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THE STATE OF HOUSING IN EKURHULENI: URBAN INFILLING VS MEGAPROJECTS IN THE LEEUWPOORT DEVELOPMENT, BOKSBURG

Martyn Sonny Vigus-Brown

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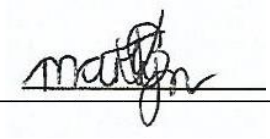


A dissertation submitted to the Faculty of Science, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements for the degree of Master of Science. School of Geography, Archaeology and Environmental Studies.

September 2019

DECLARATION

I declare that this thesis is my own, unaided work. It is being submitted for the Degree of Master of Science at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.



(Signature of candidate)

30th day of September 2019 at 17:00

ABSTRACT

Post-apartheid housing development in South Africa has been one of the consistent struggles and critiques of the national government. With provision for housing being one of the most critical challenges faced by the nation's government, it is also one of the basic rights each citizen holds, emphasising its necessity in government's addressing of it. With the transformation of the national housing policy from 1996 based on the Reconstruction and Development Programme, to Breaking New Grounds in 2004, a common reoccurrence between the two housing policy practices has been the lack of socio-spatial and socio-economic integration and sustainability in developments.

This thesis works to assess and analyse the new housing policy approach under Breaking New Ground: Megaprojects, taken out in Gauteng since the turn of 2015. The research aims to understand how a mega housing project in Ekurhuleni – Leeuwpoort – and its development plans and practices grapple with the tension between building houses and building a socially and economically self-sufficient and sustainable human settlement as envisaged. In order to understand what is trying to be achieved at Leeuwpoort and what different stakeholders expect out of the megaproject, methods focused on analysing regional planning and project documentation; interviews with local state officials, planners and ward councillors, and analysis of local media. Findings note that whilst the approach to the Leeuwpoort development is a step on the right path to creating a socio-spatially and socio-economically integrated post-apartheid Boksburg; there is still a lot to be planned for in regards to the economic mechanisms of megaproject developments post-development. However, political pressure with regards to combating the housing backlog within unrealistic timelines has resulted in miscommunication and uncoordination between spheres of government in the project planning. The future of the project in terms of its scale of delivery and effect on fragmented urbanism is uncertain. This research seeks to contribute to the growing literature on mega human settlements in South Africa and housing studies in other Gauteng municipalities such as Ekurhuleni.

Dedicated to:

My family, who has always believed in me and supported me from the very first day, and has also helped me through every step of a most difficult and personally tough 2018. Lastly, this is for me, as proof that I can achieve more than I think I can and that no matter the obstacles put in front of me there is always a way of getting through it.

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NOMENCLATURE

ANC 'African National Congress', South Africa's majority political party

BNG 'Breaking New Ground', national housing policy approach in South Africa (2004-2014)

BRT 'Bus Rapid Transit', transport system to connect the city in a quicker and faster way

CBD 'Central Business District'

DHS 'Department of Human Settlements'

DSDF 'Gauteng Spatial Development Framework'

EIA 'Environmental Impact Assessment'

EMM 'Ekurhuleni Metropolitan Municipality'

ERWAT 'East Rand Water Care Company'

FLISP 'Financially-Linked Individual Subsidy Programme'

GDARD 'Gauteng Department of Agriculture and Rural Development'

GDED 'Gauteng Department of Economic Development'

GDS 'Growth and Development Strategy'

GEAR 'Growth, Employment and Reconstruction', basic macroeconomic policy

GNU 'Government of National Unity'

HAD 'Housing Development Agency'

IDP 'Integrated Development Plans'

IRDP "Integrated Residential Development Programme"

ISRDP 'Integrated Sustainable Rural Development Programme'

LDC 'Leeuwpoort Development Company'

MEC 'Minister of Executive Council'

MHS 'Mega Human Settlements', national housing policy approach (2014-)

MSDF 'Metropolitan Spatial Development Framework'

NDP 'National Development Plan'

NDPG 'Neighbourhood Development Partnership Grant'

NPC 'National Planning Commission'

NNR 'National Nuclear Regulator'

RDP 'Reconstruction and Development Programme.', national housing policy in South Africa (1994-2004)

PPP 'Public-Private Participation'

RSDF 'Regional Spatial Development Framework'

SANRAL 'South African National Roads Agency Limited'

SDF 'Spatial Development Framework'

URB 'Urban Development Boundary'

UDZ 'Urban Development Zone'

URP **'**Urban Renewal Programme'

CHAPTER 1: INTRODUCTION

1.1. Background

With apartheid's legacy of segregation, exclusion and dispossession, the post-apartheid South African government faces many challenges, none so large as the provision and redistribution of housing (Ballard & Rubin, 2017). Since South Africa's democratization in 1994, housing policy management and reform has been a key part of the development focus.

The year 1994 saw the implementation of the 'Reconstruction and Development Programme' (RDP), which provided state-subsidized basic housing for the poorer, previously disadvantaged population of South Africa (Bradlow *et.al.* 2011). Between 1994 and 2007, the RDP accounted for the construction of an estimated 2,4 million subsidized houses at a cost of R44,1 billion in total (Lemanski, 2011; see Table 1). Although this was seen by the government as addressing its population's Constitutional rights of shelter, others argue that the implementation of the 'Growth Employment and Redistribution' (GEAR) strategy from 1996 shifted this housing scheme from just provision of basic rights and free housing towards creating financial assets for the beneficiary-owners (Lemanski, 2011). Furthermore, with RDP projects largely on the urban fringes or periphery of cities where land is cheaper and more easily accessible for the state, it has made it harder for the poorer population to gain a sense of connection and belonging to the rest of the city due to lack of affordability and access (Haferburg, 2013). Although current legislation does not restrict or barricade areas off from one another as was done in the post-apartheid era, the social, spatial and economic dynamics of developments nowadays have often reproduced such past legislations in an unplanned manner (Haferburg, 2013). Problems that arise as a result include uneven and unequal socio-spatial and socio-economic development, as well as the eradication of informal settlements.

Due to such uneven results in housing developments, 2004 became a major year of change in South African housing policy with the introduction of 'Breaking New Ground' (BNG). This "promot[ed] integrated and sustainable human

settlements mixing housing and income types in non-peripheral locations, close to economic opportunities, social and infrastructural services" (Lemanski, 2011: 60). BNG, however, has faced some of the same challenges as its predecessors. At the same time, between 2008 and 2010 the 'Neighbourhood Development Partnership Grant' (NDPG) and the 'Urban Settlements Development Grant' (USDG) (Ballard & Rubin, 2017: 3) hoped to help promote integrated local area development and ignite interest in private sector investment in community development. Unfortunately, a lack in connectivity and sense of belonging to the cities and urban areas continues to occur in the areas of development.

As a result of consistent and increasing pressure for housing, 2014 saw yet another turn in housing policy in South Africa, in which future housing developments would ideally be large-scaled megaprojects estimated at providing at least a minimum of 15,000 housing units per project and projected to hold an estimated population of around 60,000 people. The acclaimed 'Mega Human Settlement' proposal was promoted by the Gauteng Premier and his Department of Human Settlements as the way forward (Harrison & Todes, 2017: 32). This new plan, unlike previous housing policy plans, intends to include social and economic integration of its beneficiaries, and public and private sector integration in 'new cities'. These new cities are envisioned to be self-sufficient and sustainable in themselves, providing for a full range of services and facilities to the people in them (Harrison & Todes, 2017).

Although it is still early days in the implementation of megaprojects, housing scholars are concerned that this new housing plan will continue to produce large-scale peripheral housing, without encompassing social, economic and spatial aspects that engender future growth and sustainability (Ballard & Rubin, 2017; Harrison & Todes, 2017). Others have criticised the fast-made policy, and noted that it is being altered to suit already planned developments from several years ago with unclear purpose.

1.2 Problem Statement and Rationale

Megaprojects/Mega Human Settlements (MHS) are claimed to take into consideration multiple aspects of social, economic and spatial integration to address the mistakes of the past and create new post-apartheid cities (Ballard & Rubin, 2017). How this plan actually 'lands' and is negotiated in place vis-à-vis these wider goals requires investigation. This study investigates one such megaproject in its planning phases - the Leeuwpoort Megaproject - located in Boksburg, Ekurhuleni, Gauteng, between Reiger Park; Parkdene and Sunward Park south. It seeks to understand the planned development of such a large-scale human settlement project, and what it means for the city's future, socially, economically and spatially. Is it merely a larger scaled housing project with side social and economic benefits, or is it an urban infill project focused on actual social, economic and spatial integration? Furthermore, how are different stakeholders involved, and how do they interpret the aims and goals of the project?

The Leeuwpoort development is the first megaproject to start its construction in Ekurhuleni, in 2017. Under the mandate of the Ekurhuleni Metropolitan Municipality and the Gauteng Department of Human Settlements, the development is being implemented by the Leeuwpoort Development Company (PTY) LTD. Leeuwpoort aims to develop affordable and accessible mixed-used, mixed-income residential settlements, with various densities, over its 7-year development life cycle. The development is currently in the first stage of its construction cycle: upgrading bulk infrastructure for the area in the first, North Phase. These include Reiger Park and Parkdene; with Sunward Park as the South Phase. Plans to upgrade infrastructure and services have been halted in the South Phase to focus time on completing the North Phase first.

Unusually, the Leeuwpoort development includes in-fill phases, located close to the heart of Boksburg, not just on its edges.[1] Boksburg used to be a mining town, part of multiple scattered mining zones across the region. The area has had a slow growing economy since the liquidation of East Rand Proprietary Minds in the

[1] Thanks to reviewer Richard Ballard for this input during my proposal presentation discussion.

mid-1990s which contributed a considerable amount to the economic activity in the area. Despite a significant housing backlog, the majority of recent developments have been residential developments, primarily small-scale private sector projects focused on more middle-income, especially gated, property. In the region around Leeuwpoort, there are multiple informal settlements (20% of the Ekurhuleni's municipality's informal settlements), primarily located along the mining belt. The housing backlog faced within the region is estimated at around 50,000 units, nearly 10% of Ekurhuleni's total backlog listing (Metroplan, 2012a).

How the Leeuwpoort development will resolve this housing backlog and integrate this fragmented urban area – socially, economically, etc. – is key. The Leeuwpoort development is worthy of study based on its magnitude, its non-peripheral location in contrast to many proposed megaprojects, and the fact that there have been widely varying opinions on its implementation by different local stakeholders (residents, states officials, and planners). Further to add, there has been little academic work done on housing programmes (let alone at this size) in Ekurhuleni in comparison to the likes of Johannesburg and other major cities like Cape Town and Durban.

1.3 Research Aims

My primary aim is to understand how Leeuwpoort's development plans and practices grapple with the tension between building houses (just another mega housing project) and building a socially and economically self-sufficient and sustainable human settlement/megaproject.

Furthermore, I seek to understand what the expectations around social, economic and spatial integration and sustainability are from the different stakeholders involved or included in the development of Leeuwpoort.

I also aim to understand how the Ekurhuleni municipality interprets the "megaproject" policy in their own development plans and where and why it is interpreted differently.

Generally, the aim of my study is to contribute to the body of knowledge related to Human Geography focusing on Urban Development and Spatial Planning with specifics on housing in an Ekurhuleni Metropolitan Municipality context.

1.4 Research Sub-Questions

1. Where does the Leeuwpoort development fit in within the category of mega human settlements/megaprojects? Is this more about integrated urban infilling or housing?
2. What has been the process of social and economic development planning for mega human settlements/Megaprojects in Ekurhuleni and in Leeuwpoort more particular (in relation to wider Boksburg's settlement and economy, etc.)?
3. What do different stakeholders (provincial and municipal officials, developer representatives, and community representatives) expect out of mega human settlements and Leeuwpoort in particular, socially and economically throughout its life cycle?
4. How do these stakeholders see the process of mega human settlements/megaprojects differently to that of its predecessors, RDP and BNG?

1.5 Overview of Thesis

The following chapters include the literature review, policy frameworks, the methodological approach to the research, the results and discussion chapters, followed by a final conclusion.

The literature chapter consists of four main topics, namely: a history and analysis of South Africa's three phases of democratic national housing policies; the influence of spatial planning on housing development in Gauteng; new research on megaprojects, and scholarship on the practices of the state. The policy

framework chapter then reviews policy from national, provincial and municipal levels to demonstrate where megaprojects and housing development plans surface.

Following the above, the methodological chapter describes the qualitative approach of the study; methods of data collection (unstructured and semi-structured interviews and document analysis), which were conducted with state officials, planners, and councillors related to the Ekurhuleni municipality and more importantly the Leeuwpoort development, and data analysis through thematic analysis of documents, decoding and encoding of transcripts of interviews and analyzing similarities and contrasts. The chapter then presents the ethical considerations and limitations of the study.

The results chapter presents three forms of data analysis: document analysis, interview analysis and media analysis, in which the main findings are shared. The discussion chapter weighs up the main findings vis-a-vis the literature and policy framework, and my research questions. Finally the conclusion chapter summarises the main findings in reference to Leeuwpoort's position as a megaproject and suggestions for future research.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

The literature review begins with a general and broad description of the history of RDP and the views held by academics on its implementation and practices. I then consider the second phase of the housing policy development in 2004—BNG—more extensively, and literature's assessment of its policy implementation and practices. From there, I discuss the third phase of post-apartheid housing policy with a more detailed assessment and analysis of Megaprojects/MHS, drawing on the still growing research on this new phase. I then relate this policy shift to wider literature on megaprojects, and international research conceptualising and evaluating these. Since we cannot consider housing without its relations to wider planning process, I provide a brief history of spatial planning in Gauteng since 2004, to see how this has influenced the patterns of failure and/or success of past housing policies. Finally, I review scholarship on understanding state-society relations around housing, and new research on practices of the state.

2.2. South Africa's First Democratic Housing Policy: the Reconstruction and Development Programme (RDP)

With the country's first democratic elections in 1994 signifying the beginning of a post-apartheid South Africa, the new government realized that alongside political reform, social and economic reform was of primary importance. The need to alleviate decades of poverty and the dispossession enforced upon the majority of the population, whilst spurring rapid economic growth, was of prime concern to the government. As a framework for this kind of socio-economic reform, the Government of National Unity (GNU) elected to implement the RDP in 1994, with the RDP's office the principal programme and actor in achieving its goal (Blumenfeld, 1997).

One of the RDP's main promises was its five-year goal to achieve the construction of 1 million housing units for the poor, around 200,000 housing units

per year at a cost of approximately R30,000 each, exceeding an amount of R9 billion in total (Bond & Tait, 1997). This rapid and exceedingly large plan was put into place to fight the existing housing backlog which was faced due to the apartheid era. This backlog was estimated to be almost 1,3 million housing units, with a further three million including rural areas and hostels (Tomlinson, 1998). The RDP's housing goals also sought to realise Section 26 of South Africa's 1996 Constitution No. 108, which states that "everyone has the right to have access of adequate housing", therefore the state must take reasonable measures to ensure that this right of the people is realized (Republic of South Africa, 1996: 1255). Furthermore, South Africa's Housing Act 107 of 1997 notes in its general principles that "'all spheres of government are required to provide access to adequate housing and service facilities, as well as various forms of tenure options'" (Republic of South Africa 1997: 5&6).

Table 1 shows the extent of housing delivery in South Africa on a national scale over a 20-year period from 1994 until 2014 (Department of Human Settlements, 2014). Along with these quantitative successes, the programme did to an extent provide some positive impacts to its beneficiaries, although the end-user satisfaction of it and its adequacy varies quite widely (Charlton & Kihato, 2006).

Table 1: Delivery of Serviced Sites and Houses/Units from the HSDG since 1994 (20 years) (DHS, 2014).

YEAR	SERVICED SITES COMPLETED	HOUSES/UNITS COMPLETED	TOTAL HOUSING OPPORTUNITIES
1994/95	-	60,820	60,820
1995/96	-	74,409	74,409
1996/97	-	129,193	129,193
1997/98	-	209,000	209,000
1998/99	12,756	235,635	248,391
1999/2000	-	161,572	161,572
2000/01	19,711	170,932	190,643
2001/02	-	143,281	143,281
2002/03	82,286	131,784	214,070
2003/04	42,842	150,773	193,615
2004/05	87,284	148,253	235,537
2005/06	109,666	134,023	243,689
2006/07	117,845	153,374	271,219
2007/08	82,298	146,465	228,763
2008/09	68,469	160,403	228,872
2009/10	64,362	161,854	226,216
2010/11	63,546	121,879	185,425
2011/12	58,587	120,610	179,197
2012/13	45,698	115,079	160,777
2013/14	48,193	105,936	154,129
TOTAL	903,543	2,835,275	3,738,818

However, from 1994, several issues emerged around the RDP's implementations and practices across the country. Numerous studies argued that the RDP fell short in its achievements in terms of housing developments and poverty alleviation (Blumenfeld 1996; 1997; Bond & Tait, 1997; Tomlinson, 1998; Huchzermeyer 2001; Bradlow et.al., 2011). The RDP's goal of "creating a viable integrated settlement in which households would have access to opportunities, services and infrastructure' failed to materialize in most instances" (Charlton & Kihato, 2006: 255).

Firstly, there was the policy critique. Blumenfeld (1997) and others argued that there had been a lack of integrated social and economic theoretical and analytical assessment across the nation when taking into consideration the drawing up of and implementing the RDP policy. Nor did the policy provide any supportive backbone to help regions that could not in their own capacity achieve the rates of houses needed. Instead of policy, the RDP was more of a political symbol from government, according to Blumenfeld (1996: 4); "… the lesson afforded by the

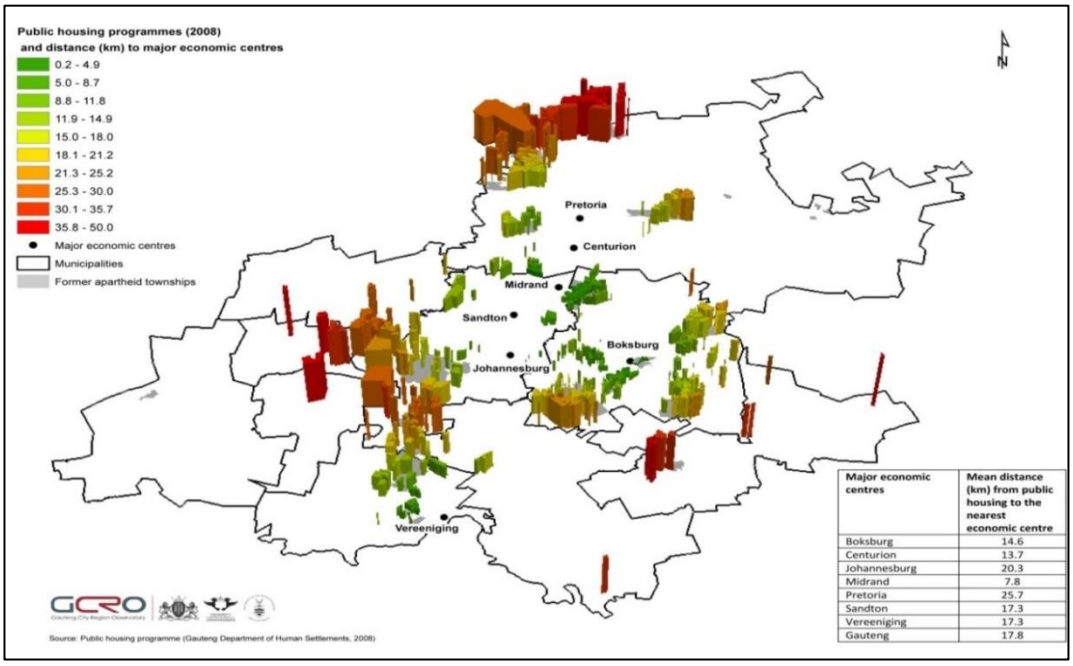
experience of the RDP is that, however widespread their support, symbols are not a substitute for real policies."

At the provincial scale, there was no consistency in the structure and support of the RDP across provincial borders. Even though policy intended for the RDP Office to be replicated across the nine provinces in their individual institutional and administrative structures, in practice, each province treated the status and role of RDP ministers and officials in a way they deemed fit (Blumenfeld, 1997). Therefore, what seemed to be a national housing policy that was meant to create a homogenous housing development scheme was in practice far from that when implemented at a provincial scale. Furthermore, there seemed to be a major issue within the financing of the entire housing programme. Those provinces which could not fund or administer the housing policy in their own capacity had little national administrative support (Bond & Tait, 1997). This resulted in some regions developing at unequal rates and falling behind the development speed of others.

Another issue was the subsidy level vis-à-vis the cost of housing. Those earning less than R800 a month were eligible for subsidies of R15,000; those earning between R800 and R1,500 would receive R12,500; beneficiaries earning anything between R1,500 and R2,500 would be in line to receive R9,500 and people earning R2,500 to R3,500 would receive R5,000 subsidies (Tomlinson, 1998: 140). Housing would cost around R30,000 to construct Bond & Tait (1997) highlight the state's concern in being able to actually fund full subsidies of R15,000 for those households that earned less than R800 per month. The state claimed that this type of funding (full subsidies) would result in fiscal constraints for the nation with no turnover being created from it. However, Bond & Tait (1997: 22) were able to calculate that the state had more than enough financing to complete the entirety of the project in its projected five-year goal. In practice, the total amount set aside for the project was not even fully used in the plans, with some cases of corruption (Bradlow et.al, 2011: 22).

Often, quantity was prioritised over quality. As Tomlinson (1998) highlights, the policy perpetuated the 'toilets-in-the-veld' produced by the apartheid regime.

RDP housing was often located on the far edges of existing settlements, reproducing social, economic and spatial marginalization of the poor, rather than decreasing this (Huchzermeyer, 2003). Map 1 demonstrates these geographies through showing the distance of RDP housing locations from Gauteng's major economic centres.



Map 1: Proximity of RDP housing in relation to major economic centres in Gauteng (GCRO, 2014).

Lastly, there was the unresolved tension between a people-centred housing delivery model and a market-based one. Both Tomlinson (1998) and Bradlow et.al, (2011) point out that the state was always going to try and slowly leave housing delivery to the market and private developers to construct. The RDP claimed to be centrally focused on the people, in which people become the driving force within housing development (Bond & Tait, 1997). However, Bradlow et.al., (2011: 268) state that "'People-centred' is simply not the way the state does business". Tomlinson (1998) explains that people-driven housing development would result in the empowerment of the community to reach their needs in housing, but would rely on more time and money invested in it by the state. Market/private sector-driven housing development would allow for the state to

reduce its investments through contracting out, as well as bonds being taken out by residents in order to pay for privately-delivered housing.

These shortcomings, together with the introduction of the Growth, Employment and Redistribution (GEAR) strategy in 1996, saw the RDP's revaluation. Whilst the RDP was more people-oriented through intervention of the state for the benefit of the people, GEAR was noted as being predominately focused on private sector capital accumulation (Visser, 2004). Therefore, a move away from state economic intervention was sought with the private sector intervening as the primary investor, and increased outsourcing of labour (Visser, 2004). This limited the development of state-supported housing developments and poverty alleviation through job creation and income generation for locals (Visser, 2004: 9-11).

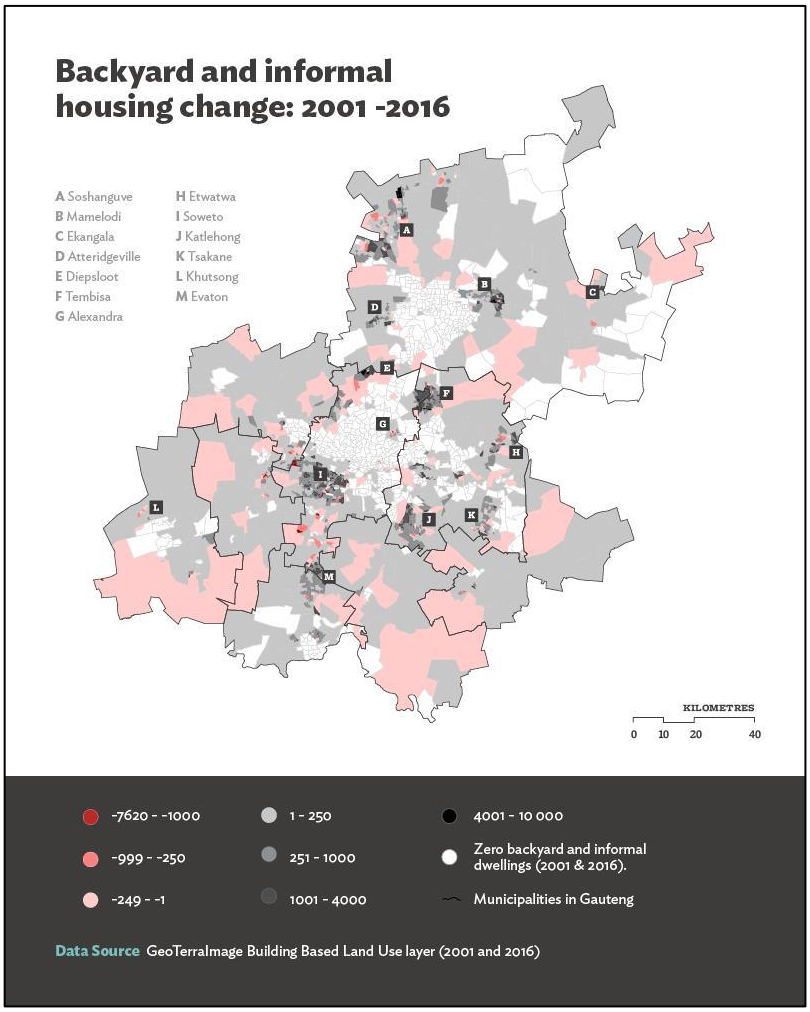
Huchzermeyer (2001) usefully summarises the change in policy practice by the RDP: instead of giving full subsidies, the state focused on giving smaller subsidies to those who could afford to get credit and take out mortgage loans from the banks. It became less about finding ways to help the poor and solve the problem of housing quality in the country, and more about finding ways to reduce costs and produce profits for banks and state-linked finance sectors and construction companies. Bond (2003) argued that South Africa's urban and housing development was not really about policy, but more about politics and its desire to promote neoliberalism in urban development. It needed to be refocused on the broader needs of our society.

Despite these issues, people have adapted RDP housing to their needs. Using Westlake Village, Cape Town, built in the late 1990s, as an example of lived experiences in an RDP settlement, Lemanski (2009) shows how people made the most of the development, despite developer or landlord plans. Within the first six years of its existence, there were an estimated 411 backyard dwellings, each accommodating around two people. Some of the problems noted by Lemanski (2009) related to why people decided to go against the developer's plans and construct backyard dwellings was accessibility and affordability. People living in surrounding areas of Westlake Village discovered becoming an attachment to the already existing housing allowed them greater and cheaper access to services such

as electricity; water and waste disposal. In their original locations, they struggled for access to such services, and if they did have access the affordability of it was less than what they had after becoming backyard tenants of RDP houses in Westlake Village. As such, RDP housing has remained sought after by people (Charlton, 2013).

2.3. The Rise of Breaking New Ground (BNG) as South Africa's New Housing Policy

The RDP housing policy held itself to the goal of achieving the construction and delivery of one million houses over five years from 1994 to households earning less than R3,500 per month. This goal had not been achieved over the first five years of construction and housing backlogs started to rise taking into consideration population growth and applicants' legibility for housing grants. As a result, the housing backlog had grown to 2,4 million by 2007; 1,1 million more than which the government had started with in 1994 at 1,3 million, its rate of growth growing quicker in comparison to its delivery (Lemanski, 2011). With the state becoming more financially inclined rather than socially inclined with the outcomes of the RDP, financial institution sustainability became a key aspect of the policy, and not the development of sustainable communities and settlements (Pillay, 2008). Furthermore, the failure in policy resulted in an inability to integrate and restructure the apartheid city, saw an increase in urban sprawl and informal settlements, and continued with the previous patterns of the marginalization of the poor (Charlton & Kihato, 2006). Map 2 depicts the growth of informal dwellings between 2001- 2016 in Gauteng.



Map 2: Backyard and informal dwellings (2001-2016) (GCRO, 2018).

In 2004 the then National Housing Minister, Lindiwe Sisulu, introduced the new housing policy: Breaking New Ground (BNG) (Haferburg, 2013), in which the minister outlined plans "for the development of sustainable human settlements in the next five years" (Charlton & Kihato 2006: 256). This was in reply to the increase in housing demand and in unemployment, as well as under-expenditure in the housing budgets at the provincial level (Pillay, 2008).

Pillay (2008) outlines the BNG housing policy as one that is focused on the development and sustainability of human settlements, something that was never stated in the previous housing policy. Similarly, but more critically defined, Lemanski (2011: 60) defines the new housing policy as, "promoting integrated and sustainable human settlements mixing housing and income types in non-

peripheral locations, close to economic opportunities, social and infrastructural services."

It is made clear from the outset that unlike the RDP housing policy, which often only referred to the sustainability of housing, the BNG policy refers to sustainable human settlements instead. This constitutes one of the main differences between the two policies: housing (RDP) versus human settlements (BNG). BNG sought to continue fighting the increasing housing backlog but in a more integrated and sustainable way that involves infrastructural and service provisions to combat poverty and improve the quality of life in settlements (Charlton& Kihato, 2006).

