10.9% of the poverty problem in South Africa is located in the Gauteng province which is largely located in areas that are isolated a long distance away from economic centres and job opportunities (Horn, 2010: 42). It has been said that the Gauteng Province took the first step in the development and implementation of the 'Urban Edge' around its urban centres.

The 'urban edge' or 'urban development boundary' has been implemented by a number of states in the USA such as Oregon; a number of cities in the United Kingdom such as Liverpool; and in New Zealand such as Auckland. The edge is characterised as an institutional boundary with the intention of containing urban development and sprawl; and tries to direct growth in a sustainable manner so that it is more compact, integrated and efficient (Horn, 2010: 45).

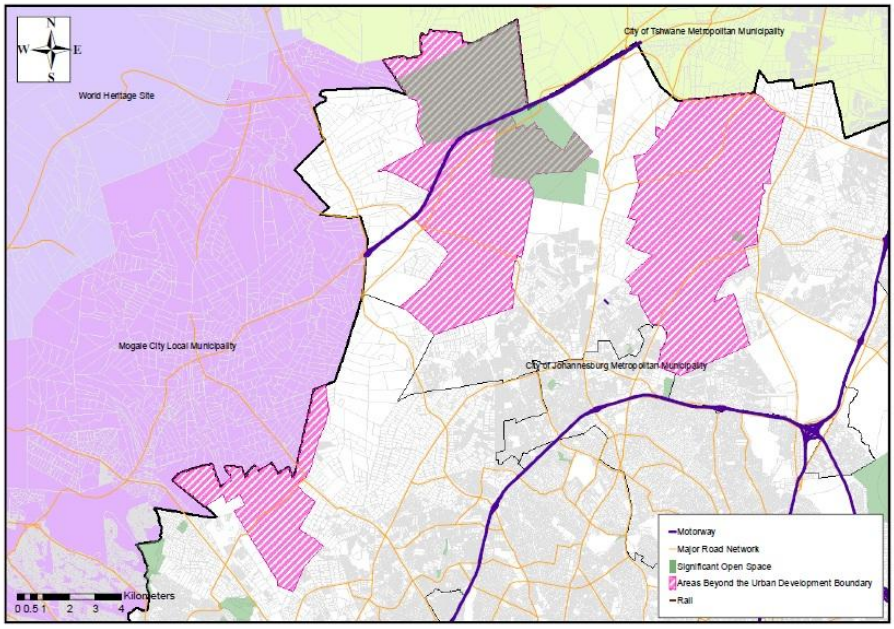


Figure 1: Urban Development Boundary – North of Johannesburg (GSDF, 2010: 211)

In 2000, the Gauteng Spatial Development Framework was published and was directed at improving the spatial inequalities developed during the apartheid era. It also introduced numerous guiding principles to ensure sustainable, equitable and economically prosperous settlement patterns in the future so that expected urbanisation in the future could be accommodated for. It was in this framework that "the provincial urban edge was introduced as a mechanism aimed at containing and redirecting urban growth" (Horn, 2010: 45). In 2001 the provincial urban edge was adopted by the provincial executive council and was accompanied by a "specific provision that the newly constituted municipalities should be afforded the opportunity to refine this alignment via an IDP process" (CoJ, 2007:).

In 2002 the CoJ delineated and adopted an urban development boundary that was mostly aligned with the provincial urban edge. However, it differed in certain places and therefore created discrepancies where in some places the City's line was more restrictive and in others more expansive. The UDB was implemented as an additional measure because low cost/ social/ government subsidised housing was always provided for on the periphery of the city (Horn, 2009). This was seen to perpetuate the disparities and imbalances of past development trends and therefore enhanced marginalisation of poor communities (Horn, 2009: 90).

The urban edge has been highly criticised and viewed as being a strategic failure in attempting to manage urban growth. The view that "the Gauteng provincial urban edge was a saviour/ or magic wand that could solve long-standing historical urban challenges" (Horn, 2010: 53) was an incorrect one. Numerous challenges were faced with its implementation which included: "the lack of implementation tools and mechanisms"; as well as weak political and administrative structures and communication in terms of urban planning (Horn, 2010: 53). The urban development boundary was seen to effectively reduce sprawl from encroaching on land beyond the boundary but because of its lack of an "overarching and proper growth management approach, municipalities had to formulate their own growth management mechanisms to support it" (Horn, 2010: 53). As a result in 2010 the constitutional court ruling of the DFA meant that the urban edge was no longer effective.

3.4 Context of Case Study: Region A

In order to evaluate the effectiveness of the Growth Management Strategy of 2008 in terms of whether or not it has limited sprawl this research report aims to examine the northern region of Greater Johannesburg otherwise defined as 'Region A' (Fig. 2) by the City of Johannesburg.

Region A is described as being the 'northern gateway' of the City (Fig. 2) which is seen to link three metropolitan regions namely: Tshwane Metro in the north, Ekurhuleni Metro in the east, and Mogale City in the west along with the remainder of the City of Johannesburg.

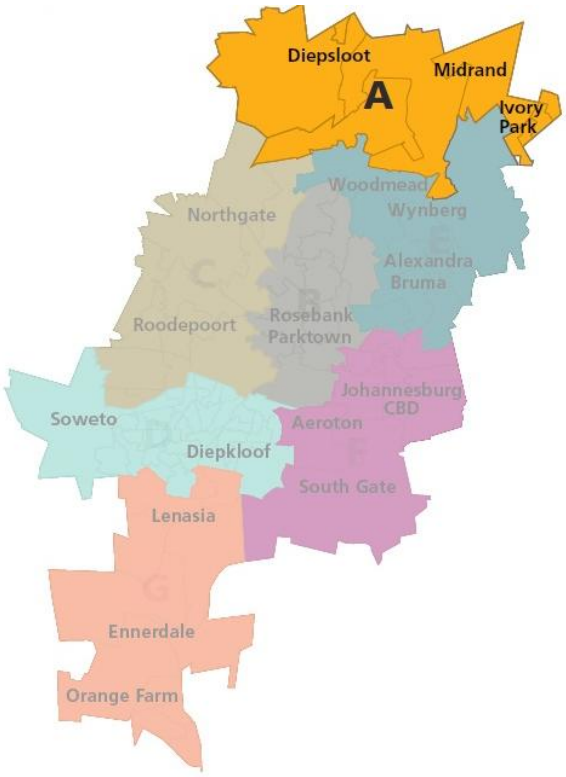


Figure 2: Location of Case Study Region 'A' of the City of Johannesburg (MFMA, 2010/11)

Region A is made up of multiple residential suburbs including that of Midrand, Kyalami, Sunninghill and Fourways which consist of both high-income settlements and low-income/ or marginalised and highly informal township areas. The high-income areas include Chartwell, Dainfern, Lonehill, Farmall and Blue Hills in contrast to the marginalised areas of Diepsloot and Ivory Park. Extensive commercial interest in the area is highly concentrated in the light industrial areas of Kya Sands, Lanseria, Kyalami and Midrand. Midrand is seen to possess the most developed CBD area in the region which is closely followed by Fourways. It is also a big contributor to the economy of Johannesburg due its high concentration of commerce and industry. The node is still experiencing a high level of growth due to its desirability and its urban form is expected to be expanded further by the CoJ.

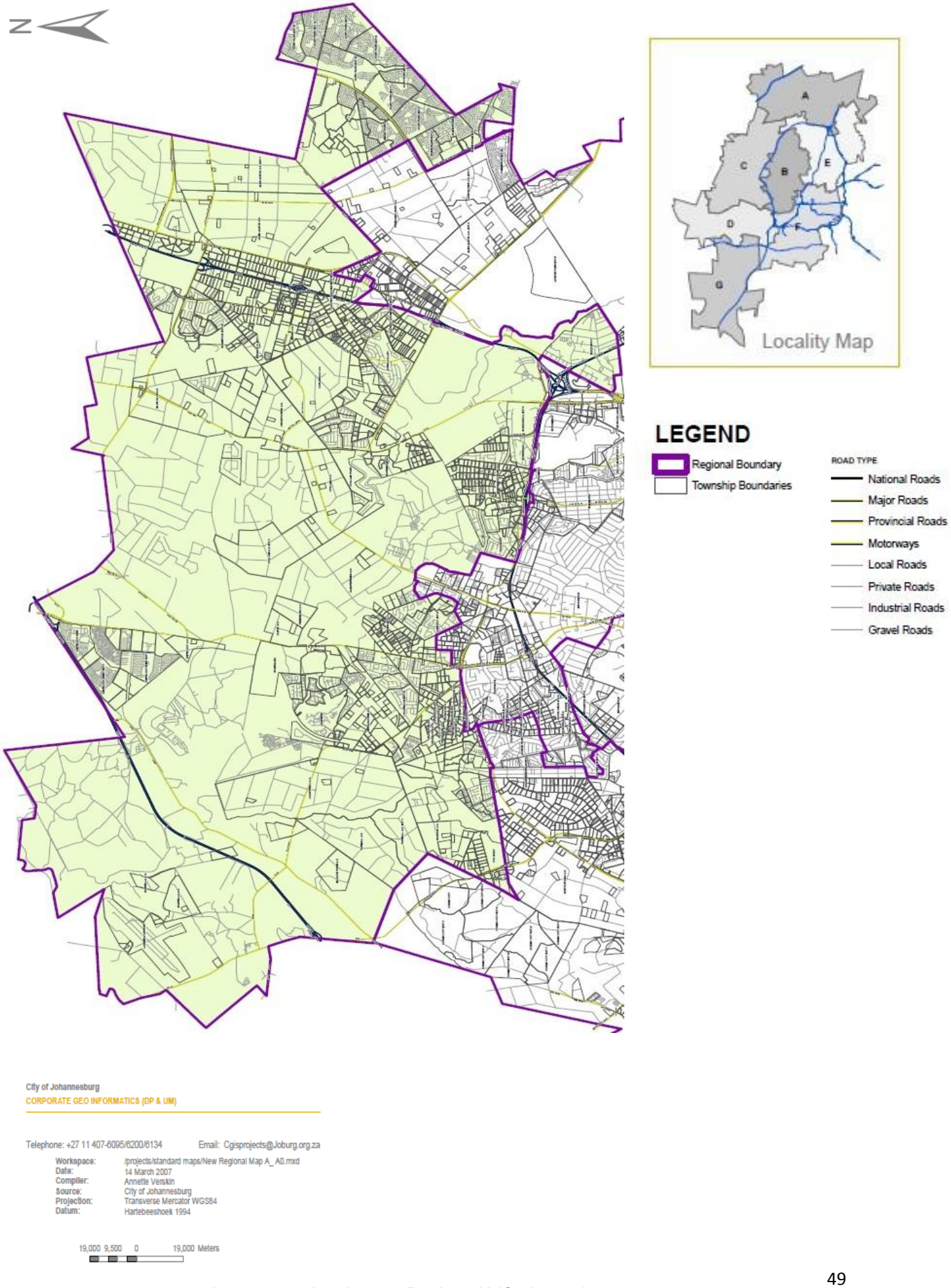


Figure 3: Regional Map - Region 'A' (CoJ, 2007)

Region ‘A’ (Fig. 3) is described by the City of Johannesburg as being “a natural growth area between the City of Johannesburg and the City of Tshwane”. The location of the region in relation to the north-south linkages N1, R55, R511 and R512 connects it to multiple urban opportunities. The eastern part of the region is stated in the regional spatial development framework as consisting of high-tech developments, warehousing, distribution centres and office developments along the N1 resulting in a large proportion of skilled labour locating in this region (RSDF, 2010/11).

The significance of looking into this region is that it is an area developing at a rapid rate. After the demise of the apartheid era, public sector funded development was highly focussed on the southern regions of Johannesburg where previously marginalised areas were situated. Whilst much of this concentration was occurring in the south - development in the northern regions continued to occur with little attention paid to the level and consistency of planned development. In order to understand development in the north it needs to be examined in accordance with how the Growth Management Strategy has viewed spatial trends in the area and whether it is able to contain urban sprawl.

It is essential to look as this region as it is developing at an exponential rate. The GMS indicated that 70% of all development applications received by the City emerge from within Region A mostly from small developers (GMS, 2008). The key driving forces behind this growth, as examined by the GMS report, is that of the emergent market in the region as well as its ideal location. The GMS (2008) states that: Region A consists of upper market developments that range in value from R500 000 to R1 000 000 as well as lower income settlements and developments such as in Diepsloot and Ivory Park, to name a few. It is clear that the land is attractive but the rate at which development is occurring within the region needs further exploration. It is not easy to understand what processes are allowing for such rapid, high-end development to occur. In this regard, the question is whether or not development in this region is following correct planning procedure whilst meeting the expectations and guidelines as laid out in the 2008 GMS. Essentially this research aims to find out whether or not there are developments, in this region, that have been established contrary to the plans and if so, how and why were they permitted?

