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The Impact of Economic Growth on Residential Segregation: A Lephalale Case Study.



Sibusiso Molefe

A dissertation submitted to the Faculty of Engineering and the Built Environment, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements for the degree: Master of Built Environment (Housing).

October 2018

DECLARATION

I declare that, the impact of economic growth on residential segregation, a Lephalale case study is my own work and all sources have been acknowledged by means of references.

I further declare that this report has not been submitted before to any academic institution.

_____

Signature

_____

Full Names

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University of the Witwatersrand, Johannesburg

School of Architecture and Planning

SENATE PLAGIARISM POLICY

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DEDICATION

This work is dedicated to my daughters, Nnetefatso and Ofentse Molefe.

ACKNOWLEDGEMENTS

First and foremost, I'd like to thank God for sustaining me thus far and all the wonderful things He's done for me.

To my supervisor, Dr. Sarah Charlton, thanks for your unwavering assistance and believing in me even when I doubted myself.

To all the respondents, this study wouldn't be a success without you.

ABSTRACT

South African cities were built under apartheid even though some of them only got city status post-apartheid. Due to colonialism and subsequently apartheid, all South African cities have similar patterns of sprawl, separate land uses and segregation. Redressing socio-economic imbalances of the past has been on the ruling party's agenda since the dawn of democracy and addressing these in human settlements is no exception. With Lephalale (formerly Ellisras) anticipated to be the first settlement built into a city post-apartheid due to its economic boom, this research investigated what is being done to create a post-apartheid envisaged city and the human settlements trends coming out of the boomtown.

Since post-apartheid policies, advancing a new deal for South African cities and towns, inculcate high-density compact development, the compact city model was applied to the study to analyse the approaches and actions undertaken in the development of Lephalale. Through in-depth interviews and document analysis, the study investigated the efforts of the municipality and other stakeholders to implement the policies and principles that promote inclusive high-density compact development. Observations were key in determining the emerging human settlement trends in the municipality.

The study found that Lephalale is not offering a model for post-apartheid city planning. The reasons identified included lack of a systematic boomtown strategy by the municipality and lack of coherent and coordinated approach by public and private sector stakeholders. Furthermore, there seems to be no lessons learned from former boomtowns particularly Johannesburg and Emalahleni. Existing policies that promote high-density compact development are not pursued with vigour resulting in the private developers implementing projects that further perpetuate apartheid characteristics.

The study recommends formulation of a context-specific policy that meets current needs of the economic boom while addressing its long-term spatial vision. There is also a need to diversify the economy in order to create enough thresholds to transcend the boom period. Furthermore, a strategy to collect rates and taxes thus extracting value from the investment taking place to create capacity within the municipality is needed. Lastly, stronger partnering of the government, corporations and the housing industry is required to ensure a successful win-win outcome.

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ABBREVIATIONS AND ACRONYMS

BNG	Breaking New Ground
CBD	Central Business District
CoGHSTA	Corporative Governance, Human Settlements and Traditional Affairs
CRO	Coaltech Research Organization
DFA	Development Facilitation Act
DHS	Department of Human Settlements
DMR	Department of Mineral Resources
DPE	Department of Public Enterprises
FFC	Financial and Fiscal Commission
GMEP	Grootegeluk Medupi Extension Project
HDA	Housing Development Agency
HRC	Human Rights Commission
IDP	Integrated Development Plan
IHP	Inclusionary Housing Policy
IRDP	Integrated Residential Development Programme
LDF	Lephalale Development Forum
LLM	Lephalale Local Municipality
MM	Municipal Manager
MPS	Medupi Power Station
NDP	National Development Plan
NHFC	National Housing Finance Corporation
NPC	National Planning Commission
OECD	Organization for Economic Co-operation and Development
PGWC	Provincial Government of the Western Cape
RDP	Reconstruction and Development Program
SACN	South African Cities Network
SDF	Spatial Development Framework
SHP	Social Housing Policy
SLP	Social Labour Plan
SPLUMA	Spatial Planning and Land Use Management Act
TOD	Transit-Oriented Development
WDM	Waterberg District Municipality

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CHAPTER 1: INTRODUCTION

This chapter introduces the case study, gives an overview of the problem statement, the general aims and objectives of the study as well as the significance of the study. Furthermore, the research question and supplementary questions, the analysis of findings and delimitations of the research are discussed. Lastly, the structure of the rest of the study is presented and key concepts are defined.

1.1 Lephalale (Case Study)

Lephalale is the capital of Lephalale Local Municipality (LLM) located in the Limpopo Province, under the Waterberg District Municipality (WDM) as can be seen on Figure 1. It was established in 1960 as Ellisras, using the combination of the surnames of original owners "Patrick Ellis and Piet Erasmus who settled on farm Waterkloof 502 LQ in the 1930's" (LLM, 2009, p. 4). In 2002, the name Ellisras was changed to Lephalale after the main river that crosses the municipality. It borders on Botswana to the north/west with the Stockpoort and Groblersbrug border posts accessible via routes R510 and R572/ N11 freeway. To the south is Thabazimbi, accessible via route R510 and Mokopane to the east, accessible via route R518.

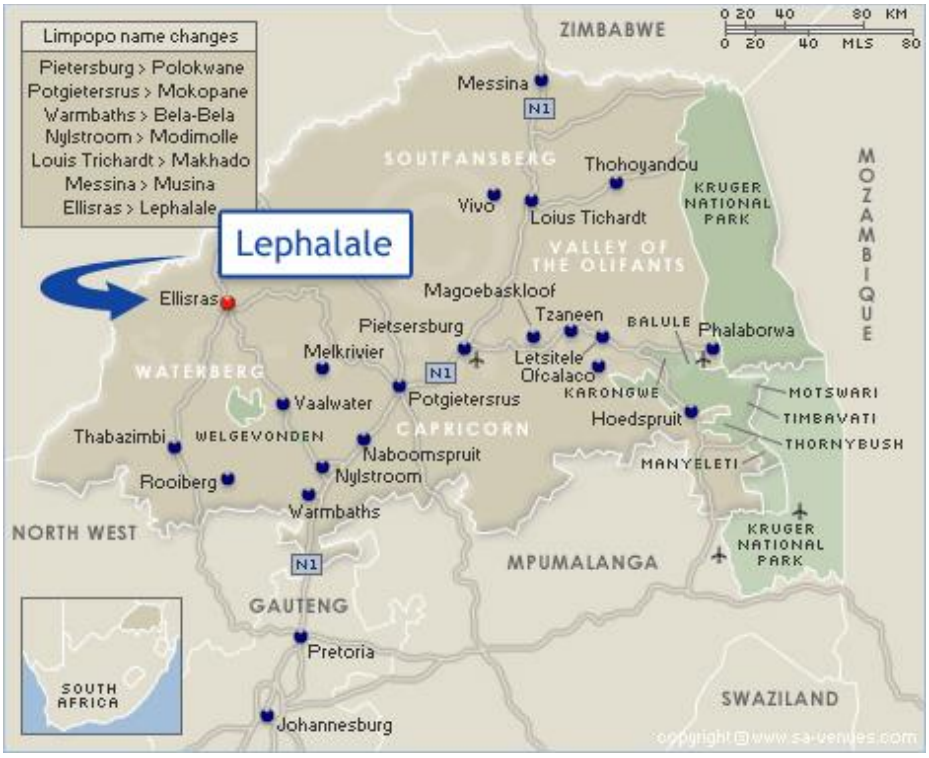
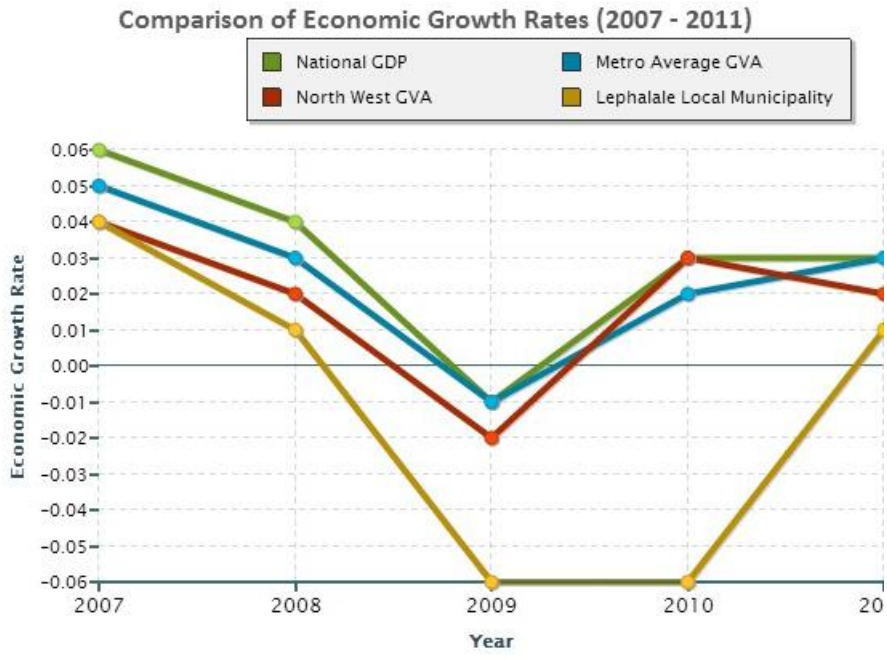


Figure 1: Location of Lephalale. Adapted from Makoupan Hunting (n.d.)

The growth of the farm Waterkloof 502LQ was majorly influenced by the decision of Iscor, then the country's largest steel producer and biggest consumer of coking coal, in 1973 to develop the Grootegeluk colliery (LLM, 2009). After the mine opened in 1981, Eskom, having realised that the coal produced was suitable for use in its power stations, expanded their interests in the area and built the Matimba power station in close vicinity of the mine.

Since then, and for the first time in the post-apartheid era, Eskom is building new power plants, one of which being the Medupi Power Station (MPS) located in Lephalale. MPS is made up of 6 X 794 Megawatt units, making it the 4th largest coal-fired and 22nd largest power plant in the world (Communications and Stakeholder Management Department, Eskom Group Capital Division, 2013). As a result of the construction of this plant and other related infrastructure, LLM is experiencing an unprecedented economic boom in post-apartheid South Africa, with its economy expected to grow by 95%. Graph 1 indicates that, after construction activities began to gain steam, LLM economy grew rapidly at a rate that was even higher than the country's metropolitans average. It sharply grew from -5.7% to 1.01% while the metros marginally grew from 2.24% to 2.65% (Housing Development Agency, 2013),



Graph 1: Comparison of economic growth rates (2007 – 2011). Source: (Housing Development Agency, 2013)

This kind of growth has turned Lephalale into the fastest growing business node in Africa (Bay Estates, 2010) and has propelled the municipality into a boomtown. Tau (2014) reports

that Lephalale is growing into what is tipped to be South Africa's first post-apartheid city, and building a city is certainly the municipality's vision (LLM, 2013).

There is also a specific commitment from the municipality to transform the current urban space into a more sustainable and integrated human settlement form. This will ensure conformance to the guiding principles from the Agenda 21, Breaking New Ground and the Sustainable Development Principles (LLM, 2013). Accordingly, the Lephalale Integrated Development Plan (IDP) is in line with the NDP's Key Focus Area of reversing the spatial effects of apartheid (NPC, 2012; LLM, 2013).

However, Lephalale has also been identified by the National Development Plan (NDP) as one of the country's three Growth Management Zones (areas of anticipated rapid growth that may require special planning and management) because of rapid growth anticipated in the mining, petro-chemical and industrial sectors around it (National Planning Commission, 2012). The presence of huge coal reserves in Lephalale, as illustrated on Figure 2, is the main reason for the expected development and upswing in the economy.

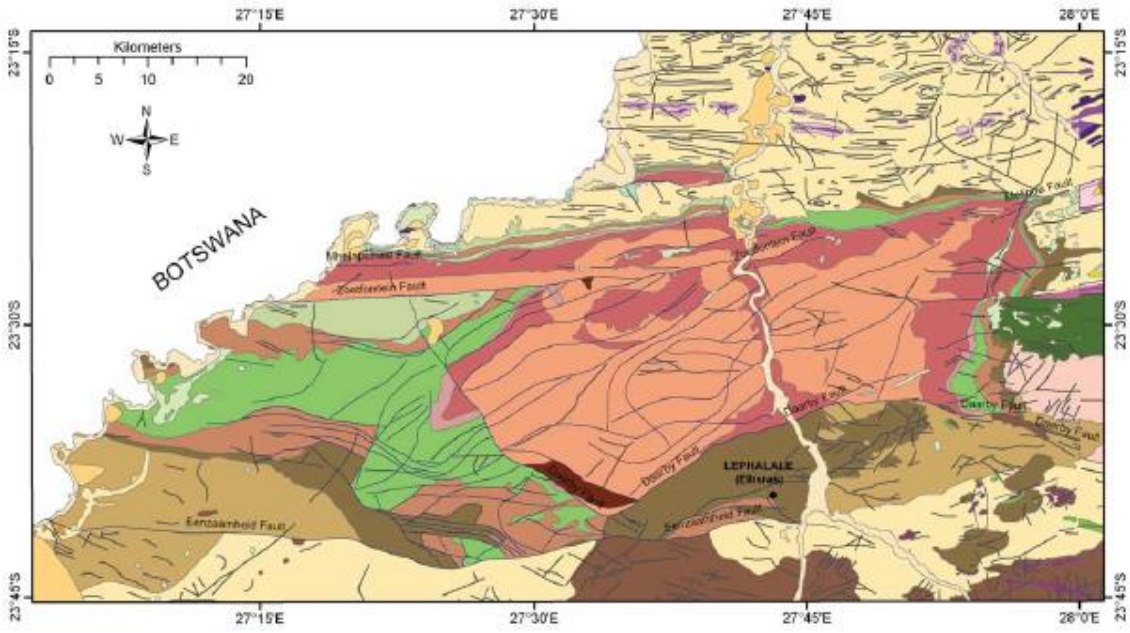


Figure 2: Location and geology of the Waterberg Coalfields. Source: Fourie, et al. (2014)

According to WDM (2013), 44% of South Africa's remaining coal resources are located in the Waterberg region and will last another 300 years. With coal-powered stations generating almost ninety percent of South Africa's electricity and coal also providing about thirty

percent of South Africa's liquid fuel requirements and seventy percent of total energy requirement (South African Coal Roadmap, 2011), coal is very critical to the South African economy.

Furthermore, South Africa is also an influential participant in global coal markets. Eberhard (2011) writes that South Africa's coal industry is influential because

- it is a relatively low-cost producer;
- it has the world's largest coal export terminal, and is positioned conveniently between Atlantic and Pacific coal markets; and
- it is a potential swing producer, able to export competitively to either Europe or the East.

The convenient position of the South African coal industry enabling it to easily swing the global coal market is illustrated on Figure 3.

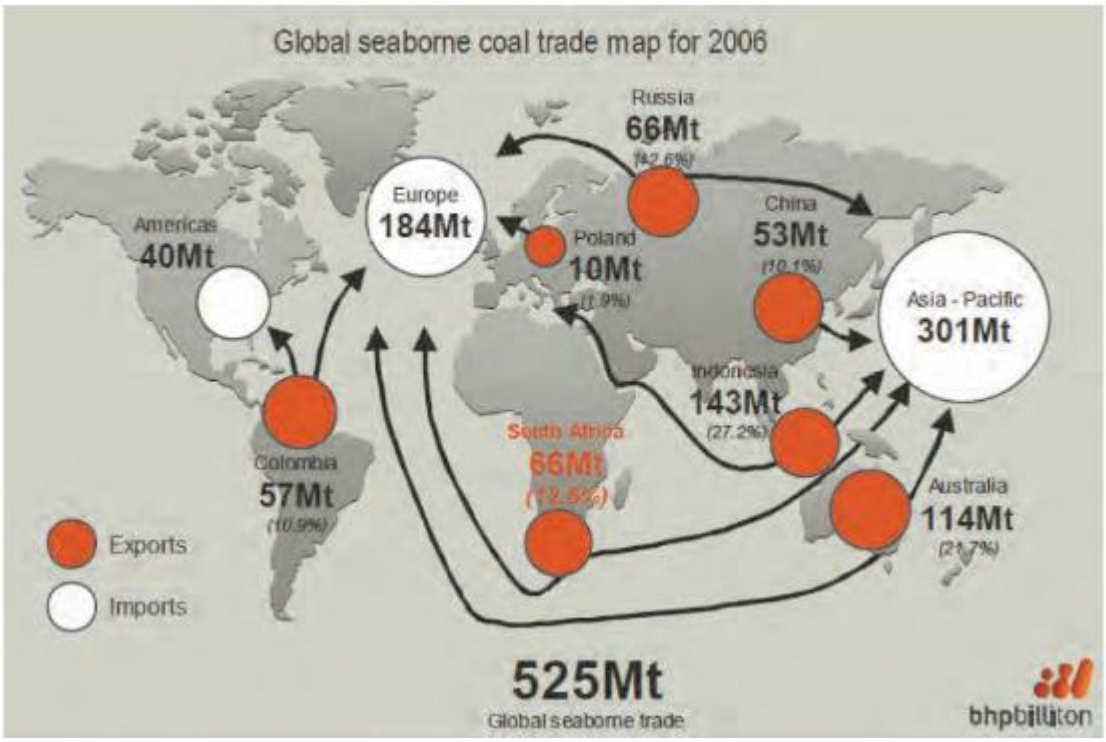


Figure 3: Convenient position of South Africa's coal industry. Source: Bench Marks Foundation (2014)

Consequently, the Waterberg coalfield is expected to take over from the Witbank, Highveld and Ermelo coalfields as "the most important energy source in South Africa in the second

quarter of this century" (Fourie, Henry, & Marie, 2014, p. 209). Precisely because of this, the municipality has a vision of becoming the energy hub of Africa (LLM, 2013)

Given these developments in Lephalale, it is imperitive to explore the emerging spatial trends to observe whether the municipality can achieve a model of post apartheid city planning and development, wherein the spatial divides between the rich and the poor are eliminated. Or, will the municipality retain the apartheid legacy of locating the poor in the periphery of the city, as has been the trend in post-aparthed cities.

Also, given other factors like national government's priorities to create jobs and attract investment as well as market forces, will the municipality be constrained in what it intends to do or will all stakeholders work together and accommodate each other's interests. Lephalale's unique situation is a big opportunity for all spheres of government to create a truly post-apartheid city as it aims to become the second biggest city in Limpopo after Polokwane, if not the biggest (City Press, 2012).

The importance of this study is to highlight existing spatial trends flowing from the economic boom and to determine where these align with or depart from the objectives of the NDP and other policies of transforming human settlements. Furthermore, the study will explore what is being done to bring this development in line with the said objectives. The envisioned Lephalale city represents an ideal opportunity to demontrate what can be achieved in transforming human settlements.

1.2 Problem Statement

South Africa is going through an electricity crisis, with rolling blackouts (load shedding) conducted regularly to ease pressure on the electricity grid. The construction of MPS is a welcomed intervention and has propelled Lephalale into a boomtown, whose development is predominantly led by the private sector. However, Lephalale has some infrastructure shortages especially related to housing and also spatial challenges emanating from apartheid era planning.

The municipality is committed to addressing these issues and private sector investment is very crucial to development. However, the private sector seems to be maximising profits and in the process perpetuating segregation thus posing a threat to the municipal vision.

Nevertheless, the municipality needs private investment, and so does national government, which has identified Lephalale as a Growth Management Zone.

In light of these competing interests, it is not clear how LLM will deal with the emerging segregation tendencies of market-led investment. Also, considering the urgency and importance of MPS and that the creation of the city is a long-term process and seems to be more of the municipality's agenda than national government, it is unknown how the other spheres of government will influence development given their own priorities.

1.3 Research Questions

The study addresses the following research questions raised on the basis of the problem statement above. The primary research question for the study is:
What is being done in Lephalale to counter the segregating spatial trends of rapid economic growth to facilitate a transformed human settlement as envisaged in the the National Development Plan supported by other national policies like the Integrated Residential Development Programme?

Sub-questions

i) What is the vision for a post-apartheid human settlement and how does this apply in the context of Lephalale?
ii) What are the opportunities in fulfilling this vision in Lephalale?
iii) What spatial trends are evident in residential development in Lephalale and what explains them?
iv) What policies and plans promote integrated and inclusive human settlements and how are these being implemented in Lephalale?

1.4 Research Aims

The research has the following academic aims:

i) To explore the impact of the economic boom in Lephalale housing development
ii) To compare Lephalale housing development trends with that of apartheid cities
iii) To determine whether Lephalale housing development is conforming to apartheid cities or is a model for post-apartheid cities; and
iv) To explore what is Lephalale Municipality doing to produce an integrated community and undo its existing segregation pattern

1.5 Research Methods

The study employs qualitative research and uses in-depth interviews to collect data from the participants. Desk research is employed in collecting data from existing resources, such as IDPs which provide basic information about the municipality. Field observations are also carried out to identify housing projects, their type and location in order to determine their target market. These methods are triangulated to evaluate the extent to which all evidence converges.

1.6 Significance of the Study

The study contributed to the documentation of the spatial transformation challenges and suggested interventions that can be embarked upon to ameliorate these challenges particularly in greenfield developments. It also provided some insights into boomtowns and the importance of proper planning as well as evolving from a single mineral-based economy into diverse agglomerations.

1.7 Definition of Concepts

The study defines the following concepts that were mainly used:

- Apartheid City
  The apartheid city refers to cities and/or towns constructed using historical segregation policies and practices thus resulting in the paradigm of urban division and exclusion.

- Boomtowns
  Cities and/or towns experiencing rapid economic growth as a result of an event, usually exploitation of natural resources, necessitating an equally rapid provision of socio-economic infrastructure.

- Compact City
  An urban planning and design concept promoting high-density urban settlement and mixed land uses, including social amenities, connected by multimodal public and pedestrian transport systems.

- Integration

  A spatial and socio-economic tactic connected with the ideas of the compact and inclusive cities thus fostering citizenship and offering equal opportunities to all.

- Spatial Transformation

  The process of transforming the apartheid city geography into socio-economically integrated areas.

1.8 Structure of the Research Report

Chapter 2 details the research methodology undertaken to conduct this study. These include methods used to collect data, analysis, ethical considerations and issues regarding reliability and validity of data. The research site and limitations of the study are also discussed.

Chapter 3 provides literature on boomtowns and how housing is affected under these circumstances. Lephalale is then presented as a boomtown that offers South Africa an opportunity to build the first post-apartheid city. The chapter then discusses literature on the apartheid city in order to provide a basis for comparison with the study area, which will be measured against the vision of post-apartheid cities.

Chapter 4 discusses the legislative framework that advances the spatial transformation needed to reverse the apartheid city. Specific challenges, with potential to affect the study area, that have hampered spatial transformation thus far are highlighted.

Chapter 5 discusses the inclusive and compact city concepts. In the chapter, the compact city is merely presented as the perceived position of the post-apartheid government based on policy documents and pronunciations by various cabinet ministers. Accordingly, merits (or lack thereof) of the compact city are immaterial to the study. However, the chapter does advance reasons for Lephalale to pursue these concepts.

Chapter 6 presents the findings regarding the emerging trends of the impact of economic development on Lephalale human settlement.

Chapter 7 provides detailed interpretations of the research findings from the interview data and document analysis. Conclusions are drawn and recommendations to build a city and/or

town envisaged in the legislative framework discussed in chapter 3 are provided in chapter 8.

1.9 Chapter Summary

This chapter presented the background, research objectives as well as clarification of concepts used in the study. These concepts defined in this chapter laid solid foundation on which discussions of the various elements of this study were based. The next chapter reviews literature on boomtowns and the apartheid city.

CHAPTER 2: RESEARCH METHODOLOGY

2.1 Introduction

Research methodology is about how the entire study was undertaken. It is “a process of collecting; analysing and interpreting the collected data” (Sarantakos, 1998, p. 106). Accordingly, it specifies who and what the events to be studied are, settings and processes considered in the study as well as the outcomes of the study. This chapter therefore focuses on the research methods used and the specific research approach adopted. Clarity will be provided on the choice of research approach linked to the research problem, the research questions and the research objectives in Chapter 1, as well as the review of the literature in Chapters 3, 4 and 5. Furthermore, ethical considerations and the limitations that were faced during data collection will be explained.

2.2 Research Design and Approach

Research design is the overall strategy employed to integrate the different components of the study in a rational manner in order to address the research problem (de Vaus, 2001). Because the study was conducted to investigate the impact of economic growth on residential segregation, it had to interpret a phenomenon of interest in order to meaningfully contribute to greater understanding about, and appreciation of, the complexity of issues relating to human settlements in boomtowns. A qualitative research was thus adopted.

With Lephalale being the first boomtown in post-apartheid South Africa, an exploratory research was the most useful approach for this study, which sought to address “a subject about which there are high levels of uncertainty and ignorance” (van Wyk, 2012, p. 8) and tackled “new problems on which little or no previous research has been done” (Brown, 2006, p. 43). Additionally, exploratory research was appropriate as the study was not meant to offer final and conclusive solutions to an existing problem but rather a better understanding thereof, as per the research aims.

Dudovskiy (2016), advances that exploratory research is the initial research, which forms the basis of more conclusive research. As will be highlighted in the limitations of the study, the findings are merely based on the emerging trends and more research would have to be done to conclusively determine the spatial outcome of Lephalale.

To conduct the exploration, the research question was broken down into sub-questions to determine the type of evidence required to answer it. Municipal strategic plans, spatial developments frameworks and emerging spatial trends were identified as the most suitable to provide the most convincing evidence. The municipality and corporations operating in Lephalale were also determined to be best positioned to provide information for the study thus interviews were selected as part of data collection.

Data collected was analysed using the content analysis method. Content analysis is "a passport to listening to the words of the text and understanding better the perspectives of the producer of these words" (Berg, 2007, p. 308). The premise is that the many words from communication messages can be reduced to categories in which words share the same meaning. To eliminate bias, given that the researcher has knowledge of the area (see Limitations of the study), a manifest analysis was adopted. In a manifest analysis, the researcher "describes what the informants actually say, stays very close to the text, uses the words themselves, and describes the visible and obvious in the text" (Bengtsson, 2016, p. 10). The analyzed data was then compared with the literature reviewed to determine conformance and/or ignorance and to arrive at conclusions.

2.3 Research Site and Sampling

Since a case study is a "method used to conduct an in-depth investigation of an issue at a specific location" (Berg, 2007, p. 283), Lephalale, being the case study area, was the research site.

Judgmental sampling was employed to identify interview participants. Judgmental, also called purposeful sampling, is necessary for the selection of a predetermined number of people who are best positioned to provide the required information for the study (Kumar, 2011). The researcher selected officials from different institutions and Table 1 illustrates a breakdown of the data collection sites and the predetermined participants who took part in the in-depth interviews and their roles in their respective institutions.

Institution	Category	Participant	Nature of Work	Total
Lephalale Local Municipality	Municipality	Municipal Manager	The office of the Municipal Manager is responsible for management administration of the municipality	3

		Executive Manager	The Community Services directorate is responsible for housing	
		Manager	The Land Planning directorate is responsible for land	
Limpopo Provincial Government	Provincial Government	Director	Spatial and human settlement planning is responsible for supporting municipalities to develop and review SDFs as well as township establishment & site demarcations.	1
HDA	National Housing Agency	General Manager	The Land and Housing Services Office is responsible for facilitation of acquisition and release of land for human settlements development	1
Private/Mining Corporations	Eskom	Middle Manager: Facilities	Despite different titles, both managers are responsible for the day-to-day management of the property portfolios of their respective organizations	2
	Exxaro	Area Project Manager for Housing		
Private Developers	Imbani Housing (Pty) Ltd	Project Manager	Project managers were responsible for overseeing the projects undertaken by their respective companies	2
	Cranbrook Property Projects	Project Manager		
Total				9

Table 1: Data Collection Sites

The following paragraphs provide an explanation of the responsibilities of each participant and their relevance to the study.