Some of the visions of the BNG approach include (BNG, 2004: 7):

- "Accelerating the delivery of housing as a key strategy for poverty alleviation."
- "Ensuring property can be accessed by all as an asset for wealth creation and empowerment.'
- "Supporting the functioning of the entire single residential property market to reduce duality within the sector by breaking the barriers between the first economy residential property boom and the second economy slump."
- "Utilizing housing as an instrument for the development of sustainable human settlements, in support of spatial restructuring."

Furthermore, BNG, was not only about the development of sustainable human settlements about responding to informal settlements. The BNG argued that we need to look differently at the situation faced across the country with regards to informal settlement developments, and pursue a process of integration and cooperation rather than neglect and conflict. It argued that doing so will allow for such developments to become more a part of the urban fabric, and through in-situ informal settlement upgrading this is possible. This was to be achieved through the Informal Settlement Upgrading Instrument (DHS, 2004a: 25).

However, this was often interpreted differently – as the eradication of informal settlements. The reason for this seems to be closely related to the "visual dimension of these settlements and without a clear understanding of the

complexities of the highly visible manifestations of poverty, mobility, and survival strategies" (Charlton & Kihato, 2006: 258). For example, at that time the Premier of Gauteng outlined that he would work towards the eradication of existing informal settlements within the next ten years, and also the prevention of any possible future informal settlements (Charlton & Kihato, 2006). Local housing scholars argued instead for upgrading informal settlements, not their eradication and redevelopment (Huchzermeyer & Karam 2006).

Scholars have investigated BNG implementation in practice, for example, the case study done on Cosmo City, Johannesburg by Haferburg (2013). Its design, which was viewed as unusual at first, would become the norm for future projects (Ballard, 2017). Cosmo City was developed in northern Johannesburg, across 1,100 hectares of land. It was designed to encompass around 11,192 erven, of which 11,288 are individual houses. 4,492 of those individual houses are fully subsidized (comprised of people from nearby informal settlements); 3,337 are bonded houses; 2,959 houses are partially subsidised, and around 1,000 are rental units. Adding onto this, 17 schools have been provided; several public open spaces; community facilities and churches. Furthermore, provisional space of around 27 hectares has been made for the development of an industrial area for the creation of job opportunities and 225 hectares has been kept aside for conservation to keep in mind environmental protection and awareness. This development comes with the intended plans to bring together people of different economic and social backgrounds to create an integrated human settlement.

While Cosmo City does integrate different income-groups into its housing plans, including those earning R3,500 up to R15,000 a month (Haferburg, 2013: 265), these are largely spatially segregated. The housing layout of Cosmo City has been a concern to researchers (Haferburg, 2013). There is more segregation than integration going on, Haferburg (2013: 265) argues: houses are separated from one another based on their class, with the cheapest being filled in closer together in the centre and then as you move further out the houses become more spacious and more expensive in comparison.

In addition to the less integrated spatial layout of the residential zones, the actual location of Cosmo City and its potential to integrate into Johannesburg has also been debated. Haferburg (2013: 265) points out that although Cosmo City's location is in a new booming upmarket residential zone, it still lies more than 20 kilometres away from the nearest major commercial zone which minimizes the economic potential for the poor people such project developments are intended for. Lack of personal transportation, access to public transportation and costs of transportation are a challenge. Municipalities are not fulfilling their roles as not only taxi services but residents are adopting and adapting services and infrastructure to benefit their needs due to their poor location and actual needs being met (Haferburg, 2013: 258). However, recent research by the Gauteng City-Region Observatory (GCRO) highlights the increasingly positive location of the development in the surrounding area based on its commercial growth and potential for future investment and development.

It is clear that although Cosmo City provides more variation in residential stock, and is providing sufficient and affordable housing, the BNG practice and strategy continues to focus more on housing at its centre, rather than other social and economic factors which play an equally important role in the development and sustainability of a post-apartheid city. As a result, the housing policy in South Africa was re-evaluated once more in 2014, ten years after its first evaluation. Therefore, 2014 saw the rise of the new housing policy practice and strategy, Megaprojects/Mega Human Settlements.

2.4. A New Approach in South Africa's Housing Policy: Megaprojects/Mega Human Settlements

There is no doubt that 2004 saw a key turning point in the development of housing policy practices in South Africa. However, with this move from simple housing policies to more 'integrated and sustainable human settlements' projects, the original problems of delivery, accessibility, affordability and sustainability continued to trouble the sector (Ballard & Rubin, 2017). Even with the new state

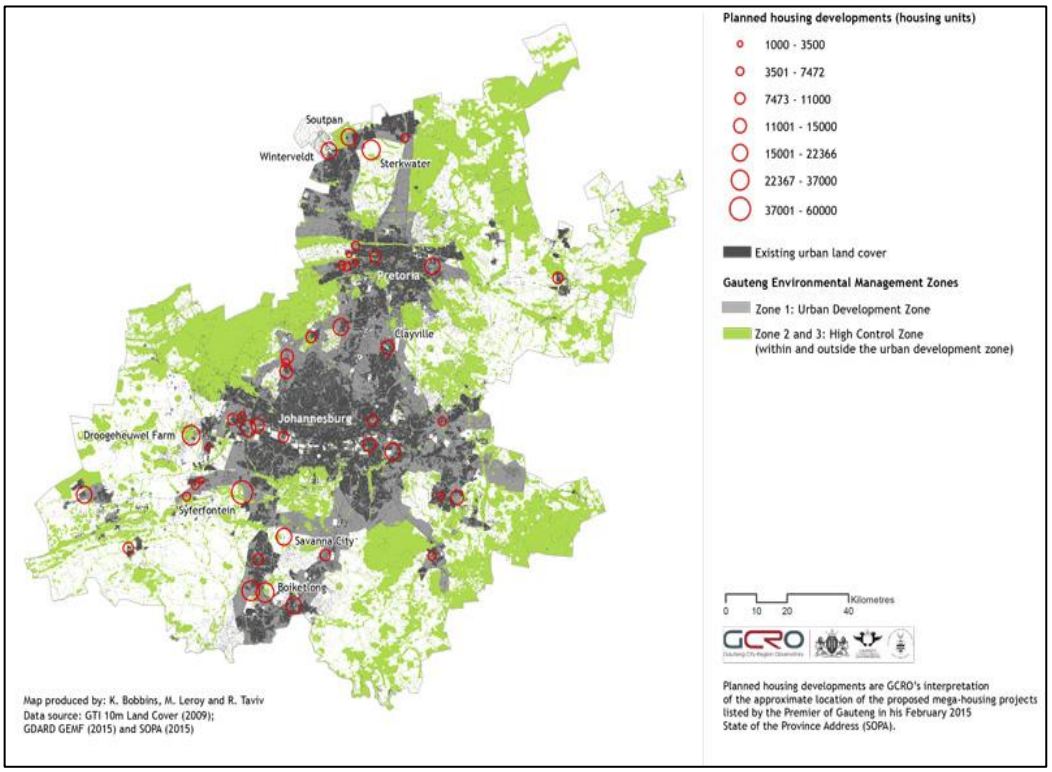
subsidies - the Neighbourhood Development Partnership Grant and the Urban Settlements Development Grant (Ballard & Rubin, 2017: 3) between 2008 and 2010 - housing production was still facing a decline.

As a result, the latest shift in housing policy practice came about in 2014 when it was stated by the National Department of Human Settlements that all housing developments would be delivered by utilizing 'megaprojects'. This had older roots: in 2005, Lindiwe Sisulu stated that, "We need to move from small projects of 200 houses to mega projects of integrated housing mix to cater for different incomes and needs" (Ballard, 2017: i). The 2014 version proposed megaprojects that would deliver at least 15,000 housing units each, and would hold a population of a minimum of 60,000 people (Harrison & Todes, 2017). This vast amount of housing would go some way in rectifying social and economic injustices. The idea of using these Mega Human Settlements or megaprojects as a normative approach was implemented first by the Gauteng Premier and his Human Settlements department in 2015 (Harrison & Todes, 2017). At the time of this Human Settlements announcement, the ruling party in Gauteng, the ANC, was preparing its defence for the 2016 municipal election. This newly announced approach provided an enhanced commitment to providing housing more than it was an actual policy (Ballard, 2017). The concern raised here by Ballard (2017: xi) is that the state may end up having themselves seen as "satisfying developers". By this it means the state introduces this new housing strategy as a means to deliver something (in this case megaprojects) that will allow for the gain of some benefits at the cost of the efficiency of others in the long run, rather than assessing and evaluating the criteria needed for the best possible outcome and working off of that.

The intentions of such an approach have been questioned in the literature. Ballard & Rubin (2017) point out that policy can serve several interests, one of those interests being political gain. Ballard (2017) highlights this point in which he believes that this policy might have come about as a result of political fear because two years down the line neither the Gauteng's ministry nor its human settlements department could identify if mega human settlements were a clear

policy as one has not been seen yet. Nor is it necessarily new: plans for many megaprojects have been in the pipeline since 2007, long before the influence of the new mega human settlement policy.

Whatever the case may be for the political influence of the new approach, there is more to it than politics. These megaprojects are also known as 'catalytic projects' not only because of their sheer size, but also their economic intention to trigger massive private sector investment. The state's investment of around R90 billion over the next five years into megaproject development through its construction and infrastructure provision seeks to leverage R150 from the private sector (Ballard, 2017). This joint investment hopes to create thousands of sustained jobs and job opportunities with the financial backing needed to do so throughout the development process. This public and private sector collaboration is key, Harrison & Todes (2017) note. Lack of private sector support in RDP and BNG development made it harder for the state to deliver as promised due to the overwhelming financial commitment needed.



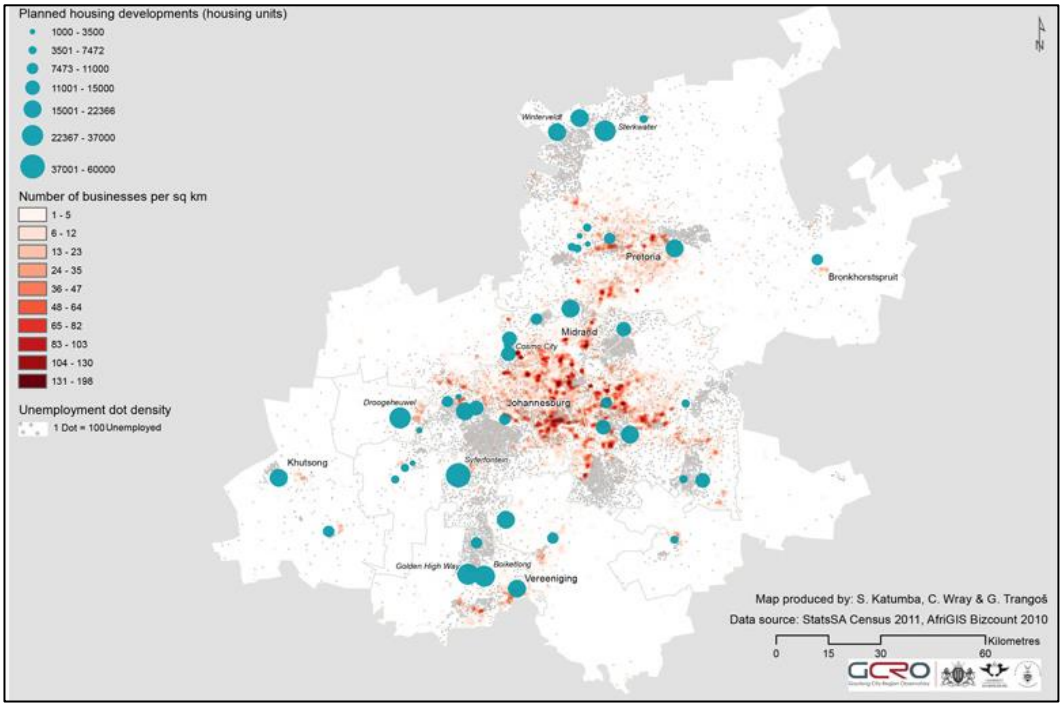
Map 3: Application of the GPEMF for informing the location of proposed mega-housing projects in Gauteng (GCRO, 2015).

The intention of the Gauteng provincial government through these megaprojects is to create ‘new cities’. Map 3 depicts planned megaproject developments and their unit sizes across Gauteng. However, it has been noted that this concept has not been well developed or explained in the new policy through a formal evaluation process (Ballard & Rubin, 2017; Harrison & Todes, 2017). This leads many people to think of these as just more augmented and supersized housing projects. In 2015, the department released a document clarifying this somewhat, stating that, “while delivering larger housing projects is central to the concept, ‘new cities’ should be self-contained, offering economic activities and employment, along with a full range of services and facilities.” (in Harrison & Todes, 2017: 33).

Three years after the first megaproject policy’s announcement, a final list of megaprojects to get underway was issued- this included 48 projects that had been signed off (Ballard & Rubin, 2017). With this in mind, three years had already been ‘wasted’ of its five-year goal to develop 1,5 million houses by the end of 2019 (Ballard & Rubin, 2017). Of the 48 projects in the pipeline on the national list, 15 projects were located in Gauteng. This was at odds with Gauteng’s own documents: Gauteng had 29 listed projects in the pipeline but only 7 of these related to the 15 stated in the national list. This reflects Gauteng’s ‘flexibility’ with the national policy’s statement about their needing to be settlements larger than 15,000 units (Ballard & Rubin, 2017).

The location of these ‘new cities’ is also a site of debate. Taking into consideration both Map 3 and Map 4 (below), Map 4shows that several developments are being designed on the periphery of the urban development boundary (UDB). These UDB were created to contain urban sprawl, create infill, and encourage densification (Todes, 2014: 87), but some of these developments would create urban sprawl as a result of their peripheral location. Map 4 shows the economic and financial benefits of development location based on business quantities in the area of development as well as unemployment levels, which would benefit as a result of such a development. It shows business-wise, the location of some of the biggest developments are poorly placed, but overall

unemployed areas are considered significant in development plans. There is concern that the pattern of development will continue down the same road housing development has been going down for the last 20 years: on the periphery of urban areas. Because of the magnitude of the projects and the limited space available to use for such projects in built up areas, it will be just left to the abandoned regions (Ballard & Rubin, 2017). Peripheral development will contradict policy intentions to deter and prevent urban sprawl and work towards social and economic integration (Ballard & Rubin, 2017).



Map 4: Planned areas of megaproject developments across Gauteng (GCRO, 2015).

As pointed out in Ballard & Rubin (2017), Gauteng has used the policy flexibly to suit its requirements, by utilizing smaller projects to make one mega human settlement, even if they are not spatially contiguous. This appears to go against the whole point of the new approach which is to create "self-sufficient" / "self-contained" / "self-balanced" and "self-sufficient" new cities (Harrison & Todes, 2017: 32-34 & 54) or as they have it termed, satellite towns. Ballard & Rubin (2017: 10 & 11) notes some of the ways the Gauteng state may enable megaprojects to be self-sufficient and sustainable. These include using and creating renewable energy; sustaining employment rates; attracting modern

architecture; have easily accessible and integrated transport routes; and governance that can think afresh in new innovative ways. But this is an imagination of the future which is rooted in "new town utopian thinking" (Ballard & Rubin, 2017: 15). There has been no integrated focus on social and economic development.

From a research perspective, we can only look at policy for MHS/megaprojects/catalytic projects and assess it accordingly to past project implementations, as projects for the new policy have only started construction in 2017/18. In the Gauteng region, there is not much actual implementation to analyse yet. This is also one of the reasons I have decided to work on the Leeuwpoort Megaproject, as I want to be part of the frontline of academic research contributing to understanding not only Gauteng's' but also South Africa's new housing approach. There is, however on a national scale, one megaproject study I will highlight before moving onto Gauteng-based megaproject approaches.

Cornubia, Durban, is a megaproject located in the northern development corridor of eThekwini municipality. The development is proposed as part of one of three primary corridors in its associated province of Kwa-Zulu Natal (Sutherland, *et.al*, 2015). Since its conception in 2005, the megaproject has been a contested one around the notions of being pro-poor and pro-growth. The development is being facilitated by a public-private partnership with the landowners (Tongaat Hulett Developments) and the eThekwini Municipality (Sutherland, *et.al*, 2015). Multiple spheres of government have interests in the project. From a national level, the scale and magnitude of such a development allows for the government to look at the pressure they are faced with in regards to the housing backlog. At a provincial level, the project allows the government to look at the provision of services at a larger scale, such as economics; health; and infrastructure. At a local level, the development allows the municipality to attend to matters affecting the daily living conditions of citizens, such as employment, transport, and housing (Sutherland *et.al*, 2015).

However, the magnitude of such a mega scaled project results in the need of coalition and cooperation between all scales of government, as well as those private sector actors and local communities. Throughput the development of Cornubia, negotiating a process that is both pro-poor (assisting in employment and housing) and pro-growth (development of infrastructure capable of inciting investment and economic progress) has resulted in tension between the political, social and economic environments at play- not only at local level but right up to national (Sutherland, *et.al*., 2015). Given the scale of inequality and inequity in South Africa as a whole, megaprojects may propose an ideal way of going about development, but there is a vast amount of complexity involved in the planning process at many different levels of operation, Sutherland et al (2015) argue.

In Johannesburg, the Lufhereng project in Soweto is considered a prototype megaproject as its construction started in 2008. Construction has been stated to finish in 2023. This makes the Lufhereng development a hybrid prototype between the BNG and MHS practices– and one of the few that has been empirically studied (Charlton, 2017).

Lufhereng looks to provide for a variety of land uses including different income residential zones, municipal services and a range of social and economic facilities such as clinics, parks, schools and commercial land (n.a, n.d, www.lufhereng.co.za/the-project/). From the start of construction in 2008 to the projected end in 2023, Lufhereng will come to be Johannesburg's largest integrated development of mixed housing and economic activities, accommodating over 22,500 households, and between 65,000 and 100,000 people. It is considered the "blueprint" for future project developments in the Gauteng province (Charlton, 2017: 85). Map 5 shows an aerial shot of the magnitude of the Lufhereng development.



Map 5: Site location of Lufhereng development project (n.a, n.d, http://www.scarch.co.za).

As for the social demographics, Lufhereng aims at attracting economic groups who are either eligible for government subsidised low-income houses or market-rate houses which can be obtained through rental or mortgage. 7,500 housing units are fully government-funded low-income houses for ownership; 7,000 units are mortgage-linked with some of them being partially subsidised; and around 6,100 units are for sale, rental and social housing usage. Around one-third of the total population will include those residents who earn between R0 and R3,500 per month. The delivery rate estimates around 1,000 housing units each year after construction started in 2008, and residents are claimed to have been chosen from several different backgrounds including backyard dwellers, military veterans, people on waiting lists from 1997/98 in Greater Soweto, general public interested in buying in the area, etc. (Charlton, 2017: 88 & 89). This is more or less the same pattern that is recognised in the Cosmo City project when looking into the housing unit setup.

There has been investment not only by the state but also by other private sector developers in housing and other amenities: 15 schools; a library and clinic, commercial and industrial spaces, as well as a waste management plant is to be developed (Charlton, 2017). This combined investment between state and private sector developers is what can be seen as a key missing contributing factor to the success of previous housing projects, as the cost to the state was viewed as exceedingly high by officials and so therefore focus was put back onto housing only.

Concerning the location- which has been an issue for housing development throughout the post-apartheid era - Lufhereng seems to be more complex than one would think. On the one hand, private sector and provincial planners identify Lufhereng as a "natural extension of Soweto" (Charlton, 2017: 91), in which it sits well in relation to other business nodes and can be seen as potentially a good example of mixed property development with the retail growth and investment happening in Soweto. On the other hand, planners from the City of Johannesburg see Lufhereng as a peripheral development as it does not lie inside the public transport corridors of investment. Furthermore, from a spatial aspect, it highlights the marginalised access to jobs and public transport faced in such developments as a result of the cost of land chosen to develop on (Charlton, 2017).

What is most unique is the development of an economic plan which highlights the basis for the area's economic activity and growth. The three forms of economic activity proposed for the development are agriculture through subsistence farming by hydroponics and aquaculture; the "Industrial Hub System" (Charlton, 2017: 95) which will focus on the manufacturing of steel windows and cookware as well as cleaning products and food processing and warehousing; and the "Urban System" (pg: 96), which is more of a natural occurring economic activity of the demand and supply by households for goods and services. The one concern raised about the "industrial Hub System" which is claimed to be the backbone economic activity for the development, is its requirement of highly skilled and qualified labour which in more than most of the case cancels out job opportunities for the third of the population with subsidised housing (Charlton, 2017: 96).

While more extensive social and economic planning has been considered in the development of Lufhereng, there are several points of concern for Charlton (2017). Firstly, the project re-inscribes previous apartheid geographies by confining lower-income people to the urban peripheries, whereas megaprojects state to be working towards integration.

Secondly, megaprojects work to build settlements closer to economic opportunity and employment as well as accessible public transport to tackle spatial transformation, but Lufhereng shows unclear evidence towards this. Third and lastly, integration and inclusivity are key aspects of megaprojects socio-economic and spatial transformation in which development projects would fit into already existing urban areas and parts of the city, instead of bringing in its own incomes, typologies and land uses- rather they would support the growth or re-growth in the area (Charlton, 2017).

While Lufhereng does well in its implementation as a housing development under BNG, it does fall short in a few aspects for it to be considered a megaproject in accordance with the new policy's definition. Location, size, and social, economic and spatial integration with existing urban areas play a more vital role in separating mega human settlements from what I would like to call mega housing projects seen in BNG. It cannot just be about housing anymore; the social; economic and spatial inequality caused through poor housing development over the last 24 years has required academics and urban planners to see beyond housing as just buildings seen as places to sleep. An assessment of the needs of the poor has to be considered in housing policy to provide the population with what they need, and not what state policy officials think is needed. There seems to be a need for sensitive place-based case studies, to treat each development uniquely but while keeping the fundamentals of policy and planning intact through practice to achieve sufficient and sustainable mega human settlements.

2.5. Conceptualizing and constructing Megaprojects

Megaprojects are not unique to South Africa; they are an international and growing phenomenon. Impacts of the Second World War throughout the 1930s and 1940s left many countries' cities shattered and fragmented. In the Fordist revolution that followed until the 1960s, many North American and European countries pursued the construction of massive (mega) developments to reconstruct their cities to regain a foothold in the globalizing world (Orueta & Fainstein, 2009). This resulted in cities that were then on the one hand symbols of modernism; and on the other hand, "displacing millions of households, destroying communities and generally resulting in a regressive distribution of benefits" (Orueta & Fainstein, 2009:759).

The concept 'megaproject' refers mainly to two types of strategies according to Oreuta & Fainstein (2009:760), namely: huge and significant symbolic structures; and "a larger scheme with complex contents" (mixed residential uses, service industries, shared facilities, new transport facilities, etc.). The Leeuwpoort development would fit into the second category megaproject. Furthermore, these kinds of projects emphasize the collaboration of public-private partnerships in a new method of financing for such large-scale developments. Oreuta & Fainstein (2009: 761) categorize four particular types of megaprojects: an extension of transport infrastructures or new ones entirely; the reclamation of warehouse and old manufacturing zones; waterfront regenerations; and the renovation of historic city districts, with the general outcome of wanting to meet special consumer demands of the higher and middle-income groups. From a South African perspective, Sutherland et.al (2015) identifies two types of megaprojects, namely; economic projects and infrastructure projects. Sutherland *et.al* (2015) highlight that megaprojects can be characterized based on their complexity; extensive periods of construction and planning; the expected realities of the plans to that of policy; the involvement of public-private partnerships and multitude of development contractors; and the scale of land-use transformations.

On an international scale, with case study examples of Atlantic Yards; Thames Gateway; and Amsterdam South; megaprojects are defined by their mixed-used

approach trying to create a live-work experience. Their magnitude in scale (socially and economically) calls for public-private participation, in which social housing is the only commitment that can be met by state intervention, with the private sector taking responsibility for office buildings and upmarket housing schemes and leisurely activities (Fainstein, 2008). The division in contribution to the projects is vital if social and environmental justice is to be achievable, considering the private sector's competitive mindset on achieving profitable margins (Fainstein, 2008). In referencing the topic of 'justice', there is a reoccurring contestation between the projects in the integration of existing middle- to high-income residential with incoming lower-income and social housing. However, city planning and public-private partnerships in these projects understand the importance of attending to previously outdated development schemes in the 20th century, to become sustainable (Fainstein, 2008).

What is apparent in the difference between the style of megaproject development in North America and Europe is the appropriation of land. In North America, the objective was focused on the repossession and regeneration of slum-like areas, whereas in Europe the focus was on the rejuvenation of post-war destroyed areas and the urban periphery- where housing provision could be a means of a justified approach to environmental and social redevelopment.

2.6. Spatial Planning in Gauteng and how it has shaped and/or been shaped by Housing Policy

Although spatial planning policies have been well documented in South Africa since the 1970s when planning took on master planning (Todes *et.al*., 2010), my focus here is on spatial planning from a 21st-century perspective, and within Gauteng more specifically.

For the majority of the 20th century up until the mid-1990s, spatial planning in South Africa took shape of a dominant top-down dictatorial master planning style. Master planning refers to the idea where the physical aspect of cities and regions including its infrastructures was the main form of spatial planning (the physical

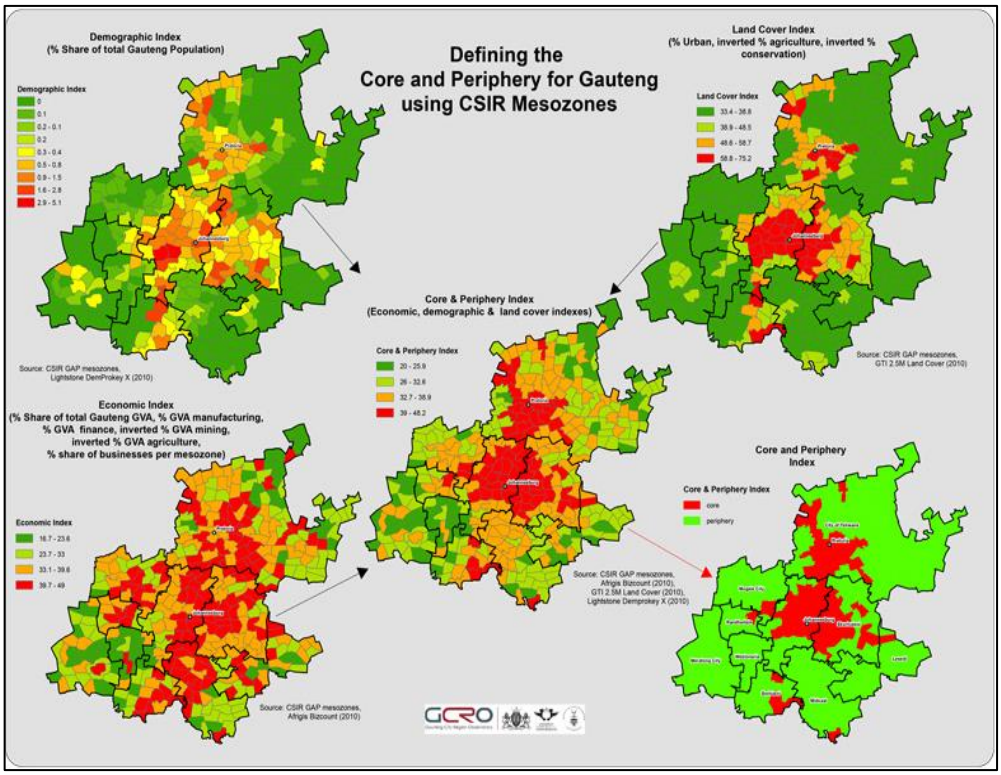
aspect) and assessing how these spatial plans would look like laid out on paper (Todes, 2012). This suited the apartheid regime more as it did not take into consideration the social and economic dynamics of urban and spatial change, which resulted in uneven and unequal distributions of development, with certain regions better off (Todes, 2012). The past development patterns in planning have made South Africa one of the most unevenly developed and unequal countries in the world, in which specific regions were purposely underdeveloped and marginalized, especially on the periphery of urban areas (Todes & Turok, 2017). Towards the end of apartheid, master planning was critiqued for being too technocentric and lacking integration of social diversity. Furthermore, it was discouraged in its use due to its lack of commitment to actual development in the field. It was seen as a 'paper plan' in which little attention was given to what was being implemented physically (Todes *et.al*., 2010). Master planning was also too rigid for the diversity and change that was occurring in South Africa in the 1980s-1990s. There had been too much neglect of political and social dynamics and influences on the shape of space in the country for master planning to encompass (Todes et.al, 2010).

As a result, with the turn of the 21st-century in South Africa, and its democracy already on its way in by 1994, Gauteng started to see a mix in social, economic, spatial and political changes. Attempts in responding to this focused strongly on the abolishment of socio-racial and socio-economic segregation for a move towards a better-integrated living environment (Todes *et.al*., 2010; Todes, 2012). By the end of 2001, South Africa saw the introduction of its first set of post-apartheid spatial policies—Spatial Development Frameworks (SDF)—which moved away from a focus on physical characteristics and towards a more sustainable urban environment. An efficient environment enabled the access of opportunities for its people and provided its people with an experience of the city for all (Todes, 2014). This coincided with the restructuring of metropolitan regions in Johannesburg and the rest of Gauteng in 2000 (Todes, 2012). The SDF included a Regional Spatial Development Framework (RSDF) (Todes, 2014), which offered more specific and detailed spatial planning guidance for

municipalities to work with. These frameworks were statutory to local Integrated Development Plans (IDPs) (Todes et.al, 2010).