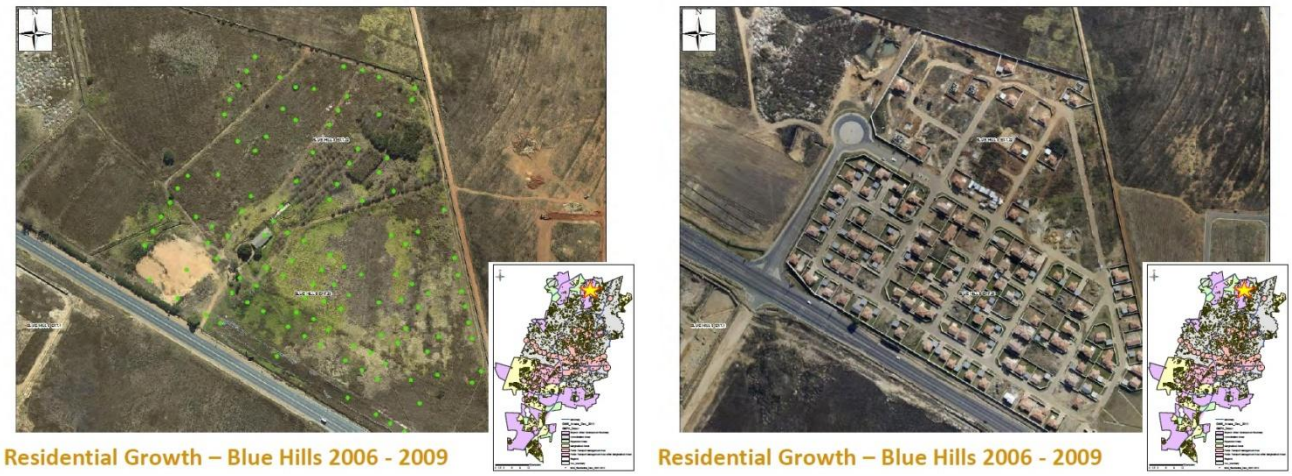


Figure 4: Example of Rapid Urban Development of Blue Hills Estate between 2006 and 2009 (GMS Trends Assessment, 2012)

3.5 Regional Spatial Development Framework for Region A (2010/ 2011)

The Provincial (Gauteng) Spatial Development Framework (PSDF), the CoJ SDF and the Regional Spatial Development Framework (RSDF) are the prevailing spatial policies within the City of Johannesburg. The RSDFs for the City of Johannesburg metropolitan region are prepared and implemented in accordance with the Municipal Systems Act, Act 32 of 2000 which forms part of the City of Johannesburg's Integrated Development Plan (IDP) (RSDF, 2010/11).

The RSDF functions primarily as a regional and local implementation tool that works to:

- Contextualise development trends;
- Prescribe where development should occur at a local level; and
- Reflect the objectives, strategies and policies that are laid out by the GSDF.

Region A consists of residential development of both a formal and informal nature. The RSDF defines Fourways, Sunninghill and Midrand as the most urbanised areas in the region; Diepsloot and Greater Ivory Park as the prominent marginalised areas in the region which require a significant amount of integration into the broader urban network; and describes Kya Sands as an informal settlement.

Due to the increased densities and pressure for development in many areas of the region there is an increasing challenge with regard to infrastructure and its provision along with the increased threat against the biodiversity of the environment.

Nodal development within the region is noted to be of great significance to understanding how growth is occurring and where it is concentrated. Some of the nodes include:

- Midrand Metropolitan Node
- Fourways Regional Node
- Sunninghill Regional Node
- Carlsworld District Node
- San Ridge Square District Node
- Cedar Square District Node; and
- Several neighbourhood Nodes (RSDF, 2010/11)

The speciality nodes of the region include:

- Kya Sands;
- Lanseria International Airport; and
- Kyalami.

“The speciality nodes contribute to the tourism and industrial functioning of the region along with all the development nodes play a significant role in the growth and sustainability of the region’s growing wealth” (RSDF, 2010/11). These nodes do so through the provision of employment opportunities for the region’s population.

The RSDF outlines the key spatial and economic issues of the region as being:

- The formalisation of a large number of informal settlements including:
    - Kya Sands;
    - Lion Park; and
    - Diepsloot
- Increased mushrooming of informal settlements in most of the region’s non-urban areas causing an issue for the need to formalise these settlements and to provide infrastructure and services to these settlements;

- Incorporating lower-income housing into the broader urban fabric in an attempt to address existing spatial inequalities;
- High levels of informality in the marginalised areas of Diepsloot and Greater Ivory Park;
- Lack of spatial integration (RSDF, 2010/11)

It has been argued that urban areas within the region have grown at an exponential rate over the years between 1990 and 2009. High technology industries and offices have grown particularly rapidly along the N1 and within the Fourways Regional Node.

This growth in the region, along with the rapid development of residential areas, puts heavy pressure on the City's bulk infrastructure as well as on the need for its provision.

- Most of the region is characterised, in the RSDF, as not being adequately serviced with bulk infrastructure - which is seen to be as a result of the rapid urban expansion of the region.

The RSDF explicitly states that the marginalised areas of Diepsloot, Ivory Park and other surrounding areas should place a significant amount of "focus on upgrading social and physical infrastructure as catalysts for economic development" (RSDF, 2010/11). These areas in the region have been categorised as being of 'high priority'. The RSDF, therefore, informs the GMS of the priority areas for the region. The GMS then determines the capital investment that should be concentrated on the priority areas based on their level of priority (high, medium or low). In Region A, the priority areas in the areas are mapped (Map 1) and stated below.

High Priority Areas include:

- Public Transport Management Areas (Sunninghill)
- Marginalised Areas (Diepsloot and Greater Ivory Park)

Medium Priority Areas

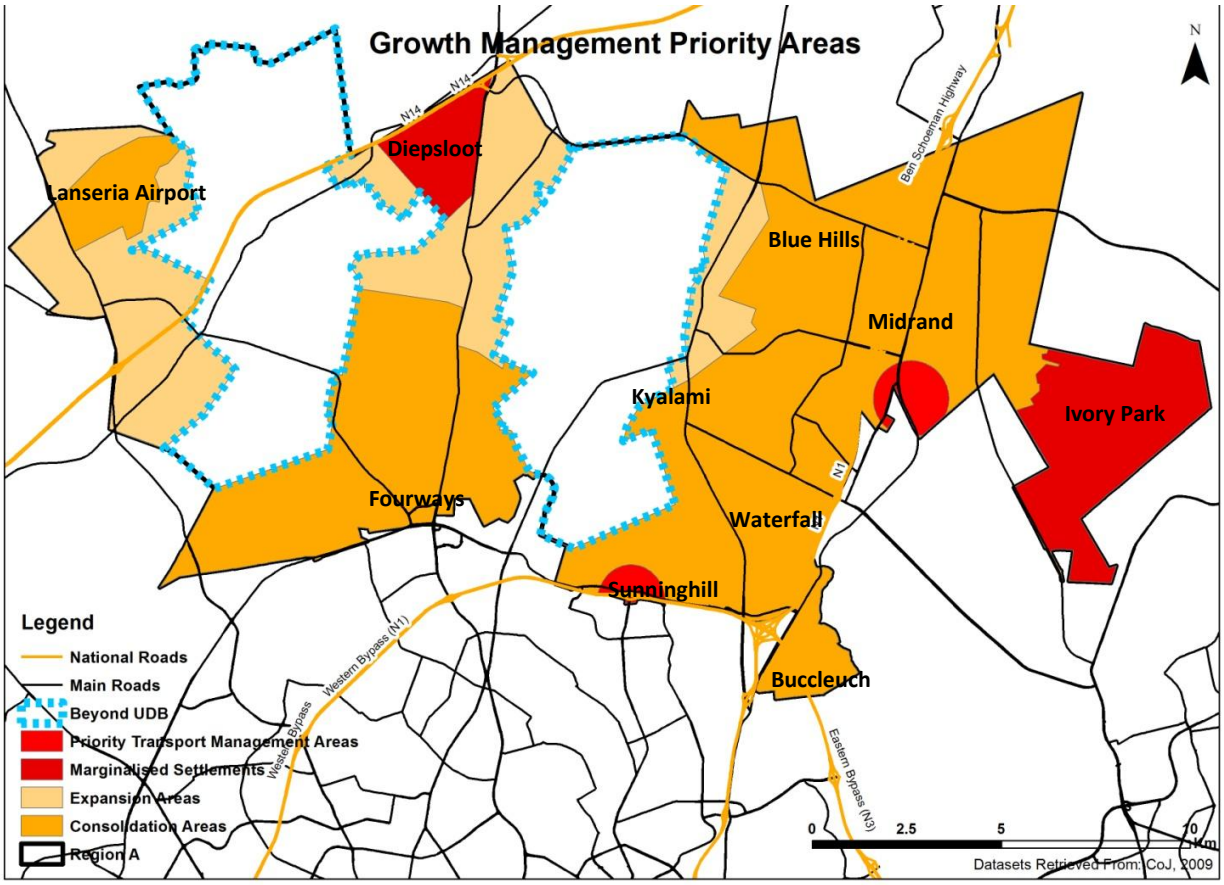
- Consolidation Areas
- Expansion Areas

Low Priority Areas

- Peri-Urban Areas (Beyond the Urban Development Boundary)

The urban development boundary is a significant feature in Region A as the region has a substantial amount of land delineated as the UDB. However this places a substantial amount of strain on the growth of the region – but has also proven to be effective in managing growth (as discussed in the next chapter of findings).

Map 1: GMS Growth Management Priority Areas in Region A



3.6 Nature of Urban Sprawl in Region A

Urban development in the Greater Johannesburg Metropolitan region can be characterised as sprawling, as seen in the low-density, haphazard placement of residential settlements distant from the central city. The north of Johannesburg (Region A) is known for its haphazard, disorganised spatial development. It is known for the settlement of a large portion of the middle-income population found within Johannesburg. Residential development in the region takes the form largely of cluster developments, residential estates and low-density housing. Commercial and

industrial development is highly prevalent on the main corridors particularly the N1 to Pretoria however the CoJ notes that Kyalami is a major industrial node and is located completely beyond the urban development boundary.

A number of private estates are beginning to emerge, often taking the form of 'privatised urbanism' – "where entrepreneurial modes of urban governance have replaced public administration, where large-scale property owners establish the institutional rules governing the use of urban space, and where unwanted people and undesirable activities are kept at bay" (Murray, 2015: 54). Examples of these forms of development include Waterfall Estate and Steyn City.

Murray (2015: 503) explores Waterfall City and describes it as "a sprawling, mixed-use, real-estate development that brings together business-commercial activities, high-end residential components, and leisurely lifestyle amenities to a single location". He argues that this emerging city is a "prototype for city building in the Greater Johannesburg metropolitan region" since the demise of apartheid. This form of development ties to long standing utopian thinking linked to the ideal of "a planned city of tomorrow" (Murray, 2015: 505) it has also been described as what one might call an "instant city". The planning of Waterfall Estate was said to have begun in 1997 (Vermeulen, 2015). It was the result of the desire by the property owner to develop their land before the government expropriated any more of it. The development proposal for the estate followed a four stage process including: council policy[1], township application, site development planning and building plans. Proposals were made to the council which determined whether or not the application was successful based on the city's overall development principles and guidelines. The application was evaluated against the RSDF for region A and subsequently approved by council. However, the development of Waterfall Estate is known to have been approved through the Development Facilitation Act (DFA) which was essentially a provincial approval in order to fast track development. This created a lot of controversy and magnified the negative connotations of market-driven development and its influence on the sprawling nature of the city.

[1] The property owner approached the City council, through their consultants, with a draft development proposal to ensure that the development aligned with the council's development policies (Vermeulen, 2015).

Steyn City bears many similarities to Waterfall Estate - it was approved through the DFA and is largely characteristic of privatised urbanism on the periphery of the city. Both of these privatised enclaves are located within Region A – they are large versions of dominant development in the region, seemingly its future.

Conclusion

The City of Johannesburg is an expanding metropolis characterised by an urban form that has been highly influenced by its jaded history. The City has been described as “vast, distended metropolis without obvious or fixed boundaries – a sprawling, spatially fragmented and increasingly polynucleated conurbation” (Murray, 2015: 2). In its attempt to address its sprawling urban development it employed a growth management strategy through its spatial development framework in 2001. The city introduced an urban development boundary which had been adapted from the provinces urban edge as one of a range of growth management tools. It is therefore closely aligned with the provinces urban edge. Later it was argued that the brief definition and use of this concept, found in the development frameworks, was seen to be insufficient for guiding growth management and thus saw the implementation of the Growth Management Strategy in 2008. This strategy is highly informed by a range of policies such as the GSDF, the CoJ SDF, and the GDS and was introduced in order to determine where, and under what conditions growth can be accommodated.