2.4.1 Municipal Manager

The office of the Municipal Manager is responsible for ensuring the smooth running of the municipality. It provides guidance and advice on compliance with certain Acts that governing the municipality to the political structures; political office-bearers and officials. Key functions include inter alia

- To provide the management of municipality's administration in accordance with municipal legislation and other legislation applicable to the municipality, including management, discipline and development of staff;
- To formulate and develop of an economical, effective, efficient and accountable administration that is equipped to carry out the task of implementing the municipality Integrated Development Plan (IDP) and responsible to the needs of the local community;
- To provide the management and monitoring of municipal services provided to local community in a sustainable and equitable manner;
- To provide the administration and implementation of the municipality's by-laws and other legislation, includes the implementation of National and Provincial directives, policies and legislation

2.4.2 Manager: Community Services

Community Services is responsible for Recreational Facilities, Solid Waste Management and Environmental Management, Housing, Library, Arts and Culture, Safety and Security, Fire and Rescue Services, Disaster Management, Traffic Control, Licensing Authority, Safety and Risk Management.

2.4.3 Manager: Development Planning

Development Planning is responsible for Land Use Management, Building Control, Local Economic Development, Tourism Development, Municipal Marketing and International relations as well as coordinating SMME development. Its key functions include the provision of the coordination of spatial planning and responsible land use.

2.4.4 Limpopo Provincial Government: Director - Spatial & Human Settlement Planning

Spatial and human settlement planning is responsible for supporting municipalities to develop and review their Spatial Development Frameworks as well as township establishment & site demarcations.

2.4.5 HDA: General Manager Land and Housing Services

The land acquisition unit is responsible for the facilitation of all acquisition and release of both Private and Public land required by the HDA, Provinces and/or Municipalities for human settlements development. To ensure that the land is suitable for development, the function includes identification and prioritisation of land for acquisition, the actual land acquisition and release and/or transfer of the land to stakeholders or qualifying beneficiaries. Some of the Land and Housing Services' responsibilities include:

- Development of the land management frameworks, guidelines and policies.
- Development of land acquisition plans across all spheres of government.
- Managing and undertaking the acquisition of property.
- Managing and undertaking the transfer of property.
- Reviewing, negotiating and managing development, drafting and conclusion of land acquisition and disposal arrangements.

2.5 Data Collection Methods

Data collection methods are used to obtain data from units of analysis in order to respond to the research questions. Data can be obtained through instruments like questionnaires, observations and interviews. The study used desk based research, interviews and field observations.

2.5.1 Desk-based research

The desk review was an intensive literature search, review, and synthesis of relevant documents concerning the municipal plans for human settlements and spatial transformation. Documents can be useful to validate data sourced through interviews and, for this study documents utilised in the desk review included municipal IDPs and SDFs, strategic planning documents and council minutes. Newspaper articles were also useful in obtaining information that previous municipality officials had communicated in the past.

2.5.2 Case Study Area Mapping

The research made use of maps to present the case study area. The maps play a crucial role in enabling the visualisation of the physical context as well as depicting spatial patterns. From the maps, the research was able to indicate where most of the housing projects are taking place.

2.5.3 Conversational interviews

Conversational interviewing is a verbal interaction between the researcher and respondents aimed at generating data through talking about specified topics in a conversational way (Given, 2008). They are valuable in providing insight into the participant's understanding of the subject matter.

Initially, informal interviews were held telephonically with respondents when the researcher contacted them to 'sell' the study and getting them to agree to participate. Once appointments were secured, follow up face-to-face semi-structured interviews were then held at the data collection sites identified in sub-section 2.3. Formal consent letter together with the interview questions were sent to the respondents before conducting the interviews. This was done not only to ensure respondents are adequately prepared but also to assure them that the interviews would not deviate from the telephone conversations, i.e. they would not be ambushed.

Respondents were also informed that the interviews would be recorded and that their names would remain anonymous even though their positions might give away clues. With the exception of the MM, the average length of the interviews was an hour. The MM, a town planner by profession, was very fascinated by the study and the interview lasted just over two hours.

2.5.4 Field Observation

The purpose of a field observation is to observe people, places, and/or events in order to "identify and categorize common themes in relation to the research problem underpinning the study" (Labaree, 2009). Runeson & Höst (2009) argue that observations have an advantage in that they may provide a deep understanding of the phenomenon that is studied and are particularly relevant where it is suspected that there may be a deviation between an official view of matters and the real case. For this study, the researcher observed housing development projects, in particular their location and typology. The location was crucial in determining the emerging spatial pattern while typology was crucial in determining integration (or lack thereof).

2.6 Data Analysis Methods

The purpose of analysing data was to obtain meaning from the collected data and draw realistic conclusions. To this end, content analysis, which is a research technique that provides means to make valid inferences from verbal, visual and/or written data in order to describe specific phenomena (Bengtsson, 2016) was used. All data gathered was scrutinized to identify similarities and patterns that keep on recurring within one theme, which were considered for relevance and merger.

Using existing theory on boomtowns, directed approach content analysis helped identify key concepts as initial coding themes which led to targeted examination of document reviews. To explore contextual use of themes like integration, summative content analysis was employed and the researcher stopped at manifest analysis in order to stay close to collected data. All data relevant to each theme was triangulated with the rest of the data collected to construct findings. Triangulation is very essential in providing evidence, whether consistent, convergent or contradictory, so that the researcher's account is rich, robust, comprehensive and well-developed.

2.7 Ethical Considerations

The study maintained ethical concerns during and after data collection. In research, ethical issues mean "general agreements shared by the researcher about what is proper or improper, in the conduct of scientific inquiry" (Babbie, 1998, p. 348)

Having spent over six years working in Lephalale before (August 2009 – July 2014 and February 2016 – September 2016) before data collection, the researcher had become familiar with the study area and context. Consequently, it was very important that the researcher distances himself in order to not influence the participants nor the interpretation of the results. Questions asked were in line with the literature reviewed in Chapters 3; 4 and 5 and not the researcher's knowledge gained from living and working in the study area.

Participants were informed about the aim of the investigation, why they were selected and were also asked if they are interested in participating in the study. In addition, the respondents were told they had a right not to participate in the study. Approval for participation in this study by respondents was granted by administrative heads of the selected institutions. Thanks in part to the telephonic conversation held prior the face-to-

face interviews and participants being given questions in advance, respondents were able to determine that the study would not be detrimental to any person nor institution. Consequently, although the issue of confidentiality was mentioned, it was generally accepted to be irrelevant. However, names of respondents have been withheld as there was no explicit agreement to use them.

2.8 Reliability and Validation of Data

Reliability aims at "making the production of data more transparent, so that readers can check what is still a statement of the interviewee as well as what is already an interpretation by the researcher" (Moraba, 2013, p. 36).

As will be discussed in the limitations of the study, it was not possible to take the results to all the interview participants. However, to counter this shortcoming, the researcher made use of notes obtained during telephonic conversations that were held prior to the interviews with the relevant participant to validate the data collected. Also, draft copies were shared with participants after examination but before final submission.

2.9 Limitations of the Study

Even though qualitative research contributes to an understanding of a perceived situation, ultimately, it is mainly influenced by how much effort, time and financial resources the researchers are able to invest in trying to understand the phenomena under their studies (Patton, 2014). Likewise, this study was also affected by such, principally time, considering that transformation of towns into cities take years.

Other key limitations were access to government officials. Due to local government elections held in August 2016 and reshuffling of officials thereafter, it remained difficult to get appointments due to their strategic meetings of planning makgotlas at the time of data collection. Also, it was not possible to secure follow-up interviews with government officials to validate the data. Data obtained from the interviews was validated with information given during the telephonic discussions that were held prior to the interviews. Also, the inexperience of the researcher played a role. The researcher was too concerned about keeping an open mind and in the process never optimally exploited the advantage of knowing the study area first-hand.

The researcher's knowledge of and about the study area could also not be used where misrepresentations were detected. While this was done for ethical considerations, it also meant the researcher had to accept misrepresentations in the interest of not arguing with respondents.

However, being a student and with the study conducted for academic purposes only, as well as being perceived as a local resident, respondents were very comfortable to help and were very frank with the information especially because they did not feel second-guessed. Respondents were able to criticise other stakeholders without feeling they are setting a cat among pigeons.

2.10 Chapter Summary

This chapter presented the methodology that guided this study by giving an in-depth rationale for the selection of the research design and approach. Logic behind the selection of participants and reasons to justify data collection methods were provided.

The chapter also discussed how ethical considerations were maintained and how research findings were validated as well as the limitations of the study. In the next chapter, findings of the data collected through interviews, field observations and document analysis are presented.

CHAPTER 3: BACKGROUND TO LEPHALALE

3.1 Introduction

> *"Human settlements cannot be considered in isolation; while their current state is time and place-specific, it is also linked to what happened in earlier historical periods. Therefore, it is imperative to look at the present state of human settlements with an understanding of the past and its impact on urban development"* (du Plessis & Landman, 2002, p. 2) .

The construction of the first post-apartheid power station in Lephalale has turned the town of Lephalale into a mega construction site and now is being tipped to become the first post-apartheid city. Given th e huge demand in housing, one of the many aspects the town will be impacted on is human settlements because human settlements are an outcome of development (Coaltech Research Organisation, 2010). Accordingly, the development of Lephalale, specifically the human settlements outcome, will be better understood by considering the current economic boom and how the municipality responded to it given the need to redress the apartheid spatial form.

This chapter introduces boomtowns and the dynamics thereof regarding housing issues. Further literature on boomtowns drawn from research mainly in Australia, which shares many parallels with the South African mining industry (Barnett, 2014) is also discussed, highlighting some of the problems associated with boomtowns. Two of South Africa's former boomtowns, i.e. Johannesburg and Emalahleni, are discussed to exemplify how boomtowns can either adapt or stagnate. Lephalale is then presented as a boomtown and how housing has been impacted as a result.

The chapter goes deeper and discusses how Lephalale is unlike any other boomtown facing housing challenges, but rather one that was built on apartheid principles and now has an opportunity to reinvent itself as a model of post-apartheid planning. The development of the apartheid city and the role played by corporations, particularly mining companies is briefly discussed. Finally, the chapter compares Lephalale to the apartheid city.

3.2 Boomtowns

A boomtown is a place experiencing sudden and rapid growth in terms of population and economy, generally caused by the exploitation of natural resources in large-scale corporate

projects (Ennis, Finlayson & Speering, 2013). The population swells due to migration by often highly paid new workers seeking opportunities, consequently increasing demand on local infrastructure. This view is supported by Gramling & Brabant (1986) as well as Wetzstein (2011, p. 1) who emphasized inter alia “the sudden increase in demand for labour and migration, the inability of housing supply and social infrastructure to keep up with sharply rising demand”.

Despite different outcomes in different situations, housing shortage is a common critical problem in boomtowns (Jacquet, 2009). According to Ennis, Tofa & Finlayson (2014, p. 448) “housing issues in boomtowns are situated at the intersection of wealth creation and economic marginalization”. This is because existing housing fills up quickly while new houses take longer to materialize on the one hand and, on the other hand, economic growth generally leads to increased land and property values, which inevitably lead to an increase in housing costs. These factors combine to push house prices up and out of reach of the majority of the population.

Moreover, Ennis, et al. (2013, p. 33) argue that even though rapid economic growth can have both positive and negative social impacts, “the impacts on housing affordability and availability are generally negative particularly for the vulnerable members of the population.” This view is also supported by McKenzie, et al. (2009, pp. 5-6) who argue that the critical issue of affordability gets exacerbated by “increased housing demand as a result of increased mining activity” for most residents, particularly those with low incomes. It is no wonder then that Rolfe, Miles, Stewart & Ivanova (2007) recommend that greater attention should be paid to housing & labour supply and integration & interdependence of planning issues.

3.3 International Research on Boomtowns

There is a growing research about the social impacts of natural resource related economic boom in many locations worldwide, especially from Australia, e.g. Lawrie, Tonts, & Plummer (2011); Reeves (2011); Rolfe et. al (2007) and Ruddell (2011). However, while most of this research considers social impacts on a range of areas including community cohesion, crime, education, health and social connectedness, housing is rarely the focus. Housing is simply articulated as one area of social impact. A repeated theme on resource dependent communities is the pressure on prices and cost of living while the resulting marginalization

and exclusion of those not involved in the resource industry is only viewed from an inequality perspective. Housing, the focus of this research, is however greatly affected during the upswing of the boom period when demand often far exceeds supply, generating profits for some while economically and spatially marginalizing others (Echenberg & Jensen, 2012; Ennis et al., 2013; Ennis et al., 2014).

Traditional research, mostly from the United States and Canada, mainly focused on the boom and bust cycle in terms of social disruption. Gilmore (1976), whose work was among the first of sociological research on impacts of energy development on the community and led to the boomtown model, wrote about a fictional energy town struggling with rapid changes resulting from coal extraction. According to Jacquet and Kay (2014, p. 5) Gilmore's model is that of "a sleepy and isolated small town that is faced with a sudden influx of people and energy-related economic activity". England and Albrecht (1984, p. 231) argue that these towns "enter a period of generalized crises and loss of traditional routines and attitudes."

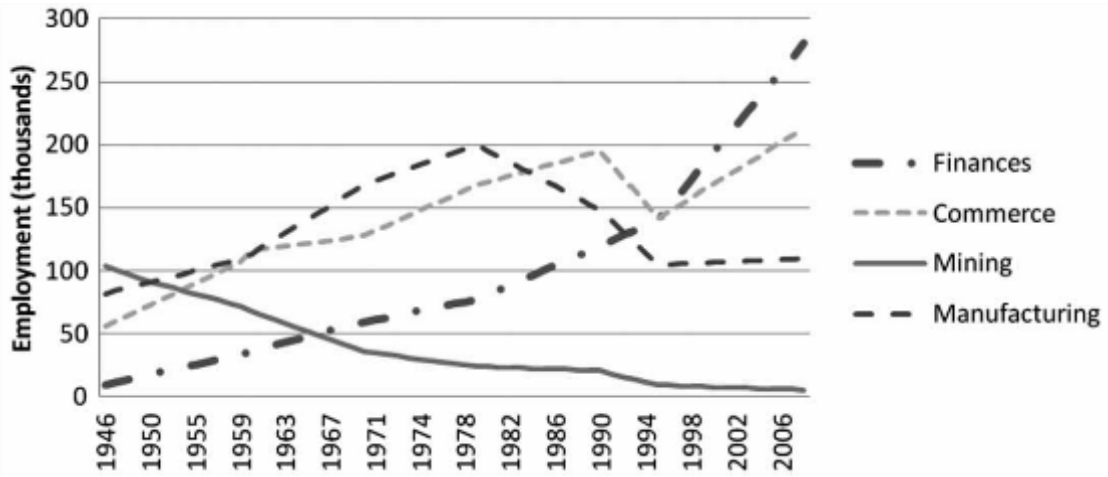
Some researchers (e.g. Krannich & Greider, 1984; Wilkinson, Thompson, Renyolds, & Ostresh, 1982) however criticize the social disruption model as over idealized and static, arguing that it mainly focuses on the negative aspects. These researchers put forward that the stage of the boom cycle, the town and its socio-economic structure and regulatory framework produce diverse and dynamic impacts.

According to Ennis et al., (2013); Asselin & Parkins, (2009) and Michell & McManus, (2013), some research has shown that some of the negative aspects can be prevented with long term planning and community involvement. The Natural Resource Governance Institute (2015) argues that governments can make policies that help avoid the negative consequences. Similarly, Ennis et al., (2014) and Jacquet (2009) argue that economic diversity; government interventions; consultation and/or collaboration are important strategies that ensure long-term viability. Johannesburg is probably the best example of a mining town that diversified its economy and thrived unlike Kimberly, for example, that never outgrew its reliance on diamond mining.

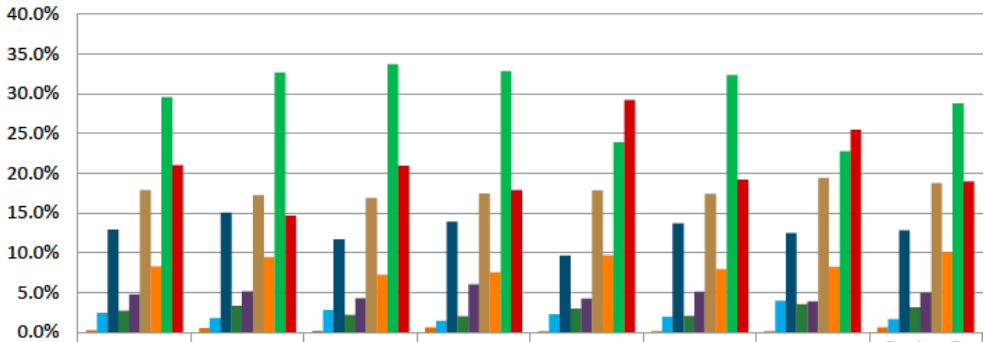
It is well known that Johannesburg was founded in 1886 following the discovery of gold at the Witwatersrand. Despite being laid out in a rudimentary manner as it was not considered

to be a permanent settlement (Beavon, 2014), Thurman (2010) argues that Johannesburg grew exponentially faster than any major world city in the early 1900s, artificially growing from a mining camp to a sky-scraping urban centre in just a few decades. Emuze and Hauptfleisch (2014, p. 884) state “it took a mere 10 years for Johannesburg to turn into the largest urban centre in Africa south of the equator” and that it only existed because of a gold reef. It is therefore apparent that Johannesburg was once a boomtown.

However, despite being founded on mining, over the years Johannesburg’s economy diversified with the financial sector, which has been on a constant growth from 1946, now being the most dominant (Graphs 2.1 and 2.2). Mining on the other hand has dwindled so much that it is one of the least contributing sectors. It is beyond the scope of this research to discuss the economic diversification of Johannesburg but Harrison and Zack (2012) unpack this matter eloquently and even cite Melbourne and San Francisco as other cities that evolved from mineral-based economies into diverse and competitive agglomerations.



Graph 2 Johannesburg's change in employment by sector from 1946 to 2009. Source: Beall, et al. (2002)



	CoJ Metro Municipality (JHB)	Region A: Midrand & Diepsloot	Region B: Randburg & Rosebank	Region C: Roodepoort	Region D: Soweto	Region E: Sandton & Alexandra	Region F: Inner City & Southern Joburg	Region G: Deep South, Ennerdale & Orange Farm
Agriculture	0.3%	0.5%	0.2%	0.6%	0.2%	0.2%	0.2%	0.6%
Mining	2.5%	1.8%	2.8%	1.5%	2.3%	2.0%	4.0%	1.7%
Manufacturing	13.0%	15.1%	11.7%	13.9%	9.6%	13.7%	12.5%	12.8%
Electricity	2.7%	3.4%	2.2%	2.0%	3.0%	2.1%	3.5%	3.2%
Construction	4.8%	5.1%	4.3%	6.1%	4.2%	5.1%	3.9%	5.0%
Trade	17.9%	17.2%	16.9%	17.5%	17.9%	17.4%	19.4%	18.8%
Transport	8.3%	9.5%	7.3%	7.6%	9.7%	8.0%	8.3%	10.1%
Finance	29.6%	32.7%	33.7%	32.9%	23.9%	32.4%	22.8%	28.8%
Community services	21.0%	14.7%	20.9%	17.9%	29.2%	19.2%	25.5%	19.0%

Graph 3: Sectorial contributions by regions. Source: Human Sciencies Research Council (2014)

Because of its economic evolution, Johannesburg offers some insight regarding the importance of diversifying the economy in order to transcend the boom-bust scenario of boomtowns. Lephalale could do well not only to learn from Johannesburg's success, particularly its strategic role as the corporate hub rather than physical centre of mining, but also from Emalahleni's (formerly Witbank) challenges regarding its high concentration of coal mines.

In fact, Lephalale is somewhat a replica of Emalahleni in that both towns were founded on and owe their fortunes to the abundant coal reserves they possess which led to power generation. But despite being the heart of the South African coal industry for over a century, Emalahleni is marred by severe problems summarized in the following excerpt by South African Cities Network (2014, p. 11):

Economic development in the region has had the following consequences. Firstly, there has been rapid population growth with the estimated population exceeding 500 000 people, which exceeds the estimates from the 2011 census. Secondly, as the city was unable to pro-actively provide for the dramatic population increase, it was unable to provide sufficient bulk

water, sewerage or electricity services and the reticulation services are seriously overloaded. As a result, these services are fragile and unreliable. Thirdly, there is insufficient housing. Although the municipality has been providing some subsidised housing (about 5300 units) there is still a demand for over 40 000 units to accommodate households in informal settlements (30 000 households), backyard shacks, hostels and farms. Furthermore, there is an extensive demand for rental units (guest houses and rooms) within the formal part of the city. According to the administrator of the city, up to 99% of these are illegal. He cites one instance of a street with about 16 erven designed for single dwellings where some 200 rooms have been erected. Fourthly, the quality of water has diminished as a result of pollution from mining, industry and power generation. Fifthly, the roads are in poor condition and the volumes of heavy vehicles using them only exacerbate the problem.

Given the contrasting outcomes of Johannesburg and Emalahleni economic booms, the importance of diversifying can therefore not be underestimated. According to the CRO (2010), settlements dependent on a single economy are unsustainable in the long-term and eventually fail because of insufficient thresholds for economic diversification. Johannesburg and particularly Emalahleni therefore offer similar histories from which Lephalale could do well to learn.

3.4 Lephalale as a Boomtown: Current and Planned Projects

The economic growth in Lephalale is rooted in the fact that for the first time since the end of apartheid Eskom is building new power stations. This is due to the fact that for many years in the past Eskom operated in an environment of surplus capacity (Department of Puplic Enterprises, 2007), as apartheid by its design was meant to cater for a white minority. The government of national unity had to cater for all South Africans, leading to the decline of surplus capacity. Consequently, “against the backdrop of a rapidly-declining surplus and a growing economy, Eskom had to develop an integrated approach to the issue of capacity creation” (DPE, 2007, p. 3).

In 2005 Eskom embarked on a capacity expansion programme. As part of this programme, Medupi Power Station (MPS), a R125.5-billion greenfield coal-fired power plant located in Lephalale, which will be the fourth largest coal plant in the southern hemisphere and will be the biggest dry-cooled power station in the world (Communications and Stakeholder

Management Department, Eskom Group Capital Division, 2013), is one of the power stations being built.

Consequential to the construction of MPS, other developments to meet the demands of this mega power plant emerged. Exxaro's Grootegeluk coal mine, which will supply coal to MPS, had to embark on a R10-billion Grootegeluk Medupi Expansion Project (GMEP). According to Exxaro, the expansion represents one of the largest mining growth projects in Southern Africa. Also, because MPS employs a dry-cooling method that doesn't use evaporation to cool the water, Eskom provided numbers that it will require 6-billion litres a year without a Flu Gas Desulphurization (FGD) plant and 14-billion litres a year with such a plant. However, Blignaut (2012), argues that once all six units are operational, Medupi will consume 21-billion litres, excluding washing coal but including the FGD plant. What is undisputed though is the need to supply water to Lephalale for MPS and associated activities. Consequently, an unplanned interim plan, costing R15 billion, has been conjured up to supplement what's immediately available through the construction of the Mokolo Crocodile Water Augmentation Project (MCWAP). Eskom also budgeted a further R1bn for 3 000 homes for staff accommodation (Bay Estates, 2010)

Besides the GMEP, Exxaro also has plans to develop Thabametsi mine in Lephalale (LLM, 2013). Overall Exxaro plans to invest R16-billion in the Waterberg over 5 years. These investment plans include an independant coal-fired power station under the Department of Energy's independent power producer programm and Grootegeluk expansion to grow output and add higher value coal products especially in light of Transnet's commitment to upgrade the Waterberg coal line capacity from 2-million tonnes to 27-million tonnes/annum (Mathews, 2014).

Furthermore, Sasol is reportedly to have selected a coal field in the Western part of Limpopo as part of its pre-feasibility study into the proposed R60-billion Mafutha coal-to-liquids (CTL) project. However, Creamer (2013) reports that although building a CTL plant in the Waterberg as part of project Mafutha no longer features in Sasol's plans, Waterberg is regarded as a promising future opportunity and the company has applied to the Department of Mineral Resources (DMR) for a mining right in the Waterberg. This is substantiated by van der Walt (2013, p. 7), who states that "Sasol Mining (Pty) Ltd plans to develop a large scale open cast coal mine on nine farming properties in the Lephalale which Sasol has prospecting

rights for. Previousls known as the Sasol Mafutha Mining Project, it is now refferred to as the Limpopo West Coal Mine (LWCM) Project". The farms on which the LWCM will be located are depicted on Figure 4.

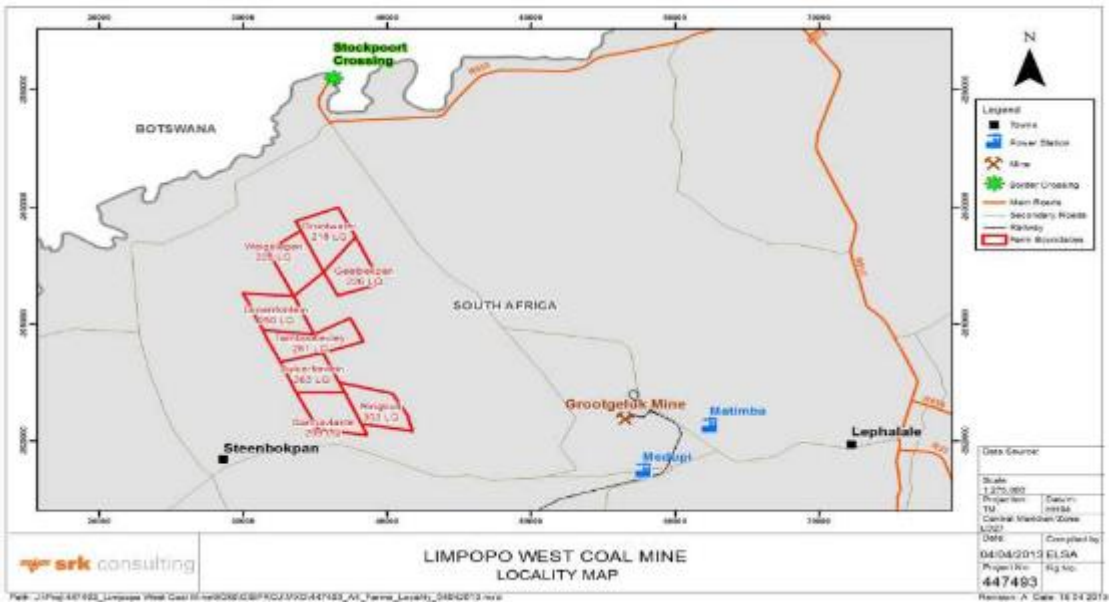


Figure 4: Farms belonging to Sasol on which the Limpopo West Coal Mine will be located in relation to Lephalale and other major developments in the municipality. Source SRK Consulting (2013)

All these and other planned projects and their location with the municipality are depicted in Figure 5 below.