Spatial planning was from then on to look at focusing on the assessment of individual applicants for developments through RSDF to thin out the process and make spatial planning more specific to its proposed environment. Furthermore, spatial planning was to be focused on mixing and integrating uses including transport, infrastructures, sustainable environment management, containing urban sprawl and creating sustainable housing environments, etc. (Todes, 2012).

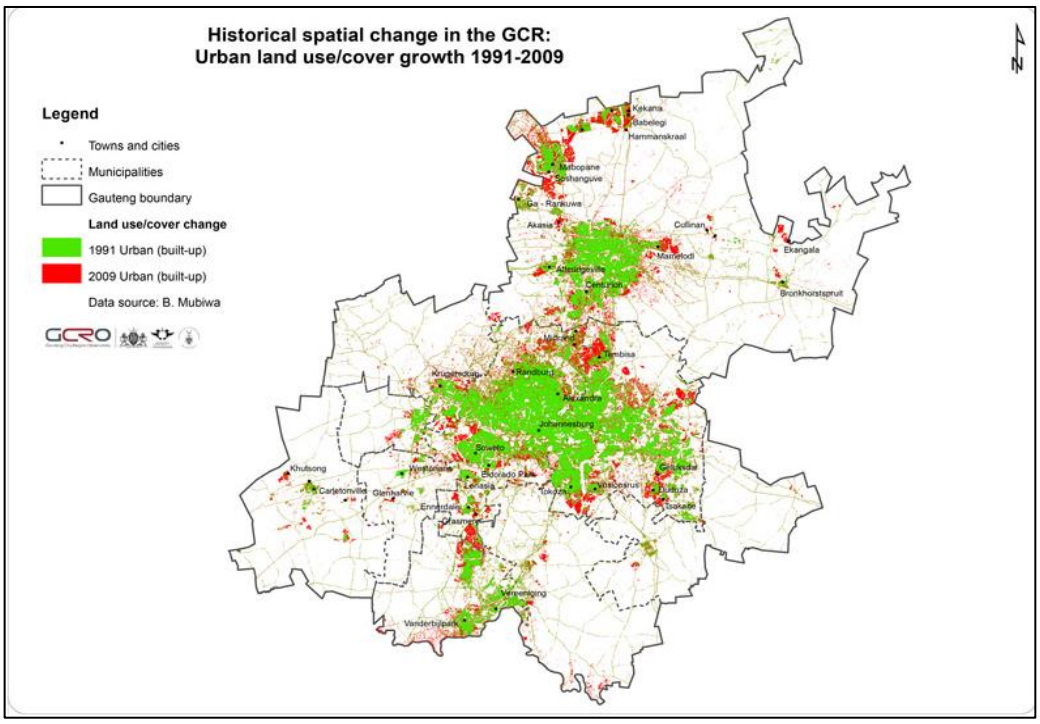
Critiques of this approach in the late 1990s and early 2000s by Philip Harrison, Alison Todes, Ivan Turok and Vanessa Watson all speak of how spatial planning was vague and too broad; nor did it link sufficiently to the intentions of land-use management (Todes et.al., 2010). Furthermore, Todes (2014) highlights that some policies were seen as more neo-liberal in the sense that economics and profit-making were at the forefront of development at the time (especially in big metros such as Johannesburg), rather than a focus on inequality and redistribution to correct past injustices. By 2006 it was clear that the current spatial frameworks being used were inadequate and not sufficiently reshaping development in the city, but more or less reproducing the already existing inequalities and unevenness of development between the core and the periphery, North/West and South/East of Johannesburg (Todes, 2012). Map 6 shows Gauteng's definition of core and periphery areas.



Map 6: Defining the core and periphery in Gauteng (GCRO, 2013).

Therefore, 2006 saw the introduction of the Growth and Development Strategy (GDS) which switched the agenda of spatial planning to be refocused on equity and redistribution with the needs of the marginalized areas to play an important part (Todes, 2012). At this point, the main concern faced by the GDS was infrastructural development-spatial planning linkages (Todes, 2014). Spatial planning coincided with infrastructural development, but the problem was infrastructural development (electricity, water, waste management, etc.) was self-governed and so was not necessarily linked to development plans of the time (Todes, 2012). As a result, the Growth Management Strategy (GMS) allowed for developments to go ahead if there was infrastructural development backing for said projects. The identifying of funding for these infrastructural backings would also need to be noted. The GMS allowed for much stronger integrated development in municipalities (Todes, 2014). The GMS was responsible for the introduction of the Gautrain and the Bus Rapid Transit (BRT) (Todes, 2014).

These transport initiatives were however criticized for being too middle-class oriented based on their cost and locations. Transport nodes supported property market developments positively around their routes. The negative to this is that these have mainly taken place in already upmarket nodes where access for commuters without cars is still an issue (Todes, 2014). The BRT has caused several issues, especially for the taxi industry, of which the BRT appeared to undermine their livelihoods and replace their means of work more formally (Todes, 2014). This is interesting considering the taxi industry already provides for 70% of commuters transportation means in the Johannesburg city vicinity (Todes, 2014: 92). Map 7 highlights the spatial change in Johannesburg's urban areas from 1991 until 2009.



Map 7: Historical spatial change in the GCR (1991-2009) (GCRO, 2013).

2010 brought about the introduction of a National Planning Commission (NPC) to reflect on the nation's spatial situation and problems to work towards an environment of new ideas (Todes & Turok, 2017). The focus started to shift to the issues of socio-spatial divisions and limited economic access and development in townships (Todes, 2014). Through the National Development Plan (NDP), the

NPC developed programmatic roadmaps for the future term of development, with spatial policies addressing a range of issues, especially in less favoured and marginalized regions through integration socially, economically, and politically (Todes & Turok, 2017).

Since 2001, there have been numerous area-based initiatives implemented to focus on the alleviation of poverty and redevelopment of townships and rural areas, as well as looking to strengthen these areas' relation to the rest of the city and create a better support system for them, nationally. Some of these initiatives include the NDPG; Urban Renewal Programme (URP); Urban Development Zones (UDZs); and the Integrated Sustainable Rural Development Programme (ISRDP) (Todes & Turok, 2017). As expected of these through cases on an international scale, the physical infrastructure was the more prominent feature. Property market dynamics were not considered significantly when planning premises' locations and furthermore, their positions socially, economically and spatially were not fully integrated with the wider urban fabrics and so tended to be seen in isolation (Todes & Turok, 2017).

The same pattern can be seen in the housing policy throughout its conception since 1994. Larger plans seem to be considered with great potential, but as the plans start to come into existence- rather than just on paper, the visions start to change as the state realises how vast, diverse and integrated plans need to be. A lot of social and economic aspects are not considered from the outset in both the housing and spatial planning policies. They tend to become fixated on the physical aspects of what can be brought in by the developments. There seems to be one key characteristic missing in the middle of all these housing and spatial planning policies: the public.

These policies have all shown that the public plays a vital role in the successful implementation of policy, yet they do not seem to be considered in policy development in a bottom-up style of planning. Nor can policy be a one department job; policy needs to speak for the betterment of all it revolves around and is intended for. It is important to note how this all relates to the practices of the state,

and how policy is implemented in practice in relation to the society it is intended for.

2.7. State and Society, and Practices of the State around Housing in Post-Apartheid South Africa

Practices of the state have become a topic of research interest over recent years, and one that has been approached by academics likes Claire Bénit-Gbaffou; Sarah Charlton; Margot Rubin; Sophie Oldfield; Chloé Buire; and Zainab Bawa to mention a few.

With regards to housing and human settlement development, one of the keys aspects emerging from the state and society scholarship is the 'waiting game' experienced by beneficiaries of houses. Oldfield & Greyling (2015: 1102) speak of this process as one that puts beneficiaries in a position that makes them and the state question and debate, "what it demands and means to claim rights and citizenship after apartheid". For those beneficiaries of more formal housing provided by the state, waiting in reality for "formal housing is spoken as a dream" (Oldfield & Greyling: 2015: 1102). This is because in the space of South Africa's 24 years of democracy, local government has changed three times and with each change, its practices have brought with it changes in policies and logistics concerning housing waiting lists. With this said, it is important to keep in mind that the local government has not always been in control of housing, so provincial governments have also been responsible in this regard.

The practices of the state when it comes to housing makes citizens, on the one hand reliant on the state- who are made to look like they cannot do anything without the state's direct intervention in their lives (housing subsidies, health benefits, social welfare grants, etc.). On the other hand, the public take on the role of the state in its absence when needed or necessary, highlighting the history of social movement and the mobilisation of poorer people in South Africa as agents of social change.

Practices in the development of housing for the poor create both of these processes: the state's rolling out of houses and the public's 'practice' of waiting. The poor build up informal settlements/shacks as a temporary means of living while they wait for the more formal housing promised by the state, in places where they can access certain service delivery infrastructure (water, electricity, transport, waste management, etc.). Within their practice of waiting they deliver themselves not only housing but also access to major basic services. The state is limited in its intervention in informal settlements and redevelopment based on its lack of knowledge of dynamics of such settlements (Rubin, 2018). This shapes its approach to informal settlements, referring to them as unmapped and ignored because of their temporariness and unwantedness (Rubin, 2018).

It is this practice of the state in seeing informal settlements as temporary and unmapped which creates the platform for informal housing to keep growing. The state plays the role of the main representation and expectation of the lower-income population specifically in South Africa, and in so doing, reactions by the public through mass protests and building of informal settlements points to their representation of needs required (Bénit-Gbaffou & Oldfield, 2011). This makes housing a "gray space" (Bénit-Gbaffou, 2018: 6).

It is these actions by the public that the state tends to acknowledge and let go without immediate reaction as a result of their awareness to the needs and desires of their people, and in so doing create a sense of "informal practices of the state" (Bénit-Gbaffou, 2018: 8). With the state's departments having different desires and visions about housing, and housing on its own having different economic and societal aspects involved in it- both formal and informal, it makes housing even more complex than expected.

A key research question as a result is for scholars working on the practices of the state in try to understand the vision and goals of housing development within different departments and state actors. Furthermore, it also involves how linkage between these visions and goals can be made between departments. It is clear that whether the state is actively involved in housing development or not that their practices are being taken regardless of the public in an attempt to solidify their

citizenship and position in the urban fabric; cities and country. Another argument being made by scholars regarding state practices in housing, is based on the state's inability to confront the problem directly. State departments need to integrate their goals and visions for housing to enable a clear route forward. Furthermore, considering how much of a role the public play in housing and the dynamics it consists of, that policy needs to focus more on what the actual needs are of the poor when it comes to housing and human settlement rather than focusing on what departments consider or expect their needs to be.

2.8. Conclusion

In conclusion to this literature review chapter, Bradlow *et.al.* (2011) provide a useful synopsis of the promises and failures of human settlements policy and practice: "It's the housing, stupid"; "It's the instructions, stupid"; and "It's the money, stupid" (pp. 269 & 271). The main challenges have been as a direct result of the type of housing being developed; the lack of institutional coordination; commitment and capability towards policy design and practices; and because of financial challenges and opacity. Either there is not enough, or there is corruption, or the projects at hand are not economically worth the cost in the end.

As for the new housing policy, it is hard to assess the current progress as projects have only started actual construction in 2017/18. In terms of the policy itself, there seems to enough concern in its reception as it took three years since its conception in 2017, for an actual project to start construction. With only two years left on the policy's goal of achieving the development of 1,5 million housing units, it seems hopeful to say the least. If the patterns of failure and success of policy and practice of the new housing approach are to be anything different from what has been in the past, it needs to work with spatial planning. As noted in the last section, housing and human settlements are considered in spatial planning, and so therefore housing needs to consider spatial planning in its policy.

CHAPTER 3: POLICY FRAMEWORKS

3.1. Introduction

This chapter explains the context of recent policies on human settlement developments and planning at a national, provincial and municipal level. I am doing this to give a sense of mega human settlements' wider policy framework, in relation to human settlement policies and expectations. This provides useful context for my focus on the particular Leeuwpoort megaproject and project-specific documents, policies and expectations in Chapter 5.

I structure this policy analysis chapter firstly by listing the documents from national to municipal, in chronological order. The policies analysed include: the National Development Plan; the revised National Housing Code of 2009; Gauteng's Megaproject policy document; Gauteng's and Ekurhuleni's Spatial Development Frameworks and Ekurhuleni's Integrated Development Plan. I also use provincial and Ekurhuleni annual reports to draw out the progress in implementing these policies. Within these policies, I focus on information directly related to human settlement developments, rather than a general review. A culmination of all these aspects will be looked into when faced with the regional and specialised documents as they are more closely and directly related to what is taking part in the Leeuwpoort development (see Chapter 5).

3.2. The National Development Plan, 2030

The National Development Plan 2030 was created by the NPC. Drafted in August 2012, the NDP aims to reduce inequality and eliminate poverty by the year 2030 by way of empowering the people in the hope of creating an inclusive economy, promoting leadership and enhancing the state's capacity.

The NDP points out that one of the key actors in addressing and attacking the state of poverty in the country is to look towards the promotion of mixed housing strategies through compact urban areas which allow for access to public facilities and services, as well as employment for all in the vicinity (NPC, 2012).

In noting the country's capacity for building infrastructure, it states infrastructure related to human settlements is planned in a way made unnecessarily complicated. Different infrastructure needed for developments are tied to different levels of government- levels of government at regional; provincial and national that do not coordinate in sync with one another. As a result, human settlements generally end up being planned badly as planned services and infrastructure are not in alignment. The recommendation put forward is to shift housing plans to the municipal level, where planning for such is done (NPC, 2012).

According to the NDP, sustainable human settlements require adherence to certain principles. Some of these principles include: reducing the carbon footprint by opening up and making public transport more affordable and accessible closer to the workplace; a low-cost holistic approach to housing developments that are all service inclusive; ensuring building regulations are compliant to environmental requirements; and the rapid inclusion and expansion of recycling infrastructure. Furthermore, rural areas make up over a third of the housing in South Africa and proposals are to put forward to upgrade rural developments into vibrant and revitalise areas. To address the issue of apartheid geography and create conditions for more humane living and sustainable working environments, the commission proposed a strategy guided by, removing social patterns across all geographies that aggravate socio-economic inequality and inefficiency; the implementation of catalytic projects in the aim of spatial transformation; creating a balance between economic competitiveness; social equity, and environmental sustainability; and providing residents with greater freedom to choose where to live across South Africa (NPC, 2012). With spatial transformation in post-apartheid South Africa not meeting the needs of the public's expectations but rather mirroring the expectations of the private sector, there is a real need to refocus the status quo and strategic approaches of spatial planning and development. Spatial development needs to follow normative principles including: spatial justice; spatial sustainability; spatial resilience; spatial quality; and spatial efficiency.

It is made very clear that in order for urban inefficiencies to be tackled, the government and private sector need to take a "location-specific approach" (NPC,

2012: 266) to the development of urban areas as they are unique and their social, economic and environmental characteristics all vary. A major challenge facing city and town development is how past high levels of fragmentation in development have increased the cost of housing, making it too expensive for the previously excluded and marginalised groups to be able to take part in the property market. As a result, the gap has widened between themselves and the middle to higher income groups. Higher-level density development has shown in cases to decrease this gap and increase growth in housing ownership. Further to add, spatial transformation of urban areas relies heavily on access to public transportation networks, giving the public access to the majority of public goods and services, as well as employment opportunity. Inefficient attention has been focused on this in development, especially through municipal coordination and integrated modes of transport.

The NDP posits that the challenge faced by the nation in this regard is finding a quick and affordable way to sort out the housing backlog while at the same time creating high quality and well-functioning human settlements that will in the long run create opportunity for income generation (NPC, 2012). It cannot just be about housing anymore, there needs to be as much focus put into service infrastructure to achieve sustainability. These two aspects—housing and provision of basic services—need to be tied closely together when planning. The Commission acknowledged certain challenges around this, including: funding; inadequate maintenance of infrastructure; access to affordable services for poorer households; failure in developing households in areas where available bulk service provision is accessible; and poorly managed municipalities with a lack of financial and human resources.

For the NDP, spatial transformation is a long-term project that will need support by strong policy. To support this vision, the Commission recommended building capabilities be accommodated by means of; improved spatial planning and coordination; an urgent and comprehensive review of the national planning system; strengthening planning capabilities within local government; supporting citizen training in spatial competencies; developing a capability framework for

spatial governance; and creating a national observatory for spatial data assembly and analysis (NPC, 2012).

3.3. The National Housing Code 2009: Integrated Residential Development Programme

The National Housing Code of 2000 tended to be primarily focused on subsidised housing developments, without a scope of planning for their integration with surrounding areas. The revised National Housing Code of 2009 sought to reassess this, with the inclusion of the Integrated Residential Development Programme (IRDP). This section highlights both the funding processes included in the new housing code and the new institutional responsibilities giving to the different spheres of governments.

The IRDP was designed as a tool to develop integrated settlements, which provide social, economic (employment opportunities and activities), and housing for different income groups (DHS, 2009b). The tool replaced the previous project-linked Subsidy Programme which focused on the development of subsidised housing primarily. The IRDP takes a more holistic approach in planning and development, in which service infrastructure and other socio-economic aspects such as finance and rental-linked housing (in addition to subsidised housing); commercial and institutional land uses, and other infrastructure is considered to produce sustainable human settlement development (DHS, 2009b: 10). Projects of the IRDP divide planning and development in two phases: Phase 1 - Planning, land acquisition, township establishment, and provision of services for residential and other land uses; Phase 2 - The construction of housing for qualified beneficiaries and the sale of housing stands to non-qualifying beneficiaries and other commercial stands.

The IRDP has been incorporated into the BNG approach through:

- An integrated township development approach, including the needs of specific community and area;

- A development approach looked at in phases to facilitate effective project management and administration;
- The sale of serviced residential stands to both qualifying and non-qualifying beneficiaries, with the latter residential sales prices based on income and profile group;
- Provision for serviced sites that are residentially non-related, as a means of providing for integrated human settlements; and
- Housing construction to be administered in the final phase of the development for the qualifying beneficiaries (DHS, 2009b: 14-15).

Funding Processes

The IRDP may be used in the cases where an integrated human settlement project is being undertaken on vacant unoccupied land; and when an integrated human settlement project is being developed on undeveloped parcels of land in an existing township (DHS, 2009b: 15). The total costing for the projects are to be considered by the Minister of Executive Council (MEC) in line with the funding policy.

Consideration is to be taken into account with regards to internal costing for engineering by the municipality. This costing is funded from the housing allocation to provinces in which the cost noted includes all service costs including stands within the project area. The following are possibilities that can be developed under this programme: higher density stands; subsidy scheme residential stands; non- subsidy scheme residential stands; commercial and business stands; and institutional stands (schools, police, etc.). Furthermore, the costing for establishing a township plan may also be funded by the programme. The construction of housing for qualifying beneficiaries is incurred by this programme, but certain beneficiaries are required to make financial contributions if they exceed a certain monthly income bracket which is determined by the MEC annually. This is to enable the construction of at least 40m² housing units (DHS, 2009b: 20-21).

Partnership with developers is key: "… the total cost of the project will be paid to the developer in terms of a progress payment system as agreed between the MEC and the developer to enable it to make payments to providers of professional services or contractors" (DHS, 2009b: 23). In the case where income is made and received by the developer from the sale of housing units considered a part of the development, the funds must be deposited into a central income account set up by Treasury. The income from this account may only be reserved for the continuous construction of houses.

Institutional Responsibilities

Table 2 encapsulates the transferred roles and responsibilities that have been put in the hands of the different spheres of government departments, in accordance with the vision of the new National Housing Code. It is evident from this that municipalities – where they have capacity – are largely responsible for project management. Provincial departments only assist in Phase 1 and 2 when municipalities are not capable. The purse strings are controlled by National.

Table 2: Institutional Responsibilities in IRDP (adapted from DHS, 2009: 24 & 25).

MUNICIPALITIES	**PROVINCIAL DEPARTMENT**	**MEC (national department)**
Role of Developer.	Role of developer when municipality lacks managerial/technical/ financial capacity.	"Using *pro forma* procurement documents, agreements, and/or contracts when applying for a project and implementing a project"
Project performance monitor and evaluator.		Receiving provincial subsidy allocation
Ensure applications are approved by municipal council.		Approving application if PD act as developer
Reservation applications for project funding.		Confirming subsidies approved
Call for land availability proposal.		Making progress payments to developers
Secure land for terms of agreement and undertake feasible study.		Supplying financial advice/assistance

Outsource services of professional teams for project assistance.		"Considering subsidy reservations and project descriptions from municipalities, district councils or any other service provider to supply, at its cost, all bulk and connector services required for the project"
"Use *pro forma* procurement documents, agreements, and/or contracts when applying for a project and implementing a project".		Assessing municipality's capacity in undertaking financial, technical, and managerial and information resources in proposed development.

3.4. Gauteng Spatial Development Framework, 2030

The Gauteng Spatial Development Framework (GSDF) was created by the Gauteng Planning Division by the end of 2014. Its purpose is to try and achieve the goal of building an inclusive and sustainable Gauteng province for all through efficient, responsible, and equitable development (GPD, 2014).

The main aim of human settlements set out by the provincial SDF highlight the need for the integration and sustainability of life as well as resources within cities. The main aims of human settlement developments are based around: providing affordable and adequate amounts of varying housing typology opportunities; corridors and activity nodes; upgrading informal settlements and townships through mixed-use economic developments; using well-located land to develop sustainable mega human settlements; and integrating social, economic and transport infrastructure with housing. With Gauteng comprising of 40.1% of all informal settlements in South Africa, and an estimated housing backlog of over 50,000 units per year and a current housing demand of 687,015 units, it is clear to see a dramatic shift in unit sizes in the housing policy (GPD, 2014: 56).

According to Gauteng's provincial key policy directive about human settlements, human settlements are focused on striving to "Develop quality living environments through provision of a variety of housing options in conjunction with public transport development" (GPD, 2014: 6). Other directives include:

large economic infrastructure investments; the revitalisation of township economies; and growing strategic economic sector competitiveness. Concerning the provincial views on mega human settlements, it represents a housing policy shift away from the previously implemented RDP housing mode (considered inefficient) towards more integrated large-scale human settlements (GPD, 2014: 23). Such settlements will be either considered nodal developments or existing cluster developments comprised of no fewer than 15,000 housing units. The SDF goes on to specify that if said projects are unable to generate economic activity internally, they run the risk of becoming unsustainable in their resource consumption, use of network systems, exacerbating urban sprawl, and resulting in dislocation and spatial fragmentation. Keeping this in mind, it is important to note that megaprojects are to emphasise economic sustainability and efficiency, as said by the Gauteng Premier when the policy was first launched in 2014. However, there is no mention of megaprojects or mega human settlements within the GSDF 2030.

3.5. Mega Projects: Clusters and New Cities (Gauteng Department of Human Settlements, 2015)

The document was compiled by the Gauteng Department of Human Settlements (GDHS) in 2015. It is based on the summary of the housing process up until 2015, and the introduction of the housing development transition taking place in the province. It highlights the legislation and process of transition from how housing and human settlement developments used to be done, to how they will be done from hereon in.

We see the approach moving away from the previous model of housing developments that had been based on sporadic micro developments, lacking wider infrastructure, and towards human settlement developments that are focused on encompassing socio-economic and service infrastructure integration and sustainable developments, to be known as “megaprojects” (GDHS, 2015a: 25). Megaprojects are focused on human settlement developments of nothing less than

15,000 housing units, and the model envisions them as either new nodal points or existing clusters developments. "It is envisaged that Megaprojects will positively and decisively impact on primary, secondary and top structure construction infrastructure as well as the household economy" (GDHS, 2015a: 32). The key components that make up a Megaproject as stated by the GDHS are as followed in table 3:

Table 3: Key Components of Megaprojects (adapted from GDHS, 2015a: 36).

Component	Departments and Funding Involved
Public housing	HSDG; USDG; NDPG; MIG.
Bulk Infrastructure	NDPG; Municipal Dept. of Infrastructure; Grants Capital Funding for Townships.
Energy and Electrification	ESKOM and Municipal Dept. of Infrastructure; and Technical.
Roads	Dept. of Roads and Transport; and Municipal Dept. of Infrastructure Development
Business Incubators	Gauteng Economic Growth and Dev. Agency; DTI; NYDA; and Gauteng Enterprise Propeller.
Public Open Spaces	Municipal Dept. of Parks; SASO; ISCOR; Leverage Community Agencies; and CSI and Foundation.
Filling Stations	Private Sector Investment.
Trader Stalls	Dept. of Transport and NDPG.
Commercial Enterprises	Black Business and Private Sector.
Light industries/Mini factories	COGTA-Small Towns Revitalisation Support Fund; DTI Agencies; DBSA; and IDC.
Taxi ranks	Dept. of Transport and NDPG.
Social Services/Facilities and Security	NDPG; IDT; and Grant Capital Funding for Township Renewal

3.6. Gauteng Department of Human Settlements Annual Report 2017/18

The mission of the provincial department of Human Settlements is to, "To facilitate the delivery of sustainable integrated human settlements, "New Towns" and "Smart Cities" in partnership with relevant role-players from all sectors of society" (GDHS, 2018b: 16). This is to be done through developing suitably well located and affordable housing; transforming existing towns and cities in Gauteng to be inclusionary and sustainable; and creating communities that are caring, cohesive and sustainable with access to work and social infrastructure and services.

This Annual Report notes that the Gauteng Department of Human Settlements has only been able to achieve 42% of its annual objectives for the 2017/18 calendar year. They argue that the main reason for this low level of achievement is the lack of suitable and well located land available for proposed human settlements. Furthermore, limited bulk infrastructure and high cost in land development have resulted in delayed processes for registration of proposed townships. The unfortunate fact of the matter is the department still has approved beneficiaries of the 1996/7 housing list that have yet to be allocated housing as a result of the challenges noted above (GDHS, 2018b: 8).

The objectives of the provincial Department of Human Settlements by the financial year end of 2019/20, with reference to housing development, are:

- Implement and partially fund 12,214 Financially-Linked Individual Subsidy Programme (FLISP) housing units;
- Under the Incremental Housing Units (packaged developments phased step-by-step in order to benefit the entire community target) , build 75,781 units and service 76,975 units;
- As part of the legacy project (related to previously focused RDPs), build and service 15,589 housing units and 12,835 housing units respectively, and
- Under the Social and Rental Housing Programme, provide for 45,661 housing units (GDHS, 2018b: 48 & 49).

Table 4 indicates the planned development targets for 2017/18 for in the above mentioned housing units, in comparison to the actual targets achieved.

Table 4: Gauteng Housing Development targets for 2017/18 (adapted from GDHS, 2018)

Housing Development Objectives	**Target Plan 2017/18**	**Actual target reached 2017/18**
FLISP	5,706 units	988 units
Incremental Housing Units	37,297 units	19,683 units
Legacy Project	2,283 units	1,445 units
Social and Rental Housing Programme	2,078 units	2,926 units

3.7. Ekurhuleni Municipal Spatial Development Framework (MSDF), 2015

The Municipal Spatial Development Framework (MSDF) for Ekurhuleni Metropolitan Municipality (EMM) was compiled by the Ekurhuleni Spatial Planning Project Management Team (PMT) in 2015. The purpose of this document is to guide any future development within the municipality to achieve sustainable development through it. Moving forward, the principles guiding the MSDF of Ekurhuleni and its entire decision making are encompassed around: spatial equity; spatial justice; spatial sustainability; spatial resilience; and spatial efficiency. In this section, I will not delve into the entirety of these spatial objectives, but rather I focus on those related to human settlements and housing, and the southern parts of the municipality – my research site.

Some weaknesses noted that need to be addressed in the municipality are related to decaying central business districts (CBDs); service backlogs in the poorer areas; ageing infrastructure; distorted spatial structures; poor housing delivery; lack of a north-south linkage as well as congestion; and quality of electricity supply. From these problems, threats such as developmental pressure being put on the use of open space systems cause stress on the ecological and environmental systems; informal settlement developments; and the limitations of engineering services which are at capacity already (PMT, 2015). The CBDs in the south and east are unable to provide for Ekurhuleni's growing residential areas (PMT, 2015). The MSDF acknowledges that electrical, water and sewer services all need expanding in the southern section of the metro.

At the same time, Region A of Ekurhuleni - the region in which the Leeuwpoort development is located - has been given the role of ensuring linkage to the rest of the municipality according to the MSDF, as well accommodating the future urban growth in the aerotropolis (Ekurhuleni is home to Africa's largest airport complex). The function for this region is based around providing essential infrastructure; providing expansion towards the east; and protecting the existing urban fabric. Furthermore, the location of the Leeuwpoort development is in line with the metro's plans for re-urbanisation through regeneration and developing new nodal retrofitting based on region A's roles and functions.

Some of these spatial objectives relate to, promoting sustainable development and livelihood development; the integration of disadvantaged communities into the urban fabric; optimisation of job creation in the formal economy; promoting access to municipal and social services; and further to create a single unified EMM. I will delve more into these and some other spatial objectives of the municipality in the discussion chapter as I connect them to what is/is not happening in the Leeuwpoort development.