For the purpose of this study, region A was selected due to its current nature of urban development. Historically, the region is sprawling due to the settlement of people away from the central city. A lot of the region consists of low-density housing spread haphazardly – largely due to the disorganised settlement of people. Another emerging development form prevalent in this region is the growing number of large private estates which are argued to be sprawling in their very nature. These include developments such as Waterfall City and Steyn City – described as being ‘instant cities’. These private enclaves are representative of what is being termed ‘privatised urbanism’ where public authority is displaced by private enterprise. The increase of these forms of settlements in the region is encouraging its sprawling development – despite their objectives of creating a compact city form – as well as exacerbating the long-standing social inequalities experienced in the city.

Chapter 4: Realising What Really Is

4 Introduction

This chapter presents the findings of how planning is managing growth in region A. It presents and analyses the information gained through interviews, GIS mapping and graphs based on GeoTerra Imaging (GTI) data and data retrieved from the City of Johannesburg.

4.1 Initial Findings

Initially interviews were conducted with policy makers (planners in the City Transformation and Spatial Change Department) who are currently working on the updated SDF for the Johannesburg Metropolitan region. The findings based on their interviews were both expected and surprising.

The first respondent (a planner who focuses on the growth and development of Region A) stated that both the RSDF and SDF for the City of Johannesburg are considered to be successful, by the City, in achieving their set objectives. The GMS is also viewed as a success due to its ability to enforce the vision and goals presented in the City's SDF and RSDFs. The interviewee claimed that many small municipalities beyond Johannesburg could not financially support the interventions of their spatial development frameworks due to their lack of budgeting and finance which, in the opinion of the interviewee, is ad hoc and uncoordinated so a lot of money is wasted and not effectively utilised in the development of their areas. The interviewee believed that the GMS guides investment well and as a result the City has managed to accomplish many of their set objectives.

The respondent also claimed that growth in region was occurring, currently, according to plan. He argued that "developers in that region are smart" and that they locate where they know they will make high returns on their investment. Many development applications in the region are made predominantly for Midrand and Fourways. According to the respondent, Midrand is fully developed and therefore there is very little room for more development. However, due to the economic prosperity of the node the City is on the verge of expanding the land area of the node so that more development can be accommodated.

The respondent believes that development occurs in line with the spatial vision of the region and of the City as a whole. He argues that more people are being integrated

by transport networks, jobs are being located closer to people, and social amenities are slowly being provided and rolled out throughout the Johannesburg Metropolitan region. It was also stated that the development that is currently underway in existing nodes aids in the support of developing and expanding high priority areas. However, the respondent mentioned that sometimes political influence can distort planning outcomes. This will be discussed later in the chapter.

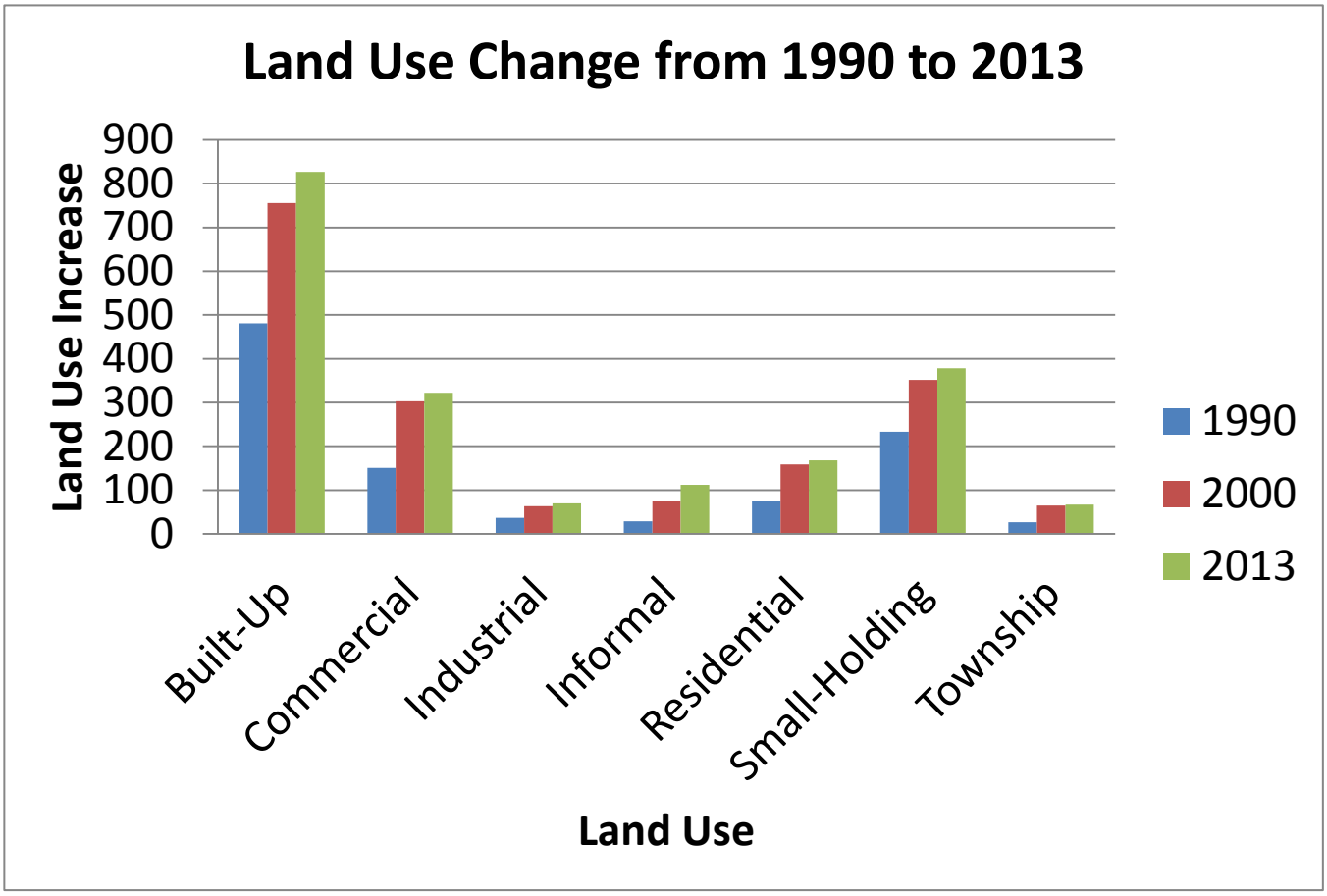
The first respondent, however, noted that the SDF and RSDFs are outdated and that the City's density policy is an issue because it is not accurate. This is as a result of population growth experienced within the city since the last updated versions of these spatial policies were produced. Planners and developers feel they cannot adequately plan and address the needs of the people as the spatial form of the City as well as its growth, in terms of population, have changed considerably since 2010 which is an issue the City is currently working on. The GMS is another outdated policy and the City is working on addressing this over the next year. However, the respondent argued that these outdated policies are causing tension between developers and the CoJ due to the limitations the outdated documents are having on their applications. For example the developers argue that population sizes have increased substantially since 2011 and therefore they cannot produce accurate development proposals because the guidelines do not provide up-to-date guidance any longer. Developers are arguing that the population dynamics of the city has changed since 2010 and are arguing that these documents are inhibiting their applications.

The second respondent stated many of the same issues and agreed that the GMS has been successful however there were a few differences of opinion between the two. The respondent stated that whilst he agreed that the Midrand node is very successful, economically, and is an important area in Johannesburg, and even South Africa – he argued against the urban form the node was taking as well as its lack of social equity in the area. It was argued that there is still a high level of inequality prevalent in the region and that very little notable change had occurred since the demise of apartheid. He argued that the City was not necessarily changing the spatial injustices of the past but rather reinforcing them. The newest SDF which is supposed to be released in December this year aims to address this issue. The respondent outlined the emergence of new proposed transport networks (such as

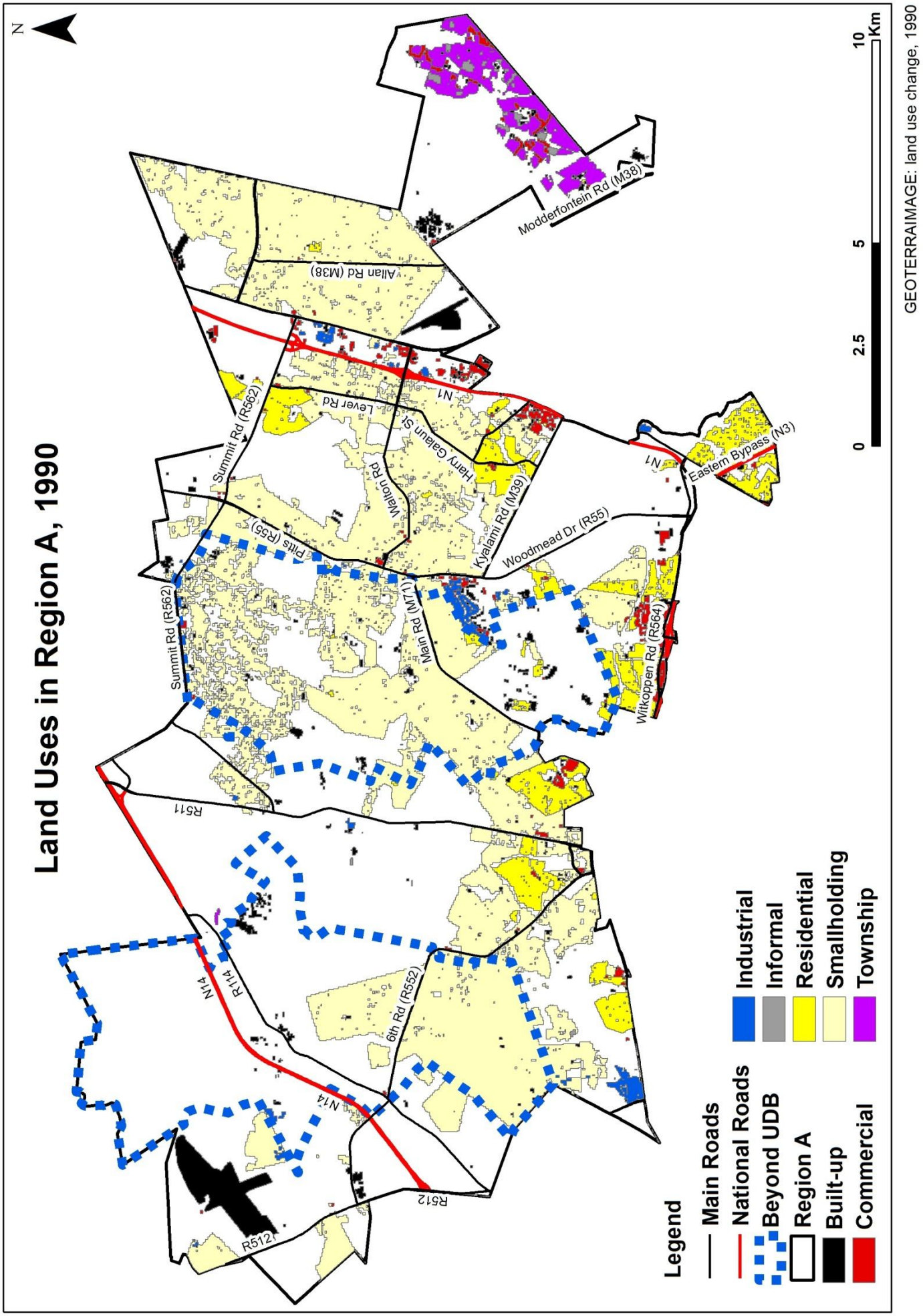
the new Gautrain and Metrorail Routes) and nodal developments (such as the Lanseria Airport City Development) which he believes will be crucial developments in establishing the spatial vision of the City as well as the perceived social benefits of these developments. These developments are discussed later in this chapter.