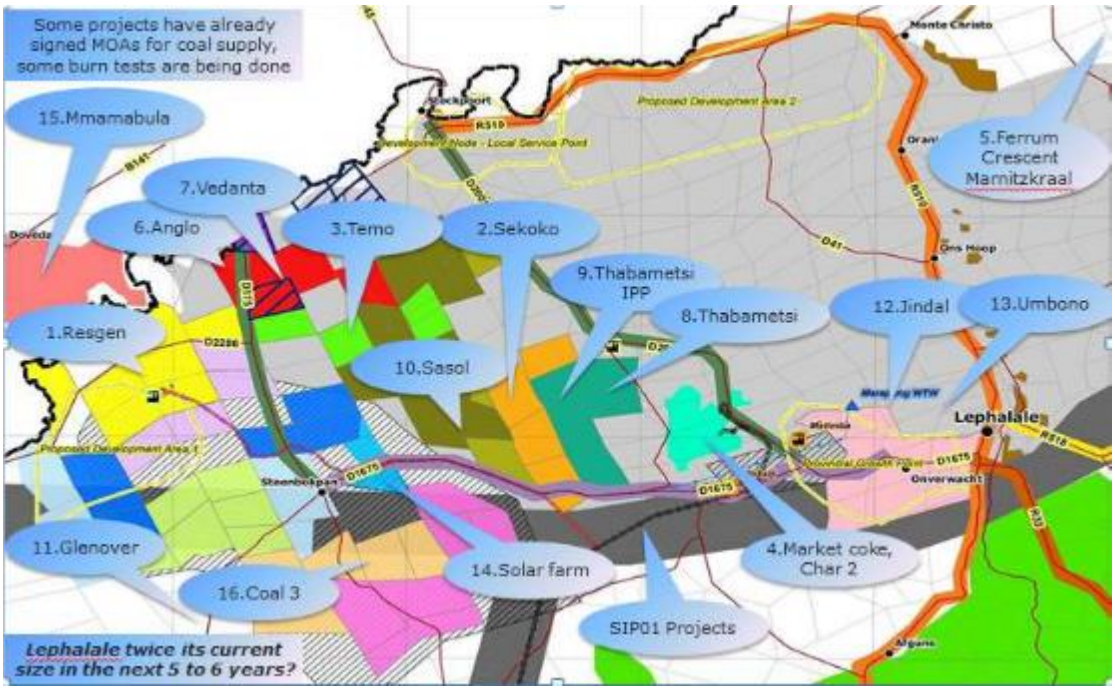


Figure 5: Other projects in a feasibility or bankable feasibility stage. Source LLM (2016)

With all this investment, and more, the town of Lephalale's Gross Domestic Product (GDP) is expected to increase by about 95% per year. Lephalale council's income from revenue including rates and taxes has more than doubled to R212 268 for the 2013/14 financial year from R83 789 in the 2007/8 financial year as a result of Medupi (Faku, 2013). While the revenue seems small, it underscores the small size of the town relative to the gigantic amounts of investments it has to cope with. Nonetheless, this unprecedented growth (95% per year) is exponentially higher than the GDP of South Africa that du Plessis and Smit (2005) say was 3% and 1% in per capita terms for the period 1995 to 2004 inclusive. Even in recent years, economic growth has been very small with the Reserve Bank Governor, Lesetja Kganyago, reported to have said the GDP was expected to grow faster at 2.2% for 2015; 2.3% for 2016 (Fin24, 2015) and 0% in 2016 (Fin24, 2016), figures that are a fraction of what is expected of Lephalale.

While this investment paints a prosperous picture about the future of Lephalale, Taylor and Winter (2013, p. 2) found in their study that "economic development from large projects rarely meets anticipated levels". They argue that because expectations are established from the espousal of the project, they tend to be unrealistically high. Also supporting this view is Van Hinte (2001) who argues that the assumption that the labour utilized in the project would otherwise not be employed is fundamental to the often-overstated economic impacts of large-scale projects. This point about overestimation is best substantiated by Fourie et al. (2014, p. 223) who concluded in their study that "although economically important, the Waterberg Coalfield is still under-studied, and much work needs to be undertaken before we can confidently estimate the amount of coal resources and reserves contained in it."

Furthermore, with coal being the only driving force behind Lephalale's development, Rolfe et al.'s (2007, p. 135) argument that "rapid growth in a single industry can also create offsetting economic and social consequences" perhaps becomes relevant to the municipality. This negative economic impact of a booming economy has become to be known as the Dutch Disease after the rapid expansion of the Netherlands' natural gas sector in the 1960s resulted in a decline of other economic sectors (Corden, 1984).

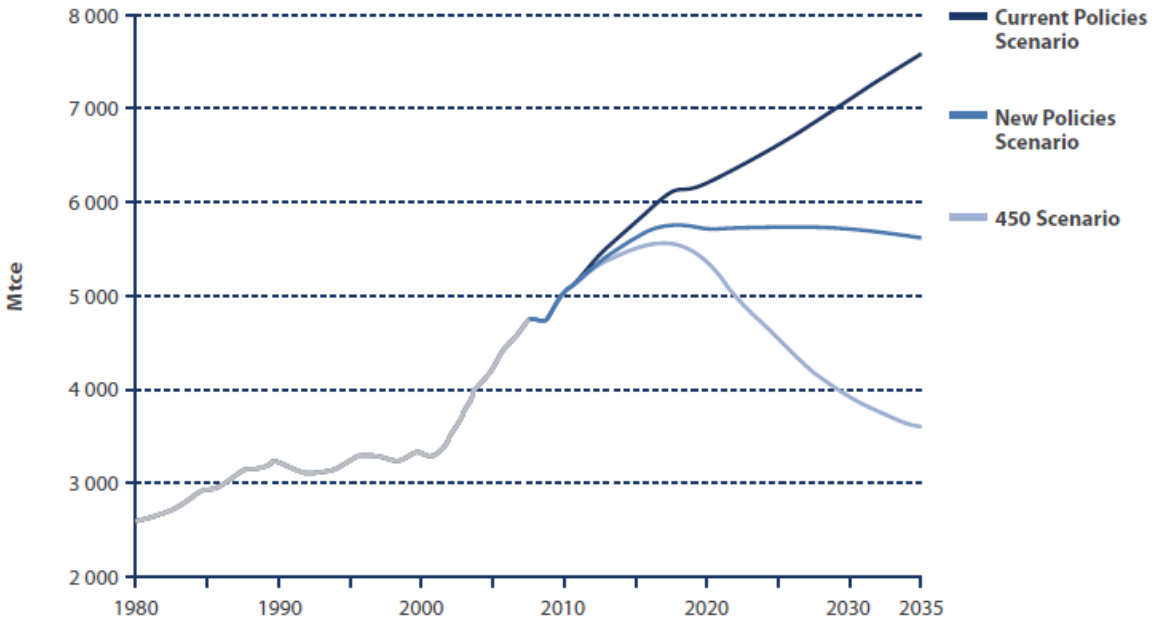
Another possible setback for Lephalale is what other scholars such as Frankel (2010) and Sala-i-Martin and Subramanian (2013) refer to as the resource curse or the paradox of plenty. The Natural Resource Governance Institute (2015, p. 1) describes the resource curse

as “the failure of many resource-rich countries to benefit fully from their natural resource wealth and for governments in these countries to respond effectively to public welfare needs”. The resource curse, as discussed in Karl (1997), explains why resource exporting countries as different as Iran, Indonesia, Venezuela and Nigeria suffered similar outcomes despite the massive oil booms in the 1970s.

But perhaps even more applicable to Lephalale is that despite the country’s economy being heavily dependent on coal, which also happens to be the third largest export earner, the government has no explicit coal policy (Eberhard, 2011). This concern was also raised by the NPC. As per the NPC (2011, p. 18)

“While most of South Africa’s energy comes from coal, it is striking that government has no integrated coal policy. South Africa ranks fifth internationally as a coal producer and exporter, yet the government has no clear policy strategy. There is also no integrated development of mining, rail, and port infrastructure to facilitate either exports or anticipated increases in local production and consumption, within acceptable environmental constraints… An expanded export drive would need to be framed within a national policy on the optimal use of depleting coal reserves, including secure supplies for legacy power stations, and the opening of the Waterberg with the required rail links.”

This means, without proper guiding policy, Lephalale may never realize its optimal growth potential. The importance of how policy can affect coal demand is depicted on Graph 4. The potential future of Lephalale may either be curtailed by international climate change treaty commitments or the scramble for coal reserves can be disadvantageous for Lephalale in the long run. The Bench Marks Foundation (2014) report, for example, exhaustively analyses the problems resulting from an extraordinary host of coal mines in Mpumalanga.



Graph 4: Global coal demand according to IEA 2010 scenarios. Current policies scenario: no change in policies; New policies scenario: planned reforms in fossil-fuel subsidies and climate change measures; 450 scenario: more decisive measures to limit climate change to 2°. Source: South African Coal Roadmap (2011).

Particularly important to this study, the Bench Marks Foundation (2014) advances that mining companies create urban slums through the living out allowance (LOA) which workers use to seek cheap accommodation as a means of supplementing their disposable income. Due to the historical migrant system of the mining sector, the LOA is a monthly subsidy given to employees who wish to stay off the mine property and is intended for boarding and lodging costs to support a stable housing environment equivalent to the standard of accommodation provided by the mine (Chamber of Mines, 2017). It aimed at broadening housing options for the mineworkers by enabling them to stay at housing that best fits their individual lifestyles instead of being confined to barracks-style single-sex hostels.

However, the LOA has not necessarily been used for its intended purpose. Many workers view their homes around the mine as temporary and would rather not invest in it. Instead, workers seek cheap accommodation in informal settlements and use the 'extra' funds to top up their disposable income in order to support their families or other spending and debt. This has contributed to the rise of informal settlements around mining operations, which have an effect of stretching municipal services such as water and sanitation. The Marikana Commission of Inquiry thoroughly covered how the LOA has contributed to the growth of informal settlements around the mines.

Given all these factors, and more, LLM cannot take for granted that the 'coal rush' spells prosperity for the future of the envisaged city. Without proper planning policy, including economic diversification, what is being written about Emalahleni today may very well be applicable to Lephalale in future.

3.5 Impact on Housing

Like other boomtowns across the world, the scale of construction workers' arrivals has overwhelmed Lephalale. Weavind (2015) reports that once a forgettable small town in Limpopo, the population has more than quadrupled from about 7000 in 2007 to about 30000 in 2015. Workers and contractors at Eskom's MPS compete for space with staff from Exxaro's GMEP. Critically, in a town characterized by poverty, unemployment and crumbling infrastructure (Tau, 2014), the workforce and their families will in turn require the establishment and support of business, schools, personal and professional services and service industries. Faku (2013) for example, reports that shopping centres, banks and car dealerships are growing in the area. Competition for accommodation has already impacted negatively on the town's hospital. Ackroyd (2014) reports that the hospital does not have enough accommodation for doctors and sisters and is struggling to retain staff because of the rising housing costs.

Demand for living space far outstrips supply and it is all but impossible to build new homes because there is not enough water, the sewerage system is inadequate and there's a power shortage (Weavind, 2015). In what can be described as an astonishing irony, Faku (2013) reports that the municipality has halted all new connections to the grid because the council cannot meet the demand for power until Lephalale's new substation is completed.

In a classic supply and demand economic model (i.e. as demand increases and supply doesn't, prices rise), "house prices are spiralling by as much as 300% per annum" (CRO, 2010, p. 8). In 2014 Lephalale was the most expensive town in the country in which to rent property despite a slowing performance of the Limpopo province as a whole (PayProp, 2015). The PayProp Rental Index for 2014 indicates that the average monthly house rental was the highest in Lephalale almost throughout the year, as illustrated in Table 2.

Top Towns	2014 Q1	2014 Q2	2014 Q3	2014 Q4
Lephalale	R23 139	R19 951	R22 657	R23 327
Bryanston	R19 402	R20 955	R19 016	R22 450
Sea Point	R16 249	R17 656	R20 173	R20 381
Musina	R16 621	R14 901	R15 574	R17 634
Camps Bay		R16 039	R13 988	R14 084
Umhlanga Rocks	R12 174	R11 556	R13 680	R13 373
Hout Bay	R12 616	R13 444	R11 871	R12 744
Franschhoek	R11 568	R11 804	R11 811	R10 883
Green Point	R10 208	R10 203	R10 267	R10 219
Mthatha	R7 504	R8 068	R8 258	R10 191
Claremont	R9 923	R9 809	R9 623	R10 126
Nahoon	R9 373	R9 463	R9 723	R9 989
Gardens	R8 428	R8 810	R9 804	R9 898
Randpark Ridge	R8 531	R8 646	R8 755	R9 460
Constantia	R8 324	R8 588	R8 951	R9 397
Belfast	R12 372	R10 042	R9 691	R9 324
Hillcrest	R9 722	R9 675	R10 870	R9 249
Burgersfort	R8 603	R9 103	R9 376	R9 175
Sandton	R9 252	R9 015	R9 907	R9 128
Glenvista	R8 641	R8 811	R9 488	R9 116

Table 2: Top Towns Weighted Average Rent. Source: PayProp (2015)

That Lephalale was more expensive than the desirable exclusive upmarket suburbs of Bryanston; Sea Point and Umhlanga Rocks is consistent with McKenzie et al.'s (2009, p. 6) assertion that "many mining communities experience median house prices and rents as high or greater than metropolitan markets." In Canada, Bates (2013) reported that Fort McMurray, an oil sands town, had the highest renting prices in that country for 2013 and McCormick (2014) reported that Williston, a small oil town in North Dakota, was the most expensive to rent a home in the United States. It is not surprisingly then that Faku (2013) reports that rentals were the main source of growth for Lephalale's property market.

Faku (2013) further reports that before construction started in 2008, rentals were half what they were in 2014: a normal-sized three-bed house was renting out for R3500 per month which had gone up to R14 000 per month in 2014 and a two-bedroom unit with one-bathroom cost R10 5000 a month to rent and R910 000 to buy. In 2016, the researcher stayed in a two-bedroom, 1-bathroom ground floor unit that was being rented for R11 000 per month.

Even in Marapong, the township that houses mainly employees from Medupi and Grootegeluk mine and consists mainly of government-built RDP housing, the price for accommodation is steep. A back room costs up to R1 200 a month, while a shack cost R600 to rent (Faku, 2013). Mantshantsha (2013) reported that almost half the households in Marapong had rented out backyard rooms to immigrant workers.

3.6 Government and Private Sector Cooperation in Mining Communities

According to McKenzie, Phillips, Rowley, Brereton, & Birdsall-Jones (2009) and McKenzie & Rowley (2013), housing markets in resource boom towns are influenced on all fronts; on the one hand by the increased demand for housing caused by economic development and, on the other hand, the housing policies and actions of resource companies, governments and the housing industry. Resource companies, especially mining, have had significant involvement in housing, particularly during colonial and apartheid era South Africa when entire towns were built and maintained by these companies. Even in Australia mining companies built and maintained entire towns in the 1970s and 80s (McKenzie & Rowley, 2013). But corporations are no longer willing to construct entire purpose-built towns because they are expensive to build and maintain and often become ghost towns (McKenzie et. al., 2009).

Despite this, there is consensus that resource companies should play an active role in facilitating community development (Limpitlaw, 2015) and driven by the need to secure operating licenses, corporates are again shifting towards direct involvement in the provision of housing. However, uncertainty remains over how much the corporates should invest without taking over the responsibilities of the municipality (Morrison et al., 2012).

In their study McKenzie et al. (2009), however, argue that coordinated action by all spheres of government, the mining and residential property industries is an absolute essential for successful housing strategies in mining communities and this involves resolution of the diverse interests of these stakeholders and agreement about who is responsible for what. In the South African context, housing demand for mineworkers could be viewed in the context of the national housing deficit. With the mines trying to move away from the hostels as their primary form of housing provision, the conversion of hostels from single-sex dormitories into bachelor and family housing units could be aligned to the government's Community Residential Units (CRU) programme.

3.7 Apartheid City

Further to problems associated with boomtowns, Lephalale faces another problem; that of reversing the spatial effects of colonialism and especially apartheid. While it is beyond the scope of this report to unpack the origins of segregation and corresponding laws, it is important to briefly discuss the development of the apartheid city. The role played by both the private sector and the state will provide a better comparison with the study area.

The South African urban is history is a history of segregation that found its roots at the beginning of industrialization and urbanization. With the formalization of the diamond industry in Kimberly in the 1870's, van Schoor (1951, p. 15) argues that the "ideas and practices which were later to become the law and policy of the land" were born. According to Apartheid Museum (2006) racial mixing particularly amongst the poor was more common but mining bosses disapproved this and pushed for races to be kept apart from possible contact in all areas. Accordingly, they created laws and people were forced to separate and this was the beginning of urban segregation. Much of the early segregation was therefore a result of practice rather than policy, as the private sector made ad hoc efforts to keep blacks and whites apart (Lemon, 1991).

The state had no policy of housing the urban black population while workers at the mines, docks, factories and commercial businesses, were housed in compounds (Maylam, 1990). Sophiatown in Johannesburg; District Six in Cape Town and Cato Minor in Durban are perhaps some good examples in demonstrating that outside the private sector-controlled compound system there was no strict pattern of residential segregation in the earlier part of the 20th century.

However, majorly influenced by the mining industry, successive governments began implementing segregation policies (CJPME Foundation, 2014). According to van Schoor (1951, p. 16) there were few laws "which were not common practice in the running of the sugar plantations, diamond mines and gold mines". According to Harrison & Zack (2012), the mining industry was a key driver of urban segregation and provided the template for the socio-spatial engineering of the apartheid government. Pallister; Stewart & Lepper (1987, p. viii) are more direct, arguing that while the Oppenheimers presented face as leading capitalists against apartheid, their mines "provided the economic impetus for some of South Africa's most vicious legislation" namely the Group Areas Act. The apartheid pattern of

segregation is reflected in Figure 6, depicting the earlier segregation settlement pattern of Johannesburg.

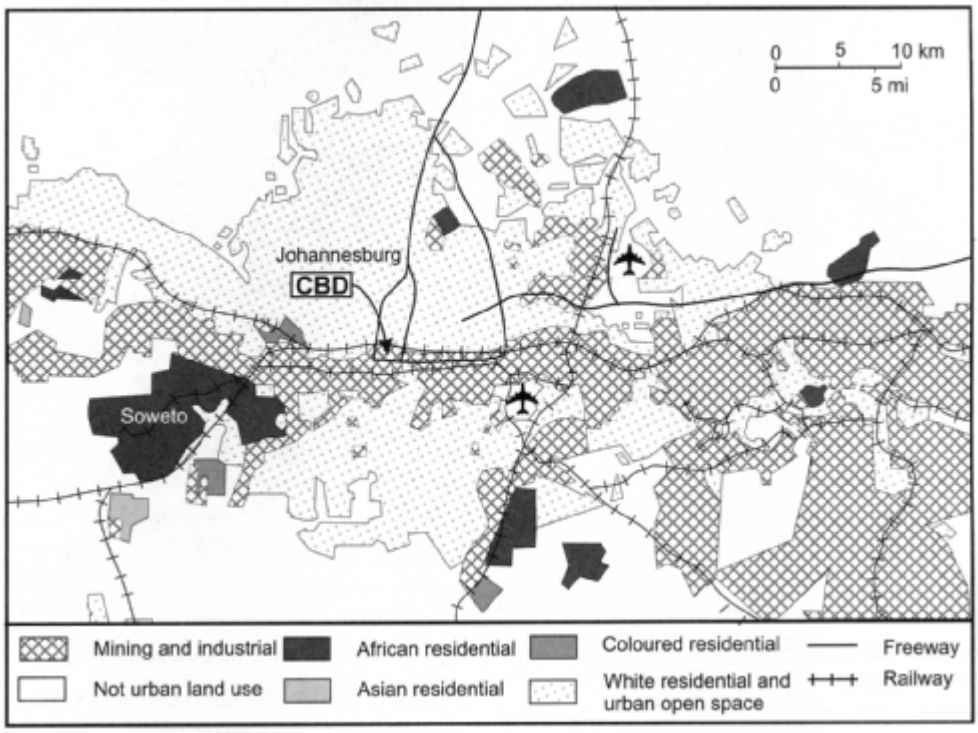


Figure 6: Johannesburg early settlement pattern. Source: Cole & Blij (2007)

The National Party drew on such spatial management to restructure and entrench more deeply a segregated city form (Hindson, 1996). From the 1950s the state "increasingly took upon itself the task of regulating the presence of Africans in urban areas" (Maylam, 1990, p. 68). The apartheid government institutionalized segregation through various legislation and this was the advent of the apartheid city and the fundamental redrawing of urban boundaries (Lemon, 1991). African townships were built reflecting the words of then Minister of Native Affairs, Dr. Hendrick F Verwoerd who, while giving a speech in Parliament on 30 May 1952, declared inter alia:

- "Every town or city, especially industrial cities, must have a single corresponding black township.
- Townships must be large, and must be situated to allow for expansion without spilling over into another racial group area.
- Black townships should be separated from white areas by an area of industrial sites where industries exist or are being planned.

- There should be suitable open buffer spaces around the black township, the breadth of which should depend on whether the border touches on densely or sparsely populated white areas" (Williams, 2000, p. 167).

Maylam (1990, pp. 69-70) writes that "townships were to be sited as far as possible from white residential areas, but reasonably close to industrial areas. Spatial separation was to be reinforced by buffer zones and by natural or other barriers. And townships were to be designed and sited in such a way that they could be cordoned off in the event of riot or rebellion". The "combination of race exclusive areas and forced removals produced an almost completely segregated city" (Schensul & Heller, 2010, p. 6) and what emerged after the application of apartheid legislation was a city more structured and quartered than anything which had preceded it (Turok, 1994). Its distinct archetypal design is depicted in Figure 7.

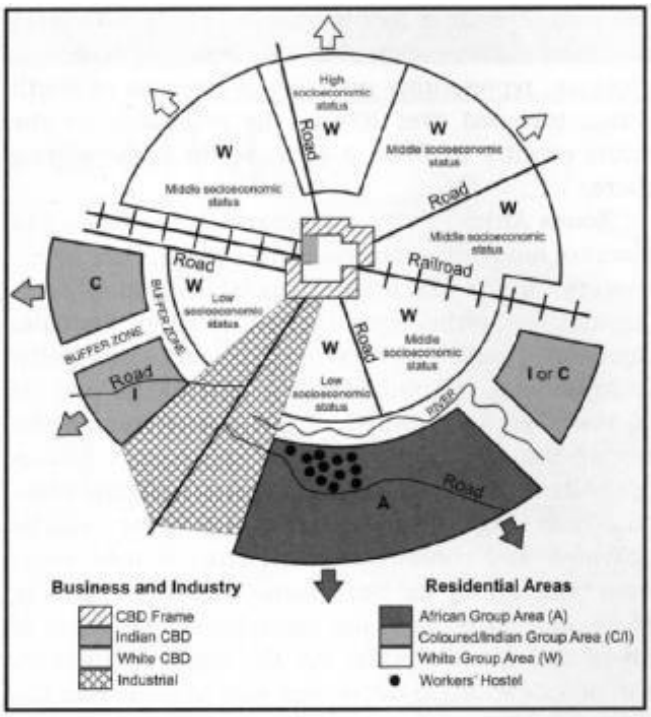


Figure 7: Apartheid City model. Source: Cole & Blij (2007)

The results of this planning include inter alia, a settlement pattern that is distorted, fragmented, unequally developed, segregated and incoherent (Financial and Fiscal Commision, 2011; Department of Land Affairs, 2007; Pieterse, 2004; du Plessis & Landman, 2002 and Donaldson, 2001). According to du Plessis & Landman (2002, p. 4) "it is a settlement pattern that generates enormous movement across vast areas, which is both

time-consuming and costly", especially for the marginalized poor who had to live far from economic and social resources and had to travel long distances to reach their places of work.

This apartheid spatial pattern whereby public transport captive communities live in the periphery of the cities, received attention in the NDP which argued for Transit-Oriented Development (TOD). The NDP explicitly calls on TOD as a core component of spatial transformation stating "new urban development and infrastructure investments should be focused around corridors of mass transit and around existing and emergent economic nodes, applying internationally accepted principles of transit-oriented development" (NPC, 2012, p. 285). Transportation is accordingly acknowledged as critical to the transformation of urban areas.

Furthermore, Behrens & Bickford (2015, p. 375) state "it has been argued in many contemporary plans and strategies that Transport-Oriented Development offers a potentially useful concept to drive the restructuring of South African socio-spatial patterns". They point out Johannesburg's corridors of freedom as the most advanced thinking of TOD in South Africa. According to Rubin & Appelbaum (2016), TOD offers a way of changing a city's geography and SACN (2014) states that the South African metropolitan municipalities are promoting TOD to achieve spatial restructuring. All this points to TOD becoming drawn into South African urban planning as a means to overcome socio-spatial challenges.

Most of the apartheid city principles seem more applicable to big metros like Johannesburg; Cape Town and Durban. However, the next section converges the colonial industrial revolution and the apartheid planning principles discussed above and illustrate how they apply to the Lephalale.

3.8 Comparing Lephalale to Apartheid City

Lephalale has the lineage of the apartheid city with its configuration a microcosm thereof. As discussed in section 3.2, urbanization of Lephalale was influenced by Iscor and Eskom's mining operations. As a result of increased mining operations, there was a severe housing need leading to the development of Ellisras Extension 16 in the early 1980's on the farm Onverwacht 503LQ (LLM, 2009). The development is named Onverwacht after the farm on which it is established. Without a Black township nearby, there was also a severe housing

need for Blacks, who had to travel for up to 75km to get to work from the former Lebowa Bantustan (homeland).

As only Black single employees could be accommodated in the single quarters (Photos 1 & 2) at the Whites suburb of Onverwacht, in 1986 “both Iscor and Eskom expressed their concern to establish families closer to the [mining] activities and the application for [another] formal residential township establishment [Marapong] was submitted in 1988 to the former Transvaal Provincial Administration” (LLM, 2009, p. 5). It was worth noticing during the field trips that the single quarters, though part of Onverwacht, are all located on the East of Onverwacht separated by Palala Street. Over the years, houses were built on this area and currently it no longer consists of single quarters only. However, the locals still refer to it as ‘quarters’.



Photo 1: Front view of the single quarters



Photo 2: Side view. Source: Author (2017)

As a result of the 1988 township establishment application, Marapong, a Black township; was established on the farms Nelsonskop 464LQ and Grootestryd 465LQ with Marapong Extension 1 proclaimed thereafter on the farm Peerboom 466LQ. Marapong mainly accommodates contractors from the Grootegeluk mine and Matimba power station (WDM, 2013) and is located right next to ‘the activities’ as per Iscor and Eskom’s concerns, at the periphery of the urban area separated by four farms (huge open spaces), see Figure 8.

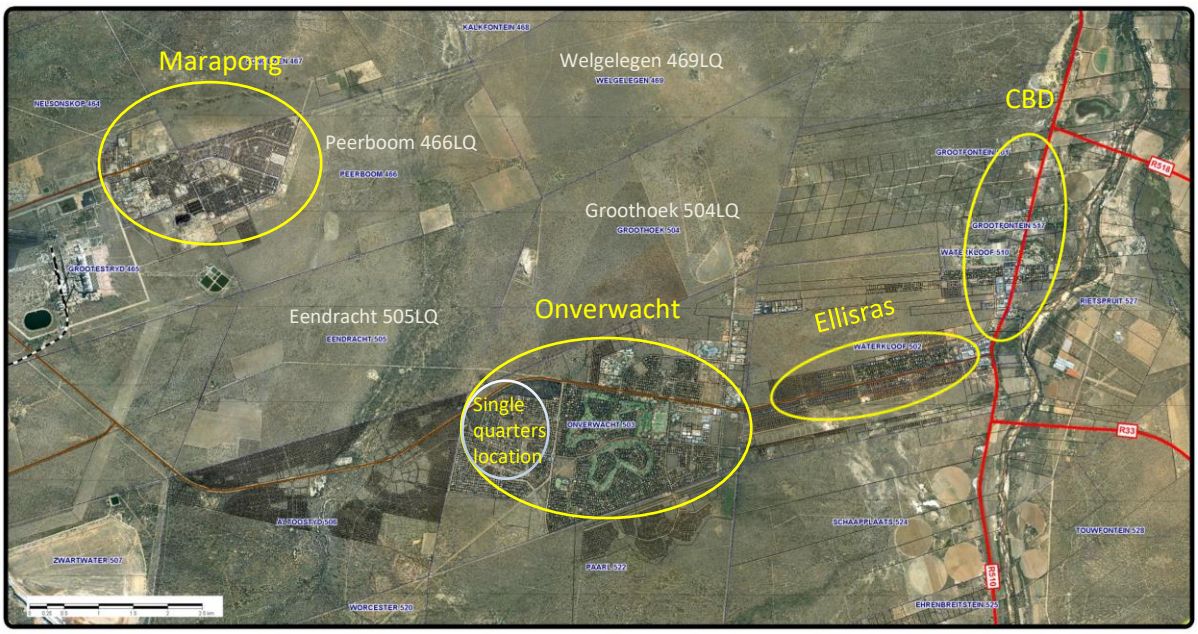


Figure 8: Study Area (Lephalale) showing the three residential nodes and the CBD. Marapong is strategically located away from former White areas separated by farms. Adapted from WDM (2013)

Limited by a wetland on the East of the CBD, Lephalale thus developed Westwards from Ellisras, the first township proclaimed in December 1960 to Onverwacht and later to Marapong. The town was renamed Lephalale in 2002.