Further to add, within the MSDF guidelines, there are five principles they need to follow to achieve guideline one: sustainable neighbourhood development. These principles are: adequate space for streets and efficient street networks; high density; mixed land-use; social mix; and limited land use specialisation. The second guideline is based around densification, a focus on a compact city by reducing travel times and costs for services. This is done through the provision of public transport; provision of social and business services; and provision of basic engineering services. Other guidelines focus on the aerotropolis, corridors, and transit-orientated development (PMT, 2015).

In section 3.2.4. of the Ekurhuleni MSDF, the Leeuwpoort development is discussed, and split between two different nodal points. The Reiger Park and Parkdene extension are phased in a primary nodal point and the Sunward Park extension is phased in a secondary nodal point. In accordance to the land uses of a primary node, the Reiger Park and Parkdene phase should accommodate: high density residential; primary, secondary and tertiary education; retail; businesses; offices; light industrial; sports facilities; community facilities; and social services as well as municipal and government facilities to name some of the main land uses. In respect to the Sunward Park extension, the land uses for secondary nodes should accommodate: medium and high density residential; primary, secondary and tertiary education; medical; retail; offices; community facilities; public open spaces; and municipal and government facilities. In addition, the Boksburg CBD serves the specialised function of providing retail needs to middle and lower-income groups especially including the areas of Vosloorus and Reiger Park. Furthermore, it provides a niche market for taxi ranks and state department

offices. Parkdene serves the specialised function of retail needs for higher-income residents. As for in Sunward Park, the Sunward Park centre and lifestyle centre provide a specialised and niche function for the retail needs of the higher income residents in the area, as well for their healthcare and service needs (PMT, 2015)

The Sunward Park area is highlighted as the major development of the Leeuwpoort project, bringing in around 17,000 to 19,000 housing units in its totality. With this in mind, if we take the average household size in South Africa of 3,5 persons per unit (Wittenberg *et.al*, 2017) and consider the minimum parameter requirements of threshold populations in secondary nodes, there are certain infrastructures expected to be developed in accordance with the MSDF regulations. Table 5 shows the thresholds per facilities required in a secondary node to accommodate such a population increase. From this it can be deduced that with regards to MSDF requirements in Ekurhuleni that all the facilities noted in the table below need to be further accommodated for, some even as much as double the amount.

Table 5: Minimum threshold parameters for building blocks or urban cores (adapted from PMT, 2015: 76).

Activity	**Parameter**
Retail	0.2m²/capita
Offices	0.1m²/capita
Community Facilities	
Clinic	500 people (20min walking distance)
Library	10 000 people (30min walking distance)
Community Centre	22 000 people (30min walking distance)
Post Office	11 000 people (40min walking distance)
Police Station	25 000 people (30min walking distance)
Primary School	2 700 people (30min walking distance)
Secondary School	8 100 people (30min walking distance)

3.8. Ekurhuleni Integrated Development Plan, 2016

The IDP was compiled by the Development Planning Division (DPD) in 2016. The document works as a guideline for all planning, managing, budgeting, and decision-making throughout the municipality (EMM, 2016).

Ekurhuleni hosts a total of 199 of the 322 (37%) informal settlements in Gauteng, making it the largest contributing city in the province. Ekurhuleni's housing backlog has been noted from 2011 to be at an estimated 209,420; 165,000 of these being in informal settlements (EMM, 2016). With this being noted, it is important to point out that backyard shacks are considered an important dwelling type in the city, yet they are not accommodated for in the backlog listing, making for an inaccurate reading of the total housing backlog. Backyard shacks, hostels, and informal settlements are amongst the cheapest and most affordable means of housing for the majority of those looking for work in the city today. Around 87,000 housing units have been delivered in the last 16 years, at an average of 5,000 units per year and Ekurhuleni has the highest rate of residents living in RDPs, at 16% (EMM, 2016).

The electricity backlog in Ekurhuleni is estimated to be at just fewer than 282,000 customer units: 118,985 formal units and 162,713 informal units (EMM, 2016). The customer units refer to the amount of households that use/require electricity, and therefore the electricity backlog refers to the amount of households that still need provided electricity. The concern with addressing and fighting this backlog is it is dependent on the housing provisions set out by the human settlements department. In other words, provision for more electrification and power stations will only be accommodated once a sufficient number of houses are provisioned for and not until (electricity supply is only provided for once the Department of Energy is guaranteed that there is sufficient housing that requires the supply- refer to Chapter 5.4.3/5). The construction of human settlements along public transport corridors has been advocated for in the MSDF to combat the challenges of moving away from private car transport; and the issue of expensive public transport cost and its availability. The municipality has also attempted to combat, and address the shortage in housing, especially rental housing:

> "At the core is the need to transform the functioning of human settlements and the workings of the space economy so as to observe meaningful and measurable progress in creating more functionally integrated, balanced

and vibrant urban settlements by 2030. This requires institutional capabilities for effective coordination and spatial."- (EMM, 2016: 101)

So in conclusion, in simpler words, the plan is to develop human settlements that do not only focus on housing and residency, but also contribute to the urban functioning of the economy, society, culture and environment (EMM, 2016).

3.9. The Annual Report of Ekurhuleni Metropolitan Municipality, 2016/2017

In the city's assessment of its mission to become a smart creative and developmental city, not much mention is made of housing. However, it does note that housing is the greatest challenge the city faces moving forward. Three years ago, Ekurhuleni had 62.5% of its population living in formal housing, with 210,000 informal settlements. By the year 2017, that figure had changed to 78.9% with around 144,000 informal settlements, an increase in formal housing of 16.4% and a decrease in informal settlements by 66.000 households. This goes to show that within the short period of time, large and considerable strides have been made in achieving the goal of eliminating informal settlements. Further to add, the city recorded the development of 256 social housing units; providing 3,885 serviced stands; and the building of 311 subsidised housing units between the 2016/17 period. Finally, 16 informal settlements were upgraded to formal townships including consistent supply of basic services.

One point that was related to the Leeuwpoort development was the capital expenditure based on the bulk infrastructure. This amount had accumulated to R112, 950 in comparison to the allocated budget of R120, 000, resulting in a less 6% variation to the original budget.

3.10. Conclusion

This chapter has summarised policies and procedures that are included in the decision making with regards to human settlements and housing project

developments. From a national level of governance down to the local level, there is a shared commitment to the promotion of mixed-use housing developments as important for economic and social integration. The National Housing Code has, since 2009, required a more focused approach on human settlement developments where communities are included in the project plans, and where not only housing is an aspect of focus but also provides services for future use. Similarly, at local levels, for example in Ekurhuleni, there is a move away from looking at developments in a narrow, housing-centric manner to look at human settlement projects as an agglomeration of societal, economic, and environmental matters. This holistic approach is required to re-stitch the urban fabric and allow for integrated and sustainable living.

This concludes the policy framework section in which I set the context for the project-specific document analysis to follow in Chapter 5. I will now move on to the methods chapter in which I explain how my fieldwork was conducted and analysed.

CHAPTER 4: METHODOLOGY

4.1 Introduction

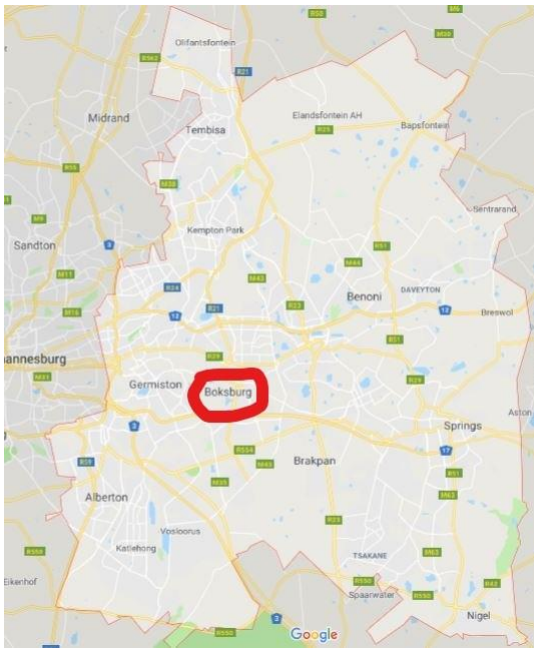
In this chapter I discuss my study's research site - the Leeuwpoort development and its relation to the rest of Boksburg. This is followed by discussion of my research approach, style of data collection, sampling tactics, and the means of going about analysing my data. I then share some of the ethical considerations taken in my research and conclude with some of the challenges and limitations I faced.

4.2. Study Site

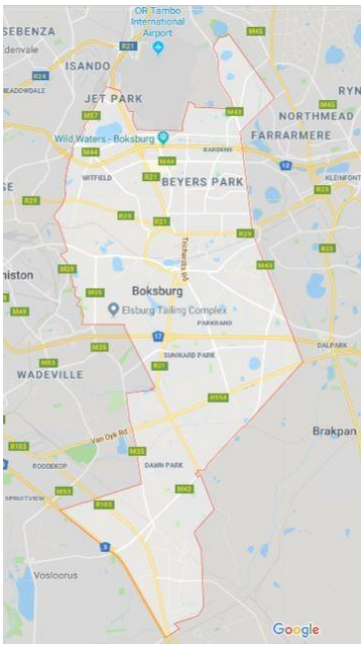
The Leeuwpoort megaproject is the chosen site for my research. It is located between three different residential areas in Boksburg, Ekurhuleni, Gauteng (see Map 8), namely: in the north Parkdene extension 7 and Reiger Park extension 19; and the south close to Sunward Park. Boksburg covers 162.35km2; it has a population of 260,321 people at 1,603.43 people per km² (Statistics South Africa, 2011). Of the total population, black Africans make up the largest population just fewer than 58%; followed by whites at just over 28%; the Coloured population just below 12%, and Indians just over 2% (Statistics South Africa, 2011). Females make up 2.6% less of the population than males at 48.7%, whilst Afrikaans and English are the predominant languages spoken by the total population at 28.5% and 18.5% respectively (Statistics South Africa, 2011).

The two maps on the following page show a visual of Boksburg and Ekurhuleni, with map 8 showing the location of Boksburg within the city of Ekurhuleni (Highlighted by the red circle), and map 9 showing the location of Boksburg in its entirety. Within Boksburg, Reiger Park covers 3,46km² (Statistics South Africa, 2011), with a population of just under 40,000, with11,335 people per km2. There are 12,348 households at 3,500 households per km2. Afrikaans is the majority language spoken at 48% with black Africans and Coloured residents making up 51.6% and 46.6% of the population respectively (Statistics South Africa, 2011).

Parkdene covers a total of only 0.9km² (Statistics South Africa, 2011) with a population of 6,900, and 10,372 people per km2. 93% of Parkdene is populated by Coloured people and Afrikaans is the majority spoken language of 95% of residents. There are only 1,451 households with 2,169 households per km2 (Statistics South Africa, 2011).



Map 8: Site location of Boksburg in Ekurhuleni (Google maps, 2019).



Map 9: Ekurhuleni Metropolitan Municipality (Google maps, 2019)

In a broader view, Ekurhuleni as a whole has an economic growth rate of 3.65% per annum, with 31.03% of its population unemployed (Metroplan, 2012e). Boksburg as a section of Region A in Ekurhuleni contributes 9.2% towards the total economy of Ekurhuleni with a growth rate of just less than 1.9% (Demacon, 2016). If youth is taken into consideration (15-35yrs), 38% of the population is not economically active and unemployed. A total of 43% of the population earns between R9,000 – R76,000 per month, and 27% earn between R0 – R9,000 of which 18% earn no income (Statistics South Africa, 2011). Of the total surface area of Ekurhuleni, 99.4% of it is considered to be urban settlement with 22.6% of that total being considered informal dwellings On average, infrastructural service delivery, including electricity, water, waste management and refuse removal, lies

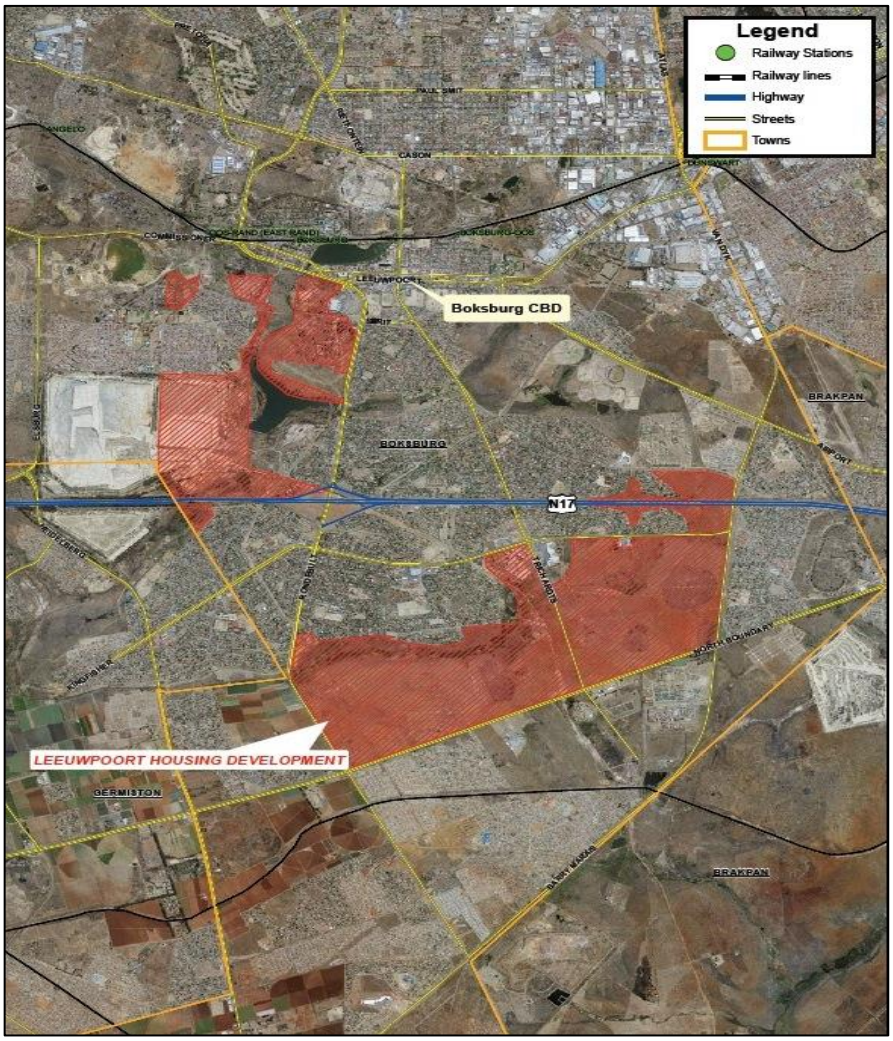
at around 80%, an almost 10% improvement over the last decade (Statistics South Africa, 2011). Unfortunately, these statistics are from seven years ago and many things have changed since, both for the negative and the positive. However, these are the latest census statistics made available to the public.

The main reasons for my choice of the Leeuwpoort development is; its relationship to the agenda of Megaprojects; its location, and its size. Leeuwpoort is one of 29 planned Megaprojects in Gauteng (Map 4). It is being developed by the LDC (PTY) LTD in collaboration with the EMM who acquired the land for the development through the GDHS around the year 2002, who also funded the acquisition. The Environmental Impact Assessment (EIA) was done by Bokamoso Environmental Consultants and completed in 2017. The project was stated to be completed in 7 years, after the EIA was signed off, implying that the project starts in 2017 and will be completed by 2024 (EMM, 2015).

Unlike many of the other sites in Map 4, the location of Leeuwpoort is not on the periphery of the urban boundary but rather in integrated locations between a number of existing residential areas that vary in income groups. It is also not a single, contiguous site, but rather three sites interspersed within the existing urban fabric around Reiger Park, Parkdene and Sunward Park. These areas were historically noted as vacant wetlands, farmlands, or buffer zones in the apartheid city, making development possible. Map 9 gives a site location outline of the development in its entirety across all three residential areas. Appendices 9.8 through to 9.10 show the more specific locations of the Leeuwpoort development, namely: Reiger Park and Parkdene; and Sunward Park respectively. During my fieldwork, construction had only started at the Reiger Park and Parkdene extension of the development, with bulk infrastructure. In Sunward Park there has been nothing at all done.

Along with integrating three different residential areas, Leeuwpoort also aims to provide around 22,000 housing units over 7 years (as the Results chapter will show, there have been consistent discrepancies in the total amount in multiple documents (see Section 5.4).. The cost of the project has been evaluated at around R8.9 billion (Van Wyngaardt, 2017). Compared to other Mega Human Settlement

projects, its housing units will be twice the number of the John Dube Mega Development in Ekurhuleni, although this development is to cost over R35 billion and include a university for the municipality as well as several primary and secondary schools (Simelane, 2017). The Clayville Mega-Catalytic project would include around 14,000 housing units which is still less than two-thirds of Leeuwpoort. It has however also proposed to introduce several primary and secondary schools, a clinic and shopping centre R5.9 billion. These are similarly aligned to the proposal made in Leeuwpoort, despite Leeuwpoort taking up 95 hectares of land in comparison to the 363 hectares in the Clayville Mega-Catalytic project (n.a, www.matchdeck.com/article/7679-). Another reason for choosing this site is that there has been a lot of debate as to whether or not the Leeuwpoort development is good enough in its planning due to previously failed housing plans seen in Reiger Park and Angelo. There has also been a lot of outcry and refusal of the development by existing residents who are concerned that the development will worsen the already declining economy and already troubled delivery of basic infrastructure and services (Mthupha, 2017b).



Map 10: Leeuwpoort Development in its entirety in relation to surrounding Ekurhuleni (www.matchdeck.com).

4.3. Research Methodology

The research methodology is a systematic procedure the researcher works by to solve the research problem faced. Furthermore, research is undertaken with the intention to answer questions through the implementation of scientific procedures Kothari (2004: 2). The scope of the research methodology is much wider than that which is seen in the individual research methods. So therein, the research methods are included as part of the research methodology. In this dissertation I take up my methodological approach through critical social science (Neuman, 1999: 81) as I look through policy and practices of mega human settlements and the perspectives of various people around their understanding of mega human settlements planning

in practice. I have chosen a selection of qualitative research approaches (Kothari, 2004: 3) to obtain the most accurate data and information needed to answer and complete this research study (Section 4.3.1).

The purpose of this research sits between exploration and explanation (Neuman, 1999: 21-22). Exploratory research refers to researching from the beginning by coming up with questions that directly answer points to the topic to understand the topic better. This could be because the topic being researched is new or has had little research done on it (Neuman, 1998: 21). Explanatory research refers to doing research that you want to discover a certain sense of 'why', as in why mega human settlements are being done this way (Neuman, 2998: 23). Within this positioning, I explore both the understanding and knowledge of mega human settlements and what it encompasses as it is still a new topic of academic research, and to explain the dilemma of housing development especially in the context of Ekurhuleni.

My study also sits between two wings of social research noted by Neuman (1999: 23) namely: basic research and applied research. Basic research is at the centre of the expansion of knowledge, which focuses on the understanding of the social world and refuting or supporting claims and theories within it (Neuman, 1998: 23). Applied research looks more at solving policy problems by using the results and data provided for within the research. Therefore, on the one hand, the approach I take seeks to better understand mega human settlements and the approaches taken by the Ekurhuleni municipality to come face to face with this national housing dilemma. On the other hand, I examine these dynamics in the Leeuwpoort development specifically.

4.3.1 Qualitative Research Approach

My use of a qualitative approach allows me to gain an understanding of what the views and opinions of the people involved with the Leeuwpoort development are, and how their views varied and contrast. Flick (1998; 13) states that "qualitative research is orientated towards analysing concrete cases in their temporal and local

particularity and starting from people's expressions and activities in their local context". Therefore, I have focused on getting the views on what the development meant to different stakeholders and how they are similar/ contradictory to what policy and practice state the benefits are, or should be, from interview narratives, documents and media.

4.4. Data collection methods

Table 6 refers back to the main research questions of my thesis and notes the type of data and data collection methods I have used.

Table 6: Methods Table

Research Question	Aim of Research Question	Data Collection Methods	Data Types
1) Where does the Leeuwpoort development fit in with the category of mega human settlements/megaprojects? Is this more about urban infilling or housing?	To get a more practical understanding of how state officials and planners outline the differences/similarities between the past and present housing policies and their developments. Furthermore, to try and get a stronger understanding of what is exactly understood by the Leeuwpoort development and where it fits into the larger plans of housing	• Semi-structures interviews (state officials and planners; ward councillors) • Policy documents • Media	• Interview transcripts • Documents
2) What has been the process of economic development planning (EDP) for mega human settlements (MHS) in Ekurhuleni and Leeuwpoort in particular (in relation to wider Boksburg settlement and economy, etc.)?	To see what the EDP policy and practice for MHS in Ekurhuleni is and if the Leeuwpoort EDP differs in anyway; to see what the 'new' economic contribution these MHS bring to the region.	• Semi-structured Interviews (state officials and planners; ward councillors) • policy documents • Media	• Interview transcripts (written and/or spoken text) • Articles & Journals • Documents

3) What do provincial officials and municipal government officials expect out of mega human settlements and Leeuwpoort in particularly, socially and economically throughout its life cycle?	To see how provincial government and municipal officials view on the social and economic benefits of the development differ if they do; to see if there expectations of its social and economics visions are aligned.	• Semi-structured interviews (state officials and planners)	• Interview transcripts (written and/or spoken text)
4) How do these stakeholders see the process of mega human settlements/ megaprojects differently to that of its precedents RDP and BNG?	To see if the state officials and planners can identify clear distinctions between previous hosing policies and the new megaproject policy. Also to understand how the public, who the developments are intended for see the development and purpose of them are seen any different to past policy developments.	• Semi- and Unstructured interviews (state officials, planners; ward councillors)	• Interview transcripts (written and/or spoken text)

My data collection methods are based around field research in the form of primary and secondary data sources (Kumar, 2019: 215-216). Primary sources being in the form of semi- and unstructured interviews, and secondary sources through historical-comparative document research and media analysis. The historical-comparative research I am referring to is in line with Craggs (2016: 116) who points out that the collection of important business archives and institutional records can be used to refer to the topic at hand. I have collected and analysed a series of documents provided by the Ekurhuleni municipality, ward councillors and a key informant which refer not only to the Leeuwpoort development, but the housing strategy and development plans in Ekurhuleni. These documents include the Environmental Impact Assessment (EIA) reports done on the land being used for Leeuwpoort; the Ekurhuleni municipality's Region A Regional Spatial Development Frameworks (RSDFs); the municipality's Municipal Spatial Development Frameworks (MSDFs); and specialised documents designed for the

assessment of the Leeuwpoort development. Through this, I can identify curated views of key stakeholders and their different visions for Leeuwpoort, which would complement my semi-structured interviews.

The semi-structured interview takes place between an interviewer and interviewee in which the interviewer has a set of predetermined questions laid out beforehand. The interview does not need to follow the exact listing of the questions and can become more of an open-ended discussion/conversation in which might follow other interests that do not pertain to the interviewers' questions (Longhurst, 2016: 103). I have used semi-structured interviews as my means of field research to find out the different expectations and experiences from state and municipal officials, spatial planners/developers and the ward councillors. My reasoning behind this is to look for varying opinions and how it compares to what policy and plans expect the perceived expectations and experiences to be for these different groups as well. I opted to keep the questions more open-ended to allow for a broader, more flexible approach to get at the views of different groups about the development (see Appendix 9.7). I had noticed a more open-ended style of approaching questions in interviews made the discussion more free-flowing and gave me added information that might not have been provided for if I had stuck rigidly to the interview schedule.

Interviews were completed with four ward councillors from different wards; four urban planners from different municipal departments; one project manager from the Department of Human Settlements, and one key informant. These took place at Boksburg Civic Center and other government department offices in Kempton Park, Benoni, and Boksburg between September and November 2018. Interviews lasted between 25 minutes and 98 minutes each (see Table 7). Interviews were both audio recorded on my phone and then transcribed later on in the process on my laptop.

Table 7: List of Interview Participants

Description	When & Where
Ward Councillor 43 (Sunward Park)	5 September @ the Boksburg Civic Centre
Ward Councillor 42 (Dawn Park	5 September @ the Boksburg Civic Centre
Ward Councillor 32 (Parkdene)	7 September @ the Boksburg Civic Centre
Ward Councillor 34 (Reiger Park)	19 November @ the Reiger Park Civic Centre
Specialised Project Manager (Leeuwpoort Development) - Ekurhuleni Human Settlements Dept.	12 October @ EMM Human Settlements Dept. (Benoni)
Spatial Planner (Kempton Park) - Ekurhuleni City Planning Dept.	22 October @ EMM City planning Dept. (Kempton Park)
Urban Planner (Boksburg) - Ekurhuleni City Planning Dept.	23 November @ the Boksburg Civic Centre
Urban Planner (Boksburg) - Ekurhuleni City Planning Dept.	23 November @ the Boksburg Civic Centre
Urban Planner (Boksburg) - Ekurhuleni City Planning Dept.	23 November @ the Boksburg Civic Centre
Key informant from the area and environmental science expert	8 November @ place of employment

Media was collected from local publications such as the *Boksburg Advertiser*; *Infrastructurenews*; and *Engineering News* from 2015 up until the end of 2018. The keywords I used to find these included phrases such as, "Leeuwpoort Development"; "Housing project in Boksburg"; "Megaproject in Boksburg"; "Leeuwpoort Megaproject".

As for observations in this fieldwork, there was not much to observe besides the service infrastructure being developed in the Reiger Park and Parkdene phase of the development. At this moment in time there has been no progress made in the Sunward Park phase of the development as the plans have yet to be finalised by the tribunal, according to the data provided to me in my interviews.

4.5. Data Analysis

I have used thematic analysis to analyse documents, interviews, and media. For the interviews, I organised data in the form of subgroups (Guest *et.al*, 2012) to

pick out not only the most reoccurring results in the interviews but also the most uncommon, and identifying which interviewee groups noted those points. This has required first transcribing my interviews, which has been followed by selective coding (Neuman, 1999: 423) which I chose to best illustrate the contrasts and comparatives in the themes between the different interviews and historical context. These analytical strategies allow me to have a general understanding about which views, demands, and needs both socially and economically are expected by the interviewees through the Leeuwpoort development.

Furthermore, I have also used discourse analysis to interpret underlying messages conveyed through the policy document(s) and media coverage. Discourse analysis, according to Fairclough (2010), explores the relationship between the text and its language practices and social context. Discourse analysis is useful in understanding how language gets used around megaprojects, for example the multiple labellings of the new housing policy: mega human settlements, megaprojects, catalytic projects, mega-catalytic projects, etc. I wanted to identify the underlying ideologies (if any) between these different labels within the policy and finally understand if the Leeuwpoort development is being understood as a mega human settlement (van Zyl, 2013).

4.6. Target Sampling and Recruitment

My fieldwork recruitment was originally focused on three target groups: provincial/municipal officials and representatives (state officials and planners); developers and experts related to the Leeuwpoort development planning, construction or/and project oversight, and thirdly ward councillors of the included Leeuwpoort development area. Furthermore, I sampled key sources such as the municipality's documented files on the policies and practices about the Leeuwpoort development, and media coverage as described above.

The state officials, planners and ward councillors (two groups) were sampled through purposive sampling which is a method that tends to be selective in its population group to use the judgment of experts in the case at hand (Neuman,

1999: 198). Given their special positions in the municipality as officials who have unique insight into knowledge about the development, it was fitting to use this sampling method. Participant recruitment was largely mediated by the Ekurhuleni's City Manager's office, in line with the terms of the institutional permission granted. After a lengthy and challenging recruitment period, I completed 10 interviews, of which four ward councillors and four were urban planners from city planning; one was the Leeuwpoort project manager and one was a key informant from the area and environmental science expert. As noted above I had elected to include the contributions of the ward councillors' interviews as their information was considered valuable. This further allowed me to see the development from not only a different political view but also from the concerns and issues raised by residents and themselves throughout the process so far. They were also easier to recruit than state officials and developer representatives (see 4.9).

4.7. Ethical Considerations

I was granted ethical clearance by the Wits ethics committee after filling and handing in my ethical clearance form on the 25th of May, 2018. I was provided with my ethic clearance code H18/06/39 on the 22nd of July to use during my interviews (see Appendix 9.1). I was also granted institutional permission from the Ekurhuleni Metropolitan Municipality through the City Manager on the 30th of July which allowed me to engage state officials and planners about the Leeuwpoort Development (see Appendix 9.2).

For each research participant, I shared with them a participant information sheet (see Appendices 9.3 and 9.4) which shared background information about the study and why I had asked them to participate in the interview. I then went on to talk them through the ethics consent form (see Appendices 9.5 and 9.6) for participating in the interview to clarify they are participating as a volunteer and are free to refuse to answer any question they felt uncomfortable with. Further to this, I stated the type of anonymity I would be offering them for using their

information in my research, noting that for public figures and officials it would be difficult to guarantee anonymity due to their public positions. I then concluded by asking them if I could record the interview sessions and ask them to sign off on two copies of the consent forms; one for them to keep and one for myself.

In talking to ward councillors and municipal officials who are related to different political parties and are on different hierarchical scales to one another, I realised that the influence of bias may arise, as noted by Neuman (1999: 377) when talking to people who are in positions of power. The somewhat virtual political seesaw is something I faced as an ethical challenge, considering certain state officials represent different political parties and therefore different motives in how they answer the questions. Keeping the integrity and reputation of these interviewees through my write-up of their answers is important (Neuman, 1999: 377) considering their institutional positions and so as not to harm an interviewee's integrity and reputation.