4.2 Spatial Form of Region A, its Development, and Growth based on Geographical Information Systems Mapping (GTI and CoJ datasets)

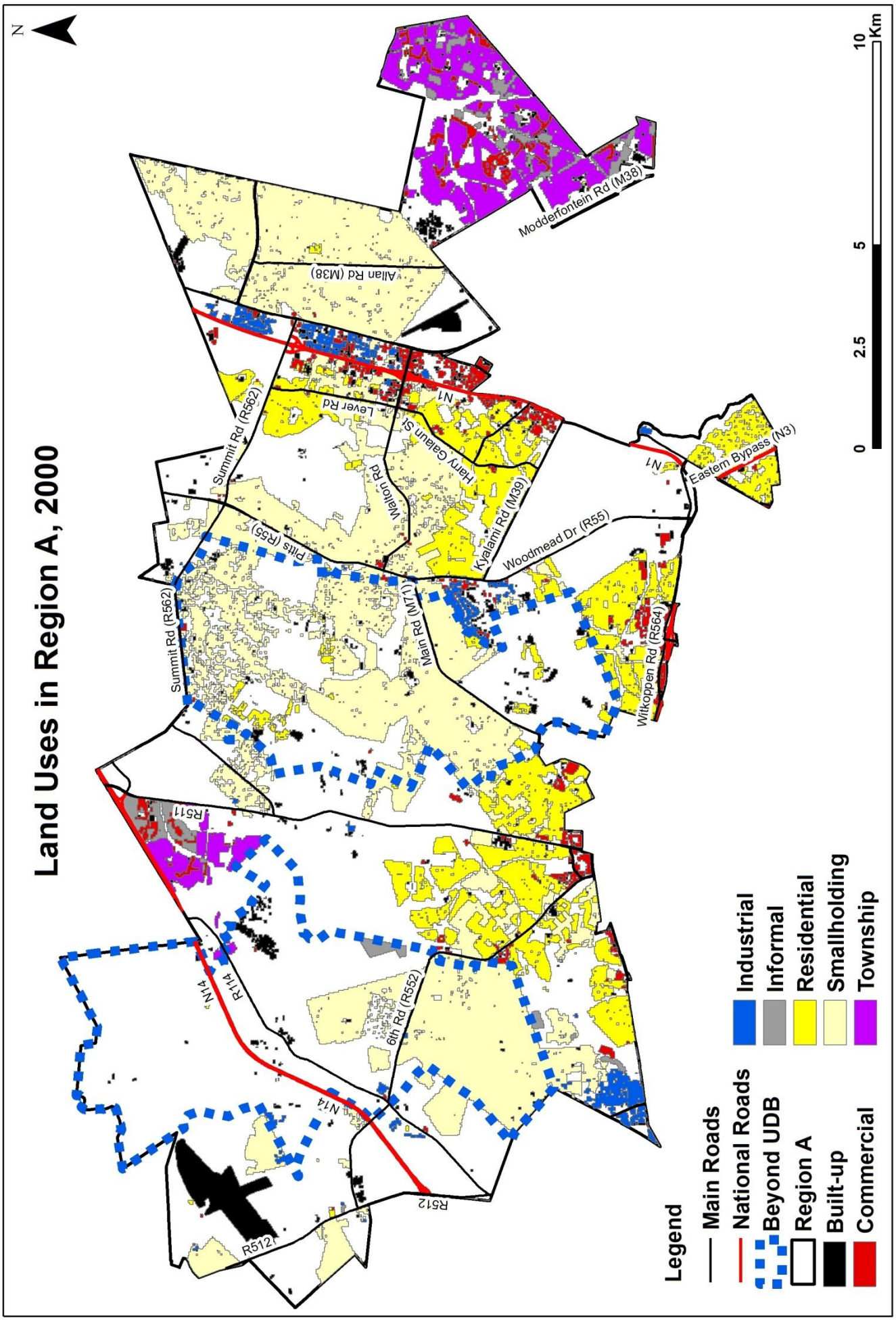
Maps 2 to 4 depict the growth of Region A in terms of residential, industrial, commercial, and informal development from 1990 to 2000 to 2013. Below is a graph that presents the extent of growth per land use, based on these maps. The data used to draw the graph is generated by GeoTerraImage (GTI) datasets. These datasets are based on the analysis of satellite imagery, in collaboration with a variety of complementary data sources and techniques which are used to characterise any landscape (urban and non-urban). Due to the aim of the study it would have been useful to provide an analysis on the change of growth in the region since the initial implementation of the GMS in 2008 – however because of the difficulty in and lack of gaining access to the relevant data I was unable to compare the differences in growth since the strategy's inception. The data I retrieved from the GCRO only provided change analysis data from 2000 to 2013. (Refer to section 4.3 for the interpretation of the maps)



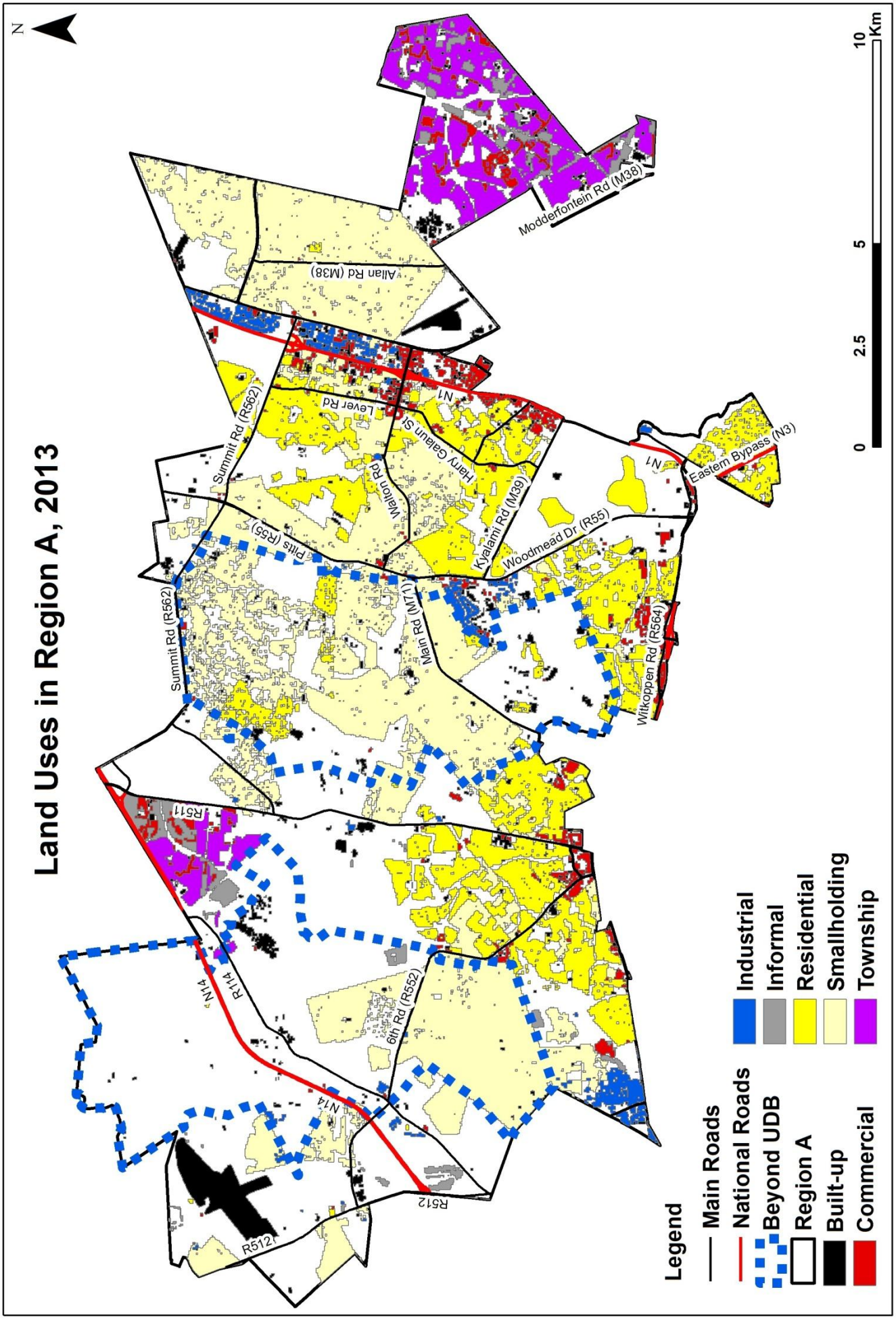
Graph 1: Land Use Change from 1990 to 2013



Map 2: Land Use Change: Region A, 1990



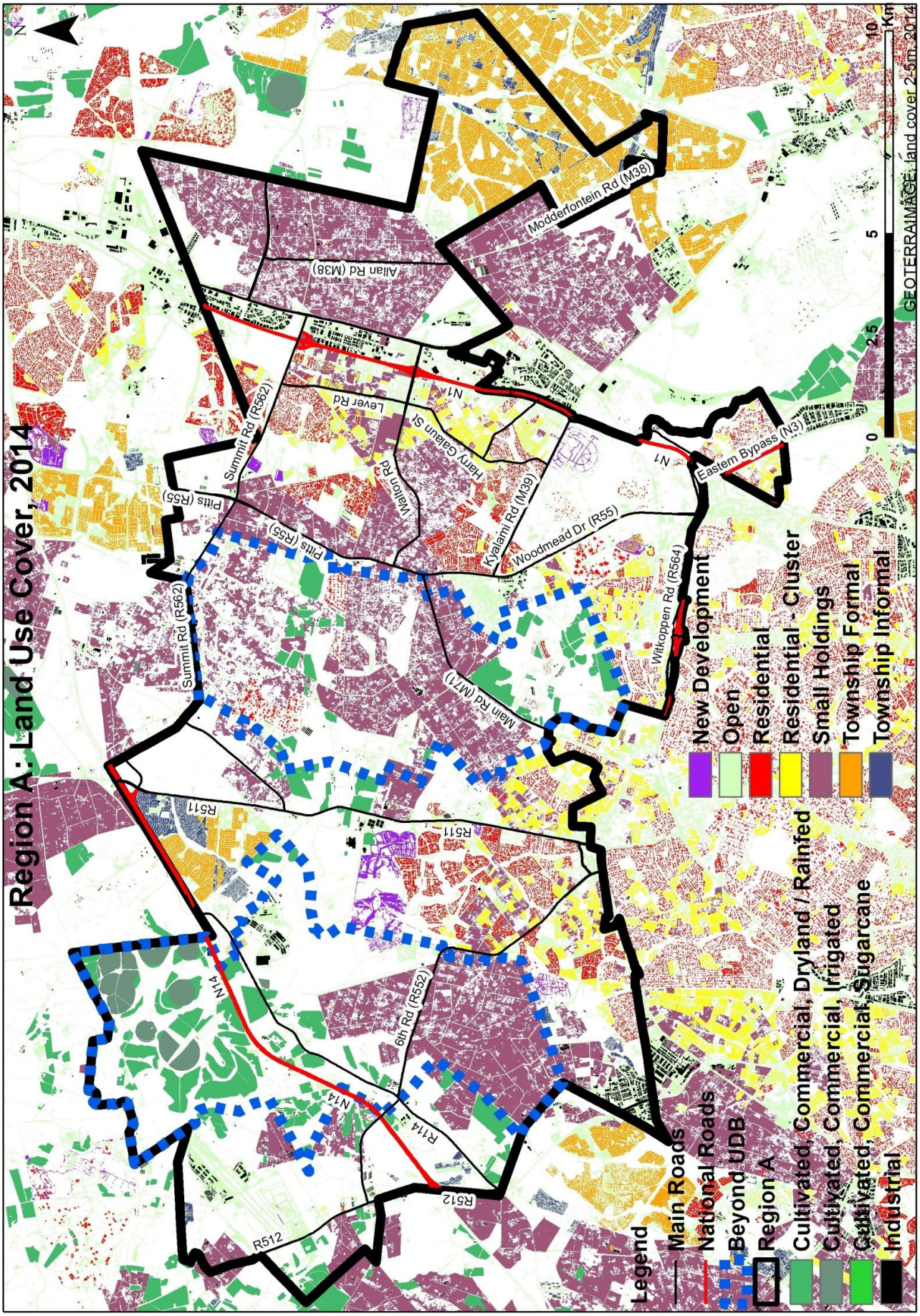
Map 3: Land Use Change: Region A, 2000



Map 4: Land Use Change: Region A, 2013

The GTI data presents how growth in Region A of Johannesburg has occurred since 1990 up until 2013 (Maps 2 to 4). It shows the emergence of the Diepsloot settlement in 2000 along with the high increase in development of Ivory Park since 1990 (Map 2 and 3). This high level of growth can attributed to the large influx of people into the City Region with the demise of the apartheid regime. The location of these settlements (particularly Ivory Park) are noted to be as a result of the spatial configuration created by the apartheid government – placing black settlements on the urban peripheries, marginalising these communities from the economic benefits and prosperities associated with the city centres. In the case of Diepsloot, some of its population were relocated to there from Alexandra in the early post-apartheid era. With the demise of apartheid – it can be assumed that the migration of people into the Johannesburg metropolitan region occurred as a result of the need for change and the search of a better standard of living. The growth of the region during that period of time can also be attributed to the exponential development of townhouse complexes and gated communities. These emerged out the laissez-faire approach to development that was happening at that time due to the influence of multiple authorities and the DFA Tribunals for some of the time.