The town has an almost linear structure with the CBD/Ellisras located on the East along regional access route R510. Onverwacht is located approximately 3km to the west of the CBD along route D1675/ Nelson Mandela Drive and the access road to Marapong is found approximately 13km further westward, see Figure 9. This spatial pattern results in Marapong being more than 21km away from the CBD by road (WDM, 2013).

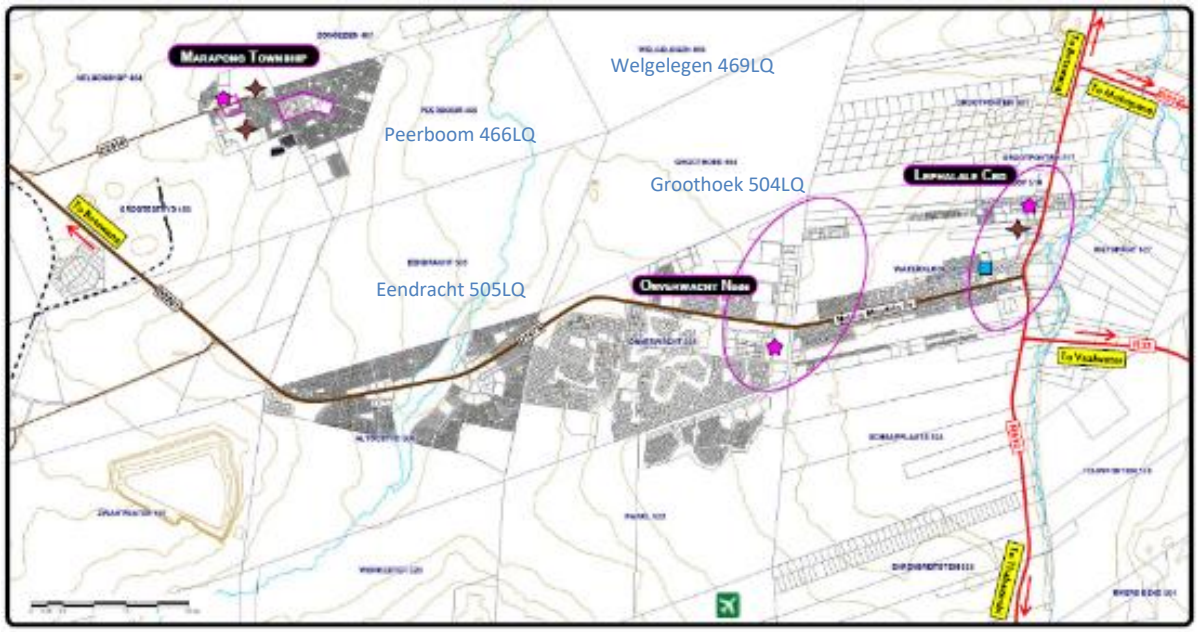


Figure 9: Movement Network: Source: WDM (2013)

Because Marapong was established to accommodate Eskom and Iscor employees, it is located adjacent to Matimba power station and Grootegeluk mine, as can be seen on Figure 10. The new Medupi power plant is also located in close proximity to this industrial vicinity.

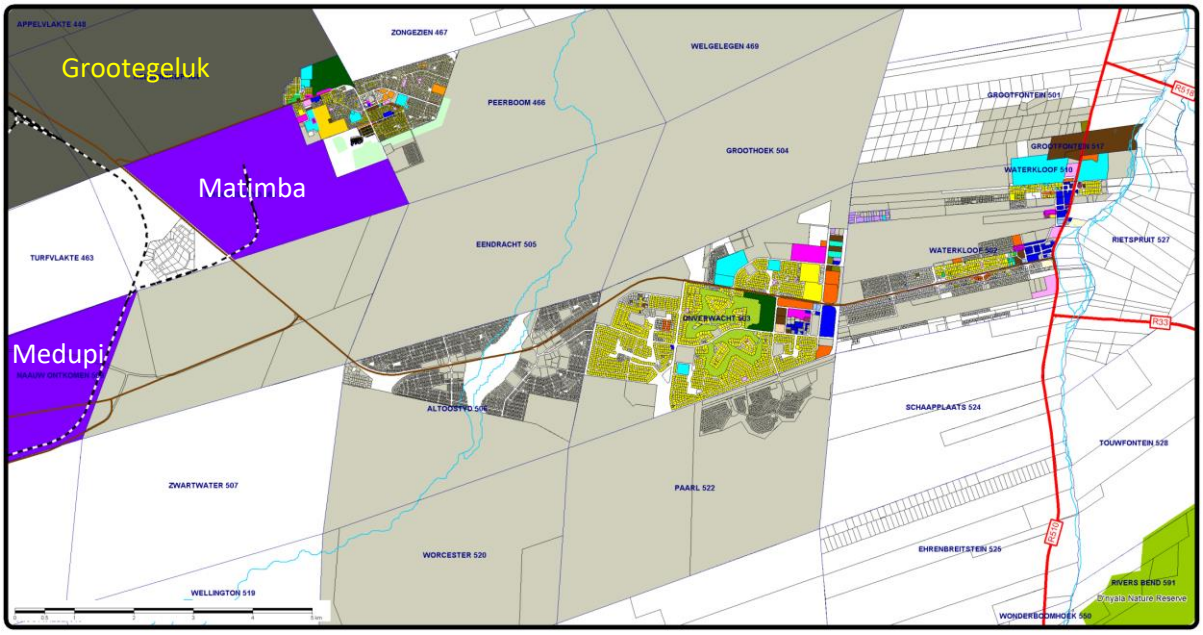


Figure 10: Industrial Zones. Source: WDM (2013)

The urbanization of Lephalale and how the private sector played a role in it, combined with residential locations (Figure 8), movement network (Figure 9) and location of industrial

zones (Figure 10) all bear a striking resemblance to the development of the apartheid city. The spatial pattern of the town clearly conforms to the apartheid city concept in the following ways:

- The town is fragmented and sprawled;
- The linear structure puts the black township at the opposite end of the CBD thus promoting segregation;
- locating blacks closer to industrial areas serves the purpose for corporates while discouraging CDB access through longer commuting distance for Marapong residents;
- The huge open space between Marapong (black township) and Onverwacht (white suburb) and Matimba power station to some extent act as a buffer zone;
- Marapong is far from the white areas but close to industrial areas; and
- With one access route, the Marapong node can easily be cordoned off.

In its report, the CRO (2010) also notes that settlement patterns, housing, social conditions in Lephalale are based on a legacy of apartheid.

3.9 Chapter Summary

This chapter gave some background to boomtowns and presented Lephalale as such. Like other boomtowns across the globe; Lephalale is facing some serious housing challenges. Unfortunately for Lephalale the problem isn't just about providing housing it is also about reversing the spatial effects of apartheid; a key objective in South Africa's spatial policy. To this end, the municipality would need to play a more active role in the provision of housing, using it as a tool to realign the landscape. Given that corporations are now reluctant to develop entire-purpose built towns, the municipality has a key role to play in shaping how housing delivery projects can be used to foster an integrated town bearing in mind that early development will dictate the direction to be followed and would be hard to reverse whether or not it tackles the current spatial pattern.

The next chapter will look at the regulatory framework the municipality can use to facilitate housing delivery projects in order to advance spatial integration. Challenges with implementation of the identified legislation and policies will also be discussed.

CHAPTER 4: REGULATORY FRAMEWORK

"We must undo or address the spatial legacy of apartheid. The spatial restructuring of cities is imperative. It is necessary to transform our urban built environment. These, among others, are the various expressions of a pronounced call that reflects a recognized need for South Africa's urban spatiality to somehow change or function differently. However, the purpose, manifestation and implications of what exactly is meant by these remain unclear to many" (Department of Economic Development; South African Cities Network, 2013, p. 1)

4.1 Introduction

According to Todes (2006), du Plessis (2014) and Orange (2014), urban spatial restructuring and integration of the cities have been an important part of post-apartheid urban policy. While the spatial transformation ground was made fertile through the abolishment of segregation-oriented apartheid laws, the Reconstruction and Development Programme (RDP) became the foundation on which transformative policies and programmes were laid. In the context of spatial reconstruction of the urban landscape, the RDP strategy commits government to acquiring land for housing that is suitably located geographically with respect to economic opportunities and social amenities (Mini, 2016). This is in line with "the establishment of viable, socially and economically integrated communities situated in areas allowing convenient access to economic opportunities as well as health, educational and social amenities" (Department of Housing, 1994) that the government committed itself to in the 1994 Housing White Paper.

In this context, policies and programmes have over the years been established to achieve spatial transformation through building integrated cities that provide for greater access to well-located residential land thus giving South African cities a new image. Spatial transformation is also endorsed in numerous statements across various key strategic documents including the National Development Plan (NDP); SACN's 2011 and 2016 State of the Cities Reports; Urban Land Paper Series; and so forth. Despite all this, some authors e.g. Harrison; Huchzermeyer & Mayekiso (2003) and Landman & Ntombela (2006) have argued that government's policies may be contributing to the increasing fragmentation and segregation within South African towns and cities. However, Pieterse (2004, p. 83) writes

“there are many reasons for the persistence of urban apartheid despite the extensive policies and legislation that the government has introduced since 1994”.

Notwithstanding, the national government’s role is “to promote a collective vision of what our cities and towns should strive to become, to set goals and a framework for urban development and actively support these by programmes aimed at achieving the vision” (Department of Housing, 1997, p. 1). This chapter therefore explores regulatory framework that aligns to spatial transformation and highlights of some of the challenges that have hampered spatial transformation despite the policy framework in place. It concludes by linking the policy framework and highlighted challenges to Lephalale.

4.2 Regulatory Framework

As a commitment to the transformation of the segregated apartheid city, post 1994 governments have promulgated various transformative housing and planning legislations designed for spatial transformation of South African cities and towns. This section zooms into such legislation. Firstly, laws (Acts) passed by parliament that seek to address the apartheid spatial structure are examined then followed by policies and programmes undertaken by various government departments to achieve similar results.

4.2.1. The Constitution

The mandate for housing provision is derived from the Constitution of the Republic of South Africa (Act 108 of 1996). The Constitution enshrines everyone’s right to have access to adequate housing. Section 26 of the Constitution outlines:

1) *Everyone has the right to have access to adequate housing.*
2) *The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realization of this right.*
3) *No one may be evicted from their home, or have their home demolished, without an order of court made after considering all the relevant circumstances. No legislation may permit arbitrary evictions.*

The Constitution also assigns powers and functions to the different spheres of government. Part A of Schedule 4 in Chapter 14 of the Constitution lists housing, urban development and regional planning and development, as functional areas of concurrent national and provincial legislative competence. Section 156(4) states that national government and

provincial governments must assign to a municipality the administration of a matter listed in Part A of Schedule 4 if that matter would most effectively be administered locally and the municipality has the capacity to administer it.

However, while the constitution is clear on the provision of housing, it doesn't address the apartheid geography of the cities. It does, however, have spatial implications since "the spatial form of cities has an impact on the individual's ability to participate in the economy and to have access to housing" (SACN, 2015, p. 20).

4.2.2 Development Facilitation Act (DFA), 1995

One of the first post-apartheid government's attempts to influence spatial planning was the introduction of the Development Facilitation Act (Geyer; du Plessis; van Eeden & Gayer Jr, 2016). It laid down a set of general principles governing land development aimed at addressing some of the challenges of urban form of South African cities and towns. These principles include inter alia

- "restructuring of the spatial environment aimed at correcting the racial settlement pattern; and
- general city-building principles that encourage compact cities and prevent urban sprawl, along with mixed land use and integrated development" (Parnell, et al., 2007, p. 11).

Accordingly, the intentions of the DFA are in line with those of the RDP. However, (Parnell, et al., 2007) point out that there were unintended consequences with the application of the DFA in that suited large-scale developers. The DFA has since been replaced by SPLUMA, discussed below, in an effort to address this and other shortcomings, which include a lack of consideration for environmental and social issues through the bypassing of "both the town and regional planning and [Environmental Impact Assessment] EIA processes" (Henderson, 2011, p. 26).

4.2.3 The Housing Act (1997)

The Housing Act is the principal housing legislation in South Africa, legally entrenching policy principles outlined in the 1994 Housing White Paper (Tissington, 2011). It provides for a sustainable housing development process, laying down general principles for housing development in all spheres of government. The Act not only defines housing development

but, very importantly for this study, it further states that housing development should be "economically, fiscally, financially and socially sustainable; ensure economical utilization of land and services and to discourage urban sprawl, in particular through the promotion of higher densities; be based upon integrated development planning, promoting integration with respect to social, economic, physical and institutional aspects of development; and contribute to redressing the historically distorted racial and spatial patterns of towns, cities and rural areas" (Khan & Thurman, 2001, p. 3). The Preamble to the National Housing Act further recognizes that housing is a vital form of integrated development planning.

Just like the constitution, the Housing Act and later the National Housing Code (promulgated in 2000, pursuant to section 4 of the Housing Act), sets out the roles and responsibilities of the three spheres of government in respect to housing. For municipalities in particular, the Act requires that they must take all reasonable and necessary steps within the framework of national and provincial housing legislation and policy to ensure that the constitutional right to housing is realized. They should do this by actively pursuing housing development by addressing issues of land, services and infrastructure provision, and by creating an enabling environment for housing development in areas of their jurisdiction.

Furthermore, Section 9 of the Act requires housing planning to form an integral part of the municipalities' integrated development plans (IDPs). Accordingly, the Housing Code (2009) requires the Housing Chapters of the IDPs to address inter alia:

- Identification of well-located land for housing;
- Identification of areas for densification and areas with shortages of land;
- Linkages between housing and urban renewal; and
- Integration of housing, planning and transportation frameworks.

It is evident that the Housing Act is not only about the provision of housing, it's implementation demands coordinated planning for housing development which can only be done in conjunction with enabling planning laws. The Act, for example, cannot be effective when implemented in an environment where segregation laws like the Group Areas Act are applicable. Therefore, complimentary planning laws need to be in place for effective implementation of the Housing Act.

4.2.4 Local Government: Municipal Structures Act, 1998

Municipalities play a crucial role in propelling the development agenda of the national government. While the constitution (Chapter 7) provides the role and functions of municipalities, their obligations relating to the provision of basic services are enunciated in the Local Government: Municipal Structures Act. Even though this act doesn't directly address spatial transformation, it does have an impact on it in that spatial parity of human settlements can facilitate more sustainability in service delivery. Furthermore, the amendment to the act (Municipal Systems Act, 2000) provides for the core principles, mechanisms and processes that are necessary for municipalities to move progressively towards the social and economic upliftment of local communities.

In terms of section 83, a municipality must seek to achieve integrated, sustainable and equitable socio-economic development of its area. Through the provision of good quality and cost-effective services, a municipality can make its area a pleasant place to live and work. Municipalities must therefore become visionary and strategic. As policymakers; planners and providers of basic household infrastructure, they have a crucial role to play for favourable development conditions.

Furthermore, the act institutionalizes citizen participation in local government to give effect to the constitutional provisions of Section 152 (i) (e). Active participation of local communities in matters of local government is crucial in the attainment of inclusive cities (discussed in Chapter 5). Through building the kind of political leadership that is able to bring together coalitions and networks of local interests that co-operate to realise a shared vision, municipalities can ensure inclusive development. Councils, for instance, "allow for more integrated planning between previously segregated areas of the same town or city" du Plessis & Landman (2002, p. 119).

4.2.5 Housing Development Agency Act, 2008

The Housing Development Agency Act was promulgated to inter alia establish the Housing Development Agency (HDA), whose primary objectives include identifying, acquiring, holding, developing and releasing well-located land and buildings for human settlement (Republic of South Africa, 2008). In performing its functions, spelt out in Section 7 (1) of the Act, the HDA is required to inter alia ensure that residential and community developments are sustainable, viable and appropriately located. Section 6 (2) of the Act read in conjunction

with Section 6 (3) empower a Minister responsible for housing to expropriate land for the purposes of creating sustainable human settlements, subject to section 25 of the Constitution.

Because the HDA is required to develop a development plan to be approved by the minister responsible for housing in terms of Section 7 (1) (a), there is a risk of bypassing relevant authorities in municipalities where there is a conflict of interests. The minister, for example, can influence the HAD to acquire land that boosts quantity of houses for political reasons but does little to assist the municipality transform its urban space.

4.2.6 Spatial Planning and Land Use Management Act (SPLUMA), 2013

The Spatial Planning and Land Use Management Act was developed to legislate for a single, integrated planning system for the entire country (SACN, 2015). It was a response to conflicting priorities and inconsistent approaches of various policy implementation. SPLUMA establishes a framework for spatial planning and land use management to redress the spatial imbalances of the past to ensure that there is equity in the application of spatial development planning and land use management systems.

In relation to spatial planning, SPLUMA reinforces the importance of Spatial Development Framework (SDF) plans as part of the Integrated Development Planning process. Chapter 4 of SPLUMA requires each sphere of government to compile SDFs, which can be considered as the most important mechanism to achieve spatial transformation. This transformation role of SDFs is categorically referred to in various clauses of Section 12 of SPLUMA aimed directly at spatial transformation:

12. (1) The national and provincial spheres of government and each municipality must prepare spatial development frameworks that—
    h) include previously disadvantaged areas, areas under traditional leadership, rural areas, informal settlements, slums and land holdings of state-owned enterprises and government agencies and address their inclusion and integration into the spatial, economic, social and environmental objectives of the relevant sphere;
    i) address historical spatial imbalances in development;

j) identify the long-term risks of particular spatial patterns of growth and development and the policies and strategies necessary to mitigate those risks.

Even though SPLUMA requires all spheres of government to compile SDFs, all land use decisions must be in line with the municipal SDF, i.e. municipalities must approve any development by other spheres. In addition, with regard to housing requirements, Section 21 of SPLUMA requires Municipal SDFs to:

f) include estimates of the demand for housing units across different socioeconomic categories and the planned location and density of future housing developments;
i) identify the designated areas where a national or provincial inclusionary housing policy may be applicable.

It is evident then that SPLUMA, through the municipal SDFs requirements, focuses on facilitating and steering the development of a broader built environment of which housing is a component. Accordingly, SPLUMA is critical to achieving the outcomes of Breaking New Ground. However, it is odd that SPLUMA (21)(i) requires municipalities to identify areas where inclusionary housing policy may be applicable even though inclusionary housing policy was never formally adopted.

There seems to be a reasonable consistency in the laws in pursuit of restructuring the apartheid geography, i.e. they assist and inform one another to address integrated development planning. They have evolved over the years to close the inconsistencies and have become aligned. The Housing Act and SPLUMA are both very clear on the role of municipalities in restructuring the apartheid city. The Municipal Structure Act gives municipalities executive and legislative authority over their areas of jurisdiction thereby giving them powers to pursue local development goals that best suit their local conditions.

Above all, the constitution shields municipalities from undue influence by insisting that national and provincial governments relinquish to capable local governments matters that are best suited to be administered there. This was reinforced in the *Johannesburg Metropolitan Municipality v Gauteng Development Tribunal,* 2010 case where the Constitutional Court unanimously ruled that municipalities have exclusive powers on all land use decisions. Accordingly, all land use decisions must be in line with municipal SDF. This means that despite national government and province largely controlling hosing investment,

the municipality can guide this development by allowing or rejecting land use rights even to other spheres of government. This of course is difficult when most of the money that the municipalities can spend is received from the other two spheres of government.

The researcher, furthermore, argues that the HDA, whose responsibilities closely resembles if not duplicate those expected of municipalities in terms of the Housing Act and SPLUMA, should be a component of municipalities instead of being a separate independent entity. This not only would prevent political interference by the minister responsible for housing, but would also ensure that the municipality, which has authority over land use decisions, is practically responsible and accountable for land acquisition by the HDA. The current situation means that the HAD, in efforts to boost its numbers, could chase quantity over quality and may receive political support from national government seeking to please the electorate thus putting the municipality under pressure to accept land that it would otherwise not. In such cases, though the total hectares acquired may be more, various smaller pieces of land that are located strategically to the municipal SDF could be more impactful for spatial transformation.

4.3 Policy and Programmes

The National Housing Code of 2009 encompasses a plethora of policies and regulations which govern the housing sector and general service delivery in South Africa. A brief discussion of these and other policies is provided below.

4.3.1 Breaking New Ground (2004)

A comprehensive review of the outcomes of the housing programme and the changes in the socio-economic context in the country was undertaken with the aim of providing new policy direction. The result of this review gave birth to the Comprehensive Plan for Sustainable Human Settlement commonly referred to as Breaking New Ground (BNG) (Department of Human Settlements, 2010). BNG retains the basic principles of the Housing White Paper but, very importantly, shifts the focus to improving the quality of housing environments by integrating communities and settlements.

Although BNG is widely criticized for not fully addressing key weaknesses of the previous policy with some authors e.g. Charlton & Kihato (2006) asserting that it did not really introduce any new policy direction into the future, BNG does recognize that the lack of

affordable and “well-located land for low-cost housing led to development on the periphery of existing urban areas” thus achieving limited integration (Tissington, 2011, p. 66).

Accordingly, BNG increases the emphasis on the role of the state, in the form of accredited municipalities in determining the location and nature of housing. Municipalities are required to develop enhanced housing chapters for their IDPs, which should include inter alia “the identification of well-located land for housing; the identification of areas for densification; the linkages between housing and urban renewal; and the integration of housing, planning and transportation frameworks” (Tissington, 2011, p. 68).
BNG also encourages municipalities to promote affordable inner-city housing to ensure the inclusion of poor inhabitants in urban renewal initiatives. The document states:

> *“Inner city areas are traditionally integrated into the benefits of the urban economy, which are close to transport hubs and commercial enterprise and work localities. They also have higher order social amenities including hospitals, libraries and galleries. They accordingly provide a key focus for urban restructuring”* (Department of Housing, 2004, p. 15)

However, despite BNG being a response to a housing policy that was not yielding desired results, scholars like Tissington (2011) and Charlton & Kihato (2006) slam the final document for surprisingly reflecting little of the review process. Because BNG was a brainchild of Minister Mabandla even though her successor Minister Sisulu is widely acknowledged as its champion, Huchzermeyer (2014) argues that there is little evidence that the minister ever aligned herself to its innovations. It is no wonder then that despite there being a number of projects that broadly reflect BNG principles like Cosmo City and Pennyville in Johannesburg, Moraba (2013) found that there was insufficient political will to influence strategic actions meant for implementation of BNG. Evidence of this is arguably demonstrated by Minister Sisulu’s lack of interest in trying to revive the policy on her second stint as Human Settlements minister, opting instead to push for the much-criticized mega cities policy.

4.3.2 Inclusionary Housing Policy (IHP), 2007

The 2007 Framework for an Inclusionary Housing Policy (IHP) in South Africa emanates from the September 2005 Housing Indaba where the government and the private sector agreed to accelerate housing delivery in order to address the housing backlog (Tissington, 2011).
The framework defines inclusionary housing as:

"the harnessing of private initiative in its pursuit of housing delivery to middle/higher income households to also provide (include) affordable housing opportunities in order to achieve a better socio-economic balance in residential developments and also contribute to the supply of affordable housing" (Department of Puplic Enterprises, 2007, p. 9).

The idea of IHP is to achieve racially integrated and income inclusive residential environments by incentivizing or compelling the private sector to provide accommodation opportunities for low-income and lower-middle income households in markets from which they might otherwise be excluded (Anon., 2007).

According to Provincial Government of Western Cape (2009, p. 29), "whilst an inclusionary housing programme will not deliver affordable housing at the scale which is required in South Africa to eradicate the country's huge housing backlog, it has the potential to play a role in addressing the after effects of Apartheid spatial planning." The success of IHP therefore lies more in bridging the socio-economic divide than in delivering affordable housing.

Although draft policies have been set up, no legislation is currently in place for IHP. Despite this, "there is nothing stopping local authorities taking the initiative to introduce their own inclusionary housing policies" (Provincial Government of the Western Cape, 2009). Municipalities can still oblige developers to provide a portion of affordable housing on new developments (Verster, 2009). However, according to Smit & Purchase (2006) not only there are very few municipalities that have the capacity required to administer the programme, but also not too much should be expected regarding the scale of impact.

Huchzermeyer (2010) also argues that the impact of inclusionary housing projects such as Brickfields in Newtown, Johannesburg and the N2 Gateway project in Cape Town on urban integration and inclusion has remained negligible. This view is supported by Klug, Rubin and Todes (2013) who argue that the potential of inclusionary housing policy for reshaping South African cities seems limited. According to PGWC (2009, p. 1) this is because "inclusionary housing has limited scope to provide affordable housing to low-income households at the kind of scale which is required."

4.3.3 The National Housing Code (2009)

The National Housing Code sets the underlying policy principles, guidelines and norms and standards which apply to the Government's various housing assistance programmes. Its objective is to simplify the implementation of housing projects by being less prescriptive while providing clear guidelines. The Code's programmes relevant to this study are the Integrated Residential Development Programme, Accreditation of Municipalities and the Social Housing Programme.

4.3.3.1 Accreditation of Municipalities

The accreditation of municipalities to administer National Housing Programmes is consistent with section 156(4) of the Constitution and was introduced to ensure progressive capacitation of municipalities. The objective of accreditation is to enable municipalities to effectively and efficiently plan, manage and deliver affordable and sustainable housing which meets the needs of the communities they serve (National Department of Housing, 2006). It has been prioritized in order to "locate the decision-making authority and funding capacity for local development at the most local sphere of government" (Department of Human Settlements, 2009, p. 9) Sufficient capacity to plan, implement and maintain projects and programmes that are integrated within municipal IDPs is a core competence required in order for a municipality to be accredited.

There are three levels of accreditation that municipalities can choose from depending on their own development priorities, housing needs and capacity. These are:

a) Level One: municipalities identify and plan for local housing programmes and projects and allocate housing subsidy funds from their annual housing subsidy funding allocation.
b) Level Two: Over and above level one functions, these municipalities have an added authority of evaluating and approving specific housing projects against pre-determined project criteria and undertaking the housing subsidy registration function for all national and provincial housing programmes.
c) Level Three: These municipalities have all Level One and Level Two functions plus the authority and responsibility for the financial administration of housing development in their jurisdiction.

4.3.3.2 Integrated Residential Development Programme (IRDP)

The IRDP was introduced in order to advance housing development in well-located areas that provide convenient access to urban amenities, including places of employment (Tissington, 2011). The IRDP states:

> *"existing housing policy programmes focus primarily on the development of subsidized housing and do not provide much scope for area wide settlement planning and the integration of a range of housing types and price categories, together with commercial and social amenities in a project. The IRDP provides a tool to plan and develop integrated settlements that include all the necessary land uses and housing types and price categories to become a truly integrated community"* (Department of Housing, 2010, p. 9).

To achieve integrated communities, the IRDP provides for social and rental housing, commercial, institutional and other land uses to be developed and is applicable to projects developed either on vacant land or in existing township where an undeveloped parcel of land is utilized for development purposes. Under the IRDP the municipalities assume the role of the developer, undertaking all planning and project activities in line with the approved housing chapter of their IDPs.