Positionality is a key concern in ethical research that must be considered when thinking about one's relation to the research and those being researched (Sultana, 2007). Positionality is the ability to understand or interpret my position in society and how that shapes my interpretation, as well understand the positionality of others to understand where they are coming from and their interpretations (Sultana, 2007: 378). In this sense I had to understand my position not only as a well-educated middle-class white male from a supportive background but also as an academic facing a housing dilemma that I in my personal life have never needed to worry about. Being a lifetime resident of *Sunward Park*, Boksburg, I also had to negotiated my insider/outsider perspective as both a resident and researcher. I had to keep in mind the questions I had asked and the responses I had received and how I had to analyse them carefully. This is an academic research and my main position of answering in this thesis is from an academic perspective. I therefore focus less on being a resident when understanding answers during interview sessions.

4.8. Scope of Study

The scope of my study is Boksburg, and more specifically focused on the Leeuwpoort project in the residential areas of Reiger Park and Parkdene, and less so Sunward Park. The development stage currently at hand is focused on bulk service infrastructure provision.

The documents I have analysed in this research has been mainly focused on the policy and implementation of mega human settlement developments in Ekurhuleni, and media related specifically to Leeuwpoort in the last few years.

I have limited my interviews to focus on the state and municipal officials and planners; and ward councillors of the included area of the development only. Given the complexities and still-in-process nature of the beneficiary list, it would be difficult to get into direct contact with definitive beneficiaries of the development, and I decided not to include this group in my research. I have not considered the influence of social and economic impacts on local businesses as a target population as it would be stretching the barriers of what I want to focus on currently. Furthermore, it would be difficult to assess the impacts given the nascent development.

4.9 Research Challenges and Limitations

In this section I speak to aspects of my research and my thesis in which I was faced with great challenges or problematic situations at that have affected the outcome of my results. The point of this section is for me to self-reflect on the partiality of the data, and the limitations and challenges in collecting and analysing it. I draw attention to these also for the sake of future research so these aspects can be addressed there.

4.9.1. Accessing the State

I took for granted in the beginning of my research that state officials would be willing to support me in my research topic, thus making my interview planning quicker. This was not the case; in fact, gaining access to state officials was my greatest challenge throughout the fieldwork.

Getting institutional permission was the first challenge. There were a lot of back and forward emails between the same people referring me to the same people who had been referring me to them in the beginning. There were a lot of circular movements happening between July and September over email as a result.

Once that was secured at the municipal level, I was assigned an interviewee coordinator through the City Manager's human resource department, who would assist by helping arrange interviews, as I was notified several times by the city manager's secretary assistant not to directly email colleagues myself. For the most part, they seemed to be having the same issues getting responses from people. During one email conversation between my supervisor, the coordinator and myself I was replied with "am trying my level best, but some departments are really not cooperating" and "The Office of CM [city manager] is not happy with departments who are not cooperating towards this research". One further example of the struggle we were both confronted with is, I had sent an email on the 11th of September 2018 for an interview request to the city of Ekurhuleni's HoD for Human Resources Management and Development, in which by the 27th of October had still received no reply and so communicated with my coordinator who responded to me with: "I am also still waiting for responses from them as well". There were many back and forth emails between myself and email respondents who were redirecting me to the very same people that had suggested me to them in the first place. For the most part, it was a waiting game on my side as responses were sometimes weeks apart. The lack of communication and coordination between the departments and HoDs was challenging.

Arranging interviews with ward councillors was straight forward as they were easily accessible through private contact. Later on around the end of October and

November, interview arrangements with urban and spatial planners from the city planning department were also organized relatively smoothly.

At the national and provincial level, I reached out to the relevant departments through my communication coordinator, as instructed by the office of the city manager. My coordinator however did not get any responses from the national departments. I garnered some responses. The provincial human settlements department referred me back to the project specialists, with the personal assistant of the HoD for Human Settlements arranging an interview with several project-related officials- including project assistants; strategy planners; and resource managers, one of which was the project manager for Leeuwpoort. Unfortunately, only the project manager could attend and was interviewed. Follow up arrangements with absent participants were unsuccessful, and I was notified that the project manager conveyed the other participants' views on their behalf during our interview already. The Gauteng Department of Economic Development offered to participate but they informed me they would not be able to assist as they have not been made aware of any proposals for the Leeuwpoort development. Late in my fieldwork, the Gauteng Department of Agriculture and Rural Development (GDARD) also offered to assist, as they were involved in extensive email communication with the town planners and EIA consultants during Leeuwpoort's planning stage. However, during a phone call with the department's coordinator I was told they are not sure who I would interview so it would be difficult and my fieldwork needed to be completed, so I used documentary analysis instead.

Timing of the study was an issue. Departments were in-between strategic review periods in August and September. Another reason for the low response rate could be that state officials have been under pressure by their line managers and as a result of being behind schedule with regards to a project not many people want to talk about. In the end they do not owe me anything and considering being behind schedule would it be wise to give me the time to question a project when they are receiving enough questions from their line manager.

4.9.2. Accessing private sector actors

It is also important to note the absence of Urban Dynamics and the Leeuwpoort Development Company (PTY) LTD from my research. After many communications, both companies were not able to assist. My supervisor and I were ensured by a planner at Urban Dynamics that I would get an interview, but availability was a challenge for them, and so I was requested to email my research questions and they would assist me. Late in November I phoned to see if any feedback had been noted yet, at which point I was told that they would not be able to arrange any information or interviews for me. With regards to the Leeuwpoort Development Company, during a talk with a project specialist at Kempton Park's City Planning department, I was introduced to a former director for LDC (PTY) LTD who said he couldn't assist as he was no longer involved. Instead, he referred to me to two gentlemen who were in control of the development operations, neither of whom replied to my emails or phones calls.

4.9.3. Research Duration

Due to my own personal financial situation at the time, I unexpectedly had to complete my Masters programme within one year. As a result, I was not able to commit more time waiting for further interviews and extra follow-up interviews. Another year might have been able to turn the above challenges around and pursue the interviewee groups for a longer period of time. However, this was not guaranteed either. They are challenges I hope will serve as helpful information for future research purposes, especially to academics pursuing research on state practices.

4.10. Conclusion

This chapter has outlined the location of my research site as well as a general background understanding of its demographics. I have explained the research methods and data collection methods I have used throughout my fieldwork, and

explained which data analysis techniques I am using to achieve the best outcome from my results. I highlighted the limitations and challenges I came across in conducting this research, and what ethical considerations were taken into account.

I will now move onto my results chapter in which I present data from my document analysis, interview analysis and media analysis.

CHAPTER 5. RESULTS

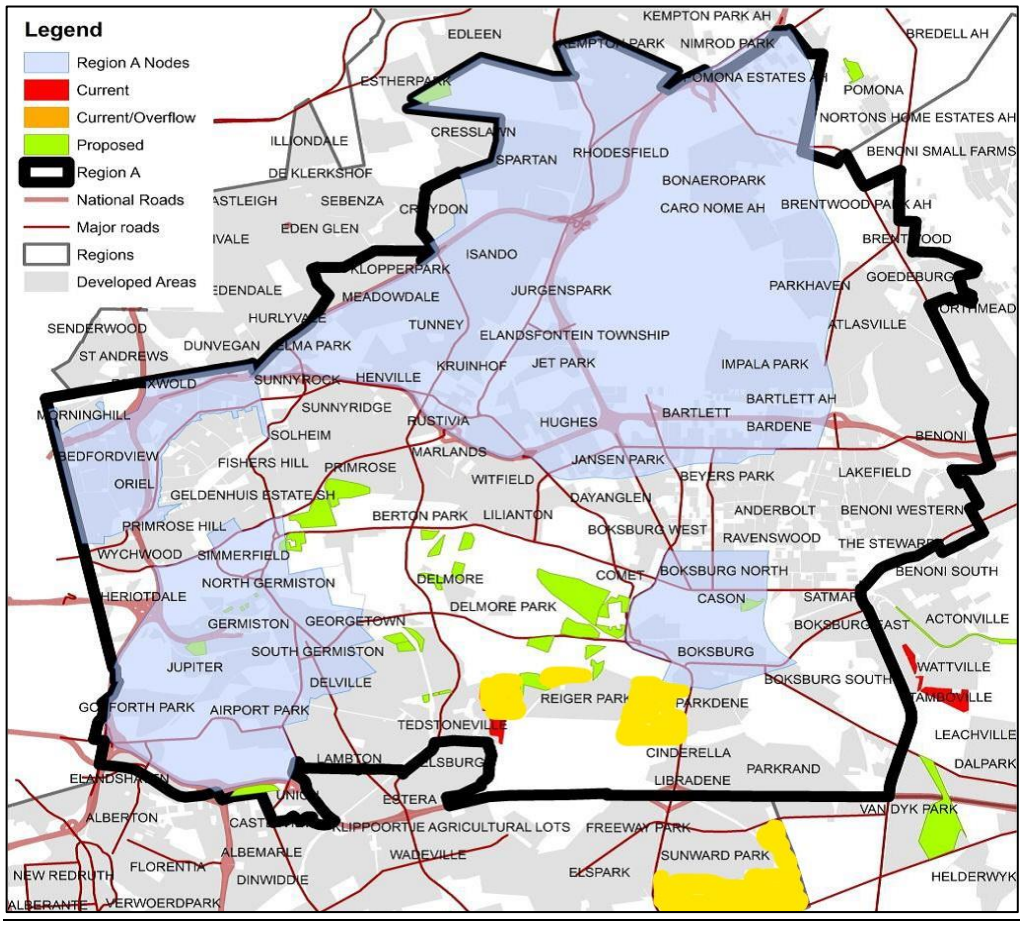
5.1 Introduction

The results chapter to follow will be split up into three different sections, namely: document analysis, interview analysis and media analysis. My document analysis will proceed in descending order of scale from municipal and regional level (Region A and Boksburg); to project-specific level (Leeuwpoort). This will be done to understand where and how the plans for Leeuwpoort have been considered in the larger plan of the municipality. The interview analysis is presented in a thematic manner. This was possible through the use of open and selective coding once my interviews had all been transcribed. Finally, I analyse the coverage of local media, mainly in the form of newspapers (online), to understand how the characteristics of megaprojects and the Leeuwpoort development more specifically are being portrayed to, and debated about by, the public.

5.2. Planning the region: a document analysis

Ekurhuleni is split up into 6 different regions, from A to F. Each region was created to keep development plans more manageable at a smaller scale through local management departments. Development in each region is guided by the Regional Spatial Development Frameworks (RSDF), which articulate with the wider MSDF. Within this section I delve into the spatial, housing and economic aspects of planning human settlements and housing from a regional perspective through analysing these RSDFs on Land Use; Spatial Concept; Urban Design Framework; Economic Plan; and Housing. These were published in 2012, so they give some longer perspective than project-specific documents. What is evident is Leeuwpoort's much longer history in the plans of the municipality, as well as how it has been shaped by the municipality's particular ideas about spatial planning, urban design, housing, land use and economic planning.

The region of focus within the RSDF documents is region A, where the Parkdene and Reiger Park phases of the development are found in the southern section. Sunward Park is located in the northern section of Region F below Region A. Map 11 shows a visual of Region A's boundaries in Ekurhuleni; highlighted in yellow are the locations of the different Leeuwpoort phases. However, looking through region F's RSDF, I found little to no information relating to either the Leeuwpoort development or mega human settlement developments. Given its proximity to region A just south of its border, my analysis focuses on RSDFs for Region A.



Map 11: North and South phase locations of the Leeuwpoort Development in region A (Metroplan, 2012c).

5.2.1. Spatial planning for Region A

The RSDF's Spatial Concept for Region A identifies residential infill, urban renewal, and development densification as the MSDF's priorities in regards to spatial uses (Metroplan, 2012a). The industrial land use of region A consists of around 23% of the total land, with the majority of it placed in Boksburg and Germiston (also the location of the older and heavier industries). The mining belt is one of the only underdeveloped areas in the region as a result of the mine dumps, radiation, and slime dams. There is a move to open up previously mined land to create residential areas in order to optimise land use and eradicate informal settlements (Metroplan, 2012a). The majority of these informal settlements are located along the mining belt central west in region A by Reiger Park and Germiston.

Nodal Developments

The Leeuwpoort development finds itself located in and around several different nodes in region A. Boksburg is identified as one of the three primary activity nodes or nodal development in region A. A nodal development is commonly characterised as an area that provides services to surrounding areas through its intensive mixed land-use; high accessibility; and clustering of activities at points in the area that are the most convenient, exposed, and opportune (Metroplan, 2012d). These mixed-uses could take the form of: different residential typologies; light industrials; retail; and commercial (Metroplan, 2012d). Besides the characteristics pointed out above, the RSDF identifies several others such as: being pedestrian orientated; having high-quality public space; being able to achieve transport-orientated development.

The Urban Design Framework shares particular guidelines for redeveloping CBDs to these ends: the street grid should be respected in order to maintain the urban fabric; promotion of a pro-pedestrian means of transportation, but also keeping the consideration of vehicle movement; use of high standard street furniture including light stands, street/benches, dustbins, etc., should be implemented; the connection of the BRT system in order to focus transport around mass transit; strategizing of public open spaces in order to create them into hubs;

emphasising the development of mixed-use development in order to complement pedestrian-friendly activities and promote a safe and vibrant environment; the preservation of historical building in existing CBDs (Metroplan, 2012b).

In addition to the Boksburg CBD node, Parkdene and East Rand Mall are identified as secondary nodes for Leeuwpoort (Metroplan, 2012a). Reiger Park not only neighbours Parkdene's phase of the Leeuwpoort development, but is also in close proximity to East Rand Mall. This puts the North phase of the Leeuwpoort development in an integrated nodal position. In contrast, the Parkdene primary node consists of a large portion of open space, which cannot be developed on. There is no direct link to the highway although situated near to the N17 road, and it does not have a particularly good connection to the rest of the region. It is identified as a neighbourhood centre with medium density, and limited expansion prospects (Metroplan, 2012a). As for East Rand Mall, there are a few medium density residential areas southwest but it is predominantly surrounded by businesses.

Corridor Planning

The RSDF promotes the identification of development corridors: areas with traffic flow of minimum interruption; higher-density residential development, and mixed land uses at intersections (Metroplan, 2012d). Boksburg is identified as one such corridor development (Metroplan, 2012a) as well as linking up to the "Aerotropolis-Boksburg Corridor" (Metroplan, 2012d: 7). This development corridor will firstly link the aerotropolis of Kempton Park and Edenvale with the Boksburg node through the R21, the railway line and the IRPTN route. Secondly, the development corridor will link up the Germiston and Boksburg nodes through a southwest corridor proposed. This will work through the railway line and K110 and K106, as well as the proposed PWV14 road. It is important to note that this development corridor is based along the mining belt between Germiston and Boksburg for visual clarification. Table 8 summarises the proposed nodal functions and land uses of the new Boksburg node.

Table 8: Proposed Boksburg Nodal function and Land-Use (adapted from Metroplan, 2012a).

Main Function In Relation To The Aerotropolis	Desired Land Uses	Undesirable Land Uses	Connectivity Within The Aerotropolis Footprint
• One of the primary nodes of the aerotropolis. • Primary target for infill development. Regional retail (medium & low income), entertainment, offices, transport modal interface, service industries, high density residential (need stimulation). • Retail needs of the middle to lower income groups especially Reiger Park. • Provides for packet shoppers. Taxi rank. Government offices: SARS & Ekurhuleni (Boksburg CCC).	Retail/ Business Medium-high density residential Office and commercial	Industrial Warehousing Manufacturing	• Boksburg is connected to East Rand mall, the industrial areas of Isando, Jet Park and Spartan and OR Tambo Airport via the R21. The proposed extension of the K90 will give Boksburg a direct link into the airport via Rondebult road to the south of the airport; the R21 also connects Boksburg to *Vosloorus* and the Proposed Tambo Springs in the south • The proposed PWV 15 will connect Boksburg with Aerotropolis east, Pomona and Bonaero Park in the north and Tambo Springs in the south.

These developments are to connect major nodes through sustainable public transport and create meaningful interaction between the nodes through high density (residential and commercial) (Metroplan, 2012d). One of the more important key drivers of nodal/corridor development is the ensuring of reliable and sustainable public transport which assures access and promotes densification in the desired areas. The three main structural elements in achieving this are based around "strip development"; "urban freeways"; and "the rail network" (Metroplan, 2012d: 9). Regarding urban freeways, this is seen through the Leeuwpoort development by upgrading the R554 and Rondebult Avenue making access to the N17 and N12 roads more accessible and opening up the inner roads

more through relaxing congestion through widening roads around the development.

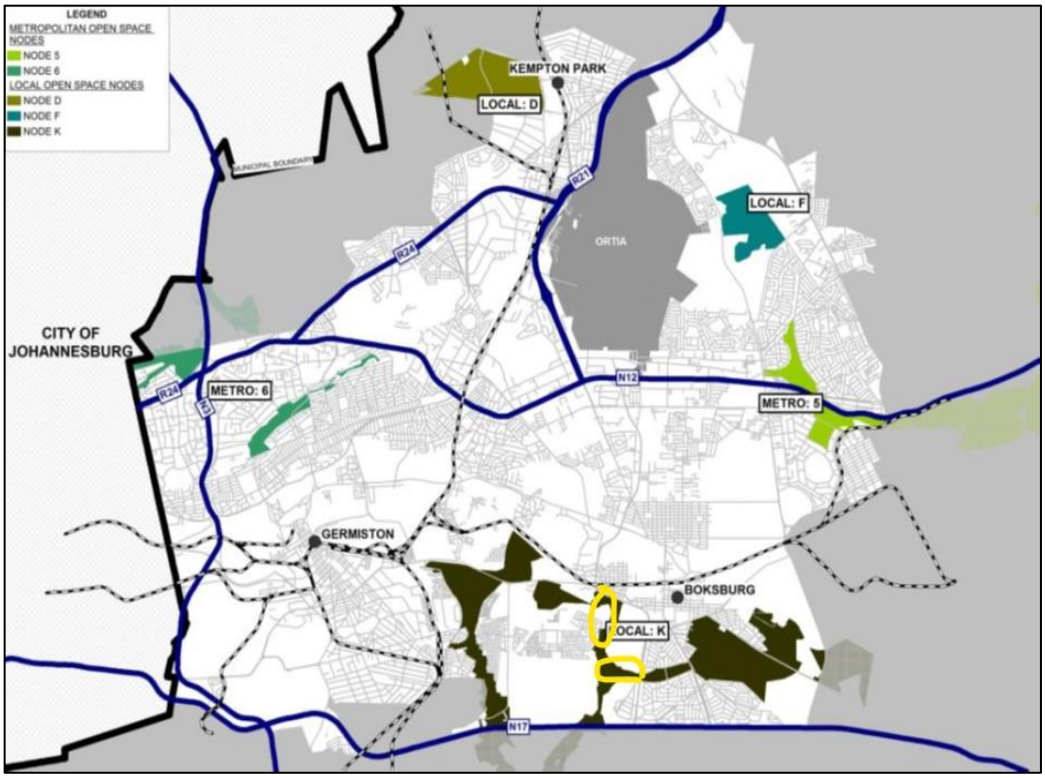
These adhere to guidelines for corridor development in the Urban Design Framework (UDF), which include: Highway intersection landscaping should emphasise a view from the road and of the road; the use of bold scaled architecture close to the roads to give an impression and express the idea of high-speed travelling on the road; the landscape should suite the high speed motorways, at a large scale in order to be easily seen at faster speeds; landscape at intersections should symbolise a sense of place and territory (Metroplan, 2012b). This is envisaged well through the northern section of Leeuwpoort, seeing as it is located not more than 500 metres away from Rondebult road.

The Open Space Network

One of the most important aspects of urban design are open space networks, as the place of social interaction and life. The UDF stresses that they provide leisure and recreation; allow for access to nature; have an impact on well-being and physiological health of humans; and facilitate social interaction and communication (Metroplan, 2012b). Neighbourhood open spaces are considered to be within walking distance of up to ten minutes. Certain guidelines note that open space planning should consider: a utilitarian approach to accommodate for different users; a playing space for different age groups; areas for individual and team sports; informal recreational users; indigenous plantation/vegetation instead of exotic as it requires less resources and maintenance, therefore it is more beneficial for the environment; inclusion of easy access through various entrances and exits to improve safety, and use of passive surveillance through inwards facing buildings to increase security (Metroplan, 2012b).

When it comes to open spaces, and open space networks, region A is not well connected. The majority of the land is built up with no open space networks being identified in region A. This raise concerns not only for environmental and ecological preservation, but also issues related to storm water management and flooding within these areas. Where there is local open space identified in region

A- in the south area of its borders and open space noted just north of its southern border in region F - housing projects have been planned especially in the Parkdene and Sunward Park areas which are related to the Leeuwpoort development (Metroplan, 2012a). Map 12 expresses this: in yellow are the open spaces planned for these specific housing projects.



Map 12: EMM open space nodes (Metroplan, 2012a).

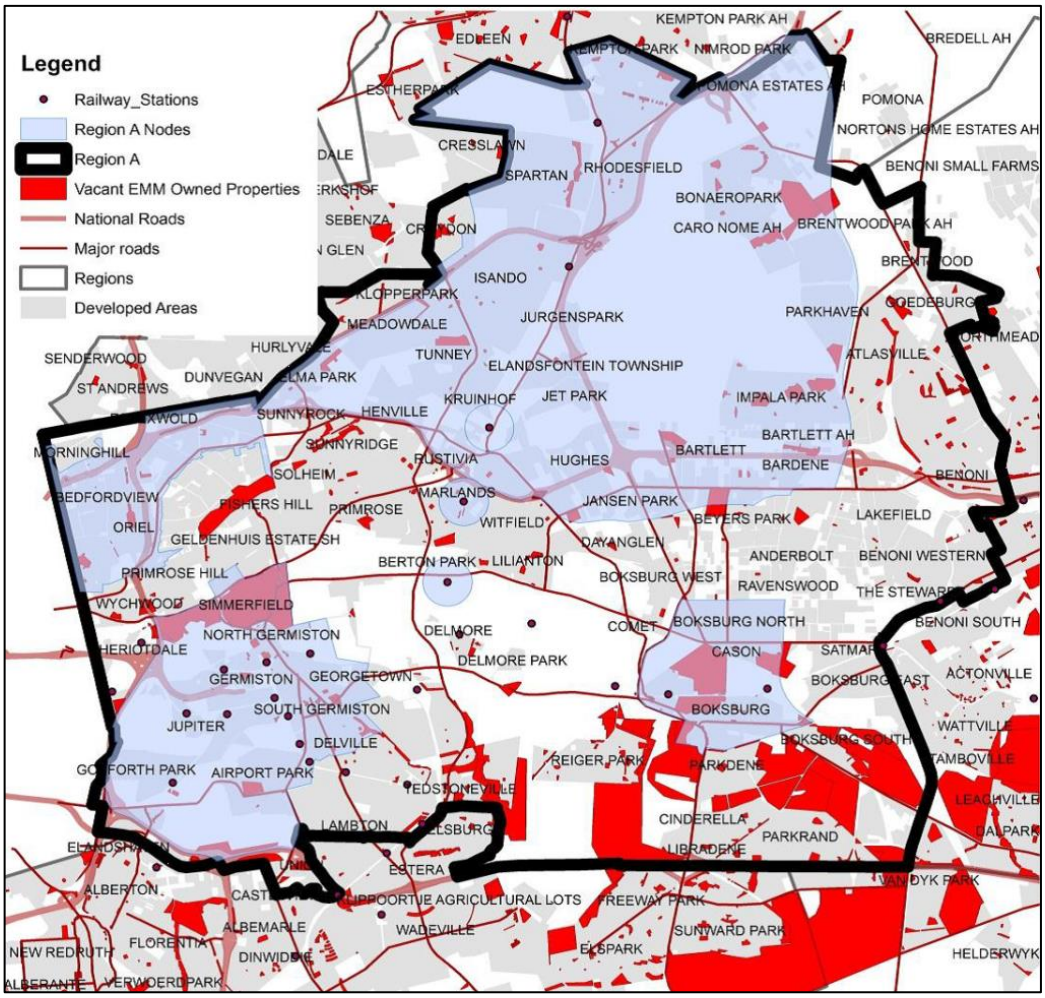
Densification

As South African post-apartheid cities focus on creating compact cities that utilise all existing resources, densification compliments this concept as it combats urban sprawl (Metroplan, 2012b). Advantages of high-density residential include: cheaper land costs; lower cost of infrastructure and transport; easy social facility access; and easier infrastructure maintenance. With regards to the urban design of high density residential, guidelines note: they should be mixed-use, focusing on activities that are suitable during daytime and night time; as a result a sense of better safety and security is created through around-the-clock surveillance and

consistent movement in and through the area; public open and green spaces should be within walking distance; buildings should have interesting architecture designs to create a better sense of place and blank or bland residential wall faces should be avoided (Metroplan, 2012b). Considering the plans for Leeuwpoort, looking at the map layouts (seen in appendices 9.8; 9.9; and 9.10) these urban designs are being attempted and promoted.

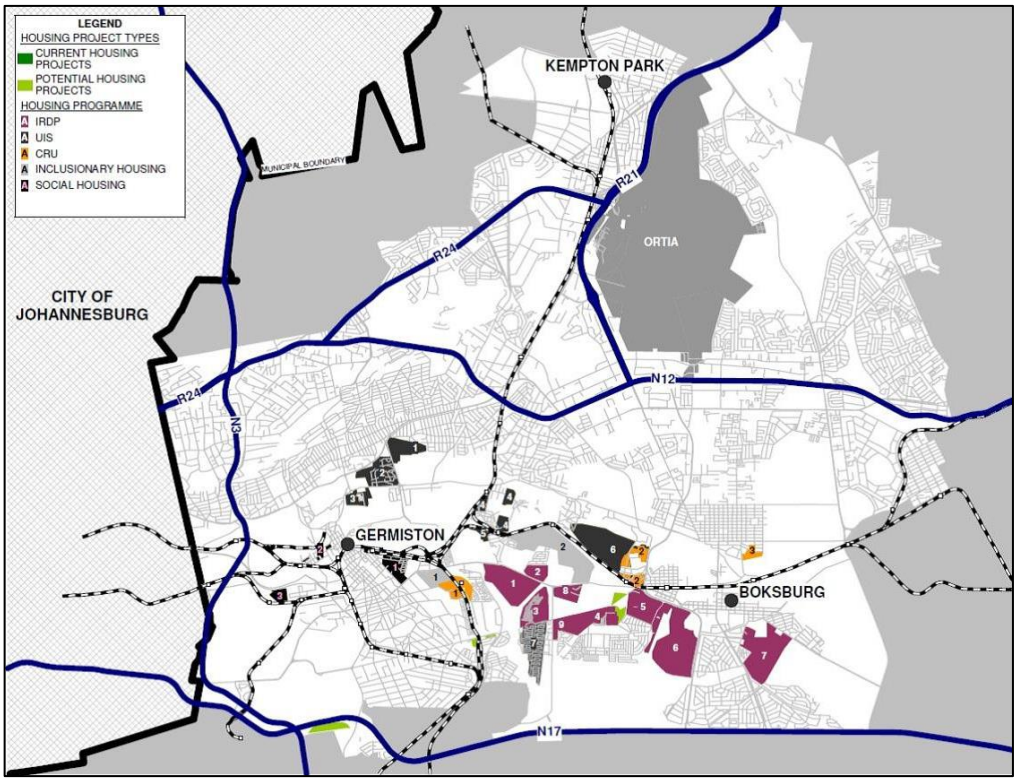
5.2.2 Housing plans for Region A

The push towards densification makes particular sense when land is scarce. In region A of Ekurhuleni, the municipality owns just around 1,855 hectares of vacant land taking into consideration bordering land as in the case of Sunward Park and Van Dyk Park (1,005 hectares) (Metroplan, 2012c). Of this land, the Boksburg CBD holds the equivalent of 10% of land at just over 108 hectares. Keeping in mind the availability of developable land minus land that is environmentally degraded, region A is left with a maximum of 480 hectares of developable land. Map 13 shows the location of vacant municipally-owned land in red, which demonstrates why Leeuwpoort is located where it is.



Map 13: Land availability in Region A, Ekurhuleni (Metroplan, 2012c).

Much of that land is in Region A's mining belt. Several housing projects have been identified along Region A's mining belt, including the North phase of Leeuwpoort (Map 14; number 4, 6 and 9 are related to the Leeuwpoort development, located central south). With the influence of undermining along the mining belt, it has been noted that this area should be made available for the locations of lower income residential developments, as well as social housing due to the mind dumps, radiation and acid mine drainage effects from previous mining activities. This can be seen in the Leeuwpoort development in the Reiger Park phase seen in map 10, especially on the right side where the purple circle is seen (location of radiation in the soil).



Map 14: Planned and types of housing projects in EMM region A (Metroplan, 2012a).

Housing layout and typologies

Several housing typologies have been assigned to different sections of the Leeuwpoort development. Within each of them, they bring different characteristics as well as advantages and disadvantages. With the added help of the Boksburg spatial planners, I will describe the different housing typologies and where they would be situated in the development. With the city's move to higher densification, higher densified residential areas make the city function more efficiently, allowing more people to benefit and access the facilities at a more affordable cost.