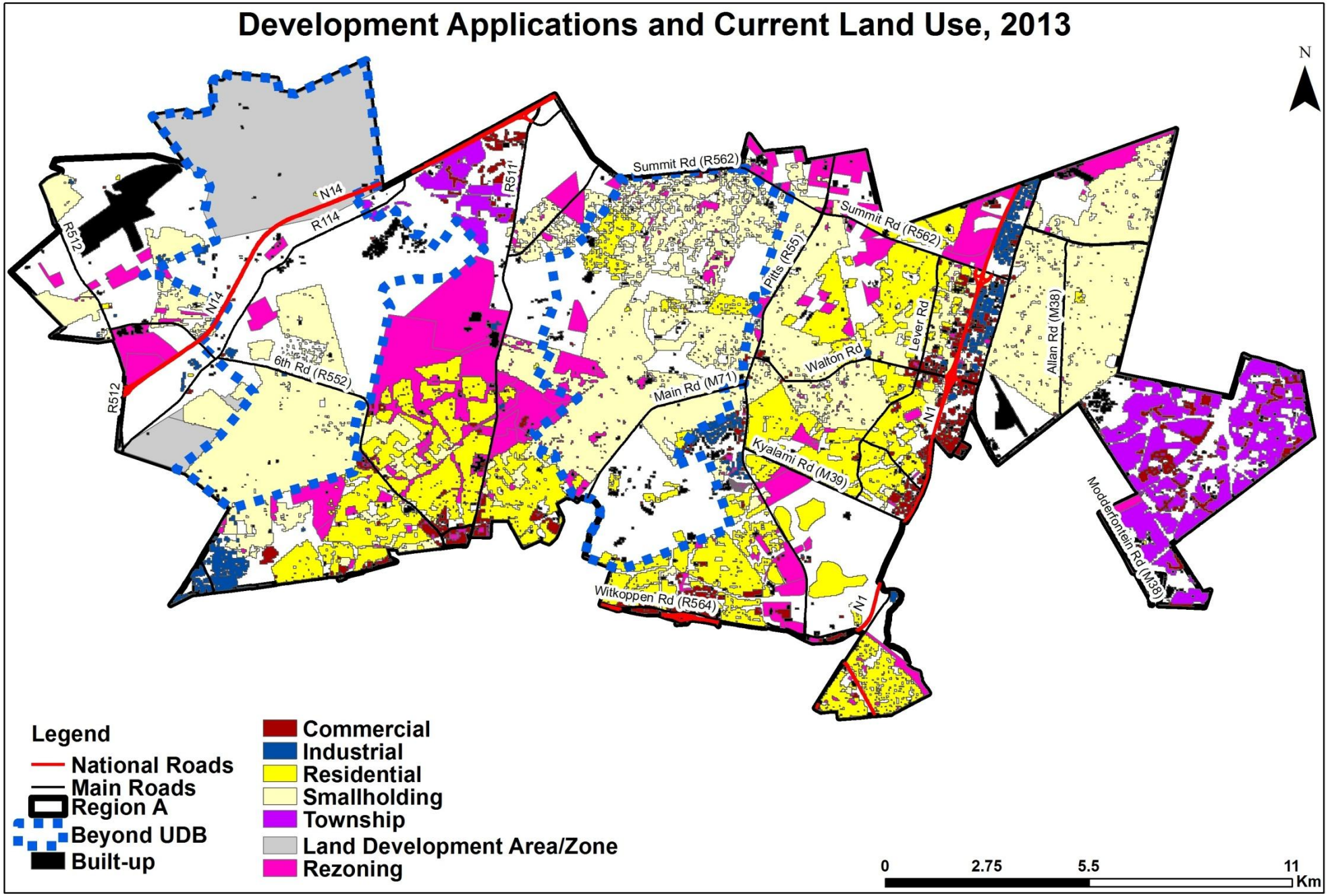
Growth in the region between 2000 and 2013 (Map 4) can be described as being slow and steady. Kyalami and parts of Blue Hills are also shown to disperse beyond the urban development boundary. The CoJ has defined this as sprawl due to the fact that these settlements are located in areas where service provision is limited and hard to provide. Another notable attribute is the effect the nature of development in the region has as a result of its exponential growth in the 1990s - a lot of the development in the region has been argued to be uncoordinated and haphazard due to the placement of residential settlements as a result of a lack of 'structure planning'. As a result a lot of the land is not considered well serviced with few educational and health care facilities within the region. Another notable appearance is the growth of Diepsloot and Ivory Park informal settlements on the periphery of the region. Diepsloot has grown exponentially and Ivory Park has continued to grow at what is seemingly a rapid rate. This proves that the apartheid pattern of development continues to occur in this region, and that the COJ hasn't managed to do planning for and/or encourage development to occur in more integrated ways.



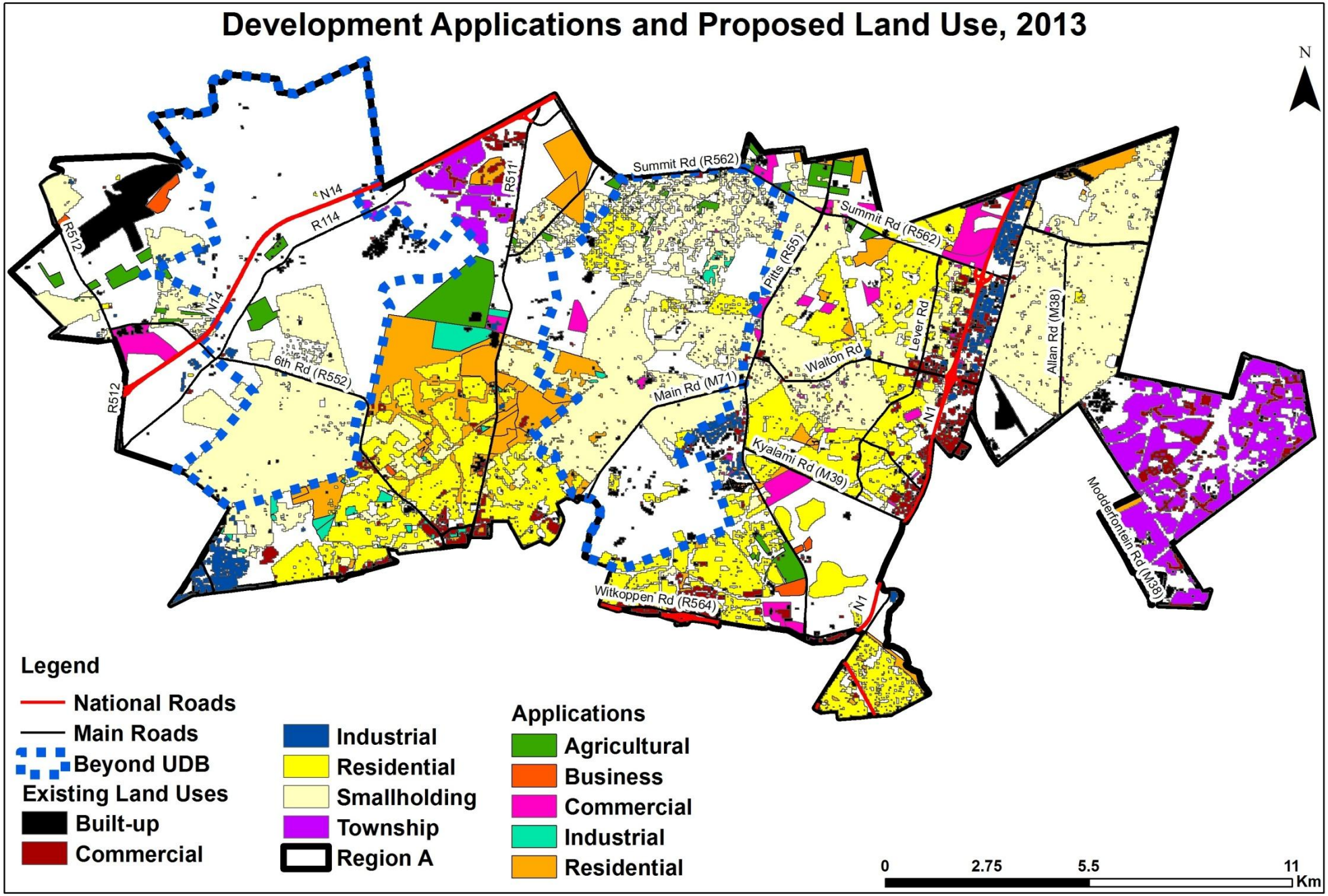
Map 5: Region A: Land Use Cover, 2014

Map 5 shows the land use cover of the region in 2014 – in order to show where development is concentrated and what the nature of development is. It is more up-to-date than maps 2 to 4 and therefore shows a clearer spatial portrait of the region. It is clear that most commercial and industrial land uses are located along major transit corridors with the rest of the region made up of predominantly residential areas. Most of these residences are low-density housing - enhancing the sprawling nature of the region.

Map 6 and 7 show where development applications per land use have been applied for as well as where rezoning and development is located in relation to the 2013 existing development in the region. Map 6 and 7 provide a spatial portrait of where applications have been made for rezoning and future land development and what type of land use application has been made (for example agricultural, business, residential, commercial, and industrial). It can be seen that many of the rezoning and development applications have been made for residential development which is the predominant land use type in the region. Applications for commercial, industrial, and agricultural use are not as prominent providing a clear description of what the region is characterised by – i.e. low-density residential settlement.



Map 6: Development Applications and Current Land Use, 2013

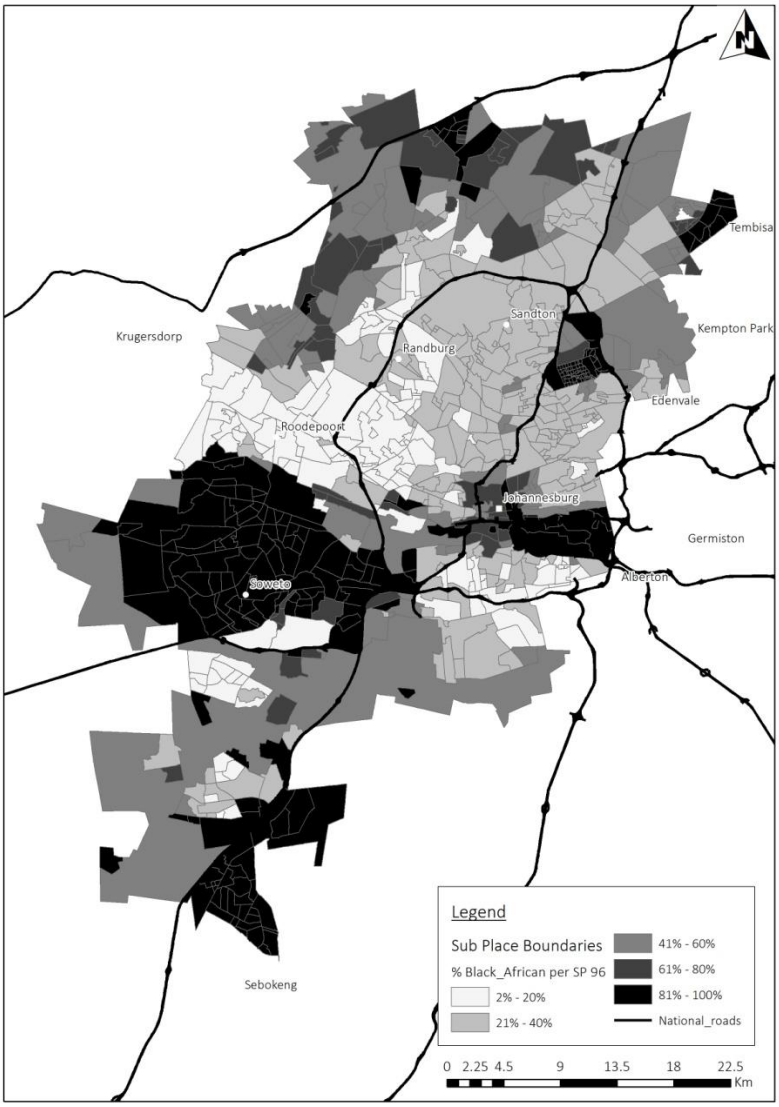


Map 7: Development Applications and Proposed Land Use, 2013

Development in the region is ongoing and inevitable. The region's most prominent node - the Midrand node - is expected to be expanded in order to accommodate further development. This is due to the high economic returns it has provided to the local, provincial and national economy. As a result, this node is considered a successful economic node by the City, however, in terms of its social benefits – it is not as satisfactory. People are still marginalised and there is still a large amount of social inequality in this region. The northern area of the city is still maintaining its apartheid spatial form but has shifted from a race-based spatial organisation to a mixed-race spatial form with a new class-based society. As a result, the CoJ has not been very successful in its objective towards integrating communities due to its policies allowing for - or not preventing – the reproduction of spatial divisions between wealthier and poor areas.