4.3.3.3 Social Housing Programme

The Social Housing Programme (SHP) is the government's initiative to "redress the old apartheid spatial inequities by providing low-and moderate-income households with good quality and affordable rental housing opportunities in well-located parts of South African cities" (HDA, 2013, p. 7). It is intended to give these households easier and cheaper access to the developmental opportunities linked to developed socio-economic infrastructure in these urban areas. At the same time, it is directed at spatial shifts in the urban environment providing households with access to parts of South African cities from which they were previously excluded.

The programme applies only to Restructuring Zones, which are identified by municipalities with the concurrence of provincial government as "areas of economic opportunity and where urban renewal restructuring impacts can best be achieved" (DHS, 2010, p. 10). Restructuring, in this regard, is concerned with shifting away from housing interventions that entrench/enforce or in any way maintain the apartheid city.

Social housing has some advantages in that, unlike conventional RDP housing, it does not have to be one-house-on-a-plot but can take the form of blocks of flats and cluster housing. Also, the social housing institution can control the long-term allocation of units to the targeted income group. There is a disadvantage though to social housing as it requires a registered social housing institution willing and able take over ownership and management of the units for it to happen. Another disadvantage is that to date the rental amounts achieved have not been accessible to very poor people.

4.3.4 Urban Development Framework (1997)

The Urban Development Framework (UDF) was the result of a redrafting of the 1995 Urban Development Strategy, which "was the most comprehensive statement of how post-apartheid cities and towns would develop" (Bond, 2003, p. 6). It incorporates the government's vision for more sustainable urban settlements and outlines guidelines and programmes for the achievement of this vision (Landman, 2004). The Urban Vision entails that by 2020 all cities and towns in South Africa should be inter alia:

- spatially and socio-economically integrated, free of racial and gender discrimination and segregation, enabling people to make residential and employment choices to pursue their ideals;
- planned in a highly participatory fashion that promotes the integration and sustainability of urban environments; and
- inclusive of integrated industrial, commercial, residential, information and health, educational and recreational centres, which provide easy access to a range of urban resources (Department of Housing, 1997).

To implement this vision, the Urban Development Framework outlines four key Programmes including:

- *Integrating the city,* which aims to negate apartheid-induced segregation, fragmentation and inequality. The focus is on integrated planning, rebuilding and upgrading the townships and informal settlements, planning for higher density land-use and developments, reforming the urban land and planning system, urban transportation and environmental management.

It is clear then that the UDF promotes integration and upliftment of under developed

urban areas through housing and infrastructure provision.

4.3.5 Integrated Urban Development Framework (2016)

The Integrated Urban Development Framework (IUDF) is "a policy framework on how the South African urban system can be reorganized, so that our cities and towns become more inclusive, resource efficient and good places to live, work, shop and play in, as per the vision outlined in the National Development Plan" (Department of Cooperative Governance and Traditional Affairs, 2016, p. 5). According to the policy, its intended outcome is spatial transformation. Policy levers 1 and 3 in particular, recognize that Integrated urban planning is essential for coherent development and integrated human settlements are very important in redressing the apartheid geography and restructuring cities respectively.

Further to the policies and programmes discussed above, there are other mechanisms with which government can effect spatial transformation. Of relevance to this study is the Social Labour Plan, which is imposed on mining companies as a condition of granting a mining license.

4.3.6 Social Labour Plan

In terms of the Mineral and Petroleum Resources Development Act, 2002, the Social and Labour Plan (SLP) is a pre-requisite for the granting of mining or production rights (Republic of South Africa, 2010). The Mining Charter, which inter alia calls for mining companies to "establish measures for improving the standard of housing, including the upgrading of hostels, conversion of hostels to family units and promotion of home-ownership options for mine employees (Minerals Council South Africa, n.d.), also requires that mining companies submit SLPs. Section 3 of the SLP requires the Mine or Production Operation to contribute towards the socio-economic development of the community in which it operates. To this end, the SLP requires the mine or production operation to provide a plan aligning with and integrated into the mine community's municipal IDP, which it should have consulted and co-operated in the formulation and review thereof.

With respect to housing, the SLP stipulates how the Mine will:

a) Address the influx of people looking for work opportunities in the mining town;
b) Provide accommodation for migrant mine workers; and
c) Provide infrastructural support for housing (Mosaval, et al., 2016).

Once approved, the SLP cannot be amended or varied without the consent of the Minister and the holder of the mining company must submit annual reports on the compliance thereof.

It is clear that there exist a number of policies and programmes that are aimed at restructuring the apartheid city. BGN; IHP and the Housing Code, through IRDP and SHP, all have a common purpose of making low-cost housing available in prime urban land in order to counter economic class segregation. The researcher argues that the DHS could enact a single housing policy, similar to SPLUMA, that encompasses the principles of BNG, IHP, IRDP and SHP thus doing away with numerous programmes that sometimes overlap and create confusion.

Furthermore, the adopted policy should make reference and be implemented in conjunction with the planning policies discussed in order to ensure a multi-pronged but coordinated approach in tackling spatial transformation. Also, while the researcher concedes that the SLP is neither a policy nor programme of the housing department, the requirement for its community development aspect to be included in the municipal IDP makes it a critical tool with which an affected municipality can leverage to effect change in human settlements within its jurisdiction.

4.4 Challenges in Policy Implementation

Parnell; Kitchin; Ovens; Williamson & Wendy Ovens & Associates (n.d.) identified weaknesses of the existing legislative framework for land use planning and the inadequacy of institutional capacity in municipalities as some of the challenges that need attention. This section expands on these and others.

4.4.1 Regulatory Framework

The current framework assigns housing as a concurrent responsibility of national and provincial government, while local government acts as an implementing agent. However, municipalities were only normalized in 2000 with the promulgation of Municipal Systems Act (2000). This means post-apartheid policy ideas with far-reaching implications for municipalities were conceptualized without a deep understanding of the specificities of municipal government and were formulated without the direct and active participation of local government (Pieterse, 2004).

Consequently, there exists a possibility of a disjuncture between policy development and the contextual realities in which it has to be implemented. Complicating this problem is that until SPLUMA was introduced in 2013, land planning was governed by unreformed laws dating back to apartheid (NPC, 2012). Consequently, the same laws that were used to implement apartheid's grand plan of segregation and inequality remained the tools used by planners (Turok, 2014 and Berrisford, 2006).

As implementing agents, municipalities are required to play a leading role in spatial transformation (Pieterse, 2002 and SACN, 2016). However, the division of functions between the three spheres of governments can create conflict where functions overlap. In its investigative hearing report, the Human Rights Commission (HRC) (2015) reported that all spheres of government cited inter alia conflicting priorities and inconsistent approaches of policy implementation in the provision of adequate housing. This view is supported by the Financial and Fiscal Commission (2011) which argues that the existing urban spatial pattern is a result of inter alia confusing and conflicting policy priorities. The NDP also states "provincial land-use management functions overlap with municipalities, creating confusion and conflict" (NPC, 2012, p. 245).

According to Pieterse (2009, p. 5) "national departments and ministries adopt a top-down imperial posture whereby they assume to know what is best for all sub-national territories and spaces, and so produce policy frameworks and guidelines that can greatly undermine local plans and initiatives". With regard to spatial transformation, this problem is compounded by the dispersion of spatial planning across national ministries: the Master Spatial Plan falls within Human Settlements; SPLUMA falls within Rural Development and Land Affairs; the IUDF sits with CoGTA; the NDP is under the supervision of the Presidency. This institutional fragmentation renders coordination and implementation of the urban agenda difficult and also allows for contradicting messages.

Even though the Constitutional Court established that municipalities have principal responsibility for land-use planning and management (in *Johannesburg Metropolitan Municipality v Gauteng Development Tribunal,* 2010) and SPLUMA reinforced this judgment by strengthening the role of municipal spatial planning, cooperation between all spheres of government is still required. van Wyk & Oranje (2014) argue that such cooperation has

lacked. This despite Chapter 3 of the Constitution being devoted to cooperative government, thereby obliging the different spheres of government to cooperate with one another and also the Intergovernmental Relations Framework Act 13 of 2005, enacted to provide structures and mechanisms to promote and facilitate intergovernmental relations and settle intergovernmental disputes. It therefore remains to be seen whether national and provincial governments will allow municipalities, who must approve any development by other spheres, to take the lead.

The gap between policy intent and practice in urban planning is magnificently articulated by Dewar (1998) and SALGA (2016) confirms that this gap still exists. The continued existence of this gap is partly explained by Turok (2014, p. 86) who argues that there is national suspicion of municipal competence, which has brought in more stringent procedures to regulate their affairs, which has consequently encouraged "backward-looking, risk-averse behavior and inhibited the creativity required to confront complicated spatial problems".

In terms of implementation, few municipalities have the necessary skills and experience to implement SPLUMA (HRC 2015). According to NPC (2012) many municipalities struggle to appoint qualified planners and "planning officials in many municipalities lack appropriate skills, particularly in land use management and spatial development" (Parnell, et al., 2007, p. 6). This incapacity of municipalities creates a disconnect between what is prescribed by legislation and local government's institutional capacity to deliver. It also means many municipalities cannot administer National Housing Programmes which require accreditation and to be accredited "municipalities must demonstrate sufficient capacity to plan, implement and maintain projects and programmes that are integrated within municipal IDPs" (Tissington, 2011, p. 76). The HRC (2015) reported that as at 2015, of the 278 municipalities, 9 have Level 1 accreditation, 19 have Level 2 accreditation and none had been awarded full assignment.

While Pieterse (2004, p. 94) argues that the "far-reaching and ambitious imperatives that inform the IDP can overwhelm even the most capable and resourced of municipalities" thus inhibiting their ability to be accredited, Huchzermeyer (2014) argues that provincial governments have been reluctant to relinquish control over the housing development and consequently have resisted the accrediting municipalities. This view is supported by the HRC (2015, p. 63) which found that "the decision to assign full responsibility of the housing

function to municipalities has become a political issue". This effectively means the conflict regarding the division of powers has not been adequately resolved.

4.4.2 Competing Interests Over Urban Land

Cities are not just to do with housing people and economic activity; they are also places of struggle for equitable distribution of resources (Malik, 2001). Therefore, transformation of urban space is fundamentally linked to the reconfiguration of power and influence (Williams, 2000). According to Pieterse (2004, pp. 86-87) "transformative urban policies must produce outcomes that involve a diminution in power and behavioural change by the powerful so that subaltern classes in the city can gain access to more resources and opportunities" to enhance their livelihoods. Consequently, while urban spatial transformation is about integration, inevitably it affects the balance of power between opposing interests. The power relations are manifested in the competition for allocation and utilization of urban space, particularly well-located land (Mini, 2016).

Well-located land, "one of the major blockages in the housing delivery chain" (VEDA Associates, 2009, p. 3), is in demand from various actors with competing interests. Its control cannot be left only to the market to determine because the property privilege is heavily skewed in favour of continued accumulation by the previously advantaged groups (Mkhize, 2015). Necessary development for transforming and building our cities cannot take place without land because "cities are driven by and depend on land as a fundamental input for development and growth" (King & Napier, 2015, p. 3). This view is also supported by the FFC (2011) which states that "land is a critical factor of production that is at the centre of any city's development". The state therefore needs interventions that fully confront the land market. Njoh (1998, p. 415) argues that it is "naive to exalt the role of government as one of an objective, fair-minded arbiter interested in nothing but the good of all". This is made all the more important because "well-located urban land for residential purposes for the previously dispossessed in terms of inclusive, transformative urban and spatial planning has lagged behind other forms of transformation" (Tissington, 2011, p. 1).

After decades of a land market system that benefited a few, the market is already skewed therefore "contestations over city land must be understood as a competition between those who try to maintain their advantage in the city, and those attempting to break into new relations of ownership" (Mkhize, 2015, p. 4). According to King & Napier (2015), the shape of

cities is determined to some extent by the nature of ownership and property rights defining land and the effectiveness of the land market. Since the formal urban land market is skewed towards the middle and high-income groups and marginalizes the poor (Landman & Ntombela, 2006), by not playing arbiter the state is therefore leaving the urban land market to shape the post-apartheid city. According to Mini (2016, p. 10) "the urban land market has emerged as a powerful player in determining the spatial reorganization of South Africa's post-apartheid cities". It determines "who depends on government for land and housing, who accesses these through the market, or who allocates these to themselves" (King & Napier, 2015, p. 3).

4.4.3 Gated Communities

Cities are produced and reproduced, constantly changing and transforming to address emerging needs and accommodate new ideas (Landman & Badenhorst, 2012). In today's free land market, the middle-to-high-income housing is predominantly developer-driven (Landman & Ntombela, 2006) and local authorities face a barrage of developer pressure and fragmented market-driven processes of development (Hendler & Wolfson, 2013).

The power of private property developers is nowhere more clearly demonstrated than in the development of gated communities. According to Landman & Ntombela (2006, p. 3), "one of the dominant characteristics of the new emerging city is the increased privatization of public space through so-called gated communities". These residential areas have been identified by property developers as new development niche in urban land development (Mini, 2016) and are purposely built with security being the foremost consideration in spite of other important lifestyle considerations (Landman, 2002; Landman & Liebermann, 2005; Landman, 2004 and Ramoroka, 2014).

Although there is no single definition of gated-communities, Lemanski; Landman & Durrington (2008, p. 1) state:

"The label 'gated communities' masks a multitude of different territorial strategies, ranging from total security estates (residential or commercial) with impenetrable boundaries and 24-hour security guards monitoring access and patrolling the interior, sectional title developments and blocks of apartments with perimeter fencing and a gate accessible by remote control, the 'booming-off' of existing streets (enclosed neighbourhoods), and

everything in between. Despite multiple labels and manifestations, gated communities are defined by their perimeter boundary (e.g. fence, wall) and restricted access (e.g. security guard, remote-controlled gate).”

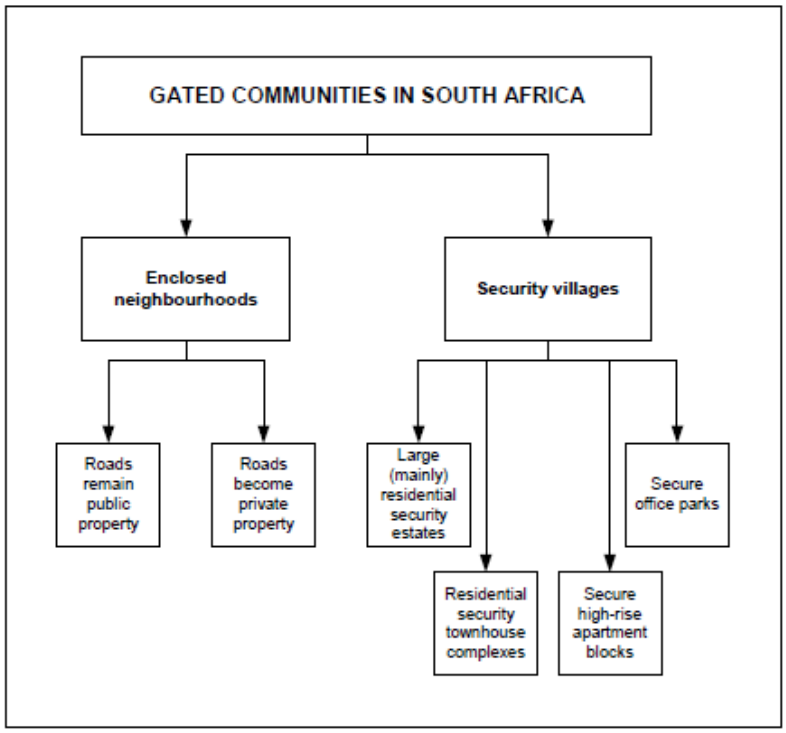


Figure 11: Different types of gated communities in South Africa. Source: Landman (2004)

Figure 11 depicts different types gated communities in South Africa. Of particular relevance to this study, because of new developments in case study area, are security villages which refer to developments where the entire area has been established by a private developer (Landman & Ntombela, 2006 and Landman & Badenhorst, 2012). According to Mini (2016), these tend to promote an image of high-quality life, with entrances often marked by magnificent gates.

Various authors e.g. (Ballard, 2004; Durington, 2006 and Low, 2003) however, have criticized gated communities for increasing residential segregation by creating exclusionary spaces thus exacerbating social divides. Lemanski, et al. (2008, p. 2) takes this argument further stating that in South Africa these exclusionary territories “effectively recreate the apartheid city and thwart post-apartheid goals of urban integration and inclusion” and Ballard (2004, p. 63) says they “represent to some extent the privatization of what was previously a state project: urban segregation”. Furthermore, Lemanski (2004) argues that they create a new form of urban apartheid in which class rather than race determines access to the city. This is

echoed by Mini (2016) assertion that these enclaves embody a new conceptualization of race-class division of urban space.

Indeed, there are parallels with urban apartheid planning. White suburbs were, in effect, enlarged gated communities that privatized public space by surrounding themselves with barriers such as nature reserves with cliffs, train tracks, highways, and rivers. Gated communities on the other hand transform public space into private space through physical boundaries (Charlton, 2006). More specifically, because in South Africa class is interwoven with race, this type of settlement "perpetuates apartheid's Group Areas by enclaving whites alongside a handful of wealthy blacks into exclusive spaces and lifestyles which the vast majority of black citizens are unable to access" (Lemanski, et al., 2008). South African cities are adopting the gated-community model that is exploiting the security interests to privatise public spaces in ways that somewhat perpetuate apartheid social exclusions through a democratic logic. Through the production of gated communities, the urban land market has contributed to the re-creation and re-enforcement of apartheid spatial race and class segregation" (Mini, 2016, p. 15).

4.5 Chapter Summary

This chapter flagged a number of legislation, policies and programmes that are aimed at reversing the apartheid city through spatial transformation. However, while spatial transformation is seen as prerequisite for redressing apartheid city geography, none of the policies offered a definition of spatial integration. Harrison & Todes (2012, p. 3) advance that "the purpose of spatial integration remains oddly vague and undefined" and Turok (2014, p. 74) argues that spatial transformation seems to be "a broad term used very loosely in public policy, academic research and popular writing" to refer to urban restructuring. Further complicating this is that "urban integration efforts aimed at changing the apartheid city are often based on shaky conceptual foundations" (Pieterse, 2004, p. 89)

The housing sector has a variety of programmes and institutions geared for specific interventions. While these have been regarded as successful in terms of delivery, at a spatial level, the challenge is to identify an appropriate programme to be applied in such a way as to realize the normative principles contained in the Housing Act. This requires an amalgamation of the housing programme and the land programme, as the land market has effectively excluded many of the country's poorest citizens. Though SPLUMA addresses land-

use, the Act has a limitation in that the Minister of Rural Development and Land Affairs can override a municipality's decision in respect to development approvals if it is deemed to be in the national interest. Given that national interest is another broad term that is used very loosely, economic growth may be framed as a legitimate reason to prioritize upmarket development over low-income housing on strategically located land. Within the current framework, it is difficult to prevent development decisions on strategic land from being made in the interests of the private sector, rather than those of the poor.

Having discussed boomtowns in Chapter 3, particularly the need to transform the spatial geography of Lephalale, Chapter 4 highlighted the policies the municipality could use to influenced the desired outcome. However, having mentioned how housing development becomes a cash cow for housing suppliers in boomtowns, Chapter 4 also discussed how the avalanche of inadequate policy and incapacitated municipalities have so far failed to tackle the contentious issue of the urban land and formal housing markets that prefer to cater for the less risky middle class and the rich, thus entrenching spatial segregation along income groups. These Chapters converge to advance that without a clear strategy and proper policy implementation, the boomtown of Lephalale will not offer anything new. Evidence gathered to assess to what extent there is a clear strategy and implementation plan in Lephalale will be presented in Chapter 6 and analysed in Chapter 7.

CHAPTER 5: COMPACT CITY CONCEPT

5.1 Introduction

The previous chapter discussed inter alia policies and programmes which have been advanced over the years to promote post-apartheid human settlements. What becomes apparent from these policies and programmes is that post-apartheid cities should counter urban sprawl, separate land uses and (race/income) segregation, which are key characteristics of the apartheid. But what kind of cities should post-apartheid South Africa produce?

The Reconstruction and Development Programme (RDP), which is one of the first post-apartheid government policies, argued for more compact cities to break down the apartheid geography (National Planning Commission, 2012). Also, compact city ideas form part of the core principles of the Development Facilitation Act (DFA), which has since been replaced by the Spatial Planning and Land Use Management Act (SPLUMA), and are embodied in the 1997 White Paper on Urban Planning (Todes, 2003). SPLUMA itself promotes land development that is spatially compact.

Compact city ideas have also been advanced by anti-apartheid planners e.g. (Turok, 1994) and African National Congress government officials. Former Housing Minister, Mthembi-Mahanyele, advocated for cities that "make provision for different income groups and different preferences, while ultimately striving towards more compact development" (Mthembi-Mahanyele, 2002, p. 5). In the Integrated Urban Development Framework (IUDF) which the Ministry of Cooperative Governance and Traditional Affairs hails as a new deal for South African cities and towns (Department of Cooperative Governance and Traditional Affairs, 2016), Minister Des Van Rooyen states that with the IUDF the ministry intends to retrofit existing city footprints to produce compact, coordinated and connected cities. Given all of this talk about compactness, it becomes apparent that, at a planning level, post-apartheid South Africa seeks to achieve compact cities. LLM itself states that the "municipality must aim to change its current sprawling urban form into one which is compact" (Lephalale Local Municipality, 2016, p. 53)

Furthermore, the Housing Act requires housing development to contribute to redressing the historically distorted racial patterns of cities and towns and also promote integrated development planning. Also, the transformation role of SDFs, as envisaged in SPLUMA,

requires the inclusion and integration of previously disadvantaged areas into spatial and socio-economic objectives of relevant government spheres. The Local Government Municipal Structures Act as well, accentuates that municipalities must seek to achieve integrated socio-economic development. This repeated theme of integrated socio-economic development suggests that post-apartheid cities must also be inclusive.

This chapter, therefore, discusses the inclusive and Compact City concepts. While, it is beyond the scope of this research to discuss the merits thereof, and is merely presenting them as a position of the post-apartheid government to counter the apartheid city, the author will opine why a combination of these is the best approach for Lephalale. The chapter starts by briefly discussing the inclusive city followed by the compact city concept. Thereafter, factors promoting either compact or sprawled development are discussed and strategies that can be implemented in pursuit of a compact city are presented. Lastly, the researcher argues why it would be beneficial for Lephalale Local Municipality (LLM) to pursue the inclusive and compact city concepts.

5.2 Inclusive City

The (UN-Habitat, 2004) defines an inclusive city as a city that promotes growth and equity, i.e. a place where everyone is enabled and empowered to fully participate in the socio-economic opportunities that the city has to offer. Shah, Hamilton, Armendaris & Lee (2015) describe an incusive city as one with three interlinked dimensions, namely, spatial inclusion; social inclusion; and economic inclusion, which respectively offer access to land, housing & infrastructure; rights & participation and opportunities to all. Locally, South African Cities Network (2016) defines an inclusive city as one whereby all residents regardless of their socio-economic status have a voice in governance and access to sustainable livelihoods. These definitions make it clear that an inclusive city is must not merely offer its residents access to its resources, but also offer them rights to meaningfully influence how the city develops.

This is critical because “citizenship and having citizen’s rights do not automatically result in inclusion” (SACN, 2016, p. 130). Authors like Huchzermeyer (2014); Tissington, et al., (2012) (Huchzermeyer, 2010), for example, have suggested that the government does not embrace informal settlements and is somewhat hostile and/or neglegent regarding policy towards them. Accordingly, residents of informal settlements, even at those as well-located as

Alexendria, continue to be socio-economically disengaged from wider urban systems and excluded from decision-making despite having citizenship and rights. In such enviromnents, residents adapt and carve livelihoods without permission and/or enablement. Despite making significant contributions to urban economic growth, these residents are effectively not recognized as citizens of the very cities they are helping to build.

An inclusionary city, therefore, must strives for the realisation of human rights to ensure the well-being of its citizens and the production and democratic management of their habitat. This means developing the full potential of citizens through access to the necessary resources with a principle that the citizens fuculty to develop themselves and their communities depends on building their capabilities. This way, the city can ensure that it draws upon the talents and skills of all its citizens. Accordingly, an inclusionary city not only give citizens access to what already exist, but also a right to change it (Harvey, 2003). It is a city where citezens are empowered to change their lives by changing the city.

5.3 Compact City

The Compact City as a concept suffers from difficulties in definition. The concept doesn't have a common definition and is often associated with "urban intensification that relates to the range of processes which make an area more compact" (Cereda, 2009, p. 11). Although there is no consensus on the definition of a Compact City, there seems to be a shared vison with key characteristics frequently mentioned. Burton (2000) definition is that of a relatively high-density, mixed use city that is based on an efficient public transport system and dimensions that encourage walking and cycling. The OECD (2012) mentions dense and proximate development patterns; urban areas linked by public transport; and accessibility to local services and jobs as three components of a Compact City. Furthermore, UN Habitat (2014) recommended efficient street network, high density, mixed land-use, social mix and limited land-use specialization as principles for sustainable urban planning.

Given the various interpretations, the compact city can therefore be understood as an umbrella concept that combines ideas of urban containment, high-density, mixed-land use and multimodal transportation. The idea is that urban activities should be located closer together to ensure better access to facilities and services and more efficient infrastructure provision in order to counteract the perceived negative socio-economic and environmental impacts of urban sprawl (Matthey-Doret, 2015). Also, a compact city does not have to be a

monocentric urban structure. According to (OECD, 2012), a polycentric metropolis can be a compact city if its urban agglomerations are not widely dispersed and are interlinked by public transport systems. In such a case, the proximity of urban nodes and transport network are critical and therefore corridors of development play an important role. In either instance, land development and transportation should not be considered in isolation from the other.

With Lephalale experiencing urban growth, it is uncertain whether it's development will follow a compact city concept or it will maintain the sprawled pattern of the apartheid city. However, a theoretical framework by Bhatta (2010) offers causes of urban growth, which may result either in compact or sprawled growth, that can be used to asses the emerging trends in Lephalale. The next section discusses these causes. According to Versluis, et al., (2010, p. 24) "the purpose of a theoretical framework is to analyse the empirical reality to existing theories in order to identify and formulate central propositions as well as to sort and direct data, which then facilitates interpretation and analysis." Causes present in Lephalale will be identified and further discussed in research findings in Chapter six.

5.4 Causes of urban growth which may result in compact and/or sprawled growth

This section is aimed to list the causes of urban growth and sprawl. The causes of urban growth are quite similar with those of sprawl and in most instances, they cannot be discriminated since urban growth and sprawl are highly interlinked (Bhatta, 2010). However, while some causes, for example population growth, may result in either coordinated compact growth or uncoordinated sprawled growth, others like country-living desire are responsible for sprawl. Table 3 lists various causes followed by a brief explanation of each cause. For a general discussion, one may refer to (Burchfield, et al., 2006; Squires, 2002)

Causes of urban growth	Compact growth	Sprawled growth
Population growth	•	•
Independence of decision		•
Economic growth	•	•
Industrialisation	•	•
Speculation		•
Expectations of land appreciation		•
Land hunger attitude		•
Legal disputes		•
Physical geography		•
Development and property tax		•
Living and property cost		•
Lack of affordable housing		•
Demand of more living space	•	•
Public regulation		•
Transportation	•	•
Road width		•
Single-family home		•
Nucleus family	•	•
Credit and capital market		•
Government developmental policies		•
Lack of proper planning policies		•
Failure to enforce planning policies		•
Country-living desire		•
Housing investment		•
Large lot size		•

Table 3: Causes of urban growth which may result in compact and/or sprawled growth. Source: Bhatta (2010)

- Population growth

  Population growth refers to an increase in the number of people residing in a particular area.

- Independence of decision

  Stakeholders (government and/or private) can have different expectations about the future and a variety of development demands which could lead to them taking their own decisions to meet their future expectations and development demands. This is especially true if the city lacks a master plan as a whole.