Reiger Park extension 19 housing layout and typologies

The majority of housing units planned is within a higher densification layout based on residential two and residential four houses. Residential two units are fully subsidized stands and residential four registered for this phase are the FLISP four-storey walk-ups and subsidised four-storey walk-ups. Appendix 9.8 and

Figures 1 through to 3 show visuals of what is planned in Reiger Park. Figures 1 to 7 were all provided for in an interview with Boksburg planners.

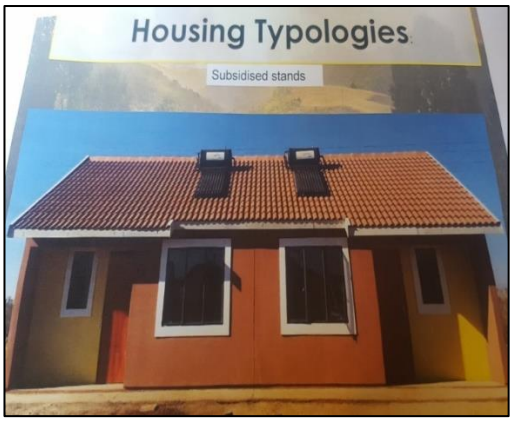


Figure 1: fully subsidised stands typology 1.

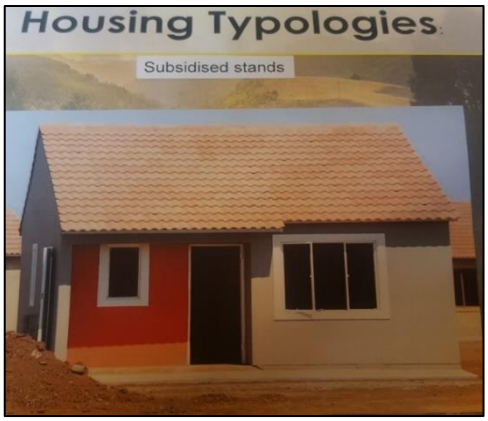


Figure 2: fully subsidised stands typology 2.

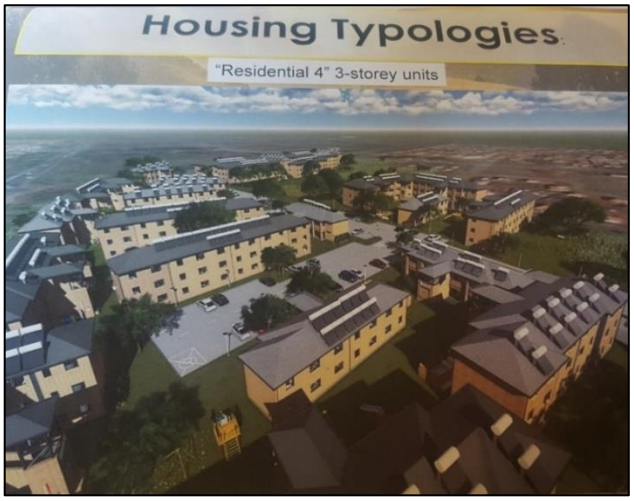


Figure 3: 3 to 4-storey FLISP unit typology.

Parkdene extension 17 housing layout and typologies

The majority of houses planned in this phase of the development are based around residential four and then residential two houses. The residential four units are four-storey walk-up FLISP units and one subsidised four-storey walk-up unit. The residential two houses in Parkdene are allocated as 200m² bonded units, which are at the centre of the development. The four-storey walk-ups are designed in the same way as noted in the Reiger Park phase. Appendix 9.9 and figures 4 and 5

show the housing layout in Parkdene and the designed bonded houses respectively.



Figure 4: 300m² bonded unit typology 1

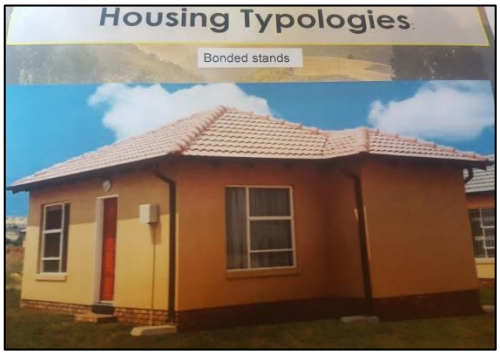


Figure 5: 200m² bonded unit typology 2.

Sunward Park extension 24-29 housing layout and typologies

Being the largest location of the Leeuwpoort development, Sunward Park boasts the most housing units as well as different typologies. It contains both residential one and residential four housing, with the residential one housing consisting of 400m² bonded units; 300m² and 220m² FLISP units; as well as 200m² subsidised units. The residential four housing consists of bonded three-storey and four-storey walk-ups; social housing three-storey and four-storey walk-ups; and subsidised three-storey walk-ups. Appendix 9.10 and figures 6 and 7 make up the rest of the bonded housing typology, as well as the end of the entire housing typology of Leeuwpoort.

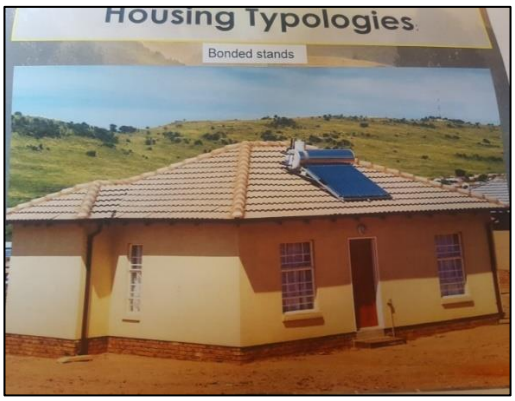


Figure 6: 300m² bonded unit typology.

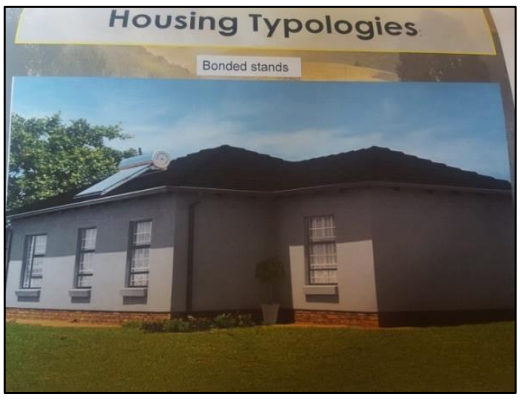


Figure 7: 400m² bonded unit typology.

The advantages of using clustered housing as seen in the form of the residential two and four bonded units is that there is an efficient use of the land made available through low-rise and high-density development. It expresses the integration of different housing typologies creating a mixed unit development at an affordable cost. It shows symbolism of even and equal use and access to open space between different typological categories in the same space, and it is a cost-effective form of housing. However, there are some disadvantages to this form of housing. There is a lack of suitable levels of privacy as space between walls is minimised to maximise use of space; quality of management put in place is key to the maintenance of communal areas and preventing such areas from becoming neglected and dangerous to move through (Metroplan, 2012c).

Three to four-storey walk-up buildings have the advantage of using space both horizontally and vertically allowing it to increase units per square metre more than single housing units do. Other advantages of using walk-ups are: it is one of the least expensive forms of medium-density housing; the density is sufficient enough to support economies of different scales in the area, as well as the use of public transport systems. Some of the disadvantages of walk-up buildings are that although there is an increase in utility of space both on ground level and upwards, privacy is minimised. Furthermore, noise sensitivity is a concern for residents of the lower-level units from directly above. With the complexity in construction design, there is an increase in the cost of construction, and lastly sharing of interior spaces such as staircases, walkways and landings is common without personal ownership (Metroplan, 2012c)

Lastly, there are the row houses and semi-detached houses predominantly in the RDP units, as well as in the smaller scaled subsidised and bonded units. The advantage of this housing form is conservation in space; it is compact; cost-effective; creates direct access to services like transport routes and open spaces; and public shared interior space. However, because this type of housing uses common characteristics between units, disadvantages such as loss of personal identity may arise; there are lower levels of privacy and higher levels of noise sensitivity due to compactness; and limited use of plot area for extensions (albeit

this is a bonus for spatial planners with regards to the concern of backyard dwellers) (Metroplan, 2012c).

5.2.3. Economic Plan for Region A

The RSDF notes that the income level of region A is considerably higher than the rest of the metropolitan area's, province's and country's averages, with 74% of the population economically involved. As a direct result, unemployment levels are lower than the rest of the metropolitan, province and country. Region A's economy grew at 4.06% per annum between 2001 and 2011. Region A contributes a total of 43.92% of Ekurhuleni's economic output which is the equivalent of just over 10% of Gauteng's economic input. Below, Figure 8 shows the different sectoral economic inputs in region A between 1996 and 2011 (Metroplan, 2012e).

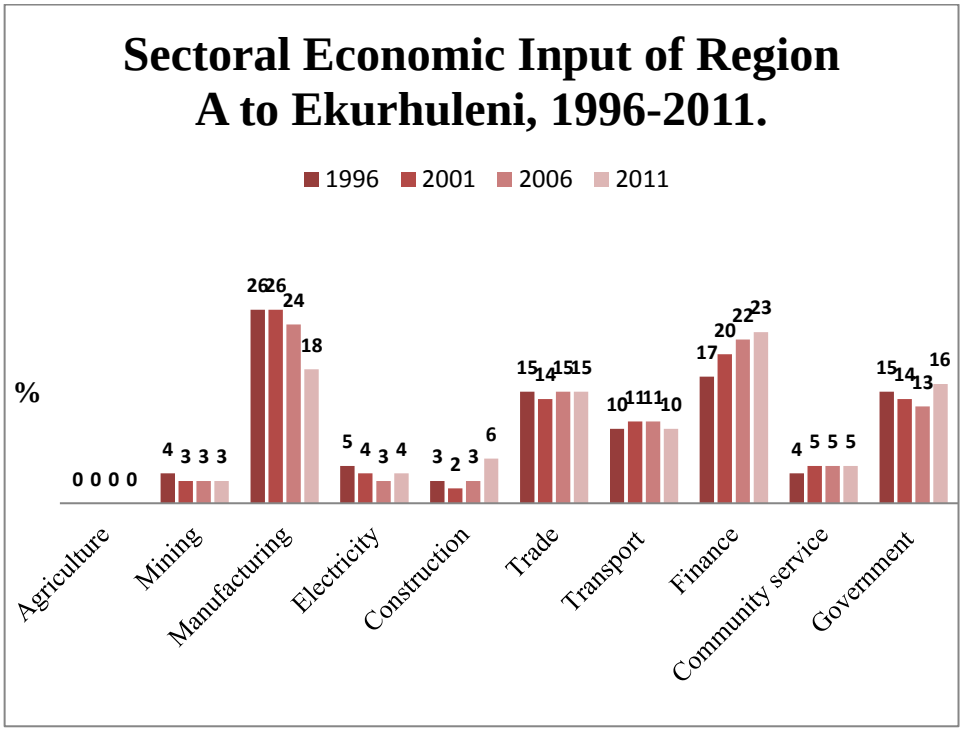


Figure 8: Sectoral Economic Input of Region A to Ekurhuleni, 1996-2011 (adapted from Metroplan, 2012e).

Region A has gone from once being a manufacturing region to a financial region since 2006. By 2011 the finance sector had overtaken manufacturing which in

2006 was the most important sector, as the most significant sector in region A. The finance sector also accounts for the biggest increase in contribution, with the manufacturing sector seeing the biggest decrease in contribution since 2011. Region A still boasts a comparatively more competitive manufacturing sector to other regions in Ekurhuleni. With regards to employment in region A, the region's unemployment rate has increased from 10.87% in 2006 to just above 14% in 2011. 14.5% of employed persons are within the informal sector. Sectoral contributions in region A to employment is as follows in figure 9 (Metroplan, 2012e).

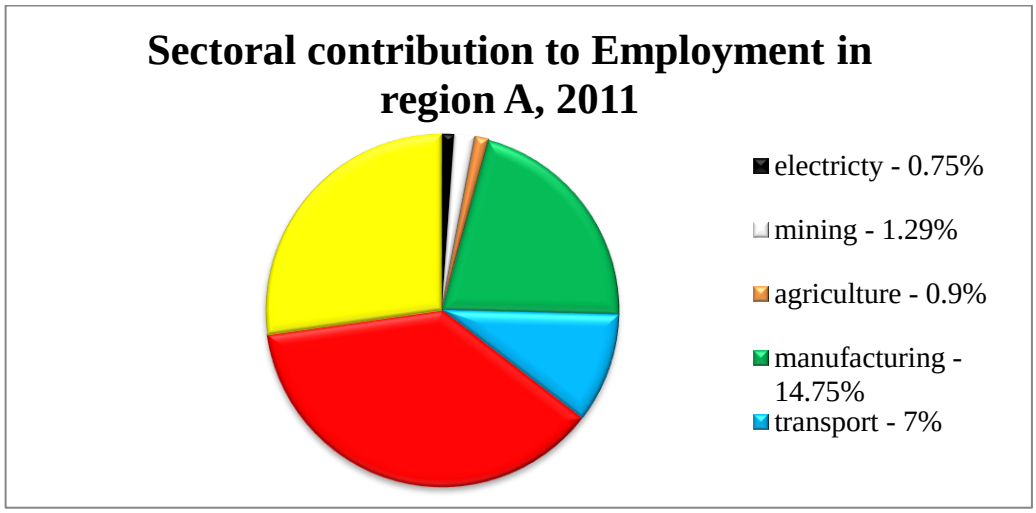


Figure 9: Sectoral contribution to Employment in Region A, 2011 (adapted from Metroplan, 2012e)

There are some commonalities between different policies related to economic growth and planning, which related to the RSDF of region A- including: the development of a green economy, strengthening the backbone of the competitive sectors and industries; the need to create employment and decent jobs; and the recognition of spatial planning in achieving this. When it comes to future economic growth and development within region A through its different sectors, the manufacturing sector has been identified as the most impacting sector (Metroplan, 2012e).

Public-Private Partnerships (PPP) are flagged in the economic plan as another important way of achieving development. This is seen in the Leeuwpoort development as the development is managed by the Department of Human Settlements but is contracted to the Leeuwpoort Development Company. This form of PPP is known as a service contract in which the Leeuwpoort Development Company is given control of the development of the housing project, under the manager of Human Settlements. By doing this the government can keep their costs down through incentives to private firms and it also allows the government to take advantage of the economic scale by using the private sector. I will now move onto the last section of my document analysis, in which I analyse the specific documents that relate directly to the Leeuwpoort development.

5.3. Planning the Leeuwpoort megaproject: a document analysis

The following section of the document analysis is based on the documents relating to the development of the Leeuwpoort project specifically. The first document is an overview of the project done by the Department of Human Settlements, the second document is an engineering design report which was taken out by the designated construction company- Leeuwpoort Company. The third document is market research conducted on behalf of the Leeuwpoort Company. Lastly, there are two Environmental Impact Assessments (EIA) which were completed by Bokamoso consultants on behalf of the Leeuwpoort Company as an independent assessor.

5.3.1. Selling a Catalytic Project

In 2016, GDHS released a technical report and fact sheet on the general information about the Leeuwpoort development for the general publics' viewing. The Human Settlements Department in partnership with the Housing Development Agency (HDA) labelled this project as the "Leeuwpoort Integrated Housing Development", and referred to it as a catalytic project rather than a mega

housing or human settlements development. The development is the first of its kind to be done in Ekurhuleni, it notes as an infill project that will bring with it a great contribution to the decreasing regional economy. Furthermore, Joe Slovo, Ramaphosa, and Vosloorus informal settlements have been identified as beneficiaries of the development (GDHS, 2016c)

The main drivers for the project, from an economic perspective, have been identified by the GDHS as the Boksburg CBD, and the mining and light industrial activity surrounding the area. The project is in its planning stage with the majority of the bulk infrastructure being put in, in the North phase after approval was given on the geo-tech assessment. According to the fact sheet, the development looks to contribute 18,428 housing units to the area over the next 7-15 years at its estimated completion time. The project is calculated to cost at around R9,907,295,054 and bringing in a potential amount of 24,768 job opportunities during its construction. Table 9 analyses some of the strengths, weaknesses, opportunities, and threats (SWOT) related to the Leeuwpoort development done by their developing company.

Table 9: SWOT analysis of the Leeuwpoort development (adapted from GDHS, 2016c).

Strengths	**Weaknesses**
• Ekurhuleni is the implementation agent for the development, • The land required for the development is owned by the municipality, • Assemblage of the land is complete, • Project planning and market study for the development is complete, and • The business plan has been amended by the end of 2015 already.	• Mining infrastructure intersects the North and South phase, • Evidence of dolomite and undermined land • 15 million rand is required to build a new sub-station, • Still require township approval, • No development agreement yet, and • Road proclamation
Opportunities	**Threats**
?	• Contestation of mining rights, • 50% of the sites land is mine dumps, • A flood line of 1:100 years affects the south phase, • There has been no finance backing from Gauteng, and • Huge commitment needed.

No opportunities were identified through this process by the Department of Human Settlements, but the final recommendation for this development was:

> "Lots of concerns with the project – Geo-tech/state of sites/ funding and is therefore not supported. The proposed sites have a lot of restrictions (environmental concerns/heritage concerns/ undermining etc.)" (Pg.3).

The main concerns raised included environmental risks and safety risks considering the land being used and environmental waste. Not mentioned was the future economic potential through the development, and the lack of a green economic approach in the development plans.

5.3.2. Designing Leeuwpoort's layout

Created by the managing construction company for LDC, *BigenAfrica*, the 'Leeuwpoort Development North & South Developments: Preliminary Engineering Design Report' is an assessment of the engineering design for the Leeuwpoort development as required for development approval by the GDHS, drafted by Thandiswa Mathibela in 2016. The relevant material in this document is around information regarding the social infrastructure potential, and housing plans. For this reason, I will not be looking at the more technical engineering aspects such as road layouts and designs as well as service infrastructure statistics and evaluations.

The report reveals that the municipality had been working since 2004 to acquire tenure for the development of Leeuwpoort which comprised of 1,300 hectares of land in total. The project consists of eight land parcels and looks to bring approximately 18,923 housing units into the south of the Boksburg area. Investigations into the existing infrastructural capacity showed that sewage, electrical and water infrastructure could not accommodate or sustain the demand required for the development. It has been noted that the accessibility for the development is very good; however, to not negatively affect existing transport

routes (servitudes, roads, and railways), these would need to be upgraded to accommodate the development. The total electrical cost of the development for both bulk infrastructure and linkage to existing infrastructure as part of the ongoing phase of the development currently will cost R775,899,479.89, with R217,803,060.14 being spent in the North phase and the remaining R558,096,419.75 being spent in the South phase (Mathibela, 2016)

The north phase of the development is located two kilometres west of the Boksburg Civic Centre and will comprise of an estimated 5,252 residential units; as well as community facilities; schools; public transport facilities; businesses; and industrial stands. Both the Parkdene and Reiger Park sections together account for 135 hectares of land use in the Leeuwpoort development. Topographically, the majority of this land is comprised of mining infrastructure and several outbuildings from past mining activities. Some of the mining infrastructure is water pipes; railway and sewer lines; and electrical and telephone lines. The majority of the land will be used for residential purposes with the inclusion of the mixed-used buildings for businesses; community facilities; as well as open spaces. Appendices 9.11 and 9.12 show the breakdown in the different housing typologies and quantity in the North phase, as well as the other mixed-use infrastructure.

The south phase of the development is located north of North Boundary Road and west of Barry Marias Road, and is comprised of an estimated 13,671 residential units; as well as community facilities; schools; public transport facilities; industrial stands; and businesses. In total this phase contributes 757 hectares of land towards the Leeuwpoort development. The northern section of the phase is covered by traversing floodplains, and holds natural watercourse within its boundaries. The southern section of the phase is predominantly vacant, although containing both underground and overhead mining infrastructure. The far-east section holds a vertical mining shaft, owned by ERPM. As stated in the north phase section, this land will also be used predominantly for residential purposes, as well as for mixed-use buildings like businesses; community facilities; and open

spaces. Appendix 9.13 shows a breakdown in the housing typology and quantity in the south phase as well as the other mixed-use infrastructures.

5.3.3. Market research on Leeuwpoort

The information provided below is based on statistical analysists and recommendations from the DEMACON market studies, commissioned by the Leeuwpoort development Company on their behalf as a private agency. The document is a critical marketing analysis of what the Leeuwpoort development brings to the region. The purpose of the document is to assess the viability of the development, considering its location.

Firstly, the Leeuwpoort development is comprised of three townships, namely: Reiger Park ext.19 (34,6 hectares); Parkdene ext.17 (88,8 hectares); and Leeuwpoort South (766,8 hectares). Appendices 9.14, 9.15, and 9.16 depict DEMACON's understanding of the housing unit breakdown in the Leeuwpoort development. What is interesting is the difference between their breakdown, and the breakdown provided for by the LDC in appendices 9.11, 12, and 13. All those marked in red, are residential/facilities that do not occur in the LDC appendices. All of these new findings show an increase in the development rather than over-exaggerating the number of units or facilities. In the case of Leeuwpoort South, it is clear that more development plans have been taken into consideration, especially residential typologies. This is confirmed during interviews with town planners in Boksburg (refer to section 5.4). The DEMACON study also perceives several different markets to exist in the sub-region of Boksburg and how and where the Leeuwpoort development may/needs to contribute to them:

Key economic indicators for the Leeuwpoort sub-region location

The site location radius of up to five kilometres in which the Leeuwpoort development bodes well for the land use contributions as all of the land uses (retail; industrial; private school; private medical; residential; and office) represent a site rating of over 70% which is the second-highest rating (Demacon, 2016). Furthermore, the sub-region in which Leeuwpoort is located contributes around

9.2% towards the total economy of Ekurhuleni. However, the downfall to this is that from 1995 to 2010 the economy of the sub-region has dropped from 2.7% to 1.4%, with the average growth of the metros economy respectively dropping from 3.3% to 2.2% per annum. The sub-region economy of Boksburg is dominated mainly by four sectors, namely: finance and business (23.2%); community and social service (20%); manufacturing (16.8%); and trade (14.3%). If the Leeuwpoort development was not to occur, the economic benefits for business sales, employment, GGP, and property rates that would have occurred as a result would be lost to the local and metropolitan as well as provincial economies, the report argues (Demacon, 2016).

Key demographic indicators within 15min walking distance of Leeuwpoort

There are a total of 197,747 households in the area, with 53.7% of dwellings in the form of formal housing and the average household size being 2.9 persons per household (Demacon, 2016). 25.1% of households are fully paid for, with 32.5% being rented and 11.6% being rent-free- the rest are owned but not paid fully. Only 2.2% of the sub-region is illiterate, with 38.5% having completed secondary school and 15.6% going into further tertiary education, resulting in the region have a 74.5% employment rate. The area is categorised as a lower to middle income area in which household earnings average between R16,380 per month and R196,556 per annum with the majority (78.5%) falling within the 4-10+ Living Standard Measure (LSM) category (R20,570 p/m and R246,839 p/a).

The Residential Market

In regards to the location, *DEMACON* argues the development would do well to cater for lower to medium-income residents at a medium to high density. To keep the interests of economic and financial sustainability, it is recommended to not exceed more than 1,552 subsidy units. Appendices 9.17 and 9.18 show a breakdown of the recommended types of housing and their related size, and pricing characteristics.

The Industrial Market

DEMACON (2016) recommended if industrial activity is to take place through the development of Leeuwpoort, they focus on commercial uses, light industrial including mini-units. The total potential for this in the sub-region of Boksburg calculates to 22.33 hectares by 2021, however, the potential for light industrial work through the Leeuwpoort development amounts to 5.02 hectares in 2026. To optimise entry point into this market it is recommended to enter in 2018, which has not been achieved.

The Private Healthcare Market

Considering that public healthcare does not play a role in a competitive market, the focus for development is on private healthcare. The Leeuwpoort development plans seven private hospitals and three public hospitals. Due to the location of the development, DEMACON (2016) finds there is potential and it is viable to locate a private hospital of 145-165 beds over the next ten years. It is recommended that in the specific location it should grow to 280 beds in 2016 and 4,013 beds by 2026. The land use size of this facility can be facilitated on 1.16 hectares. It is also important to note that outside the development area, there currently exist seven private hospitals.

The Private School Market

It is noted that the market in this development area can sustain the development of a private school (Demacon, 2016). There is an effective gap in the market in this area for a private school. However, the optimum entry point should be focused around 2020, catering for around 1,578-1,973 pupils (2021) and 1,684-2,204 at full capacity by 2026.

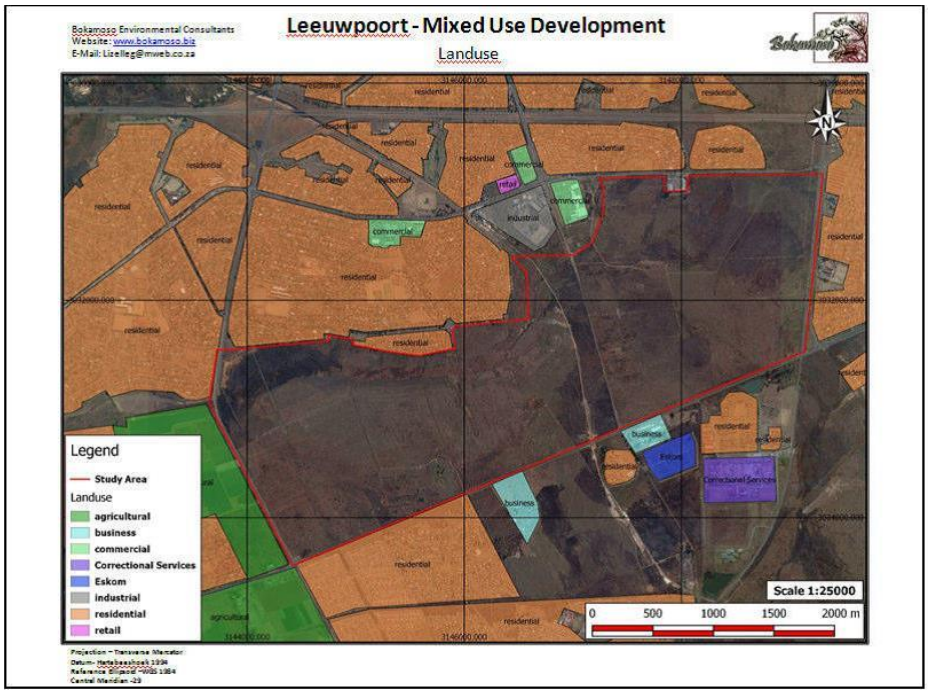
The Social Market

Lastly, social activities play a significant role in everyday living. Appendix 9.19 highlights social facilities that have been noted to be both feasible and necessary in the Leeuwpoort development (Demacon, 2016). These range from libraries, to sport facilities, down to parks.

5.3.4. Assessing Leeuwpoort's environmental impacts

A team of consultants from Bokamoso CC completed environmental impact assessments (EIAs) in October 2016 and April 2017 of the south and northern section of Leeuwpoort (Sunward Park; and Reiger Park and Parkdene respectively). These reviewed the positive and negative impacts the development would have on existing environments including the physical, economic, and social within the selected development area.

The consultants found that the development of Leeuwpoort South mixed-use development will cater to approximately 13,269 residential units spread out over around 769 hectares of land on part of the remaining Farm Leeuwpoort 113 IR. It is located in Sunward Park and Kingfisher Avenue, west of Barry Marias Road (M43), north of North Boundary Road (R554), and east of Rondebult Road (R21). Appendix 9.13 shows the proposed zones planned for the establishment in LDC (PTY) LTD's application of a mixed-use township in the south phase. Of the total 1,340ha of farm Leeuwpoort, only 769ha will be zoned for the Leeuwpoort South development (Bokamoso CC, 2017). Map 15 shows the locations of land-uses surrounding the proposed Leeuwpoort South development.



Map 15: Surrounding land-uses to the proposed Leeuwpoort South development (Bokamoso, 2016b)

With regards to the priority in mixed-use characteristics of the Leeuwpoort South it has been found that as a result of it being planned as a fully integrated settlement, residential typologies caters for all different income groups, in line with the BNG, NDP, and the Spatial Planning and Land Use Management Act. It also follows the EMSDF 2011 principle for promoting urban infill residential development mainly in Reiger Park and Parkdene. Furthermore, considering the fact that schools, medical facilities, and several other community facilities had been taken into consideration in the development, this type of development (mixed-use development) according to Bokamoso CC, is the best alternative development in the space in order to keep in line with local and regional development framework goals and objections.

The land of both phases compiled to make the north phase are owned by the municipality of Ekurhuleni, and have given development rights for construction to the LDC (PTY)LTD. Both phases are noted to have existing evidence of historical mining activities resulting in radioactively contaminated land and waste dumps. Bokamoso CC (2016 a; 2016b) note that although this is the case, considering the location and space available, residential to mixed-use development is still the most preferred option for developing the land. The two areas in which the north section of the Leeuwpoort development (Reiger Park and Parkdene) are being proposed have been zoned by the municipality as vacant and agricultural land uses respectively since 2014 Ekurhuleni town planning scheme. For the South phase refer back to the comparisons between appendices 9.13; 16; and 19; for the North phase refer to appendices 9.11; 12; 14; 15; 9.20 and 9.21.

The following section is an EIA taken by Bokamoso CC (2016 a; 2016b; 2017) on the proposed site location for both the South and North phases of Leeuwpoort development in relation to the physical and social environments.