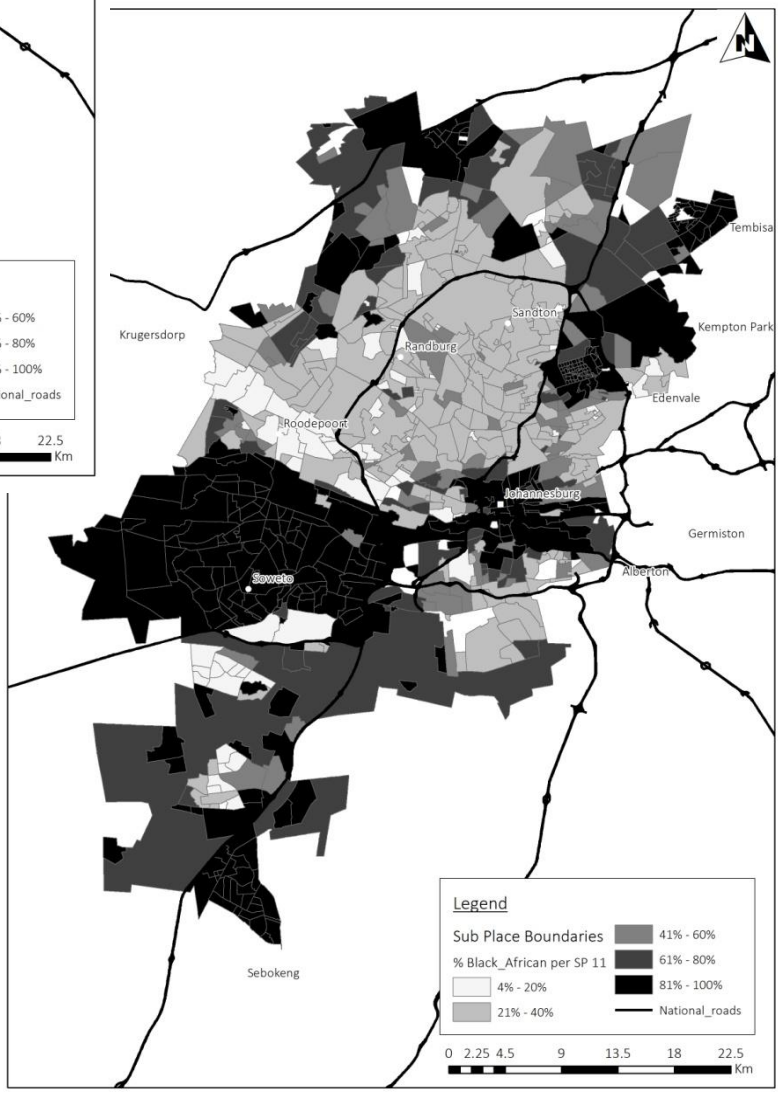
Therefore, it can be argued that the effectiveness of the City's spatial policies and frameworks go both ways. On the one hand they are a success in terms of managing growth and rolling projects out but on the other hand they do not seem to be achieving their initial goals and objectives associated with the dismantling of the apartheid style spatial configuration of the city. People are still segregated, marginalised and experiencing high levels of inequality throughout the City. The City has seemingly lost its initial end goal of social integration but rather seems to be concentrating on its economic prosperity and its vision of becoming a 'World Class African City'. It has failed to address is overarching issues as created by its former governing institution. It was noted that many municipalities do not have guidelines such as the GMS and therefore fail to efficiently direct public investment and therefore do not achieve their spatial visions and cannot grow and develop effectively as a result. The CoJ has implemented interventions and projects such as the Corridors of Freedom (currently under development). This is notably due to the guidance provided by the Spatial Development Frameworks alongside the Growth Management Strategy.

4.3 Population Change based on race from 1996 to 2011



Map 8 and 9 present the location of black population in 1996 and 2011 and shows the growth of the population between that period of time

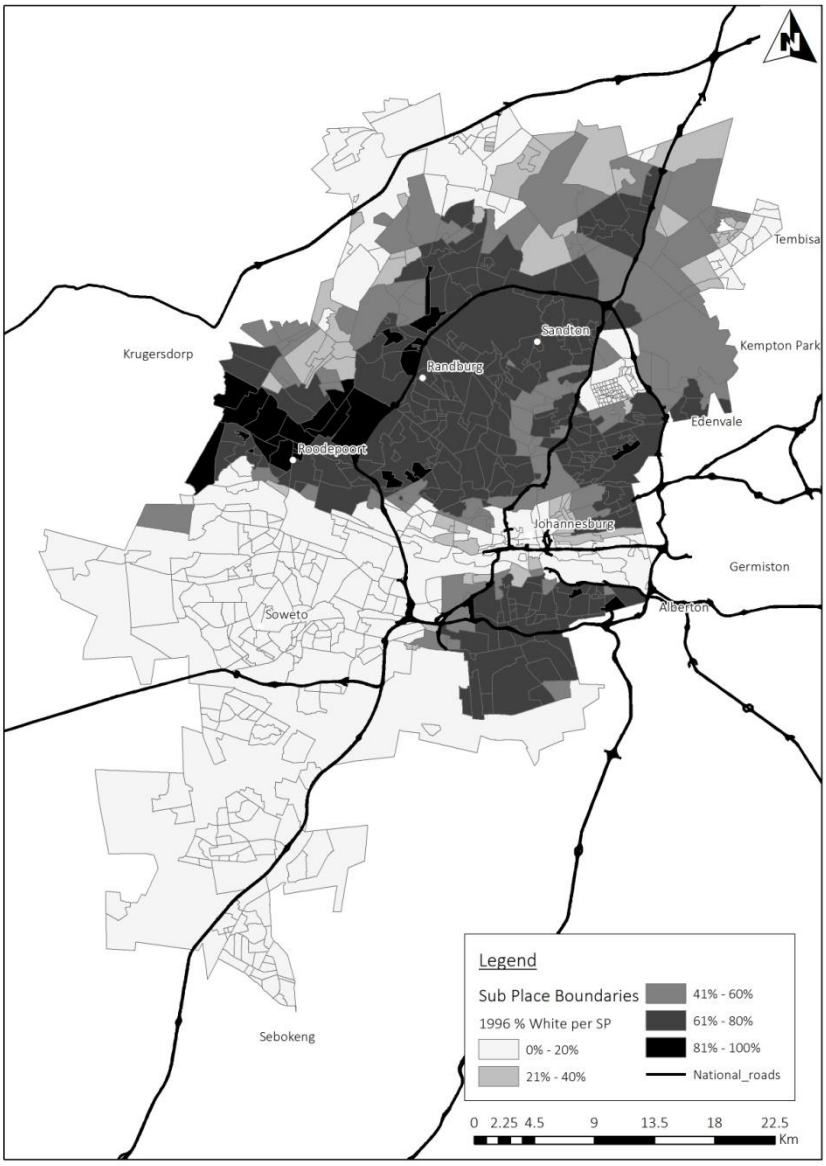
Map 9: % Black_African per SP '11 (Maina, M., 2012)



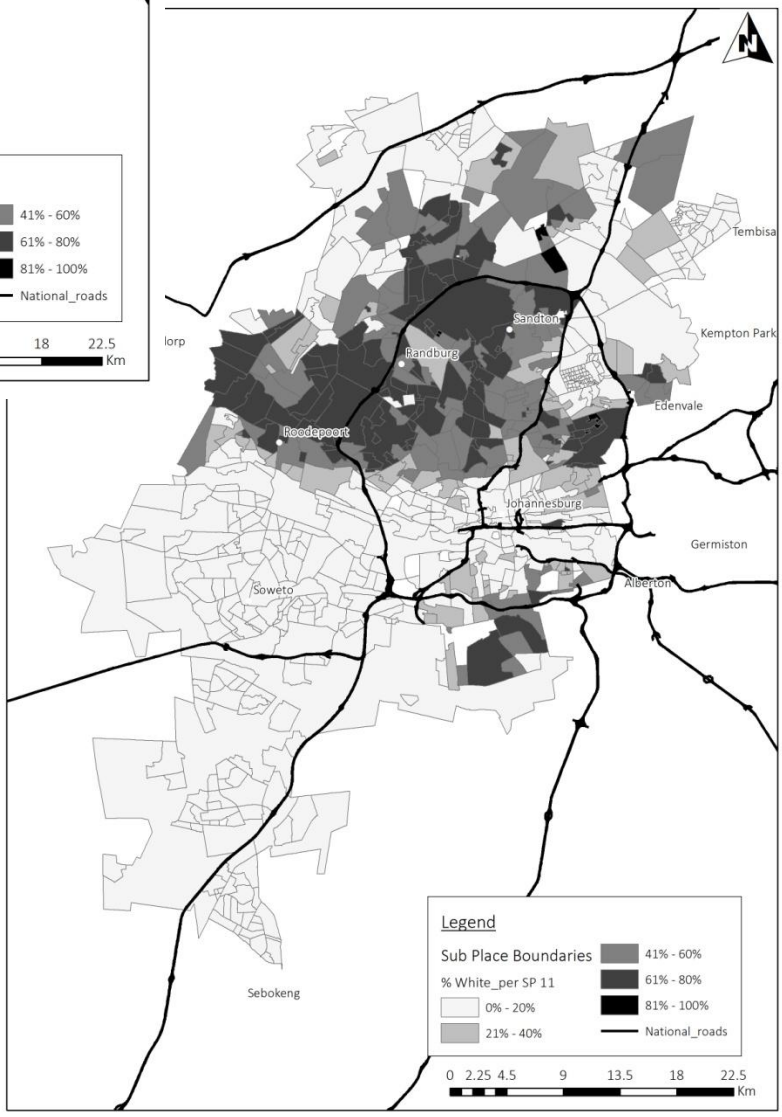
Map 8: % Black_African per SP '96 (Maina, M., 2012)

Maps produced by Miriam Maina for the IUDF by Harrison, P. and Todes, A. (2012)

Map 10 and 11 present the location of white population in 1996 and 2011 and shows the growth of the population between that period of time



Map 10: % White per SP '96 (Maina, M., 2012)



Map 11: % White per SP '11 (Maina, M., 2012)

Maps produced by Miriam Maina for the IUDF by Harrison, P. and Todes, A. (2014)

According to the City of Johannesburg website Region A roughly consists of a population of 250 000 residents – most of whom reside in Midrand. The western area of the region is stated to be scarcely populated with the exception to Diepsloot informal settlement which is estimated to have around 56 000 residents (CoJ, 2015).

Maps 8 and 9 present the percentage of black people residing across the Johannesburg municipality in 1996 and 2011. From these maps it can be determined that this population has grown since 1996 and that the north is characterised by a greater number of black people in the region. It can be said – based on the map representations – that there has been a general percentage growth of the black population from between 41% – 60% to 61% - 80%. It can therefore be assumed that there is a greater mix of races within the region and that racial integration has occurred. Spatial disparities - however - exist now based on class.

Maps 10 and 11 depict the percentage change in white population across Johannesburg between 1996 and 2011. These maps show something quite different – what they seem to show is that the white population has significantly decreased between 20 and 40% since 1996 across the whole municipality. In the case of the northern most region is can be seen that there has been a significant drop from roughly 61% - 80% to around 20% to 40% white population spread across the municipality.

What can be said based on these visual representations of population growth is that perhaps there is a wealthier black constituency within the Johannesburg municipality. As in the case of the region under study (Region A) – this region is considered to be one of the wealthiest regions in the municipality/ or consisting of higher-income populations and it seems like there has been a growth in the black population within this region. So despite much of Johannesburg maintaining its apartheid spatial form there has been greater integration of the black population with the white population but what has yet to change is the better integration of low-income communities closer to the economic opportunities found within the urban core.

4.4 Politically Motivated Development: The Case of Zandspruit

A significant case came out of interviews conducted with spatial planners in the City Transformation and Spatial Planning Department of the City of Johannesburg municipality. The case pertains to political influence on growth in the City, by politicians, who practice their power by not adhering to the development regulations, implemented by the City. This case is in reference to an application made by the Gauteng Provincial Government. The provincial government applied for the establishment of three new settlements to be developed near Zandspruit informal settlement. The application, made by the province, situates these three developments beyond the urban development boundary situated in region A. These developments were argued to be for residential purpose and were applied for by the housing department at provincial level – perhaps to address the housing backlog experienced in the municipality and as a response to the growing pressures for housing coming from within the community residing in the area. The dilemma in this case comes in at local government which has implemented strict policies and regulations that prohibit such development beyond the boundary due to the cost of development in these areas. The City of Johannesburg is currently involved in a debate against these developments but is almost certain that its judgements will be overruled by the power of its political authority – the Mayor of the City.