- Economic growth

  As discussed in Chapter three, economic growth creates demand for infrastructure and new housing which encourages rapid construction by developers. Depending on how that growth is managed, including planning policies in place, economic growth could produce either compact or sprawled urban growth.

- Industrialization

  Establishment of new industries increases impervious surfaces rapidly. New industries generally create employment opportunities and require provision of housing facilities workers.

- Speculation

  Speculation about the future growth may cause premature and discontinuous development resulting in an uncoordinated pattern of development.

- Expectations of land appreciation

  Closely linked to speculation is expectation of appreciation in land value. Higher growth rates in urban areas lead to greater expectations of land appreciation, resulting in some withholding of land for development in order to maximise market value.

- Land hunger attitude

  The desire for land ownership by institution and individuals who sometimes leave it vacant making infill strategies unsuccessful. Consequently, the city grows outward leaving the undeveloped pockets of land within the city.

- Legal disputes

  Legal disputes, for example ownership disputes, makes land unattractive to developers. This means land can be left undeveloped thus advancing sprawl. Land redistribution and/restitution issues as well may create uncertainty that can turn off interest from developers thus leaving that particular land undeveloped till the matter is settled. This can create leapfrog development.

- Physical geography

  Unsuitable physical terrain such as wetlands, mineral lands, etc. make continuous development impossible and creates leap-frog development.

- Development and property tax

  Lower development costs levied in the countryside than in the core city encourages developers to prefer peripheral development.

- Living and property cost

  Although urban residents seek to settle within the core city, higher living and property costs in the city area encourages urban periphery development for the poor.

- Lack of affordable housing

  Similar to living and property cost, lack of affordable housing within the city due to higher property and development costs forces people to set their residences in the urban periphery.

- Demand for more living space

  Availability of land outside the city core can attract those looking for more living space which could trigger low-density development. However, consumption of more living space does not necessarily cause sprawl; population density is a critical concern in this issue.

- Public regulation

  Loosely regulated public regulations fail to control new construction in a compact and sustainable manner, prompting developers to bypass government planning policies.

- Transportation

  Although transportation facilities are essential to cities and its neighbourhoods and can never be suppressed, transportation routes are a major catalyst of sprawl because they open the access of city to the countryside and responsible for linear branch development. Consequently, initiatives to impede linear branch development should be practiced.

- Road width

  Narrow roads within the city area restrict construction of high-rise buildings since regulations generally do not allow construction of high-rise buildings if the site cannot be easily accessed, resulting in waste of vertical space which gets transformed into horizontal growth.

- Single-family home

  Single-family homes, rather than multi-family high-rise building, waste vertical space significantly resulting in horizontal growth.

- Nucleus family

  Per capita consumption of carpet area in nucleus family is commonly higher than the joint family and transition from joint family to nucleus family also creates demand of new housing for individuals.

- Credit and capital market

  Credit and loan facility, low interest rate, etc. can also be responsible for rapid urban growth in advance in a sense that people can buy homes in advance before achieving the financial capability.

- Government developmental policies

  Dissimilarities in development regulations, land-use policies, and urban services among the neighbouring municipalities may cause discontinuous development as developers skip some land for land that is favourably disposed to development.

- Lack of proper planning policies

  Lack of proper planning policies may also cause urban sprawl. A city planned with exclusive zoning policies could have a separation of residential, commercial, industrial, office, institutional, or other land uses. Completely separate zoning creates isolated islands of each type of development.

- Failure to enforce planning policies

  Having a proper planning policy is not enough, rather its successful implementation and enforcement is more important. Unsuccessful enforcement of land-use plans is one of the reasons of sprawl.

- Country-living desire

  People who desire the solitude and perceived amenities of country-living as rural retreats leave the city for the normally low-density countryside.

- Housing investment

  Some urbanites purchase second homes in the countryside as future investments. These homes often left vacant but the government is forced to maintain urban facilities and services in a low-density area.

- Large-lot size

  Large-lot (plot) residents utilise a portion of their land for construction purposes leaving other portions as non-developed.

Further to the causes of compact and sprawled growth, it is important to note that, cities can become more compact either through the dynamics of the market or through influence of interventions such as planning policy (Burton, 2001). The next section explores interventions which the municipality can implement in pursuit of a compact city.

5.5 Compact City Policy Strategies

It stands to reason that there is no single compact city model that is applicable to all cities as local circumstances must be factored in. However, the Organisation for Economic Co-operation and Development (OECD), which collaborates with South Africa on policy issues including urban development, proposed five strategies from findings of a survey of its member states. These strategies are briefly discussed below.

5.5.1 Set explicit compact city goals

This strategy requires that a national urban policy, whether legally binding or just a guideline, should be in place "to signal to urban developers, citizens and sub-national governments that national urban policy is heading towards compact cities" (OECD, 2012, p. 173). Furthermore, there should be metropolitan-wide planning with clear compact city concepts that are based on local circumstances.

5.5.2 Encourage dense and proximate development

This strategy requires targeting of greenfield developments, as they are easier to densify and proximate. To do this, effectiveness of regulatory tools must be increased; compact development in greenfield areas must be targeted and minimum density requirements for new developments must be set.

5.5.3 Retrofit existing built-up areas

This strategy requires that urban space in built-up areas should accommodate for more activities. This can be done by promoting brownfield development; harmonising industrial policies with compact city policies; regenerating existing residential areas; promoting transit-oriented development in built-up areas and encouraging intensification of existing urban assets.

5.5.4 Enhance diversity and quality of life

This strategy is about promoting mixed land uses. It is not only applicable to urban centres but also to existing built-up areas. These centres help to sustain the centrifugal power of metropolitans and the quality of life they provide is essential to the attractiveness of the urban centre.

5.5.5 Minimise adverse negative effects

The strategies discussed above should be combined with strategies to combat unwanted consequences that might offset positive outcomes. Such strategies could include provision of low-cost housing; encouraging green buildings; suppressing traffic congestion and promoting focused investment on public space.

5.6 Inclusive and Compact Lephalale

This section converges the inclusionary and compact city strategies and advances why this is the best approach for Lephalale. Section 3.8 extensively discussed the apartheid geography of Lephalale and how the town is fragmented and segregated. It stands to reason therefore that to reverse this spatial pattern, urban containment strategies must be employed. Even though population is increasing, the huge open spaces, particularly between Onverwacht and Marapong, makes it unnecessary for the town to spread beyond the current footprint to accommodate this increase.

For a town already battling with infrastructure backlogs including water supply systems, it would just put further strain to pursue a spread-out development and would increase public expenditure. Furthermore, with mines expected to significantly contribute to air pollution, it would be beneficial to find carbon dioxide reduction on other areas like car emissions. Therefore, development must discourage the use of private vehicles by promoting public transport and pedestrian transit. Also, sprawled development would compromise the

wildlife habitat and ecosystem of the town, which are critical in diversifying the economy (discussed in section 7.2). This would be very devastating should the municipality not transcend the boom and end up becoming a ghost town as it would mean farmland was consumed for short-term gain, without long-lasting counter benefits.

However, it cannot just be about densifying the town above everything else. Lephalale economy is booming and, since migration is partly about people moving to have access to jobs and by extension better living standards, it's reasonable to anticipate that there will be some migration to the town for the foreseeable future. Migration is a critical issue for city governance, policy and planning (SACN, 2016) and Lephalale Local Municipality (LLM) cannot ignore this. As migration continues to grow, a shift in thinking will be needed, especially around who belongs and has rights in the city.

The concept of urban citizenship will be very critical for the municipality. Embracing migrants and their contribution would allow LLM to adequately plan for service and infrastructure provision and develop livelihood opportunities for them, thus reducing the risk of social conflict, including xenophobic violence, which can adversely affect local governance. Understanding migration patterns, diversity and complexity of urban migrants will enable LLM to see migrants not just as consumers but as producers as well. This goes beyond seeing migrants as cross-border job-seekers; it includes but not limited to, internal migrants, students and professionals who engage the city differently. It also includes citizens that are not residents but are nevertheless embedded in the urban space.

This is critical for creation of participation platforms where diversity can be managed and collective interests mobilized. Creating a conducive environment for citizens to have a sense of belonging spatially, socio-culturally and economically, will enable them to influence how the city develops and unfolds over time. It will create a mutually beneficial relationship where policy enhances capabilities while participative citizenship enhances policy.

However, it is not enough to just give equal rights to locals and migrants, different racial and income groups, etc.; the city itself should be designed for social cohesion because space helps to shape and direct human action. Social cohesion relies on urban safety which requires "cross-sectorial collaboration between spatial planning, transport and mobility, human settlements, social and economic development and community safety" (SACN,

2016:151). To advance social cohesion, therefore, LLM should aim for urban development that ensures mixed-land uses and good mobility of various means of transport. This means drawing people of diverse backgrounds to share the same services and facilities through multi-functional public spaces.

South Africa has a history of urban division and urban integration seems to be laden with multiple meanings that inevitably shroud it into confusion. Pieterse (2003) argues that the assumption that urban integration as a shared common good can be defined and pursued is flawed. However, he does suggest that it refers to an ideal policy outcome that optimally combines economic, environmental, political and social goals. Accordingly, urban integration accords with the compact city and the latter incorporates the former. The compact city model, which apparently already has the backing of national government, is thus a useful tool to pursue both urban space transformation and inclusivity.

5.7 Chapter Summary

Building from the literature on the apartheid city and legislative framework intended to reverse it, this chapter presented the compact and inclusive city as the best-known alternative. The concepts were briefly discussed for better understanding and factors which can either advance or compromise the compact city were listed and explained. Lastly, strategies that can be implemented in pursuit of a compact city were discussed.

The theoretical framework presented in this chapter as well as Chapters 3 and 4 will be very pivotal in research findings discussed in Chapter 6. The compact city principles and post-apartheid aspirations, embedded in various policies, will form the basis of assessing the emerging spatial trends in Lephalale. Additionally, because apartheid cities are characterized by low-density sprawl; fragmentation and separation, prevalence of factors advancing these characteristics will be explored to determine conformance to or departure from the apartheid city.

Furthermore, application of BNG; IHP; IRDP and SHP, four housing programmes identified in Chapter 4 as necessary for integrating cities, will be explored. The application of these programmes (or lack thereof) in Lephalale will help the researcher determine:

- the intervention(s) of the municipality in the restructuring of the emerging city;
- available housing choice through widening the range of housing alternatives; and

- creation of human settlements that offer the full range of urban amenities.

The findings will thus help to answer the research question through its sub-questions. However, it is important to note that these patterns may change with time and further research would need to be done to confirm how the municipality developed.

CHAPTER 6: RESEARCH FINDINGS

6.1 Introduction

Chapter six presents findings to answer the research questions set for the study. Data was primarily collected through in-depth interviews and observations and secondary data was examined to extract the emerging settlement patterns in Lephalale.

The chapter presents findings as per the primary data collection methods employed, i.e. in-depth interviews and observations.

6.2 In-depth Interviews

Several questions were asked to elicit and capture information regarding the response to the housing demand in Lephalale and the development of integrated human settlements. These were aimed at understanding

a) What kind of city Lephalale aspires to be;
b) Who is driving the housing development;
c) What planning framework is being implemented for residential development; and
d) What policy and programmes are being used for housing delivery.

In all instances, the challenges encountered were also probed as well as what is being done to overcome these.

A) The Kind of city Lephalale aspires to be

It emerged from the study that Lephalale is indeed trying to build an integrated city. All respondents from the municipality spoke about the need to address the fragmented nature of the current urban pattern as well as densifying the previously white dominated suburbs of Ellisras and Onverwacht. However, neither Eskom nor Exxaro reported to have the requirement to address this issue. Although these corporates spoke of their commitment to social responsibility, their primary objective was to secure housing for their employees, which meant focusing on quantity to overcome the demand. Their social responsibility initiatives, ranging from education and training/skills development to building infrastructure were more directed at assisting and empowering the town to deal with socioeconomic development rather than building a compact integrated city, i.e. provision of housing was seen as an end (securing accommodation) than a means to reshape the apartheid geography.

Although one corporation respondent confirmed that they anticipated that the industrial developments would catapult the municipality into a city the size of Polokwane he could not explain how this fits into building the first post-apartheid city. The private developers as well, while aware of the potential growth of Lephalale, didn't see the future city turning out differently from "any other city". They pointed out that the extent of industrialization and the land market will dictate how the town develops.

Despite this, the municipality is determined to transform the urban structure. Respondents from the municipality acknowledged that transforming human settlements is a large and complex agenda requiring an incremental approach within a long-term strategic vision and sequencing that will ensure that reforms have cumulative effects. Accordingly, the municipality has identified three spatial development areas, categorized as Spatial Development Area (SDA) 1; 2 and 3, as can be seen in Figure 12.

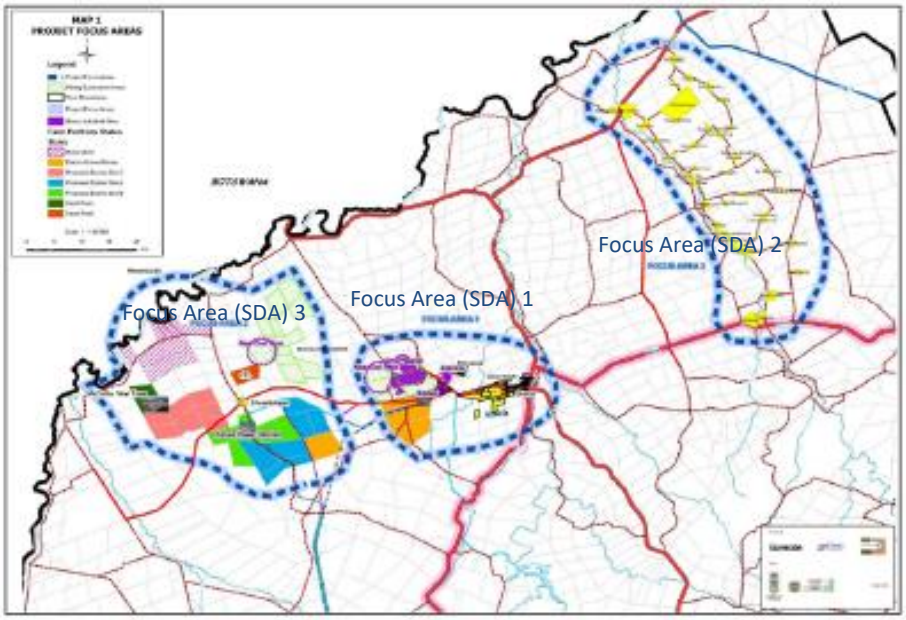


Figure 12: Three Spatial Development Areas. Source: (Lephalale Local Municipality, 2016)

The municipal respondents pointed out that SDA 1 is designated a priority development area and it includes farms Altoostyd 506LQ, Paarl 522LQ, Waterkloof 408LQ (Ellisras), Onverwacht 508 LQ, Groothoek 504LQ and Eendracht 505LQ which are all in proximity of current development and form part of the natural extension thereof as can be seen Figure 13. SDA 2, on the other hand, consists of developable land removed from the existing urban development and would only promote the current disjointedness of the town and

contribute to sprawl if developed prior to SDA 1. Lastly, SDA 3 is earmarked for industrial land-use driven by mining and energy companies.

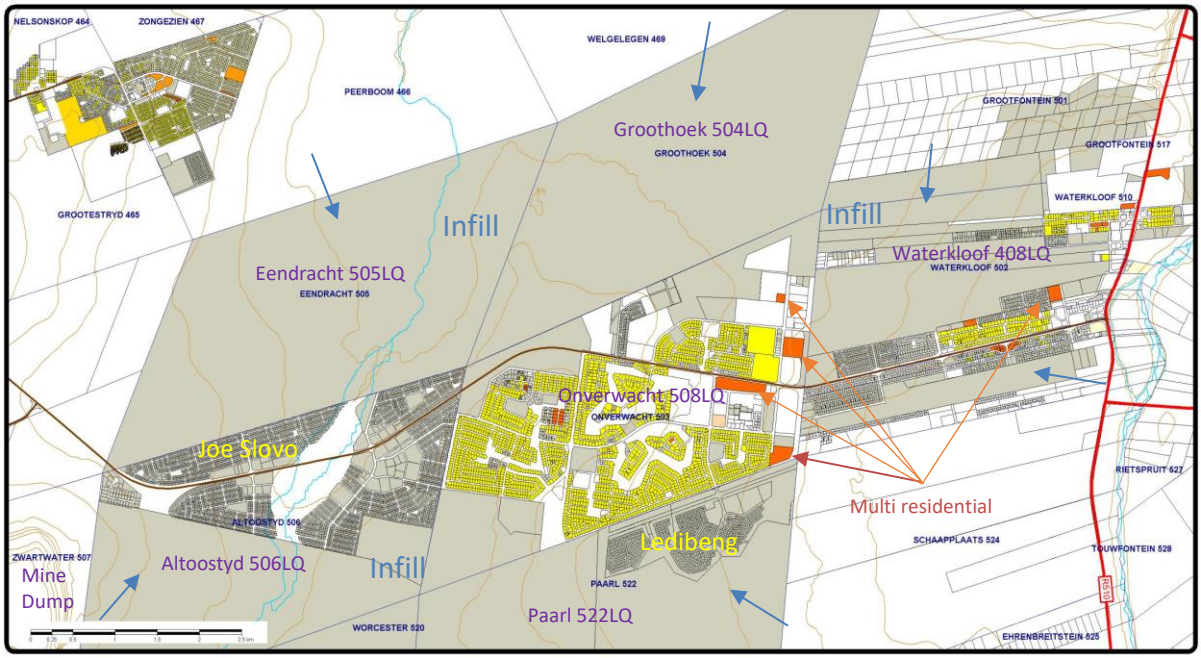


Figure 13: Spatial Development Area 1 Infill development. Adapted from Lephalale Municipality (2013)

SDA 1 infill development fosters the integration of the currently fragmented urban spatial form by breaking down the current linear urban structure and integrating the three urban nodes of Ellisras, Onverwacht and Marapong. However, despite this seemingly large-scale infill strategy, the municipality has no Integrated Transport Plan to connect and get around these SDAs, particularly SDA1, thereby advancing transit-oriented development (TOD). Without TOD, Lephalale risks continuing with apartheid planning that lacked integration of land use and public transport. Consequently, this lack of integration will maintain the apartheid-produced transport system that places high dependence on private cars despite a vast majority dependent on public transport.

It was pointed out by the municipal respondents that the municipality's objective is targeting infill development, expected to accommodate 50,000 future housing units as well as business and community facilities. This is to ensure that development promotes linkage and integration of Marapong with Onverwacht and Ellisras thus breaking the buffer zone provided by the open space. The Joe Slovo housing development (see section 6.3.2.1), on farm Altoostyd 506LQ, is the first major government intervention in this regard. According to the municipality,

"The R270 million project will see approximately 5000 mixed income housing units established on the farm Altoostyd next to Onverwacht. The aim of the project is to integrate housing and to provide low to middle income residents with an opportunity to own or rent homes close to the CBD." (Lephalale Municipality, 2016, p. 8)

However, some of the major challenges faced by this development is the Matimba mine dump, which has limited development on the East and the flood line that dissects the development and has brought construction to a halt. Also, the Municipal Manager pointed out that "the biggest challenge is to accommodate the approximately 15 thousand low-income earners in Lephalale" at the proposed development, i.e. the housing mix is such that low-income houses will not be at the scale required to accommodate everyone. The latter poses a threat to exclude low-income earners. The HDA respondent stated that the affordability ratio (the ability of the average local income to afford an average local house price) in Lephalale is 4.7, which is higher than the national average of 3. This effectively means that local incomes are not enough to afford the price of an average local house. Therefore, there are affordability issues that need to be carefully considered with regard to the Altoostyd project.

As part of the infill strategy, it was pointed out that multi-unit residential developments are being encouraged to compact and densify existing suburbs. These developments will also break the one-house per plot form as well as enhance housing choice by widening the range of housing alternatives. In line with the Community Residential Units Programme, multi-unit residential developments are also planned for Marapong with the planned establishment of the Marapong Community Residential Units (see section 6.3.2.2) to replace the old hostel.

It was also pointed out by a municipal official that the Ellisras node is targeted for the middle to high income groups. When asked why this was so, the official responded by pointing out that this node already boasts the highest property values and it would be impracticable to construct low-cost housing there.

Challenges to the attainment of the vision

Given that the construction of Medupi and related housing projects started in 2008, it was probed why it has taken so long for the municipality to act. It was claimed by municipal respondents that Medupi is a project that was predominantly driven by national government

and there was little involvement of the municipality. Lephalale FM (2016) also reported that in a joint-sitting between the Municipality, Cooperative Governance Human Settlements and Traditional Affairs (CoGHSTA) and Housing Development Agency (HDA) at Council Chamber for the launch of the Altoostyd project, the municipal Manager admitted that previously projects were initiated by national government and “councillors in the chamber were very upset and they raised concerns that they are always called useless by the community because of drastic actions without consultations with the municipality”.

Implication of municipal exclusion was also obvious from the HDA official’s statement who said as the HDA they “were in Lephalale in 2007 in the early stages of Medupi construction when they saw that the area was becoming a growing town and as a result huge demand for housing was without a doubt bound to be”. He continued saying they approached National Department of Human Settlement to ask for support in special Urban Settlement Development Grant and in 2015 CoGHSTA approached them to conclude an agreement on the development of the project. There was no mention of the municipality.

However, during an interview with an Eskom official it transpired that the municipality was not really excluded. On the contrary, in July 2008 the Lephalale Development Forum (LDF) was established. It has an executive committee, chaired by the mayor, comprising various public and private stakeholders such as Eskom, Exxaro and Lephalale Municipality and a working committee chaired by the municipal manager. Its aim was to review the impact of the development of MPS and the GMEP on the town. The governance structure of the LDF is presented in Figure 14

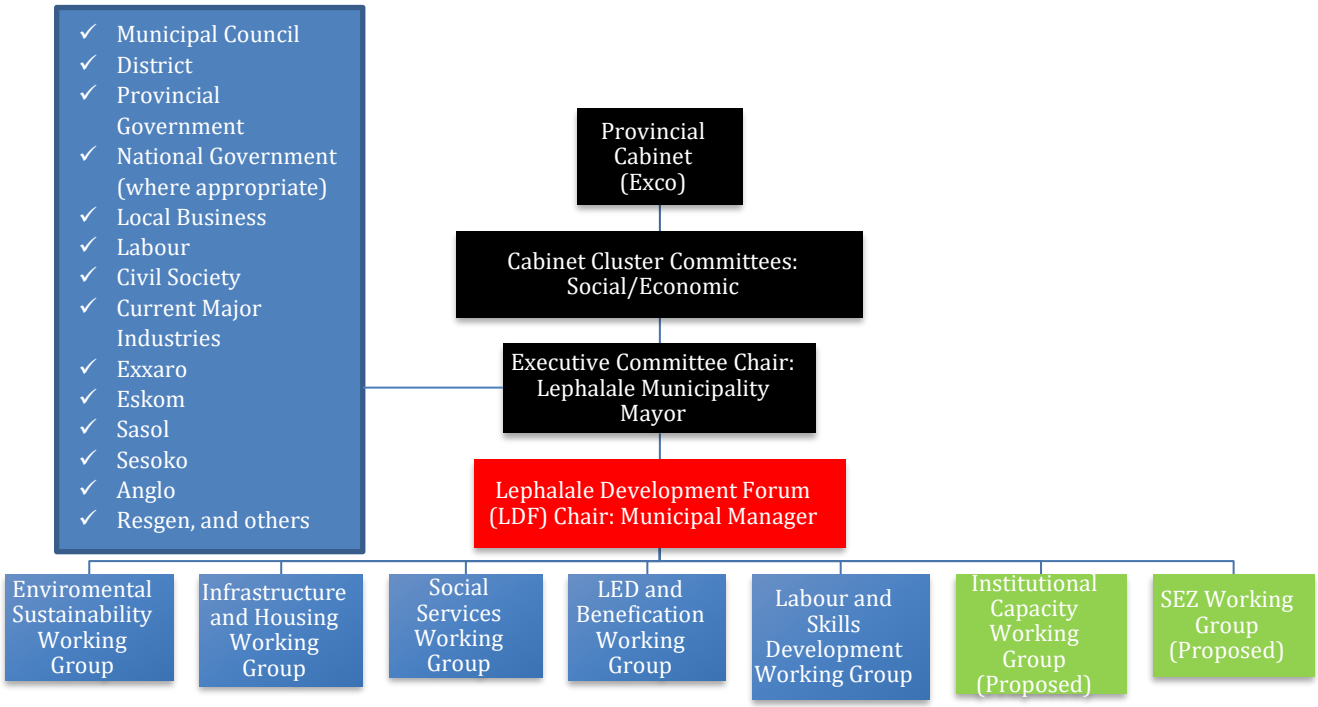


Figure 14: LDF Governance Structure. Source: Veti (2014)

Precisely because the aim of the LDF was to review the impact of the construction of MPS and GMEP, the municipality which chairs the LDF ought to have anticipated the economic boom and associated housing issues. It emerged from the interviews that issues of continuity affected the functioning of the municipality and by extension the LDF. The person who was the Municipal Manager in 2008 (when LDF was formed) was seconded to provincial government in 2010 though his contract of employment was due to lapse in 2012.

Someone else was appointed acting MM and his appointment was made permanent in 2012. During that period (2010 – 2012), the researcher found that the person who had been seconded to provincial government was still referred to as the manager and continued to earn a monthly gross salary of about R74000 from the municipality (Matlala, 2010), although no longer part of the municipality. Also, the acting manager's tenure was marred by issues of corruption and maladministration that eventually led to him being put on special leave in April 2014 (Cilliers, 2014) and subsequently resigning in August 2014. During that tenure, the researcher found that the municipality didn't appoint applicants to the positions of Planning and Development Manager and Social and Infrastructure Manager. The LDF was also accused of serving the interest of big private companies instead of the local community (Cilliers, 2013).

A second person was appointed acting MM till 31 August 2014. The researcher found out that during her tenure South African Municipal Workers' Union (SAMWU) members went on strike demanding, among other things, for her immediate resignation citing that she was appointed without any experience within a municipality (Cilliers, 2014). A third person was appointed acting MM in September 2014 and the post was finally filled when the incumbent was appointed on a permanent basis, after initially acting in the position. The progress of the LDF's Infrastructure, Housing & Spatial Planning Working Group is depicted on Figure 15 which indicates that none of its projects is completed and therefore it stands to reason that spatial transformation has not been achieved yet.