The Physical Environment

Geology and Soils

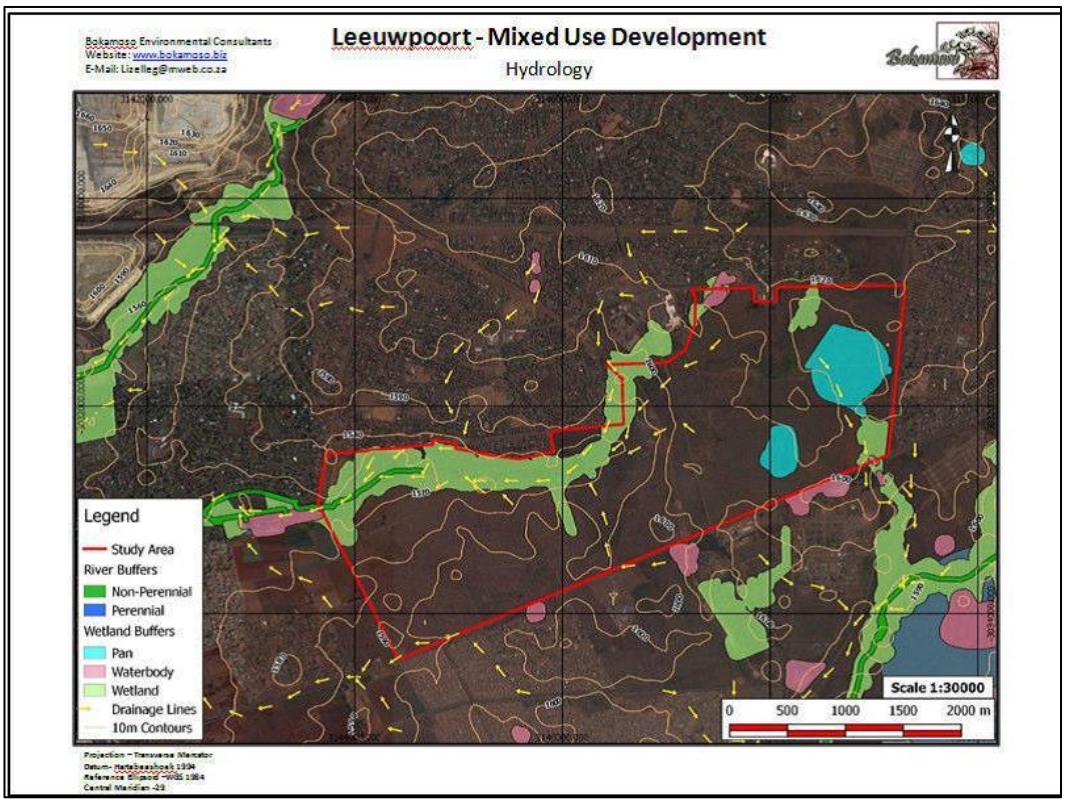
The ground identified for the south phase of the development is noted to be underlain by dolomite, quartzites, and problematic soils due to undermining resulting in the soils being active and collapsible through such excavations needed for the development (Bokamoso CC, 2017). Furthermore, due to the ground being historically undermined and having the presence of dolomite, there is potential for ground vibrations. These conditions have resulted in the area having low agricultural potential.

Both sites in the north phase are underlain by quartzites and an amalgamation of the Turffontein Subgroup of the Witwatersrand Supergroup. A large portion of the proposed site is encompassed by the ERPM gold mine, of which the majority has been undermined and therefore susceptible to ground vibration. Certain sections of the northern site in Parkdene are not recommended for developing on due to the occurrence of mine waste, rock dumps and borrow pits. In the southern section, precautions must be taken, given the potential for both active and collapsible soils. In Reiger Park, the western section has the presence of historic mining buildings and in the east, signs of historic mine slime dams. Concerning the development, the western section is suitable for development; however, precaution must be taken given the presence of active and collapsible soils. In the eastern section, investigations have noted extensive soil contamination due to past historic gold mining storage activity. Soils have been identified as containing Thorium, Radian, and more significantly Uranium.

Hydrology

In the south phase, the stream that flows through the North boundary of the development zone from east to west is a non-perennial stream that eventually flows off and drains into the Vaal River. Map 16 shows the above stream location through the development. Further wetlands present within the borders of the development include: a pan; seepage wetland; a storm water wetland; and a valley bottom wetland seen to be associated with the non-perennial stream (Bokamoso CC, 2017).

As a result of the gradient of the site sloping downwards towards the stream, the northerly location of the site will typically be a wet surface due to the flow of the water down into the stream. Due to the channelled valley wetland in the north-phase (light green demarcation in Map 16) being located on the boundaries of the development, this section should not be allowed to be developed on and at most possibly operate as a private or public open space or for the instalment of a pedestrian bridge. The main concerns of developing on such a wetland are the damage that can be done to the wetland areas and drainage lines. Surface and groundwater pollution and soil erosion are further concerns during construction, and there has been no indication of development on the 1: 100-year flood line either.

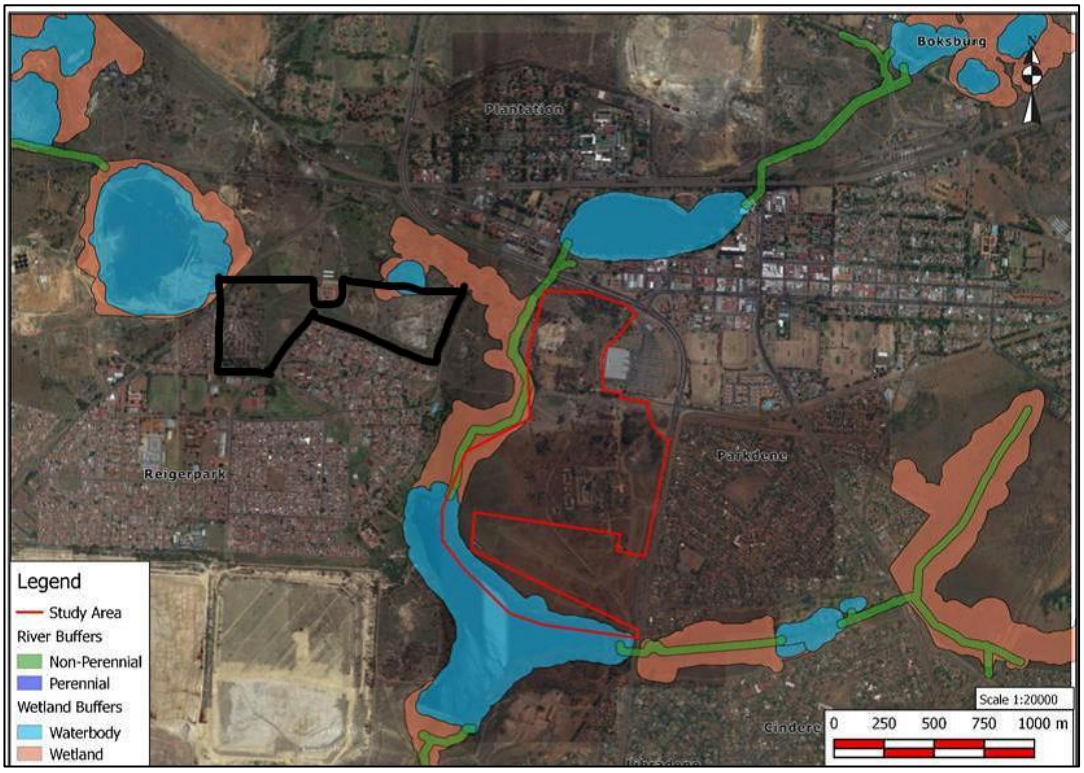


Map 16: River flow through Leeuwpoort South (Bokamoso Scoping Report, 2016b).

Along the western boundary of the Parkdene site- north phase, the non-perennial Natalspruit flows from north to south into the Cinderella Dam forming the southern boundary. In Reiger Park, the Natalspruit flows in an easterly direction.

Map 17 shows the hydrology system within the northern development. Black represents the Reiger Park phase and red for the Parkdene phase. It has been noted by Bokamoso CC (2016a; 2016b) that both in the Reiger Park and Parkdene sites that contaminates from historic gold mining activities have possibly leached into the Natalspruit.

What occurs in the Reiger Park phase of the development in relation to the hydrological system is of important concern, especially to the health of current and future residents. According to Bokamoso CC, the sites associated with wetlands are more than certainly contaminated due to historic gold mining activity leaving at least a 90-year trail of acids, sulphates and metals (more definitely Uranium). In the eastern section there are remnants of slime dumps, leaving radioactive waste to leach into soils causing health risks for residents in the area. Lastly, a 30 metre wetland buffer zone is recommended due to the extent of the build-up in pollutants.



Map 17: Hydrology system in north section of Leeuwpoort (adapted from Bokamoso CC, 2016a & 2017).

The Social Environment

Existing and Proposed Land Uses

In the south phase, since the 2014 Ekurhuleni Town Panning scheme, the property has been identified as Agricultural in terms of land use. There is evidence of illegal dumping taking place next to Trichardt Road and along Boundary Road. The majority of the housing around the site is residential one, with several businesses along Kingfisher Avenue, ranging from four shopping centres, a hospital, several filling stations, and medical consulting rooms. As noted at the beginning of this document analysis, and appendices 9.13, and 9.16, we can see what has been proposed to be brought in through the development of the area.

Similarly, in the norther phase, the site location was identified as agricultural. The site is filled mainly with historic mining infrastructure, of which those notified for needing preservation through the development will be done so under 'community facilities'. Surrounding land uses to the proposed Parkdene development site, in Boksburg north consist of mainly business one, two and three buildings; government and municipal offices; as well as residential one and four. In Reiger Park land uses are mainly residential one, business three and government buildings. The proposed infrastructure for the north section of Leeuwpoort is fairly mixed, but thin on economic activities, particularly in the Reiger Park phase.

Social Facilities in Surrounding Area

Multiple social facilities are available to both phases. These include Leeuwpoort Street Musallah north of the R21; Tambo Memorial Hospital to the north in Boksburg; House of Nations Church situated west; St Michael and All Angels Church to the north; House & Home bordering the development to the northeast; Checkers Hyper in Boksburg; Fire Station Boksburg Central situated north-east on opposite side of R21; Reiger Park Pharmacy due west; and Reiger Park Mosque due west.

Needs and Desirabilities

Bokamoso CC (2017) find that the establishment of this township would increase the value of land in the area and contribute towards much needed economic growth, and supply affordable residential opportunities in this region of Ekurhuleni. With the concern of well-located and affordable housing being a challenge in Ekurhuleni and Boksburg, especially closely located areas in the south phase such as Dawn Park and Windmill park, this development provides both location and affordability for residents in the area. Further to add, the development provides a foundation for 'gap housing' in an attempt to both financially help the lost middle-income group as well as those unable to afford formal housing on their own. The economics behind this development is in the form of bridging the geographical gap between income groups and allowing those working in the area to have the opportunity to as well live closer to their place of work, well planned for in the northern phase between Reiger Park and Parkdene.(Bokamoso CC, 2016a; 2016b).

The development also allocates provision for future businesses to move into the area as well as restaurants and shops which will always provide employment opportunities (Bokamoso CC, 2016a; 2016b). There is a need for a revitalisation of the economic activity within the northern section considering its proximity to the Boksburg CBD. The location of the development is also found to be in line with the municipality's strategic plan to implement and develop further BRT systems, linking different nodes and activity areas more directly together. Lastly, Bokamoso CC (2016a) note there is a need and now a reason for the upgrading of the area's bulk infrastructure (which is currently being done) to not only carry on servicing current residents but the incoming residents for Leeuwpoort South. As in urban infill, Leeuwpoort works towards increasing not only the incoming residential standard of living but also the existing residential through the provision for upgrades in bulk infrastructure and services in the area.

Services

Bokamoso CC's (2016a; 2016b) assessment concluded that Leeuwpoort's water supply can be accommodated within the area without any major upgrades to the system. As for the sewage, the East Rand Water Company (ERWAT) will have to

make upgrades to the Waterval Waste Water Treatment Plant (WWTP) to contain the inflow amounts during dry and wet weather periods. The western section of Reiger Park needs no new water supply; however, it is proposed that a new bulk pipe will be installed to connect Parkdene to the eastern section of Reiger Park to supply sufficient water across the two developments. With regards to sewer management, no new developments are required in Parkdene, however in Reiger Park there does need to be a further investigation to see whether the existing 600ND bulk outfall sewer along the Natalspruit needs upgrading or not.

To maintain water reservoir capacity in the region, a new 31 ML reservoir will need to be constructed, and as for the booster pump station, it is noted that there will be additional demand from the Leeuwpoort South and so Bokamoso recommended tests on the need to increase the requirement for the station. The sewage pump station will not be affected by the development, but it is recommended that a further sewage pipe bridge be installed across Natalspruit to drain sections of the development. In Parkdene natural run-off from storm water drains into the Cinderella Dam. In Reiger Park it is proposed to include two attenuation dams to control discharge water from the *Natalspruit* which need to be located around 500 metres away from the channelled valley bottom wetlands.

As for roads and accessibility, there have been nine proposed access points via provincial roads, three into Kingfisher Avenue, and foud into Sunward Park. In the north phase, there is a proposed K11 provincial road and two access points from Rondebult road (refer to chapter 5 section 4.5).

The electrical supply needed for the development in the south will result in an upgrade of South East vertical ESKOM substation to supply sufficient power. According to Bokamoso CC's (2017) investigation, Eskom has verified that there is spare capacity in the Parkdene 88kV station to support the proposed development. In Reiger Park the central vertical substation located west of the proposed development requires upgrades in feeder panels and a transformer and a new 11kV substation will be constructed across the Natalspruit towards the Parkdene extension.

Economy

In Bokamoso's (year) assessment, both south and north phases of the development will create temporary and permanent jobs through both the construction phase and business two and three buildings; and industrial two buildings. The development will also increase the value in adjacent properties, as well as contribute towards the rates and taxes going into the local authorities from the area.

This concludes my section on the document analysis regarding the Leeuwpoort development. I will now move on to the interview analysis.

5.4 Interview Analysis

5.4.1. Introduction to Interview Participants and Overview

The study population that participated in this study turned out to be very different to the one I intended in my proposal, as I came to focus on several different municipal departments but ended up with the compliance of just two—Housing and City Planning—and faced multiple challenges in accessing the state (see Chapter four). However the case, it was smaller but more focused on individuals specialising in the field of my research topic. They include representatives from three groups: ward councillors of affected areas; spatial and urban planners; and municipal officials (Table 7).

Throughout my interviews, certain themes were identified whilst transcribing and analysing the data. Through a process of thematic analysis I have organized the interview data by theme (Guest et.al, 2012), rather than by interview question. Instead, I use the interview questions as a feeder throughout the sub-sections. I supplement my interview data with observations from the site where relevant. The main themes identified throughout the interviews were based on contestation of Leeuwpoort's labelling; development expectations; environmental and infrastructural concerns; ambiguous economic influence of the development; possibilities of social integration; and the challenges of coordinating intra-departmental responsibilities and activities.

5.4.2 Contested Labelling of the Leeuwpoort development

From the beginning of my research on Leeuwpoort, I found it interesting the type of labels the Leeuwpoort development was given by different stakeholders, and what that meant for the development. In asking a question on the influence of labelling Leeuwpoort a mega housing project (see appendix 9.7 for full interview question list) I was surprised how labels varied between all three interview groups. The project manager for Leeuwpoort from Ekurhuleni Human Settlements department quite enthusiastically stated:

> *"Leeuwpoort is a mega catalytic project… It's catalytic in its nature because of the mixed typology of the houses".*

Catalytic refers to something that sets a spark off resulting in a knock-on effect for other aspects. Talking to the Kempton Park and Boksburg spatial and urban planners, however, I was given different labels that were different to the project manager's but also differed between the planners from Kempton Park and Boksburg. In asking the Kempton Park spatial planner about the label of 'catalytic', they responded:

> "*Yeah, and we totally disagree. There has been a lot of debate around the definition of catalytic on the Built Environment Performance Plan for National Treasury. A free stand housing project is not catalytic… So by our definition it is not catalytic, mega yes 'cause of the scale of it, [but rather] a Mega housing project".*

Speaking to the Boksburg planners a different label for Leeuwpoort was given, a label that even between the different colleagues had different meanings. One of the planners noted that labelling Leeuwpoort as *"mixed use is definitely correct because it is a mixture of everything*", whilst another argued *"This is a housing project because it comes from our housing development team".* So between the planners interviewed in Kempton Park and Boksburg they have small differences in how they would label the development – "mega", "mixed use" - but they all

hold the same view that this is not a catalytic development as a result of it being predominately focused on housing. One Boksburg planner elaborated further that:

> *"...you get different types of mixed use. This one is a mixed use residential. So it's a residential bias with some business and other activities that fit in with the residential."*

These multiple labels can be confusing for everyone, and a question very much raised by the existing residents of the Boksburg area, which I will delve into in the discussion chapter. Whether Leeuwpoort is a mega housing project; mega catalytic project; mixed-use residential development or simply a mega human settlement or housing development, it leaves space to question what exactly this development intends to bring to the region.

It also begs the question as to why it would be given such an extravagant name of a 'catalytic megaproject' in the first place, and secondly why no one singular universal label for it could be decided on. Some of my interviewees elaborated: because these types of developments were announced and mandated by the Gauteng Premier, and have been under the wing of the GDHS, the local town planners who are formatting and planning the layouts for the development have no say in the labelling of the projects. The Kempton Park spatial planner explained:

> *"But the naming: that hasn't come up from us at Ekurhuleni, it's from National Treasury or Provincial."*

A Boksburg urban planner shared a similar view and further elaborated:

> *"You must remember we have politicians involved here; they need to market this and use powerful words like mega housing project. Those words are not town planning words; this is just a development for us, whether it is private or government".*

It is evident then that this development is influenced by more than just what the planners have to consider. Clearly, since the premier stated a mandate for 100,000 housing units would be built in the five years from 2015 throughout Ekurhuleni, and Leeuwpoort being a considerable contributor to this amount (estimated at

around 22,000) (*Boksburg Advertiser*, 2017) that there would be a need to make it politically inclined. This is not just a sign of urgency to develop but of political will to fight the housing backlog in a manner considered 'mega' and 'catalytic' rather than how the town planners view it.

What was less questioned or debated amongst interviewees is that the Leeuwpoort development is mega in nature. Taking up around 1,000 hectares of open land, bringing in around 20,000 housing units, it is the biggest development that any of the Boksburg planners I interviewed have been involved in.

> **Planner A:** *"It's the biggest development we have all been involved in and it's very complicated because of the size".*
>
> **Planner B:** *"So yes there is a lot of thinking going on and we even requested they phase that project (South) - 6 phases just to make it a bit more manageable because it's massive- nobody has worked on such a big project".*

While it is still unclear in my opinion what the development is actually going to be called, it is clear that the political influence of promoting such a large development has played a role in this labelling confusion. Understandably, from a political viewpoint it is something intended to catch the attention of those it is intended for and not the developers. From the urban and spatial planner's perspective, it is much of a muchness as the labelling on their behalf though the application is formalized under a township category. This uncertainty and confusion opens questions as to why exactly there is a need to use words like catalytic if those planning and developing the project believe otherwise and feel it gives off the wrong intention.

5.4.3 Development Expectations: Politicians vs Planners

As pointed out above, the contestation between the labelling of the Leeuwpoort development creates certain expectations which ought to be shaped by what we are told about the development; whether it be because the development is 'mega'

or ‘catalytic’. Through my interviews there seemed to be two main expectations from the Leeuwpoort development: the eradication of informal settlements which was emphasised by the ward councillors of the involved areas and the Ekurhuleni RSDF and MSDFs; and the mandate of developing 100,000 housing units over the next five years in Ekurhuleni. I discuss the latter and then the former, demonstrating different views on which goal was predominant and at what scale would be achievable, in what timeframe. Others had different visions altogether, seeing the project as one of community building instead of housing delivery, or a blunt political tool.

100,000 houses in 5 years or 25 years?

As noted above, the latter mandate for 100,000 housing units came from the Gauteng Premier in his speech in 2015. For town and urban planners, this is a mandate that is impossible to achieve, especially considering a point made by one of the ward councillors who argued that, “*they haven’t even reached 10% [by today’s date]”.* Similar statistics were pointed out by the Boksburg planners in that they have not even achieved close to a third of that total, three years after the mandate was set:

> *“… I think we are 3 years down the line and we have only achieved 20,000 if we are lucky. So we are way- way behind the fourball, and these things push the unit size up quite high.”*
>
> *“Realistically we can build 10,000 units a year.”*
>
> *“We spoke to Baldwin who build something like 12,000 units a year and they’re a company listed on the stock market. The figures are, we just cannot do it”.*

One of the Boksburg urban planners pointed out, when asked about the housing approach taken in Ekurhuleni that:

> *“…we are the authorized authority that has taken over projects from provincial and national government and our approach is slightly different, where we are not providing RDP houses where they slap-bang a house in*

the middle of a property or row of houses... we are trying to create communities so we are looking at providing additional facilities in each of these developments. And each of these developments should become a community type development."

This is in contrast to past housing developments that have failed at becoming a part of the community due to the lack of service and facility provision, especially in the RDP era of housing developments. So it is understandable as to why they have not yet achieved such high numbers in the development, when a more thought-through approach is being taken to achieve community developments instead of isolated housing pockets as seen in the past.

With the Leeuwpoort development going into its second year of implementation and the majority of bulk infrastructure still being developed in the northern phase, there has yet to be any construction of houses done from my observation. When asking the project manager, *"How many houses, to-date, have been built out of the planned target for Leeuwpoort?"* It was stated, "*Zero… But we will be breaking ground in December/January."*

At the end of January 2019, Leeuwpoort's northern phase (Reiger Park and Parkdene) is still busy with the bulk infrastructure of power stations and road works which is mandatory for the development of the housing units. In the southern phase (Sunward Park), the developers are still waiting for approval on the plan layouts. Figure 10 through to 14 shows images of the three different site's progress to date in the Leeuwpoort development. They confirm the above-mentioned view with regards to the state of construction in the different phases of Leeuwpoort. In contrast to what was said to me during my interview with the project manager, no houses have been built yet by the end of January. The photos have been taken by the researcher on the 7th of March 2019.



Figure 10: Site location of Parkdene phase, Leeuwpoort.



Figure 11: Site location of phase 1-3, Leeuwpoort South.



Figure 13: Overview of Leeuwpoort South from North Boundary Road.



Figure 12: Site location of phase 4-6, Leeuwpoort South.



Figure 14: Site location of Reiger Park phase, Leeuwpoort, with backend of Checkers marked with green arrow.

When asking the Kempton Park spatial planner about their expectations on when Leeuwpoort could be complete, s/he replied:

> *"This is not a 5 year project regardless of what some politicians might say. The infrastructure alone could take that long to complete. This is probably more realistically a 20 year project."*

This succinctly demonstrates how expectations on the politicians' side are very far apart from the reality faced by developers and planners. At first glance, it is startling not only because the expectations are vastly different but because once a bold mandate like this is published it has an impact on the expectations of proposed beneficiaries as well. The project manager explained that they are aiming to construct around 250 units in the first year 2018/19, and from there on in they are aiming for 1,005 units per annum. Even with this estimation, we would realistically be looking at a completion year of around 2038, falling far beyond the 2020 mandate. Leeuwpoort is the biggest of the mega housing projects in Ekurhuleni, it would be a monumental task to achieve the five year 100,000 housing unit mandate without the completed contribution of Leeuwpoort's 20/22,000 housing units. Furthermore, when asking the question of *"When do you expect the development to be completed in its entirety?"* to planners and ward councillors, all the responses shared a similar estimation:

> *"In another 20 years at least".*
>
> *"It is going to take 15-20 years to complete so it's no quick fix".*
>
> *"Well they spoke about a 20 year period for the Sunward Park one from when it starts getting developed which could be 2020 so yes I think 2040. This one (Reiger park/Parkdene) they have already started breaking ground with the services".*
>
> *"3-5 years on these ones [Reiger Park] and 20 years on this one [Sunward Park]".*

It is clear that political pressure and demand for housing development to combat the major housing backlog faced in the country is difficult to square with the timelines of developers and planners.

From Informal to Formal Living: the Eradication of informal settlements: but Which and for Who?

With its 100,000 houses vision, the Leeuwpoort development is intended to directly impact the living standards of those currently living in informal settlements in the Boksburg area, such as Transkei; Ramaphosa; Angelo; Joe Slovo; Driefontien; Katlehong; as well as the mining hostels and road reserves. However, the councillors explained that certain groups of residents in the existing area and township residents in other surrounding vicinities have questioned why these communities. It is the view of the councillors that these communities are being selected based on their political party association. Of course, the municipality has an objective, which is stated in Ekurhuleni's MSDF and RSDFs, to eradicate all informal settlements. As a result, land is needed to make this happen, and the Leeuwpoort project offers this. Others argued that informal settlement upgrading was more appropriate than relocation, with *"ample space where people are currently residing"* to build more infrastructure and services according to one councillor. Financially they believe it would be more viable going about it this way rather than a whole settlement development in which new land needs to be acquired, as it would be cheaper and possibly quicker to move towards a plan of action. However, upgrading informal settlements located in poor and wasted lands around the periphery still leaves behind the same problems of social and economic inequality, just with more access to services.

There seem to be two consistent subthemes with regards to the process of transferring informal residential into formal residential through housing developments: the housing list and the concerns around who will be considered when the time comes; and doubt in whether the correct process of transferring houses over will be followed as planned on paper.

As noted previously, there are many informal settlements in the vicinity of the proposed development that will benefit directly in regards to housing. The process of selecting the beneficiaries has been applauded by planners and ward councillors alike as they believe these existing informal settlements add pressure on the lifestyles and services of the formal residential. In asking more directly about the typologies of the housing units the project manager stated that:

> *"In terms of Leeuwpoort we have got a mixed typology in the housing units firstly: you've got your fully subsidized, social housing, FLISP and bonded housing".*

To which I asked the projected manager which typologies would be prioritized for in the development:

> *"Priority is being given to the fully subsidized units, which is your BNG."*

The north phase of Leeuwpoort has been the priority development in getting the project off the ground with the focal point being getting residents out of informal settlements and into more formal residential units. A Boksburg planner noted that, *"our approach is slightly different where we are not providing RDP houses where they slap-bang a house in the middle of a property or row of houses... in the middle of nowhere"*. Clear to see then that the subsidized housing located in the Reiger Park/Parkdene phase would be the priority development taken out. A ward councillor went on to note that the north phase development started at around 2,600 units and has now been increased to just over 7,000 units which would impact the lives of 17,000 families. So in as far as thinking of the impacts of this residential transformation, it from the outset would increase the living standards of the residents, as the same ward councillor states:

> *"…that is a vast amount of families and living standards being impacted on in a positive way."*

> *"How they benefit, there is a couple of ways: some are already benefiting through economic spinoffs through jobs in development and construction. Others will benefit directly through getting a house or a unit."*

Another ward councillor representative of the north phase of Leeuwpoort went further on complimenting the development for the designs and typologies of the housing units that have been proposed:

> *"These are beautiful houses… In the case of having them behind my house where I live, I wouldn't be at all completely upset aesthetically. For us here, the flats proposed really the fully subsidized houses and walk-ups, yes they feel if it's going to be like this than yes as long as they go with what we see here than we don't have a problem".*

One Boksburg planner quite confidently and enthusiastically stated that:

> *"I can guarantee that in the Reiger Park section the demand is there. It's taken up, there's no free erven there that won't be taken up. Those Parkdene ones as well in my opinion, the demand is there".*

The north phase then seems to not only tick the box in regards to combating informal settlements, but also tick the box of being aesthetically appealing; increasing living standards of residents; and having an acceptable layout. A ward councillor in the south phase of the Leeuwpoort development even went as far as saying that if it ends up being developed the way they have proposed some of these houses would be worth investing in through the rental market. The Kempton Park spatial planner was less certain, and brought up another issue:

> *"Whether the typologies are right for the area, particularly in the Sunward Park side is maybe debatable. The typologies are definitely right in the Reiger Park/Parkdene side".*

As the one planner in Boksburg noted this as prime land, there is no reason as to why lower and middle-income groups should not have access to such land, especially considering it is a public-led development. The process from informal to formal residential in Leeuwpoort has left a lot of people looking forward to it from a residential and social corrective aspect, the only point for concern is whether or not it is actually developed as planned, which brings me to the last point.