The problem with these developments comes with the cost it will have at a local level. First of all, the City will have to acquire the land which they do not own; second the land will need to be serviced with bulk infrastructure; finally the cost of developing the settlements itself. The City argues that it has land available in region C of the municipal region that would not cost the City any money; the land available is serviced and the development would be affordable. However, development beyond the urban development boundary will take from the City's public investment and would therefore mean that high priority areas and projects would have to be delayed as a result of the reduced budget. The spatial planners interviewed stated that in this case the decision is up to the City's mayor who seemed to be in support of the application – causing the dilemma of what, how and where development can

take place - based on power and influence. It is in this circumstance that the effectiveness of policies and frameworks – at local level – come into question.

Discussion

This case provides an example of how the planning process and regulatory system is undermined by political influence. In this case the provincial government applied for the development of three new residential settlements beyond the UDB (located in region A). The City's planners were not in agreement with this application due to the cost of these developments and their lack of financial gain for the City and therefore wanted to reject it. The CoJ projects that the cost of these developments will be well over R500 million rand which will have to come out of the City's capital budget. If the project is approved – the cost of it will dig into the funding budgeted for the development of city projects such as the Corridors of Freedom. The decision went to the City's mayor who was seen to be in approval of these developments and therefore provides a situation where the hands of the planner's are tied. It is in this case that the credibility of the planning profession comes under fire despite its true intentions.

It is a case such as this one where the moral dilemma of the planning profession comes into discussion. Many of the planners working for the City show disapproval towards these projects due to the expense they will cause for the City. However, as stated by the planners themselves, if their authority approves the development at local level then they have no other option but to approve the application.

4.5 Examples of Future Developments in Region A to accommodate existing and Forecasted Growth

This section looks at two future developments expected to happen within the city including the Gautrain or future rail extension; and Lanseria Airport City (LAC). The city has had to adapt to these proposed developments as they were initially piloted by the provincial government. This section provides further proof of how political pressures can influence development that whilst these developments may have good intentions in terms of aiding the city in achieving its objective of being sustainable and compact – they do not necessarily align with the city's intial policy's or guidelines.

4.5.1 Gautrain Future Rail Extension (ITMP 25)

With the cities primary focus on creating a sustainable city through the reduction of increased congestion and the enhancement of efficiency throughout the city, in 2013 the Gauteng province embarked on the development of a new proposed rail network with the introduction to the Integrated Transport Master Plan (ITMP25) (Gautrain Management Agency, 2013).

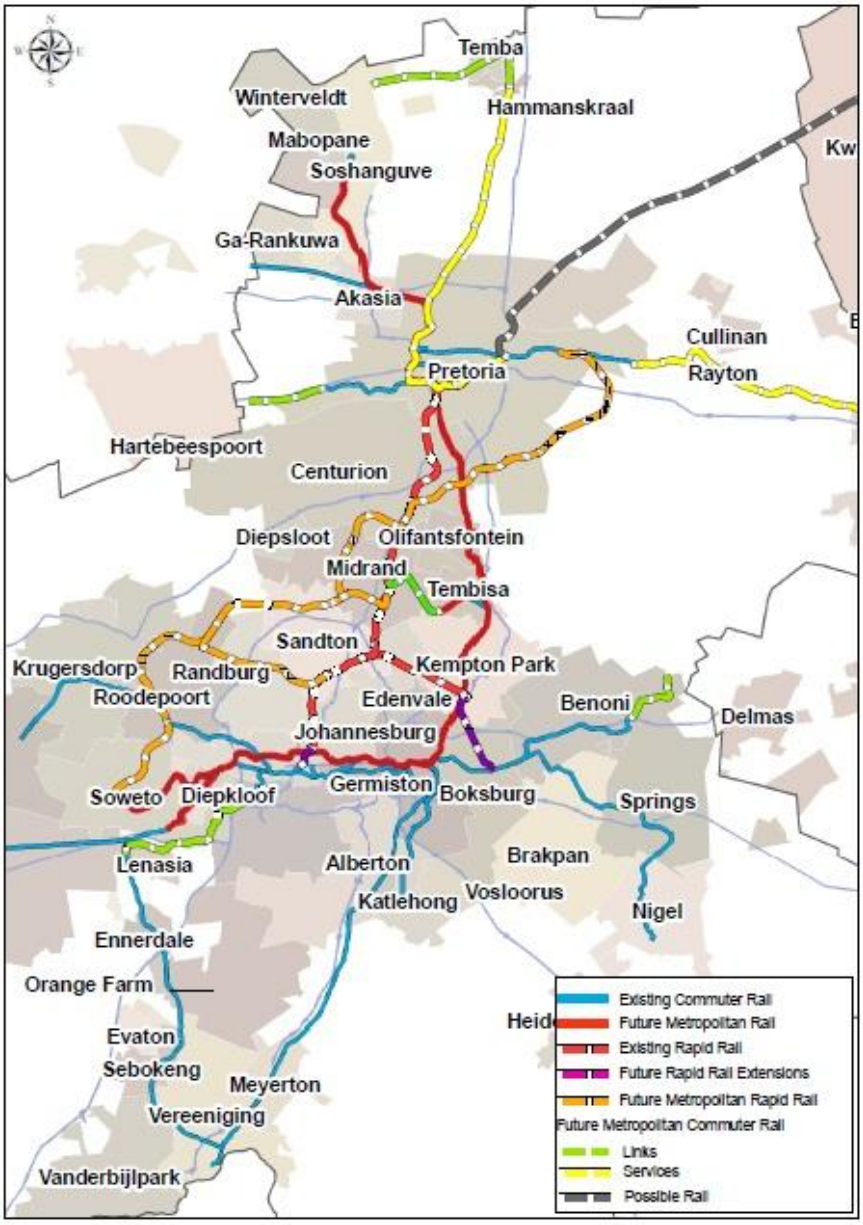
The main purpose of this plan is to make public transport a priority in Johannesburg – through the introduction to a new railway network to be the foundation of the transport network.

The plan proposes (refer to Map 12):

- A high speed railway link from Johannesburg and Durban;
- A rapid link comprised of the Gautrain and its extensions;
    - The extensions include:
        - A link between Park Station to Westgate;
        - Rhodesfield to Boksburg;
        - Naledi, Soweto to Mamelodi;
        - Sandton to Randburg.
- To provide a railway system that encompasses the existing railway network which is managed by the Passenger Rail Agency of South Africa (PRASA)/ Metrorail; and
- A commuter rail with the purpose of encouraging mobility between clusters of suburban settlements and economic centres (Gautrain Management Agency, 2013).

The integrated transport master plan provides a planning framework that aims to assist the Gauteng Department of Roads and Transport to collaborate with other local level agencies which include the Gautrain Management Agency and PRASA to create and develop a more sustainable network system. The plans main objectives are “to develop, and extend the rail network into an integrated and efficient transport system that serves the needs of all Gauteng citizens” through the development of a modern system of mobility (Gautrain Management Agency, 2013).

The development of such a system will assist the City in its endeavour to create a non-motorised transport system away from private vehicular use to facilitate in the development of a sustainable and efficient city.



Map 12: Integrated Transport Master Plan 25: New Rail Network/ Routes (Gautrain, 2013)

4.5.2 Lanseria Airport City Development

Lanseria Airport has been chosen, by the City, as a prime candidate for expansion (CoJ, 2009). The City's drive to increase economic development in the region has encouraged the new development as Lanseria has access to a significant amount of developable land in order to anchor it as an airport city development what has come to be known as Lanseria Airport City (LAC)

"LAC/Cradle City is a master-planned 'instant city', built entirely from scratch on a huge expanse of uninhabited land, with a large-scale private property owner that plays a prominent and decisive regulatory role in the administration and management of municipal functions once under the exclusive domain of public authorities, such as major infrastructure installation, utility provision and ensuring safety and security.6 Rather than performing as a mono-functional or single-use centre dependent upon automobile commuting, this self-sufficient megaproject promises to become a central place in its own right, with strong local networks, connections and all the amenities and services associated with urban life (Varnelis, 2005: 184)" (Herbert & Murray, 2015: 2).

The Lanseria Economic Development Initiative (LEDI) is located within Region A of the City of Johannesburg and is defined as the northern gateway to the city. It is characterised as being ideally positioned between the best of rural and urban living. The area is viewed as having "plenty of developmental opportunities to offer" (Lanseria Airport City Development Company, nd: 4). It is of the view of the LACDC that Region A is ideally placed between Johannesburg, Pretoria, and Ekurhuleni for the encouragement of metropolitan economic development.

The position of Lanseria International airport was identified as "the best option for future development of infrastructure in the City of Johannesburg" (Lanseria Airport City Development Company, nd: 4). Therefore the main purpose behind the LACDC is to facilitate the extension of Lanseria International Airport and the surrounding areas to enhance economic development and job creation within and beyond the City of Johannesburg.

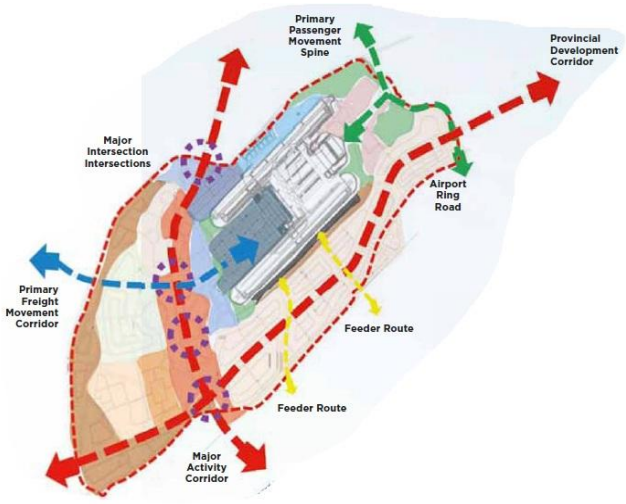


Figure 5: Concept for the Lanseria Airport City Development (LACDC, nd)

In creating the concept behind Lanseria Airport City the LACDC engaged with various policies, guidelines and plans that are focussed on directing growth within the Gauteng Province. The City of Johannesburg, the West Rand District

Municipality, and the City of Tshwane all fall within the parameters of the proposed airport city and all three municipalities have identified Lanseria Airport as a region with great potential in terms of growth possibilities. It has been defined as a region that is relatively underdeveloped which provides significant opportunity for maximising planning potential of the region. The concept aims to create “a truly unique economic community” (Lanseria Airport City Development Company, nd: 10).

However this idea was another development thrust on the CoJ, which was not initially keen on it, and therefore provides another example of political pressures in decision-making.

4.5.3 Purpose of these Examples

There are large new developments (such as Lanseria Airport City and Gautrain) that were different from the CoJ’s initial thinking around compaction, but the CoJ has had to adapt to, and as a result are accommodating them. So it can be said that growth management is a moving target and evolves based on differing circumstances.

These developments – particularly Gautrain are not as a result of the city’s decision making - they were developments were spearheaded by the provincial government and approved by provincial council. These developments are planned – meaning that there will be increased development in places particularly at key transport nodes where trains are expected to have stations. In this regard, these developments have been argued to be a contradiction to what the City is aiming to accomplish but the city has to adapt to it. These proposed developments may form part of the updated SDF for the city as it tries to align itself with the Provinces development objectives.

Conclusion:

From the findings and analysis it can be seen that growth has occurred in the region and in a controlled manner. There is an issue of sprawl which is being experienced throughout the metropolitan region but in region A: the RSDF characterises Kyalami and parts of Blue Hills as sprawl due to their location beyond the UDB however the entire region is of a sprawling nature if compared to the basic definition of ‘sprawl’. Region A largely consists of low-density residential settlements - apart from low-income settlements like Diepsloot and Ivory Park - which are only increasing in size, the region is growing more and more and residential estates of all typologies are on

the rise. ‘New cities’ such as Waterfall City and Steyn City are just two examples of the direction the region is leaning towards – of sprawling ‘instant cities’ with higher walls and security; and areas for higher-income living. However, despite this, development is occurring in line with the guidance of the spatial development frameworks of the region but the credibility of planning as a tool or mechanism to enforce the spatial policies and frameworks of the City has been shown to be potentially inhibited by other spheres of government or authority. In the findings it emerged that some developments do go contrary to plan when authority goes above planning processes and regulations in terms of developments which would normally be rejected by the City. This is evident where the provincial government granted applications through the DFA despite municipalities having the authority to make those judgements as stated in the Constitution. Further, it came out that the provincial government has had significant sway in getting the approval of three new residential settlements beyond the City’s urban development boundary despite the cost of this type of development and in future, there are big developments promoted by other spheres of government (including the Gautrain stations and LAC) that push this further.