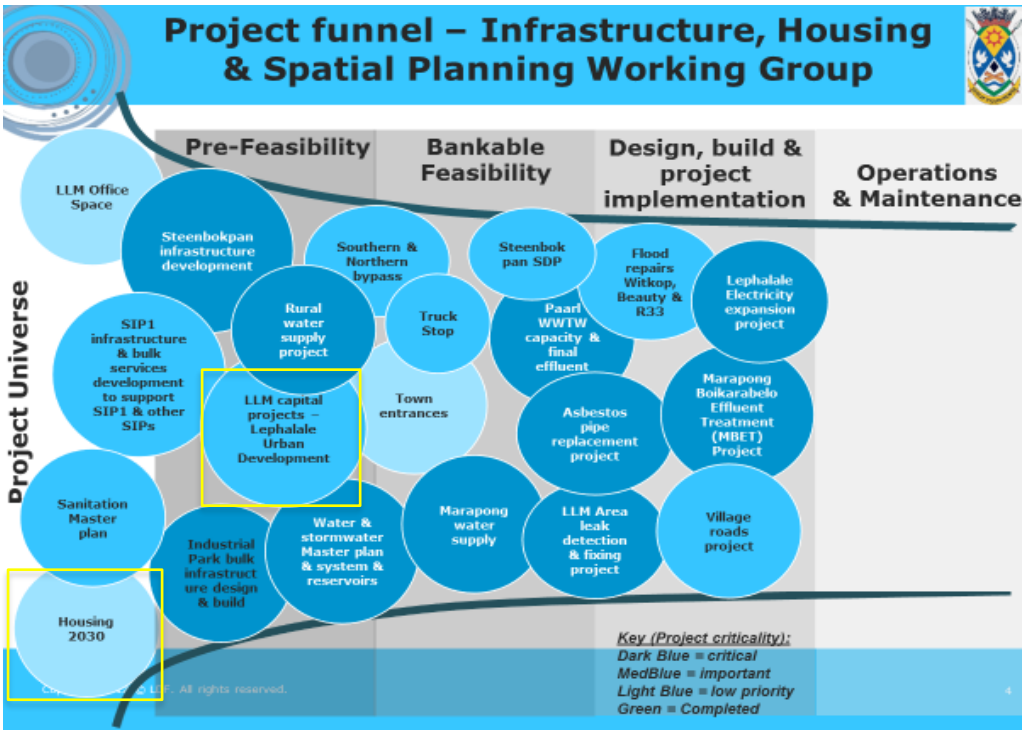


Figure 15: LDF projects progress. Source: (Lephalale Development Forum, 2015). Dark blue: critical, Medium blue: important; Light blue: low priority; Green: completed. Lephalale Urban Development is not considered critical and Housing 2030 is a low priority

B) Who is driving residential development

It was confirmed by all three LLM respondents that the municipality is not accredited to administer National Housing programmes. When researcher probed if there was anything being done to ensure that the municipality realizes its vision given that it is not even accredited, it was pointed that the municipality has been receiving very little support from both provincial and national government. During the interview, the MM pointed out that accreditation is not an achievement, assignment is. Accreditation, it was explained, is

recognition by the MEC that the municipality needs support to acquire the capacity to achieve assignment, and this support has been lacking.

It was also pointed out that the municipality was never empowered to deal with the demands associated with the construction of Medupi. The municipality had neither the sufficient qualified human resources to plan for the boom nor the financial capital to react to it. It was further pointed out that despite the challenges becoming clearer since construction began in 2008, the municipality had never received a special grant and its 2016/2017 budget allocation from Treasury, given to all municipalities to fulfil their constitutional obligations, was 'a mere R35 million'.

Given that this allocation increases annually, it means the municipality received a lesser amount the previous year and even lesser the year before that, and consequently struggled to provide basic services at the scale and pace of development. As a result of this incapacity, early housing projects were predominantly driven by and for the benefit of Eskom, Exxaro and private developers. Even bulk infrastructure including water, sewage, stormwater and electrical reticulation, was provided by private developers on some projects, specifically Ledibeng, and handed over to the municipality. This kind of reliance by the municipality on private corporations simply made it difficult for it to bargain and exert its influence on development. The small budget coupled with little revenue effectively meant the municipality could not use provision of bulk infrastructure as a tool to drive the private sector to a particular direction.

The municipality was hamstrung to initiate projects for the benefit of the broader community. Both the Joe Slovo project (provincial project) and Marapong CRU were started in 2016, eight years after Medupi started and neither was complete at the conclusion of study.

However, during an interview with an Eskom official it transpired that Eskom had very little to do with housing development, with indications of early land speculation by private developers emerging. The official stated:

"You know, even before the official announcement was made [about the construction of Medupi] private developers were coming to us with proposals. Somehow they knew about the project and they bought all available land!"

Eskom simply told private developers what they require and developers came back with a finished product, ranging from an entire neighbourhood to a block of flats. Because these houses/flats are meant for professionals and management, they had to be 3-bedroom/2-bathroom units some with double garages others with single garages. The official pointed out that Eskom doesn't own any land which the company could develop and was dependent on private developers who capitalized on their desperateness.

Exxaro on the other hand, owned substantial land in the study area and was developing it according to their needs. In probing whether the National Housing Code's programmes were implemented during the early development, the official suggested that this was not even considered. He responded by saying:

"We're not in the business of housing delivery so those programmes don't apply to us."

This quote seems to suggest ignorance because even though corporates may not be aware of government's housing programmes, by providing the living-out-allowance to some and accommodation to others, mining corporates are demonstrating awareness to the need to diversify housing options. Furthermore, it fundamentally highlights lack of coordination between different government's departments in dealing with the private sector. This becomes more apparent when one considers the following response from Exxaro:

"Look, we submit our Social Labour Plans to DMR [Department of Mineral Resources] for approval, if there's housing programmes we need comply with, they should tell us."

This means there is a gap between what government and private sector are doing regarding housing issues. This is not supposed to be the case because the municipal IDP and the corporates SLP are supposed to be aligned. This gap indicates the need to involve the affected municipality in the approval of the SLP, as DMR alone is not equipped to deal with IDP-related issues and therefore would not know if the submitted SLP adequately responds to the most important needs of the affected community.

This lack of alignment became obvious during a discussion on Exxaro's housing initiatives. The company seemed more concerned about energy-efficient building technologies. The official described their housing development as "an innovative energy efficient housing development project model that demonstrates multiple energy efficiency building methods that can be applied at any development project". The official also used the term "sustainable development" and when asked what does that term mean to their organization, not only did he explain it in terms of green technology, he also admitted to not knowing what it means in relation to planning. When the researcher brought up policies like SPLUMA he conceded that he was not aware of such. However, he did say he's heard of BNG but is not really clued up about what exactly it entails.

At the end of the interview he emphasized that their objective is to provide housing and facilitate home ownership particularly through the Finance Linked Individual Subsidy Programme (FLISP) as part of their Social Labour Plans. It was mentioned that the Chamber of Mines is engaging with the National Housing Finance Corporation (NHFC) to address bottlenecks related to FLISP implementation. While employees generally receive either a house or a living-out allowance, the company has a five-year mortgage subsidy for permanent employees who are first-time home buyers. Reference was also made to developments like Sunrise View and Platinum Village which were built and funded by Implats in Rustenburg, and the houses then sold to employees as some of the initiatives by the industry to promote home ownership. In light of issues discussed, the Exxaro official concluded, there is a need to align industry initiatives with government's housing policies, which the government should play a leading role in.

It also transpired that the municipality had to rely on a planner made possible and funded by the corporates, which corroborates that the municipality didn't have a Planning and Development Manager during the chopping and changing of municipal managers, as discussed earlier. This planner, however, was seconded to the municipality for a very short time (about 3 years). This could mean that the planner was provided to ensure that interests of corporates were served despite the municipality's shortcomings.

Challenges to housing development

The unintended consequence of early housing development being wholly driven by the private sector is not attributable to the incapacity of the municipality only. It emerged that

the combination of the load-shedding crisis, the recession and the 2010 soccer World Cup all meant that Medupi became an urgent priority. One respondent eloquently narrated this point, stating:

"the country is experiencing load-shedding, the whole world is going through a recession and you got a World Cup coming. Eskom was under serious pressure. Do you really think the government cared about those issues?"

This quotes highlights competing interests between various stakeholders with government in particular seemingly less interested in spatial transformation issues. The significance of competing interests having an impact on the municipality's plans was also made glaring when it was pointed out that Groothoek Coal Mining Company (Pty) Ltd had prospecting right on the farms Eendracht 505LQ and Groothoek 504LQ up until 31 July 2015 and had made an application to renew these rights. Given that the Waterberg coalfields is part of the Strategic Integrated Projects identified by the Presidential Infrastructure Coordinating Commission, and that these rights were renewed in 2012 (before lapsing again in 2015), there is a high expectation that they will be renewed again. Since these farms are located between Onverwacht and Marapong thus best positioned to directly address this buffer zone, mining activity in this area will not only prevent the integration of these nodes, but it also builds an actual physical barrier separating them, see Figure 16.

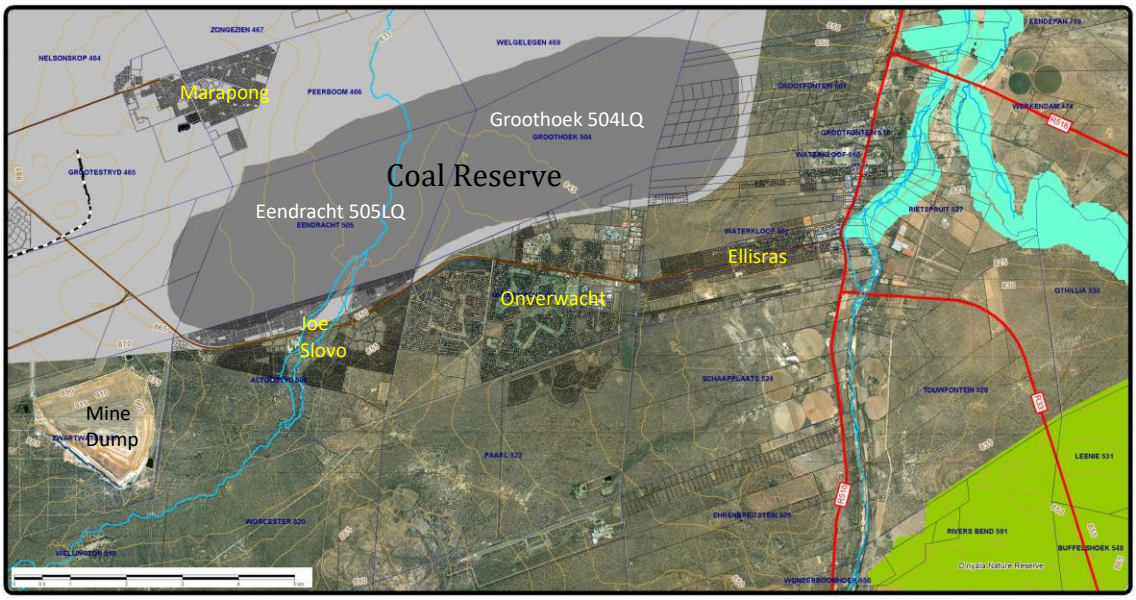


Figure 16: Coal reserve separating Onverwacht and Marapong. Source: Lephalale Municipality (2013)

Another case of competing interests was the development of the Joe Slovo project. While the municipality applauded the Joe Slovo project, it was pointed out by one respondent that this is a large-scale housing project driven by the HDA (and by extension the DHS) and CoGHSTA, which will most likely serve attention-grabbing political interests. The official also expressed concern that this project will further sprawl the urban space and cannot be guaranteed to result in a commercial and higher-density residential area, especially since its aimed at low to middle income groups, which are generally not seen as attractive to investment. The official made an example about length of time it took Cosmo City to be considered a success albeit with mixed opinions.

Perceived complexities and controversies of implementing large-scale housing projects were expressed by the same official particularly that they create new artificial environments that fail to fit into the existing urban structure. The N2 Gateway project was cited as an example. The concerned official preferred an approach which would provide high-density development for very low-income beneficiaries around Ellisras, which all respondents from the municipality mentioned has been earmarked for middle to high income groups.

C) Planning Framework

All development at the time of the research had been done through the Ordinances and the 1995 Development Facilitation Act (DFA). As the municipality was also still in the process of revising its Spatial Development Framework (SDF) to align it with SPLUMA, there was no urban edge/green belt confining new development within the existing urban boundary. One municipal official pointed to the development of Ledibeng as development built beyond existing boundary (see Fig. 13) thus not helping with the infill strategy. It was explained that this was achievable because the municipality was by-passed in the approval process.

Prior to SPLUMA coming in operation in 2015 there was conflict over township development as the former Transvaal Provincial Town-Planning and Townships Ordinance 15 of 1986, for example, gave the province decision-making authority making it the institution of first instance. Through the DFA, applications could be fast-tracked to bypass the executive powers of veto of the municipality thus undermining it to govern in its own right. Developers, according to both private developers and municipal respondents, preferred the province over the municipality because historically provinces have had many years to establish necessary structures to process applications with greater efficiency. Added to this

advantage is that provinces receive a larger share of the fiscus thus enabling them to attract and retain skilled professionals thereby offering a better service while further disadvantaging municipalities, especially the smaller ones.

The abovementioned advantages were expressed as concerns by property developers with regard to SPLUMA. Section 53 of SPLUMA requires that registration of property resulting from a land development application be performed after the municipality certifies that all the requirements and conditions for approval have been complied with. Respondents pointed that the municipalities already lack the capacity to deal with applications and would require additional time to build the necessary capacity to administer SPLUMA. Compounding this challenge is the incorporation of traditional leaders input required by SPLUMA. Private developers felt that even with the best development intentions, the engagement and co-operation required by SPLUMA may result in delays in implementation.

Other challenges cited were planning and pipelining of projects. It was cited by municipal and corporations' officials that there is no alignment of projects in general with infrastructure funding and implementation. The researcher is aware for example that Eskom had to carry the cost of improving the road to Medupi Power Station (MPS) because the municipality said it was a provincial road and the province said it had not budgeted for it since it was not consulted about MPS. Also, there is no structure dedicated for mining towns' oversight. However, it was mentioned that that the HDA is working with municipalities and provinces to get these established and that, as part of the Mining Towns Strategy, a Human Settlement Transformation Plan has been drafted and is being consulted on. The researcher, however, could not find anything regarding the Mining Towns Strategy except being mentioned in parliamentary minutes as something the Department of Human Settlements is working on (Parliamentary Monitoring Group, 2015).

D) Housing Programmes

At the time of research only the Community Residential Units (Marapong CRU Project) was being implemented by the municipality. Housing projects were predominantly driven by private developers and corporations without any specific requirement to comply to any of the housing programmes. Corporations were more interested in green technology and finance programmes to promote home ownership than spatial transformation.

The municipal IDPs from 2008 to 2016 seemed to be updated duplicates of the same document. While they mention widening housing options, nowhere do they explicitly talk about programmes the municipality intends implementing to achieve this.

6.3 Observations

Field observations were conducted to identify new housing projects in order to determine their location and housing type. Where available, more information was obtained from the relevant developer about house plans, sizes and prices. This is just to give a reader a better idea about the houses built and the income group they serve considering that 38% of local population lives under the poverty line of R14 600 per annum, at 2013 prices.

As stated in the limitations of the study, it would have been impossible to identify all housing projects in the area thus only projects undertaken by the municipality; corporations operating in the area as well as large private developments significant to answer the research questions were considered. Game farms, guesthouses, private houses where owners have either moved to (maid's) cottages within the premises or found alternate accommodation somewhere else, were not considered. Notwithstanding, some small developments will be highlighted, again to give a reader a better idea about the houses built and the income group they serve.

6.3.2.1 Joe Slovo Housing Development (Limpopo Provincial Government)

The Limpopo Provincial Government in collaboration with the HDA is developing an integrated human settlement known as Ellisras Extension 102, located on the farm Altoostyd 506-LQ, which is directly west of the township of Onverwacht and directly north and south of the road to Marapong/Matimba Power station (Figure 17). Bulk infrastructure for this project is provided by provincial government.



Figure 17: Joe Slovo housing development. Source: HDA (2015)

The project was first announced and proclaimed in 2012 by then Human Settlements Minister, Tokyo Sexwale and R234 million was invested on bulk services including water and sewer pipelines, reservoirs and substations. Reporting on the project, Raats (2012, p. 2) writes:

"The project is only the first phase of the department's plan to develop 30 000 housing units with an anticipated delivery of around 2 000 units a year over the next 10 years in the burgeoning town. The balance will be made up by private developers"

It will yield approximately 5 000 mixed income housing units, business use areas, public use areas, education and other land uses primarily related to residential land development. The Municipal Manager reiterated that these are aimed at low to middle income groups. Raats (2012) also, reports that former MM Mr. Naidoo stated that the idea behind the Altoostyd housing project is to integrate the community by building middle income, low income and RDP houses on the same estate.

According to the provincial official, RDP houses will be built on some of the land while some other land will be sold to companies to build houses for their workers thus this development will restructure Lephalale into a mega city and represents an example of how government plans to develop mixed-use residential areas. However, in August 2015 the HDA requested proposals for the market feasibility study with the specific aims to:

a) “determine relevant market trends in the business, industrial and residential property market” and
b) “to determine whether there is a gap for development of business, industrial and residential units in the proposed Altoostyd development” (HDA, 2015, p. 3).

This raises doubt about the planning of the project. It seems like the cart was put before the horse by proclaiming the output when a feasibility study was not done yet. At the time of the research, no houses had been built and services installation had completely been stopped. The township registration was still awaiting finalization of the floodline report and services agreement.



Photo 3: HDA Signage



Photo 4: Joe Slovo. Source: Author (2016)

The installation of services was expected to be completed by September 2016. However, when the researcher returned to the construction site on March 2017 not only was this incomplete, there was also no work going on and contractors were not on site. The site remained empty till the completion of the study.



Photo 5: Installation of power lines incomplete



Photo 6: Site closed but bulk services incomplete

6.3.2.2 Marapong Community Residential Units (CRU)

The Marapong CRU is a project aimed at replacing the Marapong hostel with 514 units, ranging from bachelor- to two-bedroom units and is targeted for people earning between R800-R3500 per month. At the time of the research the verification of beneficiaries had been completed to ascertain rental affordability and all those who can't afford the projected rental would be allocated a state-subsidised house. The project requires that 223 residents currently living in and around the hostel be temporarily relocated to a facility at Altoostyd since neither CoGHSTA nor the Municipality have alternate available land in the area.

The project was planned to start in January 2015, however with Altoostyd's services not complete, relocation and, by extension the CRU, had not started at the time of the research. The researcher also found that during a site visit the Portfolio Committee on Human Settlements delegation expressed concerns about the timing of the relocation of hostel dwellers because it would take time to clear the Altoostyd land (Parliamentary Monitoring Group, 2015).

6.3.2.3 Lephalale Housing Project (Eskom)

Eskom's property portfolio includes 995 houses and 321 flats developed by private developers and sold to Eskom. Additionally, the company set up contractors' villages (single sex hostels) in Marapong with the capacity to house nearly 7 000 employees. The contractors' villages will be demolished at the end of the project, land rehabilitated and handed back to the owner, Exxaro Resources and the houses will be utilized by the company's qualifying employees. The houses are built in cluster villages spread over Ellisras and all have a mandatory solar geyser and at least two air-conditioners.

- Imbani Villages (Ellisras)

  These are 5 villages developed by a private company for Eskom on a turn-key basis and comprise of 320 houses. The developer describes these as high-income cluster developments. All these villages have a boundary wall around them and one access point. Some have a physical barrier at the access point (security gate; boom gate, etc.) or security guards to control access and others don't.






- Silver Charm

  Silver Charm is an all new neighbourhood comprising of 160 houses. Built by a private developer and sold to Eskom, all the houses have 3 bedrooms and 2 bathrooms. Unlike Imbani Villages, this neighbourhood has no perimeter fence around it and it easily accessible from the main road (Nelson Mandela Drive).



Image 1: Silver Charm neighbourhood. Image courtesy of Palace Group

6.3.2.2 Lephalale Housing Project (Exxaro)

Exxaro constructed 740 environmentally-friendly homes for use by employees required as part of the expansion of its Grootegeluk mine. The designs incorporated the efficient use of renewable energy such as solar architecture (houses are built with overhanging roofs to capture rain water which can be used for domestic applications and are positioned to face north-east and between trees for improved temperature regulation and efficient lighting), solar powered geysers and gas stoves.

The allocation of the housing is as follows:

- 124 Housing Units scattered in Onverwacht



Photo 7: Typical unit in Onverwacht



Photo 8: One of the eight golf course units

- 40 Housing Units scattered in Marapong



Photo 9: Marapong scattered housing

- 284 Flat units in Onverwacht



Photo 10: Swartrif Manor (168 units)

- 292 Flat units in Marapong



Image 2: Marapong Flats. Photo courtesy of Exxaro

6.3.2.3 Ledibeng Eco-Estate

Situated on 635ha, Ledibeng was the biggest private development at the time of research. The development includes approximately 2 400 residential stands, 288 residential cluster units, three school stands and a medium sized commercial stand. 550 stands were sold to Eskom of which 350 houses have been constructed and the 200 remaining are earmarked for Eskom's management for the Medupi Power station. Wholly developed by a private developer, Cranbrook, who also provided the bulk infrastructure, the estate is access-controlled with security at the entrance. The estate is located adjacent to Onverwacht on the South (Figure 18).



Figure 18: Ledibeng Eco Estate. Source: Cranbrook

Eskom owns 350 units in the estates, which are described by the projected management company that oversaw their construction as “high-income units”.



Photo 11: Typical house in Ledibeng

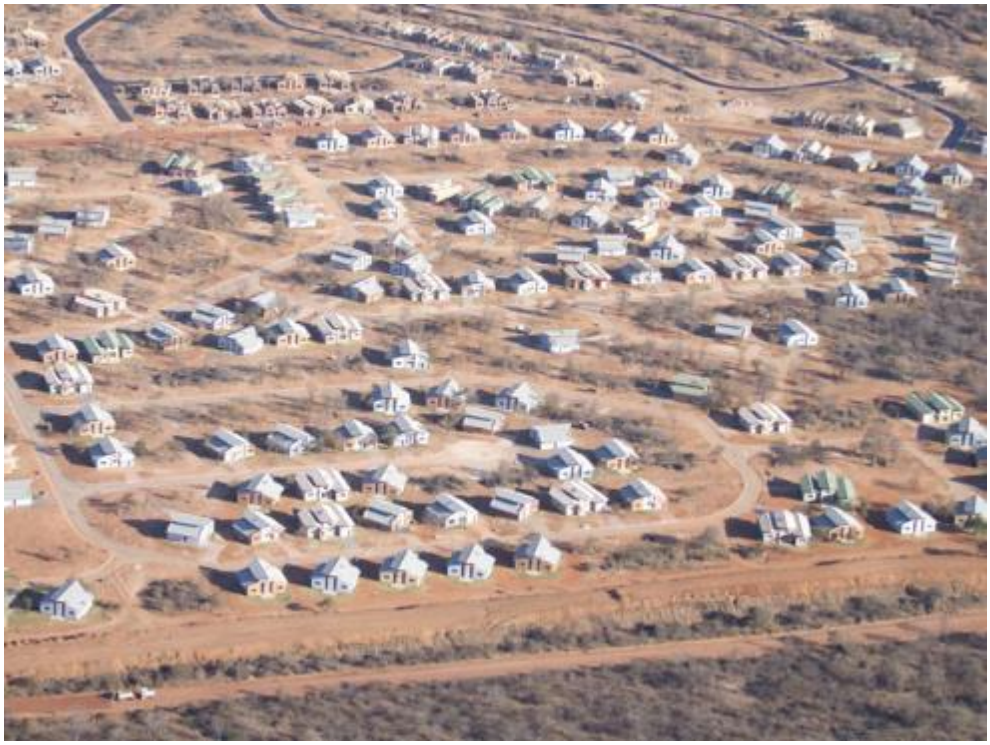


Image 3: Ledibeng Estate. Image courtesy of Palace Group

6.3.2.4 Other Significant Developments

Mopani Estate (Ellisras)

Mopani estate is a gated-community development comprising 24X3-bedroom houses. It is located at the Ellisras node.








Marula Security Village (Ellisras)

This access-controlled village consists of 36 3 Bedroom, double garage houses a guard house and clubhouse.






There are other ‘estates’ of much smaller size, e.g. less than 10 houses like Doornhoek and Sekelbos Villas. What is common about these developments is that they are not developed by established property developers, rather by people trying to cash in on the housing within one boundary wall and a remote-controlled security gate provided.



Doornhoek



Sekelbos Villa



Further to estates being built is a multitude of townhouse complexes. Table 4 lists a few of these townhouse complexes.

Name of Complex	Storeys/Levels	Units	Beds	Location
Adelsa Court	3	38	3	Church Street
Boscia Court	3	48	2 & 3	Onverwacht
Crystal Waters	3	148	2	Ellisras
Kloppenheim	3	420	1, 2 & 3	Onverwacht
La Bela Rosa	2 (duplexes)	65	3	Onverwacht
Lephalale Heights	2 (duplexes)	92	2	Ellisras
Troupant Court	3	33	2 & 3	Onverwacht
Villa Cynell	3	38	1 & 2	Church Street
Villa Michelle	3	38	1 & 2	Church Street
Villa Mija	3	38	1 & 2	Church Street
Waterberg 1	3	255	2	Onverwacht

Waterberg 2	3	201	2	Onverwacht
Zebra Village	1	48	1, 2	Onverwacht

Table 4: Some of the new townhouse complexes in the study area. Compiled by author.

It is apparent that there is a significant response to the hosing need in Lephalale. While the municipality has not delivered a single a single project yet, the mixture of housing types delivered by the private sector ensures that there's a variety of options to choose from. A bulk of this housing development has occurred within the Onverwacht node while development in the Ellisras node seems to be skewed towards security villages/estates (perhaps reflecting that this node is earmarked for the high-income group?).

6.4 Chapter Summary

This chapter presented the research findings. It revealed that while the municipality is indeed aiming for spatial transformation as stated in its plans, apart from densification there isn't a comprehensive strategy/policy on how this should be achieved. Although densification is encouraged, there is less said about integrated settlements. Despite anticipation of economic growth and presence of characteristics of boom, no long term comprehensive strategy has been developed. The similarities of the IDPs and SDFs suggest a copy and paste reproduction of the same document. Also, the reviews continue to be undertaken at five-year intervals instead of shorter intervals that would allow the municipality to keep abreast with the boom.

Within the municipality there seems to be a high staff turnover, vacancy in key posts and insufficient budget, which inevitably affects the functioning of the Lephalale Development Forum (LDF). The LDF itself is primarily focused on infrastructure needs (probably to serve the corporations) rather than social needs. Consequently, the municipality has not played a leading role in directing housing provision. Consequently, private developers and corporates are implementing housing delivery in a manner that meets their objectives rather than those of the municipality while the provincial and national governments are more interested in the mega housing project of Joe Slovo.

This uncoordinated response to housing has thus led to neighbourhood integration being neglected. Big and small estates are being built but these creates private cells that are actually excluded from the rest of the neighbourhood. Housing delivery is taking place

without any application of the planning principles and housing programmes aimed at creating a spatially transformed city.

The next chapter analyses the findings in the context of the literature reviewed to arrive at a conclusion about the emerging human settlements pattern.

CHAPTER 7: ANALYSIS AND INTERPRETATION OF RESEARCH FINDINGS

7.1 Introduction

The main objective of this chapter is to interpret the findings presented in Chapter 6 against the literature and theory presented in Chapters 3, 4 and 5. Because literature revealed that boomtowns, first and foremost, require a long-term plan and economic diversity to transcend the boom-bust scenario, the results will be analysed against this background. Furthermore, since South African cities should avoid sprawl and rather aim for compact development, data from interview findings and document reviews is assessed in relation to factors influencing urban sprawl or urban compaction as summarised by Bhatta (2010). This is followed by a further analysis using the Compact City concept. Due to the many interpretations of the compact city, the study employed the Organisation for Economic Co-operation and Development (OECD) interpretation because of its collaboration with South Africa on policy issues which include urban development. Since Lephalale is divided into distinct nodes, this interpretation was useful as it doesn't only look at compactness of monocentric urban structures, but also of polycentric urban structures. Urban agglomerations, with proximate urban cores, linked by public transport systems are key for a polycentric compact city.

7.2 Boomtown Strategy and Economic Diversity

Literature revealed in Section 3.4 that proper planning and economic diversity are essential for boomtowns to flourish.

The findings reveal that the Lephalale Development Forum (LDF) was established precisely to serve as an apex advisory body to Lephalale Local Municipality (LLM), helping it respond to and navigate the economic boom. Given the mix of players that constitute the LDF, one would have expected it to provide strategic planning on cross-cutting issues that influence the long-term development of boomtowns, as advanced by Ennis, et al. (2013) and Michell & McManus (2013), and probably come up with its local version of a development plan similar to the National Planning Committee's National Development Plan.

However, despite boomtowns' tendency to promote inequality, the LDF seems more interested in serving interests of the corporates rather than driving inclusive development. This is glaringly evident in the fact that, despite most boomtown researchers agreeing that

housing shortage is a common critical problem in boomtowns (e.g. Ennis, et al., 2013; Jacquet, 2009; McKenzie, et al., 2009), the LDF considers housing a low priority, as was shown on Figure 6.4. This in spite of existing housing filling up quickly while new housing (Joe Slovo and Marapong CRU) is taking longer to materialise.

Additionally, despite research being unanimous that house prices in boomtowns marginalise the poor (Ennis, et al., 2014), the LDF, comprising of the very corporates that are developing/buying houses, has not advanced any policy or programme geared towards addressing affordability and access to finance. Low levels of housing affordability have for years been apparent across the nation but the problem clearly becomes acute in a boomtown. In a small remote area, better planning to enhance liveability and attractiveness is critical and, in a boomtown so is adequate supply and mix of housing as well as the issue of affordability. As a result of elevated house prices, people who would ordinarily afford reasonable accommodation are condemned to overcrowded conditions in Marapong. What should be a housing crisis for the unemployed and destitute groups now reaches into the working population evinced by the local hospital's struggle to retain staff because of the rising house prices (Ackroyd, 2014).

The LDF has also been affected by leadership disruptions that most certainly would have hampered its functioning. As a result, the opportunity of rallying the municipality early around a common set of predetermined key challenges faced by boomtowns was missed. Specifically, strategic planning emanating from lessons drawn particularly from Emalahleni has largely been absent. Consequently, there is no talk from LLM of the need to diversify the economy. On the contrary, LLM seems to be more excited about further investment in physical coal-oriented projects rather than strategically positioning itself as the corporate hub of coal mining given that as part of National Energy Programme, LLM is envisioned to become a "coal gate into Africa" (WDM, 2013, p. 7). Physical coal-oriented projects will not only produce a higher concentration of coal centres, for example mines and power plants, but will also perpetuate dependence on a single industry thus not create enough thresholds for diversification and probably attract the same resource curse that has devastated Emalahleni.

A diversification strategy could comprise of:

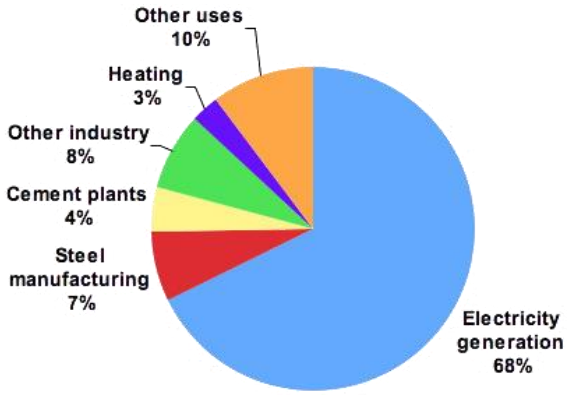
a) Advancing beneficiation, metal fabrication and equipment manufacturing;

b) Green and energy-saving industries;

c) Revitalisation of the agriculture and the agro-processing value chain; and

d) Tourism.

With the anticipated strong growth in the mining sector, the municipality should advance beneficiation. It must work with the private sector to promote innovation and secure investment in research and development. Beneficiation can stimulate a manufacturing industry around coal whereby different types of coal are used for different purposes as can be seen on Graph 4.



Graph 5: Breakdown by usage of the world coal consumption in 2007. Source: International Energy Agency (2009)

Steel manufacturing, for example, can produce steel that can be used to build the very trains and rails that are required to transport the coal. Transnet is already looking to increase its rail capacity and Exxaro is working with Industrial Development Corporation, Botswana and Namibia governments to link up the proposed Trans Kalahari-Walvis Bay rail to Waterberg. So, there are development opportunities in steel manufacturing and more jobs could be created, profit margins and return on investment improved and a wider prosperity achieved. This a more beneficial exploitation of the municipal natural resources than just harvesting for exports. It is worth remembering that the literature in chapter 3 revealed that Lephalale's earlier development was majorly influenced by ISCOR, a steel producer. Therefore, the contribution of steel manufacturing cannot be ignored.

Secondly, the output of waste material can correspond positively with economic activity. With corporates already investing in green and energy saving technology, the municipality can look further for development in green economy. In this regard, the municipal vision of becoming the energy hub should not only be about coal production. It must also encompass energy-saving activities like recycling and waste-to-energy processing. As Lephalale becomes

more urbanised, greater effort will be required to manage waste. Understanding waste as a resource to be exploited instead of end-of-use material to be disposed of, will unlock the provision of more energy services. Therefore, development in this area would not only provide more opportunities for poverty alleviation but also, it would put the municipality in a pioneering role in waste management issues and provide a framework for other cities to deal with waste.

Thirdly, agriculture and agro-processing are established industries in the Waterberg district. However, there are opportunities for growth and development. Commercial production must be harnessed to stimulate the development of value chains that are inclusive to emerging farmers. Investment in education on good agricultural practices and cluster (e.g. red meat cluster) formation can move this sector beyond just being a low-wage labour-intensive sector. A policy that pays attention to issues like improving education and skills; provision of essential infrastructure; building capacity in technology; improving institutional efficiency and opening access to capital markets will be essential for the development of clusters.

Fourthly, promotion of the local tourism industry provides an important opportunity for small town and rural development. The protected Waterberg Biosphere (declared by the United Nations), lends itself to eco-tourism that can be promoted to educate and provide funds for ecological conservation. The Mokolo Dam and D'Nyala Nature Reserves as well as the game ranching industry also provide opportunities for tourism attraction. The good accessibility via the N1, also means a tourism transportation service and tour operators can be developed.

Lastly, the above diversification strategies will expand the tax base and as such must be accompanied by a strategy to collect rates and taxes. Municipalities rely on their revenue and intergovernmental transfers to fund their constitutionally mandated responsibilities. Intergovernmental transfers are usually allocated for a specific purpose and have conditions attached on how they may be utilised, which is not the case with municipal revenue. Maximising municipal revenue collection is therefore pivotal for improved performance and efficient service delivery. Every effort must be made to develop the necessary processes to ensure that all properties are charged for property rates and all services rendered to the property.

7.3 Causes of Sprawled Growth

This section analyses and interprets the research findings through Bhatta's framework as presented in sub-section 5.4. However, only the causes present in Lephalale at the time of the study were considered as these best explain the emerging spatial trends. Causes applicable to both compact development and sprawl were also considered as these may eventually advance sprawl should they not be managed by the municipality. These causes are presented in Table 5.

Sprawled Growth Factor	Description	Evidence of presence in Lephalale
Population Growth	The growth in population caused by natural growth or migration	Population has more than quadrupled mainly due to migration from about 7000 in 2007 to about 30000 in 2015 (Weavind, 2015)
Independence of decision	Stakeholders have different expectation about the future and take decisions to meet their own expectations, especially if the city lacks a master plan	Corporations are providing houses for their employees geared towards energy efficiency without consideration to spatial transformation and housing related challenges, e.g. low-cost housing. HDA develops Altoostyd in collaboration with CoGHSTA without proper planning with LLM. Private developers cashing in on the boom without any spatial transformation principles imposed by the municipality. Leadership issues at the municipality affecting the effectiveness of the LDF that is meant to bring various public and private stakeholders together as partners in growth. (interview data)
Economic Growth	Expansion of economic base resulting in demand for new housing triggering rapid construction of discontinuous uncorrelated new developments	Lephalale's GDP is expected to increase by about 95% per year (Faku, 2013). Demand for living space far outstrips supply (Weavind, 2015). Over 1300 units by Eskom; 740 by Exxaro and plenty more by private developers

Industrialization	Establishment of new industries requiring provision of housing facilities in a large area	Industrialization particularly mining is the basis of the economic boom in Lephalale.
Speculation	Speculation about future growth causing premature unplanned growth	"The Waterberg Coalfield is still under-studied, and much work needs to be undertaken before we can confidently estimate the amount of coal resources and reserves contained in it" (Fourie, et al., 2014, p. 223). Developers approaching Eskom before official announcement of Medupi (interview data)
Expectations of Land Appreciation	Higher growth rates in urban areas results in greater expectations for land appreciation	Land is held back for future developments resulting in discontinuous pattern of development
Physical Geography	Presence of unsuitable physical terrain, like wetlands, mineral land, etc.	Wetland prevents Lephalale from developing to the East. Groothoek Coal Mining Company (Pty) Ltd has prospecting rights on the farms Eendracht 505LQ and Groothoek 504LQ preventing infill development (interview data). Development of Altoostyd hampered by floodline
Lack of affordable Housing	Lack of affordable houses within the city forces people to settle on the periphery	Housing developments are on the Ellisras and Onverwacht Nodes and are geared towards the middle and high-income groups (observations and interview data). Also, there is an overflow of shacks at Marapong (observations) Half the households in Marapong had rented out backyard rooms (Mantshantsha, 2013). Marapong CRU incomplete and house construction has not begun at Altoostyd (observations).

		Hospital struggling to retain staff because of the rising housing costs (Ackroyd, 2014)
Single-family Home	Single-family homes waste vertical space significantly resulting in horizontal growth	Developments like Ledibeng, Marula & Mopani Estates and Church street are spread out (Maps 7.1 & 7.3)
Lack of proper planning policies	Lack of consistent and well-experimented mixed-use planning policies	Until SPLUMA, land planning was governed by unreformed laws. Developers preference of DFA and bypassing the municipality in the process (interview data). Municipal IDPs continue to be reviewed every 5 years
Failure to enforce policies	Not only are proper polices required, but their implementation is also important	Lack of BNG, IHP, IRDP and SHP projects in current developments

Table 5: Factors of urban sprawl and their evidence in Lephalale

Table 5 illustrates that in Lephalale there already exist a number of factors that perpetuate urban sprawl, therefore strategies to contain it are very necessary. The next section provides an analysis of such strategies.

7.4 Compact City Strategies

This section analyses the findings in relation to the compact city strategies discussed in section 5.5.

7.4.1 Set Explicit Compact City Goals

The study showed that the municipality has got national policies like SPLUMA and, at local level, IDPs that can help guide development. Also, the municipality has at its disposal various housing policy that it can implement to achieve socio-economic integrated human settlement. The Social Labour Plan (SLP) is a vital tool with which the municipality can leverage mining companies to address its socio-economic requirements considering that these companies must submit SLPs to be granted operating licenses. The combination of SLP and IDP can thus be used to set an explicit context-specific goal. Since SLPs must align with IDPs which in turn must align with the Housing Code, there exist a real opportunity for

cooperation between the municipality and the private sector to address densification as required in the Housing Code.

However, the findings revealed that current development is taking without the application of these policies. Housing development has been predominantly driven by corporations who think spatial transformation policies don't apply to them and private developers who prefer unreformed policies that bypass the municipality. While a vital policy like SPLUMA was only adopted years after the boom started, there was nothing stopping the municipality from adopting principles of policies like the IHP.

Furthermore, there seems to be a misalignment between the SLP and IDP. While Exxaro is eager to fulfill its SLP especially with regard to housing, its deliverables don't seem to correspond with the municipal SDF. The company's focus is limited to provision of housing but does not address how that fits into spatial transformation. This could be explained by the fact that SLPs are approved by the Department of Mineral Resources while the project of spatial transformation is dispersed across various ministries.

Also noteworthy, the municipality has no creative context-specific policy guiding both the economic and spatial developments. IDPs, and by extension SDFs, are tools expected of every municipality in the country. Lephalale's economic boom however, makes it a special case that should be treated differently; a business-as-usual approach is not good enough under the circumstances. Despite this, IDPs continue to be reviewed at five-year intervals, which simply means Lephalale Local Municipality (LLM) is not reacting swiftly to the dynamics of the economic growth. It's hope of turning out differently to Emalahleni is that the latter was indeed historically developed with apartheid policies to be a segregated city. LLM is effectively relying on policies developed by national government, which have had no significant success in spatial realignment thus far, but these are not even pursued with vigor.

In an environment where house prices are rocketing, there is no policy aimed at either addressing affordability issues or how financial schemes can be leveraged to link to the problem of affordability. While corporates are trying to promote homeownership for their employees and are even engaging the NHFC, LLM seems to have completely ignored the issue of affordability. High land prices and building costs, drive up the price of new houses, which reflects inefficiencies in the development process. Consequently, the market is being

allowed to exclude even the lower middle-income group that would otherwise qualify were it not for the spiralling house prices. What was a problem for the poor now reaches deeply into the middle class. This exclusion from the formal property market will end up contributing to the perpetuation of the very informality government dislikes.

7.4.2 Encourage dense and contiguous development

There was no finding of a long-term incremental and sequencing approach aimed at densification. Developments are popping up all over without any coordination. Even though the municipality is promoting densification, single houses per plot developments, for instance, are undermining this strategy. As pointed out by Dewar (1992), low-density sprawl in urban management is fuelled by largely unmanaged suburbia development that promotes a single-storey house on a large plot. Map 6.1 illustrates how the Ellisras node is already sprawling due to single house per plot developments.



Map 1: Sprawled and fragmented development pattern emerging at the Ellisras node. Adapted from Google Maps

What is also evident from Map 1 is that the Ellisras node is developing in a fragmented fashion, which will also require densification in future. A sequencing strategy and a Housing Development Agency (HDA) working under the municipality (or better consultation between the two institutions) could have seen the HDA acquiring land and/or private developers developing it in accordance with the sequencing strategy thus fostering development that avoids fragmentation. Where land acquisition is not possible for whatever reason (owners

not willing to sell; land disputes; etc.) the sequencing strategy could still have enabled LLM to proactively plan around the expected vacant land. Zoning and bulk infrastructure supply, for example, could then be used to influence future development.

While the developments shown in Map 1 seem to be collectively densifying the Ellisras node, this is simply a perpetuation of low-density and actually makes things worse as low-density will now exist on a larger scale than previously. The estates on the South are not only away from existing built-up areas, but also their linear structure means their density far exceeds the population density, i.e. people per square meter. Silver Charm, which has more units than both Marula Estates combined, provides a nice contrast to the linear structure of the south estates. Crystal Waters is the only townhouse complexes in this node thus not having an impact on breaking down the single-house per plot structure. Development on this node has been predominantly spontaneous low-density enclosed residential estates.
On a larger scale, sprawling is emerging with the continuation of linear development through the construction of the proposed Altoostyd project. This project, even if it meets all its mixed-use objectives, will produce a chain-like structure along route D1675/Nelson Mandela Drive. Consequently, the liner structure will result in a spatially extensive development thus doing nothing to compact the existing urban structure. Ledibeng on the periphery of Onverwacht is further sprawling the town to the South while creating a low-density income exclusive residential node.

7.4.3 Enhance diversity and quality of life

Outside the Exxaro housing units, there is virtually no other formal development in Marapong. The demand for cheap and flexible rental accommodation has however led to a thriving small-scale private rental market. Consequently, there has been a rapid rise in backrooms and shacks thus further densifying what was an already dense node. Some households have also turned their homes into income generating assets by hosting homebased businesses like spaza shops; hair salons; shebeens, etc. thus creating a vibrant second economy. Despite this, Marapong remains an underserviced urban node offering very little opportunities to sustain livelihoods. The survival strategies by households seem to be viewed negatively in that they create a semi slum-like neighbourhood.

The Ellisras node on the other hand couldn't be more different. As illustrated in Map 1, developments in this area are manly in form of detached single-story houses, mostly in

enclosed villages. As these are owned and/or leased to corporates, it is not uncommon for a three-bedroom house to be occupied by a single employee thus perpetuating infrastructural inefficiencies and low-density. Consequently, population thresholds are not adequate to support public transport and other public facilities. These enclosed developments also exclude opportunities for small businesses while advancing monofunctional areas. Add the lack of amenities and the monotonous layouts and the result is poor quality neighbourhoods.

The Onverwacht node even though it is still largely residential, is starting to offer mixed-land uses and different housing typologies, see Map 2. The flourishing of amenities and the construction of the Lephalale mall in this node has resulted in some businesses fleeing the CBD and coming to set up in this node. The previously single quarters section has become valuable in offering cheaper housing options and is a viable option for people who don't want to stay in Marapong but cannot afford the prices of the formal market.



Map 2: Onverwacht node. Adapted from Google Maps

7.4.4 Retrofit existing built-up areas

The Onverwacht node is starting to takeaway business from the CBD much like Rosebank and Sandton have from Johannesburg's city centre. This presents an opportunity for CBD renewal projects. However, despite some business investment in the CBD, residential development has not been complimentary. The limited residential projects around the CBD

that could have rejuvenated it and provided accommodation in the heart of the town are actually sprawling away from it on Church street, as can be seen on Map 3.

Their linear structure of this development, which perpetuates sprawl, coupled with a lack of public transit service, encourages the use of private vehicles despite being in close proximity of the CBD. As an alternative, these developments could have been located on the South of existing development/East of CBD, putting them adjacent to the CBD and providing easy access thereto.



Map 3: Church street developments sprawling away from CBD. Source: Google Maps

7.4.5 Minimize adverse negative effects

The study showed that the town is sprawling and fragmented. Accordingly, it will still attract the problems associated with this kind of urban structure, e.g. carbon emissions due to heavy reliance on private motor vehicles; spread infrastructure, etc. There is also a significant lack of investment in public space. Housing development in the Ellisras node and Ledibeng in particular have not provided for social amenities.

7.5 Chapter Summary

The theoretical framework highlighted that to transcend the boom-bust scenario of boomtowns, proper strategic planning by all stakeholders is critical. This chapter showed that not only is this absent in terms of housing, but also in terms of spatial transformation through compact city strategies.

The next chapter focuses on the conclusions drawn from the study followed by recommendations proposed by the author. Research questions set out in Chapter 1 are also answered.

CHAPTER 8: CONCLUSION AND RECOMMENDATIONS

8.1 Introduction

The preceding chapters laid the foundation for the realization of this chapter, which is the pinnacle of the study. In this chapter, attempts have been made to answer the research questions posed in section 1.3 in chapter one. The answers provided to the research questions, concurrently furnish evidence for the achievement of the research objectives listed in section 1.4.

On the basis of the interpretation of the findings presented in chapter six, a number of conclusions have been drawn for the study as listed in section 7.3. Also, recommendations of the study have been formulated in relation to the conclusions in this chapter as outlined in section 8.4.

8.2 Answering the Research Questions

This section answers the research sub-questions culminating to answering the research question.

i. What is the vision for post-apartheid human settlement and how does this apply in Lephalale?

   The literature reviewed suggested that South Africa aims for compact, mixed-land cities that optimize social, economic and environmental aspects. This spatial strategy conforms to the Compact City concept, as was discussed in Chapter 5.

ii. What are the opportunities in fulfilling the vision of LLM

   Spatial transformation is a process that can take years to materialize, especially in areas that are already built-up. LLM has a huge advantage in that development in the urban area is on greenfield and therefore there is an opportunity to get things right from the very beginning.

   The Onverwacht node is offering a model of how Lephalale should develop its urban nodes. While compact development like that in Onverwacht is not sufficient to create a compact city on its own, the proximity of the Ellisras, Onverwacht and the proposed Altoostyd nodes makes it possible that a polycentric city could be

produced through the pursuit of a compact urban development policy coupled with an integrated transport system.

The Marapong node offers an opportunity of harnessing the small-scale private rental market. Since mining activities tend to expand and shrink at various intervals, recognising and understanding this market can lead to a policy response that focuses on the factors that will lead to positive outcomes, rather than a hostile policy framework that simply deems it undesirable.

Lastly, there is already a high emphasis on energy efficient and environmental-friendly construction methods. This should be part of the municipal requirements instead of being driven by the corporates. This way, LLM can look forward to achieving not just an integrated city but a sustainable one too.

iii. What spatial trends are evident in Lephalale and what explains them?
Lephalale remains fragmented with the original structural layout still very much intact. Large housing projects with the capacity to alter the town's footprint, e.g. Silver Charm and Ledibeng are uncoordinated and sprawling the growing town instead of consolidating what exists already. Also, these projects are developed without any consideration for socio-economic integration; integrated land-use planning; alleviation of poverty and inequalities. The consequence of this is mono-functional settlements that exclude the poor.

Furthermore, there is no significant evidence of increasing densities while connecting transport and land-use planning. Consequently, densification in Marapong is producing a settlement that is being perceived negatively because of its slum features. On the other hand, densification in Ellisras is producing fragmented neighborhoods.

iv. What policies and plans promote integrated and inclusive human settlements and how are these applied in Lephalale?
The study revealed that outside the mandatory Integrated Development Plan and Spatial Development Framework, which would still be required even in the absence

of economic boom, the municipality doesn't have any local context-based policies that is it implementing.

The primary research question of the study was to identify what is being done differently in Lephalale to produce a spatially transformed city as envisioned in many policy documents. The findings reveal that while there are some efforts, these are not necessarily a response to the economic growth. The municipality's infill strategy, for example, seems a logical expansion of the town and therefore would have been pursued as and when the town grows irrespective of the boom.

The following paragraphs explain why Lephalale is not offering anything new.

8.2.1 Lack of Proper Spatial Policy and Implementation of Housing Programmes

Until SPLUMA was adopted in 2015, development was primarily driven by unreformed policies that have had no significant success in spatial transformation. This problem has hampered many municipalities across the country and there was nothing that suggested Lephalale would be an exception.

There is also a gap between policy and reality. The municipality does talk about infill development to address the fragmented structure of the town. However, the nature of most of this infill development is not only exacerbating sprawl, but it is also fragmented itself and economically exclusive.

Furthermore, housing programmes that have the potential for social integration have not been pursued at all. There is not a single project that was done with the principles of either BNG, IHP, IRDP or SHP and the planned projects (e.g. Joe Slovo) are taking longer to materialize and there's risk that by the time they do they would have little effect to counter early settlement patterns. The poor's access to prime development is largely accidental in that it is only enabled by the private rental market in the former single quarters and not through pursuit of housing programmes.

8.2.2 Human Resource

There has been a high staff turn-over and vacancy in key positions at crucial times. Consequently, the municipality didn't have the capacity to respond to the housing

development. The small budget and rates collection didn't help neither to attract qualified and skilled individuals to form part of their human resources. This is another challenged that has been repeatedly spoken about as hampering municipalities to even carry through their own IDPs.

Deprived of a long-serving permanent MM for more than five years during which three acting MMs were appointed, the municipality simply didn't have the leadership to steer the housing development at its early stage. A planner sponsored by the corporates, when the municipality had other vacancies, seems to indicate that the corporates were only trying to fast-track their interests so that they could address their own housing shortages.

8.2.3 Lack of well-located land

The lack of well-located land is another common challenge that has been experienced by many municipalities across the country and it's the same with Lephalale. However, in Lephalale the major issue is ownership which could be resolved through horse-trading. Probably because of lack of leadership and corporation between government and private sector, the land that has been made available (Altoostyd) by the HDA is perpetuating the linear development of the town thus sprawling the urban area.

8.2.4 Gated communities

The urban land market is not just marginalizing the poor, but the rise of gated communities is creating fragmented islands, thus perpetuating segregation. Fragmentation refers to a cellular development pattern occurring in relatively discrete pockets or cells that are frequently bounded by one type of barrier or another, e.g. buffer zones; freeways; etc. (du Plessis & Landman, 2002). All developments indicated on Map 6.1 have open spaces around them. Consequently, they are fragmented by these open spaces and they in turn fragment the space by their non-contiguous and widely spaced development. This kind of fragmentation, contrary to permanent open spaces in use in fully built neighbourhoods e.g. parks, is a product of the land market. Small businesses and public facilities are also excluded from this fragmented development pattern and therefore there is no mixed-use development. Without any immediate plans to deal with this, one can only conclude that nothing is being done to counter the segregation tendencies of the past.

On a larger scale, the proposed Altoostyd project and the Ledibeng Eco Estate are further fragmenting the current urban structure. As things stand, the emerging pattern is a polycentric urban area comprising of Ellisras, Onverwacht, Ledibeng, Altoostyd and Marapong. Without an integrated transport plan, these nodes will not produce a polycentric compact city but rather a conglomeration of distinct nodes with different characteristics.

8.3 Conclusion

Although racial integration has been achieved in Lephalale, largely due to national politics, the majority of blacks are still confined to Marapong due to lack of affordable housing closer to the CBD. Furthermore, economic segregation is seemingly getting more prevalent with the Ellisras node emerging as the middle to high-income area, Marapong for low-income earners while Onverwacht is emerging as the mixed-income area.

In sub-section 2.6 it was illustrated that Lephalale is a microcosm of the apartheid city. Accordingly, a lot would need to be done not only to reverse the apartheid spatial trend, but also to provide a model for post-apartheid city planning. As Todes, et al. (2003, p. 271) put it "if urban restructuring is to be taken seriously, there is a need for substantial shifts in the orientation and implementation of housing policy". However, similar mistakes that have been committed by national government in efforts reverse apartheid spatial legacy seem to be repeated.

The detached house primarily designed for a nuclear family, which is one of the criticism of RDP housing, is being repeated albeit with middle to high-income houses. The prioritization of homeownership by corporates over other tenure options, another criticism of national government's response to housing, is inhibiting diversity in the formal housing market consequently excluding rental accommodation seekers. Furthermore, the focus on quantity particularly by corporates in order to meet their own needs, similar to national government's one million houses in 5 years target, is attending to housing exclusively as shelter thus neglecting other aspects of housing.

Just like how the apartheid city was founded on economic development based on unsustainable dependence on extractive activities, LLM is effectually relying only on the coal demand to propel it into "a vibrant city and energy hub of Africa". The result of all this is a rapidly growing town that is not offering anything new in terms of spatial planning and

human settlement transformation. Lephalale thus reflects mining towns characteristics based on the housing need of employers rather than post-apartheid planning considerations. Accordingly, not only is Lephalale conforming to its apartheid lineage but it is also exacerbating inequality by attracting all income groups only to provide for the middle and higher income groups.

8.4 Recommendations

Against the answers provided to the research questions above, the following recommendations are hereby made:

The municipality needs to take charge of its own development. It must formulate and adopt context-specific policy that meets current needs of the economic boom while addressing its long-term spatial vision. Policies formulated at national level are general and apply to all municipalities. IDPs and SDFs can attend to this but they need to be reviewed on much shorter intervals instead of every five years thus providing swift response to development. As is, new development is showing signs of apartheid characteristics, i.e. sprawl, fragmentation and separation. This needs to be stopped before it becomes uncontainable.

Furthermore, the SLP needs to be taken more seriously. It cannot be left to be an agreement between the Department of Mineral Resources and the mining houses while the municipality plays a passive role. Apartheid cities were built on the back of collaboration between the state and mining houses. Similar collaboration is absolutely necessary to reverse the apartheid legacy and SLPs play a vital role in this. Therefore, there needs to be a clear alignment of SLPs and IDPs, e.g. mining company's housing programme should be informed by and respond to the housing issues identified in the municipality's IDP. In Lephalale this could have been achieved by imposing Inclusionary Housing Programme principles on new developments like Ledibeng.

On the issue of land, the HDA needs to take directive from the municipality regarding land to be acquired. Smaller pieces of land that are strategically located should be preferred over a large piece that does little to nothing to address spatial transformation. It must be borne in mind that spatial transformation cannot happen overnight through one project. Incremental and sequential development may be deliver fewer housing than mega-projects but it's value lies in strategic placement of housing rather than the quantity thereof.

The emergence of secluded neighbourhoods is a phenomenon that is occurring everywhere so it probably would be unrealistic to expect it not to happen in Lephalale. However, this cannot be allowed to be a norm. The municipality needs to come up with its own version of IHP to counter this trend, just as the PGWC and Johannesburg are doing.

Lastly, a diversified economy is important in creating a sustainable municipal economic base. A well-diversified economy is less sensitive to the fluctuations associated with one particular sector because the risk is spread across a number of economic sectors. The municipality must therefore look at ways to stimulate growth in other sectors of its economy particularly around energy as it aims to be the energy hub of South Africa. And this must be coupled with a revenue collection strategy that ensures that all properties, especially the corporates, are charged accordingly for property rates and all services rendered to the property.



Map 4: Lephalale at the conclusion of the study. Source: Google Maps

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