It can be argued that the region consists of a number of sprawling developments. Despite the sprawling nature and the characteristics of these settlements, development in the region has been described as being ’smart’ (economically) as property developers choose to develop in areas where they expect to get a high return on their investments. In this regard applications made by developers located in region A, as stated by the City, go according to plan. Developers are therefore seen to choose prime economic nodes in the region such as Midrand or Fourways which are established nodes that will reduce application costs and prevent unnecessary development costs if they choose to locate beyond the urban development boundary. The region is considered to be moving towards successfully reaching the spatial vision of the City as stated in the City’s SDF and RSDF for region A.

However, despite the successful nature of development occurring in the region in line with the regional spatial development framework for region A – it is clearly apparent that the region consists of a number of large estate developments also referred to as “instant cities” or “cities built from scratch” (Murray, 2015: 505)

including: Waterfall City and Steyn City. Many of these large “instant city” developments were applied for through the DFA (such as Steyn City) which approved these applications above the CoJ’s municipal authority. In the case of these developments it can be argued that because they are located in expansion areas and because they have paid for their own infrastructure as stipulated by policy they do somewhat go according to plan and so it can be further argues that perhaps the plan itself focuses on some things, and not others.

Conclusion

5 Conclusion

Growth management is a concept that has been widely accepted and used across the world. It has been in circulation as a tool/ mechanism to assist in managing the inevitable growth of the city. Its first notable inception occurred in 1973 with the successful implementation of an 'urban edge' in Oregon, USA. The strategic objective of this growth management tool was to confine, contain and guide growth in a sustainable manner – to prevent sprawl and reduce the negative impacts of the urban infrastructure and development on the rural and what were considered to be 'prime agricultural' lands.

In chapter 2 the research looked into three different countries and their varying applications of the concept. These included that of Portland, Oregon in the USA; Liverpool in England; and Auckland in New Zealand. All three contexts are considered to have differing reasons behind the need for the implementation of growth management. It must also be remembered that whilst they may have had differing reasons for the need to implement such a strategy; they are all different in terms of their contexts. For example, New Zealand, in 2007, consisted of a population of approximately 4 million people with a population density of about 15 people per km². Auckland consisted, in 2007, of a population just over a million – it was therefore considered to be a small metropolis by global standards. However, most of its population is sprawled over a land area which has been compared to that of a European city which has at least two to three times more population than that of Auckland (Schultink, *et al*., 2007) - proving the dire need for a growth management mechanism.

The initiation of growth management came from the desire to manage and control urban growth that was encroaching on peripheral regions. As argued by Horn (2009: 100) the consequence of "planned decentralisation" resulted in the sprawling nature of development which was seen to be spearheaded by commercial and residential suburbanisation. This sprawling development was highly motivated by developing public transport networks which began to expand beyond the urban core. However, the further people moved from the inner city regions – the more reliant they became on private transport which introduced traffic congestion along with a decline in the public transport systems. Further, it initiated the decline of the inner-city as more and

more people and businesses fled the urban centres and in so doing increased the demand for suburban land - driving urban development further out into the rural areas. It is from this that the principle of 'containment' emerged – the desire to protect and prevent further detriment to the environment was one of the first major reasons for introducing the concept of 'growth management'.

Over time the reasons for the need for growth management changed and became congruent to the context it was introduced and implemented into. As seen in the case of Auckland – the largest metropolitan city in New Zealand - the need for growth management came as a result of a "fragmented, overlapping local government". It was because of this that the practice of governance was extremely constrained resulting in the "short-sighted decisions" being made which left the City of Auckland in a series of crises with regard to an old overburdened infrastructure system (Schultink, *et al.*, 2007:64). In this case, the key objective was to improve institutional arrangements and to promote collaborative planning among the varying local jurisdictions within Auckland through the application of a growth management process. The Auckland case study clearly demonstrates that – where there is a "plural land-owning democracy...an urban metropolitan region cannot be planned by a single regional authority alone" (Schultink, *et al.*, 2007: 71).

Therefore, it must be acknowledged that whilst growth management may have an overarching objective of managing growth - it must be remembered that one growth management 'formula' cannot fit varying contexts, particularly in developing nations, as argued by Angel (2012: 290) that "...growing cities need to employ quite different strategies for confronting their expansion than those championed in North America and Europe".

When looking into the enforcement of growth management in Gauteng Horn (2009: 101) finds that many of the reasons behind its inception, in the province, are certainly of similar cause as that of the international cases. However, she found the provinces reasons went further – first – to promote densification and the integration of land uses and transport networks – second – it wanted to provide a mechanism that would allow for residents and entrepreneurs to access prime urban land within the set boundary. In so doing it wanted to address the spatial injustices enforced by the previous government of the country and thus also proposed the need to develop

public housing closer to the urban centres and places of opportunity. The province also argued that the establishment of the boundary would redirect investment back into the inner-city. The reasons behind the introduction to a growth management strategy such as the urban development boundary were all valid and context based. However, the inevitability that this singular growth management tool would be highly criticised and be deemed simply 'a-line-on-a-map' was high. It was believed that the success of the provincial growth management strategy was inhibited by the authorities belief that a single tool would be able to curb all the intricacies associated with growth. Therefore, in order to make the boundary work, local government and municipalities had to develop and implement their own growth management strategies to assist the provincial UDB.

In the case of Johannesburg, the concept of the 2008 Growth Management Strategy was initiated in 2007. The GMS was drawn up as a response to the need for a more detailed growth management guideline in curbing the inevitable expansion of the city and worked simultaneously with the City's Urban Development Boundary as seen in the City of Johannesburg metropolitan region. In Horn's concluding remarks she stated that "if the urban edge is to regain prominence and credibility in the Gauteng planning environment, it needs to be supported by a provincial-wide growth management strategy" (2009: 101). In this study it was found that the City's GMS is viewed as a success due to its ability to effectively guide investment; to promote where and under what conditions growth can be accommodated; and it effectively encourages the implementation of interventions as laid out by the City in its SDF and RSDFs. When the strategy is analysed alongside the UDB it shows how effectively they work side-by-side despite the reservations many planners still may have about the UDB. The City argues that even though many are still against the boundary – it still has credibility and all applications are either accepted or rejected based on the UDB, GMS, and SDFs of the municipality.

The study started out as an evaluation of the effectiveness of the Growth Management Strategy as an effective tool for managing growth and containing further sprawl within the City's boundary. It aimed to continue existing trends analysis of the GMS conducted by the City up until 2012. In doing so it was trying to see how planning was managing growth and in the case of this study – Region A of the City was chosen as a focus. The reason behind this choice was based on the

expedient growth that the region has experienced over the last 25 years and even more recently with the sudden popping-up of large, higher income, gated communities; lifestyle estates; and edge cities. The study wanted to understand how this growth occurred and whether or not these developments, in the north, have come about in accordance with or contrary to the plans, frameworks and strategies enforced by the City.

Through interviews conducted with urban planners, working within the Urban Transformations and Spatial Planning Department, for the City of Johannesburg it was discovered that all the developments, which are located within the region, went according to plan and went through acceptable application processes. It was stated that, to-date, developers in the region only apply for developments in regions where they will gain returns on their investments and would rather not apply for developments that may cost them more. It was stated in the first interview that an application to expand the Midrand Node was made to the City in order for the node to accommodate more economic growth – which the City is very happy to approve. However this brought on a thought that perhaps the government is placing a significant amount of focus on economic development and thus neglecting its initial focus on social integration and equality. This high focus on economic development within the Midrand node might generate growth on the one hand but on the other it is argued that it is reinforcing, if not exacerbating social inequality.

However, despite the positive nature of development found within the region it was discovered that beyond Region A – urban planners working for the City have experienced severe headaches with regard to the application of residential developments beyond the UDB in Region C. Whilst this was not the focus of this study it is still a crucial component of the underlying purpose of this study – which is the validity of planning as a practice and its ability to manage growth. In this case, the conclusions that can be drawn is that when authority, or power comes into play – frameworks, strategies, tools, mechanisms, policies, regulations, or whatever one might like to call it – power places itself above it. Planners found their hands tied when their managing authority approved of the application made by the provincial government which goes in contravention to the growth management strategies as well as the planning regulations of the local government. Here there is a question

about how can planning, as a profession, work effectively when its processes are undermined by the supposed power of authority?

Returning to the main focus of the study, the study moved from evaluating the efficiency of a strategy to redeeming the credibility of growth management whilst understanding the constraints faced by planners when subjected by the power or believed power of authority to bend the law or in this case the guideline the UDB provides and the accompanying planning processes and regulations. Despite this the study somewhat proves that planning is managing growth through its frameworks and strategies what can be seen is the focussed development of areas which have been prioritised by the GMS. The UDB has also shown how it has and can be effective even though its validity is still seen to be questionable.

Since the demise of apartheid spatial transformation has formed a significant directive in many development documents as the City works to rectify the spatial injustices created during the apartheid era. The northern region of Johannesburg has become increasingly developed and continues to grow based on its sparse amounts of land, its location in relation to key transportation corridors, and its proximity to important economic nodes such as Midrand and Fourways. A large amount of development occurred in the region between 1990 and 2000 with a steady amount of growth since the millennium (but much less) – this can be seen in Maps 2 to 4 in the findings and analysis chapter. The initial focus of the study was to see how growth had changed since the implementation of the GMS in 2008 – however due to the difficulty in gaining access to relevant data this focus could not be accomplished visually. Growth in the north can be described as being sprawling in its nature as a lot of development in the region is recorded to be low-density and spread haphazardly with limited access to infrastructural services. Development in the north is also largely composed of what authors such as Murray and Herbert are describing as “privatised urbanism” seen through emerging new cities such as Waterfall City and Steyn City.

As a result of the sprawling nature of much of the City – planning mechanisms and policies have been introduced and implemented in an attempt to curb the negative effects of sprawl. These mechanisms and policies include: the SDF of the City accompanied by the RSDFs for the 7 regions; the GMS of 2008; and numerous other

documents including the GDS. These policies and mechanisms have been strategically aligned and created in order to counter the negative effects of sprawl – their objectives include that of creating more compact environments and introducing tools such as the UDB to provide strict, physical measures to prevent development and growth into areas which are not suitable for development and growth. The GMS is a more detailed measure directed at growth management – it works to direct growth where it can be accommodated in the most sustainable way. It also channels growth and encourages it through public investment based on the determined priority of a given area in the City.

Growth in the north of Johannesburg, as stated by the interviewed respondents in the city, is arguably consistent with what is stipulated in spatial policy. Many developers in the region conform to what policy promotes and rejects in the region and applications are only made if it will be beneficial to them. However, even though growth is happening in line with spatial policy some of the developments in the region such as Steyn City were approved by the DFA which can be argued to be a contradiction to a lot of what the City was aiming to accomplish. In such a case, the provincial government had a significant influence on the approval of such developments which can be argued to enhance the sprawling nature of the region – posing the question of whether or not sprawl or growth is really being managed effectively in the region.

With this in mind – even though the City may view Region A as a success in terms of reaching the spatial vision as defined by the City - the region still faces a large amount of issues which are in need of being addressed. These issues include: the integration of marginalised settlements, and the need to address spatial inequalities which are being exacerbated by the City instead of being reduced. It has been determined that the region still has limited access to educational and health care facilities due to the poorly planned settlement of people within this region. It is clear that the existing growth management tools, that the city employs, are managing largely to enforce compliance in relation to concerns like sprawl, but they are still quite limited in terms of their ability to address social inequalities and a divided city and to ensure the provision of public services and facilities. Is another form of planning required? Perhaps the region, in study, should employ a more careful planning method to address the ongoing backlogs of service provision with the

continued growth of the population. Perhaps the city should employ an older method of planning such as the structure planning method which effectively planned and located services and facilities in a organised fashion where development was strict and planned around services rather than haphazardly. Or the city would need to strategise and come up with more innovative ideas that would suit the context needs.

However, what came from the case studies is that careful coordination and communication needs to happen across the spheres of government – particularly local and regional government - in terms of their development goals. What is clear in the Johannesburg context is that provincial government and local government are not well coordinated in what their development plans and goals are and therefore an overlap occurs in their thought processes and causes disjuncture's between them.

The city is embarking on a polycentric model of development which it hopes that the future rail network will help facilitate – through nodal development. Perhaps this form of development will be the answer for a more inclusive and developed region.

Further research on growth management should go into the political implications on the effectiveness of the strategy and whether this could be addressed and how? As well as further examination into the development of a region such as Region A in terms of the form of development it is experiencing. Due to time constraints this could not be properly explored and therefore it would be useful to understand the reason for the type of development seen in Region A based on population calculations in relation to infrastructure and public facilities (i.e. hospitals and schools).

6 References

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