Uncertain beneficiaries

There has been a lot spoken about the concern of corruption in the handing of the waiting lists in the past (Rubin 2011), which was brought to my attention by several ward councillors and planners alike. There is a serious concern as to who exactly will be receiving the housing units once development is complete. As I learnt for myself first-hand during my research for this thesis, no one actually knows who the beneficiaries are going to be until the project gets to that point. In asking the project manager about whom the development is first and foremost meant to benefit and whether precautions had been put in place in considering who becomes a beneficiary, it was noted that:

> *"Uhm, the development is to address the housing backlog obviously. The fully subsidized; our 1996 waiting list; your informal settlements; the people you want to attract; and then also your social housing".*
>
> *"A survey is done in informal settlements and it's determined from there… Leeuwpoort we would prioritize the nearest townships for example your road reserves and Ramaphosa which are immediately affected by the development".*

Yet there has been no definitive answer as to who these populations are. As a result, this has fuelled a lot of speculation amongst concerned ward councillors (who are involved in opposing political parties which have their own agendas) and existing residents. From the view of ward councillors, it is firmly believed that the housing list is just a political tool used by the party in control to use as they please. In asking ward councillors the same question addressed to the project manager above, they stated that:

> **Ward councillor A**: "*The ANC decide".*
>
> **Ward councillor B**: "*Yeah the ANC decide for their friends and family, its catering thing".*

> **Ward councillor C:** *"Until now it is unclear who is actually getting, and this is the million dollar question that we are going to pursue throughout until they reveal this information".*

Aware of beneficiary corruption incidences in Lufhereng and Cosmo City, it is a concern and something that hangs the success of this development for the region of Boksburg on a tight thread. One ward councillor openly stated:

> *"When the housing list is going to be put together as councillors we feel we need to see it, that's a definite. Because we haven't seen it in the past, we just hear that, that one has a house and at the end of the day we find out that this Mr. X is not even from this area, not even this province but he has qualified for a house. So how did he qualify for a house? Because presently I can say openly that there are people from other provinces, from other countries that have houses but our community doesn't have houses".*

In keeping the latter part of the above in mind, there are several developments which contain different housing lists, and the relevance of this statement would be held if the housing list designed for the Leeuwpoort development continued in this theme. The development makes clear its intention to formalise housing in the region and eradicate informal settlement living. The evaluation of its success in doing this can only be measured once the housing list is finalised and the construction of the residential units is complete.

Political tools at work?

Some interviewees connected these diverging expectations to the wider political context. Ward councillors in particular questioned why the development is being done now at this particular time when the development has been in the pipeline for over 20 years. With local elections having taken place in 2016 and the national elections in 2019, some ward councillors of the involved areas believe the Leeuwpoort development is being used as a political tool in trying to incentivise ruling party votes at a smaller scale:

"But it's definitely a political move, when the mayor stands up and says we are going to house 100,000 people, it is a political gesture to get support from those it's intended for which are those in townships. And they are using houses/title deeds as a currency to exchange for votes because the food parcels are no longer working because the people are living in poverty so houses are becoming the new trading commodity."

"Look there is a few undertones here; one is the political agenda in my view, where the ruling party seriously wants to bring their electorate closer to wards that are traditionally won by opposition parties, in this case the DA. In my view it is a perfect opportunity for them to use their political muscle".

In contrast, others did not see the development as a political tool. When asking another ward councillor, *"Do you think MHS is more of a quick fix as a political motivation to give people houses?"* they answered quite differently to their peers:

"No, because it is going to take 15-20 years to complete so it's no quick fix. By the time they finish this project we will still have as many people waiting for houses as we do now. But it is a necessary evil that must be done".

My interviews with the planners argued that less political influence had been brought to bear on this development than some local residents may have believed. While politically there has been an influence in what residential developments would take place inside Leeuwpoort (e.g. fully subsidised RDPs and walk-ups), the fact that its implementation has been left in the hands of the local planners to format and layout speaks otherwise. As my transcriptions demonstrate:

Researcher: *"Would you know of how many political fingers have been put into this development?"*

Planner A: *"Compared to others, none".*

Planner B: *"... equally there is the argument where you could have sold the land to private developers and did high-end development housing and*

made more money and not caused a drain on the fiscus. Does it bring any real benefit; probably not. But it has to be done, those people have to be housed somewhere, and putting them on the periphery is no longer the answer".

So while noticeable that politics play a role in the Leeuwpoort development, it would be clear to see that political influence or/and muscle has not been exercised in how the development has been planned, seeing as the development has been given over to local authority to ensure correct development implementation.

5.4.4. Site location and Environmental Concerns

The following section refers to the main environmental concerns raised throughout the planning stage of the Leeuwpoort development: the wetlands and mining. It looks at how certain groups tried to mobilise against the development of Leeuwpoort in defence of these environmental impacts, while at the same time the municipality has key justifications as to why using land like this for such a development is ideal and necessary.

Mobilisation against Wetlands Encroachment

One of the biggest environmental concerns I had come across throughout my interviews was the serious residential uproar with regards to the use of wetlands being developed for Leeuwpoort. A key informant -an Environmental Scientist and resident - gave me access to a residential Whatsapp group called *"Save our Wetlands"* which was created with the intent to sign a petition to prevent development on the wetlands in Sunward Park. Further to add, a Facebook and Twitter page called *"Sunward Park NCG Against Leeupoort"* was created by a residential group with the same intention. The Facebook page's last petition posted on the 27th of June 2017 reached over 600 signatures against the development in the region. However, since then there has been no activity on the page with the page receiving 275 likes.

It is unclear where the residents got the information that the development would encroach and be developed on the wetlands, given the EIA for the area (Chapter

five, section three) and layouts for each section of the development that show that the wetlands have not been encroached upon. This was confirmed in my interviews. With the Kempton Park spatial planner, I asked whether they had concerns environmentally with regards to the wetlands and it was simply put that, *"The wetlands will be protected, and must be protected".* Talking to the ward councillor who was actively involved in the wetlands WhatsApp group I asked a similar question; s/he replied confidently:

> *"Nowhere in the project does it show they are building houses on the wetland. There is a buffer zone between the wetland and where the houses will be built… they are not building on the wetlands, it is clearly demarcated here on the map."*

Hard and soft copies of the layout maps kept to the 1: 100-year flood line, and created a 50 metre buffer zone between the development and the wetlands. Whether or not the builders adhere to this layout plan is another matter. Furthermore, in speaking to the Boksburg planners about potential trade-offs between social and environmental justice in this development[2], they saw no such trade-off:

> *"It's brilliant land for development. We have taken into consideration some of the environmentalism where we cannot build on [wetlands]and it's actually made a natural buffer zone between some of the current developments [Sunwards Park's existing residential area north of the wetlands]. "It's astonishing, this is actually a developer crying not to have this ground developed on, I mean really what more do you want? And if we don't use it for this, what are we going to use it for, this is what it's earmarked for. It ticks all the boxes".*

The anxieties of middle to high-income residential areas such as Sunward Park about the wetlands rather reflects a feeling of NIMBYism (*Not In My Backyard*)

[2] The exact interview question being: "With regards to the environmental justice within this development, considering it's close to the wetlands in the South…do you think developing near spaces like these create conflict between social and environmental justice in the way the land is being used and how?"

about a low-income mega housing development in 'their' open space. The Facebook page notes the development will bring in around 70,000 housing units which is also inaccurate.

Impact of historic mining

The other major environmental issue, and from my experience and knowledge on the development so far, are the damaged and contaminated soils in the north phase of the development. As pointed out in the EIA document analysis of the north phase, the Reiger Park and Parkdene proposed land has soils contaminated by chemicals due to the historic mining activity in the area. I was first made aware of the soil concern by ward councillors during interviews when asking them for background knowledge on the development and reasons as to why no development had occurred yet. One ward councillor replied in a quite frustrating manner:

> "*Yes! Let's have a public meeting and discuss that, there is 50 thousand frikken reasons [including wetlands, residential concerns of property price, and schools as well as police stations]"*

Whilst pointing out a list of issues raised by ward councillors during the tribunal for approval of the development, another ward councillor closer related to the north phase of the development pointed out that:

> *"My biggest issue with this is the surface being used for the development in Reiger Park as it is a mine dump and the soil is radioactive. So the ground water is irradiative and they said they will do soil replacement which I protested against as it is not feasible and very expensive to replace somewhere along 60,0000 units of soil, and as soon as it starts raining the radiated water starts arising to the surface as runoff water which would then reradiate the soil again. They came back to me at that stage and said they would just plan to cement over the soil with no geotechnical drainage which is as expensive."*

This is confirmed in EIA documents for the north phase (Chapter five, Section three), which identified that there was extensive soil damage and contamination

due to historic gold mining (Bokamoso CC, 2017: 103). Information like this highlights the severe health hazards not only for incoming and existing residents, but also for the environment. Furthermore, I was notified by a ward councillor that:

> *"To date I am still waiting for the project manager or any other official in that development to come back and prove that the National Nuclear Regulator [NNR] issued a certificate clearing that area".*

In receiving this information, in my interview with the project manager of the development, when asking whether the NNR had resolved the issue on the radioactive material situation in the Reiger Park phase of the development considering the health implications[3], it was replied to quickly and confidently:

> *"Yes they have. We had to do a radiation clean-up and remove the radiative soil, around 105,000 cm² of radiative soil. Thereafter the NNR came out and did a test and on a technical bas[is] we got the go ahead, all good to go, the development may commence".*

In a follow-up with the Boksburg planners I asked a similar question based on whether the green light had been given by the NNR with regards to the radon removal. The answers I received were rather short and to the point, and confident in the fact that the NNR went in and gave the go ahead for the project to commence:

> **Planner A:** *"Yes".*
>
> **Planner B:** *"They did get the green light…"*

So, with this information provided for, there seem to be a disjunction between what the ward councillors claim, and what the project manager and planners say. However this may be, the planers made it clear that the plans for removing the amount of soil and the process had both been changed from what was originally noted by the project manager when asked about the radon. With this contradiction

[3] The full interview question is, "Has the national nuclear regulator resolved the concern about the radioactive soil left behind in Reiger park from past mining activities, as concerns of health and safety are being raised by residents and ward councillors in question to this?"

in description, it seems the environmental concern arises as the radon in the Reiger Park section has been left for so long that it has leached further into the ground than expected. In explaining why development had not taken place yet in the Reiger Park phase, a planner from Boksburg detailed the complexity of remediation:

> *"Now to remove the normal soil they have to cut back about 8-10m into the ground and it's just not viable to do. So they are moving the radon I think about 2m (topsoil) but in that area it's leached below that and that's causing a problem".*

As mentioned by the ward councillor, it just costs too much to actually make removing all of the radon viable. This leaves a lot to think about especially considering the effects such as contaminated run-off water arising in the community or contaminated vegetation growth. As to how they would minimise or prevent this kind of situation from happening, I was told by a planner that there were plans to increasing the residential height and density (mitigation plan) in the Reiger Park phase in order to reduce open space which would prevent any residents from trying to use open topsoil for vegetation or gardening purposes.

> *"There was a lot of discussion with the ward councillor in relation to the increase in heights and densities and he wasn't very impressed. But the council made a decision and overruled him".*

So whilst it is a major concern, this is the plan of action in order to move the process along to get ready for bulk infrastructure servicing in time. I have yet to see or hear any final and guaranteed response to insuring no health or environmental implications may arise as a result of only cutting back by 2 metres and concrete slabbing instead of removing it all as was noted in my interview with the project manager. Furthermore, the town planners in Boksburg noted that these new changes had not been signed off yet by the Minister:

> *"... they got environmental clearance but because of the change they had made they had to do an amended application to GDARD and that*

apparently the minister hasn't signed off yet, whether it's true or not though I don't know…"

To which another planner noted that:

"Well the environmentalist came back and said they are busy with the document so I don't think they have signed off yet".

To date, this updated approval letter on the adjustments made to the radon removal process in the Reiger Park phase is not available.

Justification of Site Location

Despite these underlying environmental concerns noted previously, the location of the Leeuwpoort development has been justified in various ways. Primary is the fact that the land was already owned by the council so it was much cheaper to use this land than buying off of a private owner. Of course, there is more to this story than the fiscal benefit of using this land. Other justifications have included things like: the lack of existing available open land; its economic benefit of being located in close proximity to the Boksburg CBD; social justice in integrated residential housing; and maximising the use of environmentally damaged land. On the south side of the Leeuwpoort development, it is well documented in the EIA report in the previous section as well as in news reports that there is consistent illegal dumping that takes place by Trichardt road along Boundary road, as well as along Rondebult road by the R554 (Figure 15). With the development of Leeuwpoort South, these illegal dumpsites will be eradicated during the process as pointed out by a Boksburg planner when asking about the environmental justice of choosing this site location:

"So I do not believe it is environmentally harmful because currently you have toxic waste on these grounds and really there's illegal dumping… we have to develop this because it is going to be a good development".



Figure 15: Illegal dumping in Sunward Park, along Trichardt Road across the road from the ERPM Mine shaft.

Furthermore, the ward councillors acknowledged that Ekurhuleni is running out of respectable land pieces that can cater for such a development and address the growing demands for land and housing:

> **Ward councillor A:** *"So with like Leeuwpoort, if they can start utilizing it, it will be the right thing".*

> **Ward councillor B:** *"Look mining has grinded to a halt here in this area and the municipality has a policy called 'fill in land' policy where they use all open spaces available to them to build houses. On the other end, we are facing a critical housing backlog in South Africa and these open spaces might be attractive to developers and government to use for housing and social housing."*

In talking to the Boksburg planners about their views as to the reasons for the locations of the Leeuwpoort development, they concurred:

"Unfortunately, the developable land is becoming less and less available; it's just not there anymore. So the land we have available, we have to utilize and optimize the amount of units we can fit on it".

"This infill is all about spatial justice and it's the logical thing to do".

Leeuwpoort's sites are also located close to several existing informal settlements. The project manager goes on to note that developments like this follow a migration plan which is part of the mitigation process for the eradication of informal settlements. In Reiger Park and Parkdene the proposed land used for the development is surrounded by several informal settlements (including Ramaphosa and Joe Slovo) so it is a further advantage for the location.

Finally, these sites are close to urban centres, rather than on the periphery – as old RDP settlements were, as one planner highlighted:

"It's very close to the CBD; it ticks all the boxes to actually be a very good development… It's brilliant land for development."

"This is prime prime prime land that ticks all the boxes. The only thing we have to be careful of is getting the balance right".

From an environmentalist perspective then, the one real concern is the radon removal situation faced in the Reiger Park site. The wetlands will be protected with a buffer zone of 50 meters between the developments. Furthermore, the concerns of mine dumps and illegal dumping will be answered through their removal in order to open up the space for the development. This process solves two environmental concerns at once: clearing the natural land of toxic wastes and providing space for residential-use.

5.4.5. Infrastructure and Service Upgrading

From stage one of the plans for Leeuwpoort, one of the major interventions of the project is the investment injected into the upgrading and development of the service infrastructure in Boksburg. This has been a topic of concern for many

years amongst residents facing consistent power outages; lack of water supply; road congestion and waste management issues. Whether Leeuwpoort will solve or exacerbate those service challenges is debated.

The ward councillor in the south phase of the development shared mixed feelings on the topic of infrastructure capacity and upgrading:

> *"Nothing's being done about the roads that I can see or believe, building a new sub-station is not a problem, that can handle it… The water can cope… There is a railway line that is supposed to run through but if you ask Transnet or whoever does the transport for such and they have heard no news on this plan".*
>
> *"With the traffic congestion there has been no transport infrastructure proposed for the project from what I last heard. Ideally you would need a train station that stops in the middle of the development".*

Initially there seems to be a positive response in relation to current problems faced in the area such as water and electricity, but not for transportation. On this topic, the Boksburg planners noted that the railway plan was a part of another project, not necessarily for the Leeuwpoort development (which relates to region A's RSDF in Chapter five, Section 5.2). However, in direct relation to the concern about the road congestion in the area, they clarified that:

> *"This development rather relies more heavily on the BRT [Bus Rapid Transit] system which is supposed to go down Rondebult road (Phase1) and then there will be secondary lines installed when the need arises and then we also have extension to the Gautrain and one of the proposed sites is in Boksburg CBD".*
>
> *"… and most of those roads are going to be upgraded as you can see currently on Rondebult road".*
>
> *"As well as on Mckechnie Road that we are opening [the road] up because the current Reiger Park people don't have a lot of access to*

commercial sites…" (Refer to figure 16 through to 19 on the following page, taken on 9th March 2018 by the researcher)



Figure 16: Rondebult Avenue road construction (width) south bound across from the Urbika Lifestyle Estate (south of Parkdene phase of Leeuwpoort).



Figure 18: Rondebult road and Espri Avenue intersection road extension construction by south entrance of Checkers Hypermarket.



Figure 17: Rondebult road and Espri Avenue intersection road extension construction by south entrance of Checkers Hypermarket (marked with green arrows).



Figure 19: Rondebult road and Espri Avenue intersection road extension construction by south entrance of Checkers Hypermarket.

In asking the project manager about what was being done about the roads, s/he replied with:

> *"Okay so those would be put through your Gautrans and Sanral for input. So we will have upgrades for those sections of the road … we have plans to widen and increase the number of lanes, so far they have all been approved".*

Evidently, there are currently upgrades being done to widen Rondebult road (Fig. 16-19). In speaking with the Kempton Park spatial planner about certain other services residents were concerned about, it was stated that the municipality is in control of the electricity in cooperation with Eskom; waste management is done through East Rand Water Care Company (ERWAT), and water management and installation is co-jointly done with Rand Water.

The difference between the two phases of the development is that the north phase is considered an infill, whilst the south phase is more of a new township establishment. These could mean quite different approaches to planning and implementing service infrastructure. In putting this question to the project manager, I was told it does not make much of a difference because they are working with experienced developers, and that:

> *"You see in Leeuwpoort it is different already because in the North the existing services are not sufficient enough to even support existing residents so we would have to develop new ones anyway".*
>
> *"For example, at Reiger Park we did an upgrade of Sub 117 where we installed an 11 kv switch gear panel to increase the power supply. Obviously bringing in new houses there is already an overburdened station there so we have increased the capacity there. We are also increasing the central Eskom vertical. So you would do an entire upgrade if necessary".*

This correlates with what is noted in the north phase EIA. Furthermore, in speaking to the ward councillor in the south phase site about the service concerns

raised by residents, it was noted that these are all node points that do not take up a lot of space and will be addressed.

> *"They will build a new electricity sub-station on the corner of the land to supply more than enough electricity for all the houses, and none will be taken off of the Sunward Park and those current transformers couldn't even supply for more houses anyway so that's not an issue".*

Overall the project promotes a complete revitalization of the service infrastructure in the area that has for a while now been operating under stress to supply its population. The only downside is that it will take several years to complete these upgrades and developments before housing construction can take place. As a spatial planner positively put it:

> *"So in this instance this helps redevelopment/upgrade and rejuvenates services that are old like in Sunward Park- they have electric and water problems there… So it is quite nice, any development rejuvenates our engineering services in that respect but because this one is so big the current services are too small they even have to replace the old ones so it's nice".*

5.4.6 Socio-Economic influence of the Leeuwpoort development

In the past, housing developments have seen to feed off of existing economic and social systems rather than compliment and grow them by bringing in their own, and in doing so generate an integrated socio-economic operation. This section below looks at how the economic and social aspects have been addressed in the Leeuwpoort development in order to see if the development aims in integrating its characteristics with those that already exist in Boksburg, whether it be through the style of residential units for social unity or economic spinoffs through job creation and future opportunities through the development.

Economic Benefits of a Housing Project

In previous housing development projects as noted in the literature review, the sense of economic development seemed to be bogged down by focusing on housing provisions. Considering the already struggling economy in Boksburg, there seemed to be mixed feelings between interviewees as to how exactly this development would assist the economy. One of the Boksburg planners saw economic possibilities in the development:

> "*This is a very important development for us because at the moment remember our markets are struggling and this could trigger a bit of a boost in our local economy, I think they are talking about 2% that could generate going forward. That's huge for us and the amount that has already been secured for this project makes it very interesting and very viable project to get off the ground*".

It is quite considerable looking at the investment injection into the budget for this development, somewhere over two billion rand. With the project's construction being tendered to local businesses through the LDC (PTY) LTD, a local South African consortium, it shows promising signs for them as well fiscally. I spoke to ward councillors about whether or not local residents would reap the benefits of this development as much as local business. In asking who the development was first and foremost meant to benefit, it was mentioned that obviously those most importantly facing housing dilemmas in our communities, but also that:

> *"How they benefit, there is a couple of ways: some are already benefiting through economic spinoffs through jobs in development and construction".*

Another ward councillor went further to explain that:

> *"I have people coming to me on a daily basis just asking for a little job. The problem is, what we are facing is, I have a list here from contractors for employment of people and they tell me 18 years-35 years old. Now the other day I told the one contractor, 'sorry man you got to extend that to 45 or 50 years because they want to work'".*

This signals some economic potential through local employment in the construction which is a big positive for the development, as it is not only looking at the effects at the end of the project but a consistent effect throughout the project. Giving locals a chance in building their own community is also something that can create a sense of pride, as well as a sense of unity and belonging which in the long run promotes a sense of place and upliftment in society. However, the concern regarding the age limit noted by the contractors is understandable but also problematic. The ward councillor explained the dilemma faced with younger recruits:

> *"They don't want these jobs of R3,500 that the contractor is paying… You get guys over that age that has experience but you don't want them to do the job even though they want it, and you get these 25 year olds who don't want those jobs but you catering only for the youth".*

The ward councillor went on to express his frustration in this because it is noted that some these jobs are now lost because the economic expectations of the youth is not shared by the subcontractors, yet there are elders pleading for these jobs offered but cannot have them due to their age. One benefit of working in construction is training for future work:

> *"Like now in this project, Leeuwpoort yes a lot of our guys will be trained, most definite they will be trained so there is a future benefit of this project coming to us, yes most definite and they will get experience for future".*

Not only will there then be an economic spinoff for locals during the development, but with training and experience it will allow them to open the door for future possibilities in employment opportunity, which is a vital asset to take away from this project.

However, as the fieldwork progressed, it became clear that no one knew what kind of economic benefit would be brought into the Boksburg area *after* the development is complete. It is stated by the Gauteng Premier and in policies since BNG that economic development plans need to be developed in megaprojects to assist these types of developments in being self-sufficient and self-sustainable to

contribute to the economies at regional and provincial local. Bearing this in mind, when asking my interviewees about what economic plans have been put forward for the Leeuwpoort development I received the following replies:

> **Project Manager:** *"Yes there is, I'd have to get you into contact with the developers as they are wholly in tasked with the development".*
>
> **Boksburg Town Planner: "***No, I know they are doing social analysis of the population but not economic, I don't think the economic department has been involved in that. It is unfortunately a bit of a problem".*
>
> **Kempton Park Spatial Planner: "***Along Rondebult road on the north end of Parkdene there's some light industrial/commercial developments proposed there, whether it's the right thing, but there are some potential job opportunities".*
>
> **Ward councillor A**: *"My view, they are very short or silent on economic development. I believe this is just a housing project only". *Ironic laughter**
>
> **Ward councillor B:** *"I actually sit on [the board] for the Economic Development [for the project]. So what do you think?"*
>
> **Project manager:** *"We haven't got that far yet, yes".*

This array of answers jarred with spatial plans to have *"economic hubs, your industrial sites and commercial sites"* (project manager). When queried more about economic hubs and light industry, the sense of ambiguity around the post-development economics in Leeuwpoort was clear:

> *"That's a difficult question because we haven't thoroughly gone through the business hubs and commercial sites, we haven't detailed that into much depth because our focus is tackling the 100,000 housing units".*

With this array of contradictory answers from the local level, I investigated further with those who work closer to the economic plans in provincial developments. The HoD's office of the Gauteng Department of Economic

Development (GDED) wished they could help me with some information, but they did not have any fruitful information to share in regards to economic plans as nothing has been brought to their attention about the Leeuwpoort project. I returned to local informants invested in this project. The Boksburg town planners also had mixed feelings both for and against what has been proposed economically:

> **Planner A:** *"Also if you are looking at Sunward Park specifically it's bringing in a lot of jobs, we have a lot of business sites there that are sort of the halfway link between Vosloorus and the ERM node".*

> **Planner B:** *"So yes, it might put a lot more pressure on our industrial areas that we will need to upgrade some of the industrial areas. But we do have a massive industrial area proposed near Vosloorus that links (Thambo Springs)".*

Whilst there is some doubt hovering over the economic contribution of the north, what has been planned in the south phase of the development seems to be considerable in the view of the town planners. With this noted, another planner pointed out to me that there is the possibility of the north phase of the development having a knock-on effect for the local businesses, which are struggling in the current economic situation:

> **Planner A:** *"There is going to be a need for shops, a lot of the shops now failing could now possibly survive because there are more people going into the space. The Checkers Hyper in Parkdene is actually proposing upgrades that we are busy with at the moment so they are upgrading yes. So this development helps makes it feasible for them to now upgrade…"*

> **Planner B:** *"…Which [Checkers Hyper] will actually be built into this development. He has actually asked us now to sell him some additional land because he is so confident of this actually having such a positive spin-off onto his tenants…"*

Whilst economic plans for the development after construction is complete seems to hold a lot of questions, the potential considering how successful residency occupancy becomes seems to be fruitful- especially for existing struggling businesses that will have a larger population to look at in their demand and supply. Business and office buildings have been planned for in the south phase, yet in the north phase there is more cause for concern considering the spending power of the lower-income residents that will be housed there. With this said, sites have been allocated in the development, both north phase and south, if GDED wants to take it up later on once construction is complete, according to the Boksburg planners.

Mixed Residential vs Integrated Residential

Leeuwpoort is an important case for understanding the possibilities of urban integration through such projects. As the first and largest of the megaprojects proposed for the EMM, it is also unique in the sense of its multiple locations and its infill and new township sites. Their relationship to one another works in an integrated manner which aims to make the area of Boksburg more unified, as pointed out by a spatial planner in Kempton Park working on the spatial frameworks board:

> *"Oh yes, most definitely, obviously both phases infill on a different scale, but they work to knit Boksburg together".*

What interests me most about this development's location is whether or not the development has the ability to become an integrated part of Boksburg. It has been noted throughout the literature review that human settlement developments in the past have failed to become integrated into existing urban areas. Cosmo City and Lufhereng, as examples were noted by some to be isolated developments from existing structures. With the location of Leeuwpoort closer to the Boksburg CBD and existing urban infrastructures, it's a good start in considering the development an integrated development. However, would it become an integrated part of Boksburg's residential communities or an isolated housing project within Boksburg?

In asking interviewees about their views on the layout and formatting of the residential areas and whether or not they believed it was done in an integrated or more a combined plan, the majority of the results leaned to one side more than the other in that it was a combined/mixed residential plan rather than integrated in the wider urban fabric:

> **Project Manager:** *"I think the living area is integrated because you'll find your BNG walk up houses a block or so away from your social housing so I think its integrated".*
>
> **Planner A:** *"Other than in the sort of mini CBD area which is quite mixed, the others are pockets of different typologies and then therefore different income brackets so yeah it's not fully integrated in the BNG kind of sense. It's mixed in the wider sense".*
>
> **Planner B:** *"From a social aspect, it doesn't create social cohesion to isolate pockets of communities which does not help at all. So yes, that point you noting is very interesting. Unfortunately, the developable land is becoming less and less available it's just not there anymore".*
>
> **Planner C: "***Look from the little bit I know on the Sunward Park side… your cheaper houses are more closely located towards Windmill Park by North Boundary road and your more expensive properties are towards Sunward Park. In Reiger Park and in Parkdene we have a lot of high density, so it's a mixture of subsidized units and FLISP units and some small bonded units".*
>
> **Ward Councillor:** *"There is a section A, Section B, and Section C. Yes there are certain areas for certain income areas".*

From what is understood the layout in the south phase does well in combining the areas of Sunward Park and Windmill Park together nicely. However, the layout in the development itself mirrors that of what exists already in the area and so it does not seem to achieve integration on a whole. The north phase however, being an infill sees a well-rounded layout which connects Reiger Park and Parkdene

together in a manner that would be viewed as integrated. The housing typologies allow for a mixed and combined formatting in the area. Appendices 9.22; 23 (south phase); and 9.24; and 9.25 (north phase) give a visual sense of what has been planned in the layouts for the north and south phases of the Leeuwpoort development. All the appendices have been adapted from original maps in appendices 9.8; 9.9; and 9.10 which were provided by the planners in Boksburg during our interview.

With regards to the housing typology and the layout discussed in Section 5.2, the layouts seems to promote a combined residential typology in the Leeuwpoort development whilst achieving a more integrated and mixed residential landscape in the wider Boksburg area by closing the gaps and connecting sections together. However, this is arguably more definitive in the south phase of the development considering the social justice trying to be achieved through the use of lower-income residential in an area known more for its middle to higher income housing. The fact that it is not socio-economically viable to develop in that manner anymore in an area (Sunward Park) where it has previously been accustomed to, has been noted by a spatial planner:

> *"This thing of everyone wanting a house with a little garden has past- we just don't have the land available to do that. Unfortunately with the current trends in South Africa and Gauteng we cannot continue with it. It's just uneconomical and just incorrect".*

As noted by Planner C and what can be seen in the first two maps it is clear that there is not really integration going on in the residential side of the development. It follows the existing trends of the area where the cheaper smaller subsidized and social residential lay southwards (orange and yellow) and the better sort after bonded sought after south (light grey and brown) (see Appendix 9.10). What particularly fascinated me in the interview with the planners was the different thought process the housing department had to the planners in layout of the plans for the different residential types in the south phase. The housing department wanted to use 16-storey walk-ups to create higher density in the south, to which the planners replied:

> *"Firstly, it is a bit out of the general pattern of the area. Secondly, the maintenance brings in an issue higher then 4-stories, and thirdly, why would you want to create high density there?"*

Secondly, they wanted to create a gated community for the bonded housing units in the northern section of the south phase which would have possibly eradicated the social integration trying to be achieved by locating this development in the south phase residential development. The planners reflected on this:

> *"They [housing department] actually wanted to create it as a gated community and you will see the roads vary in widths to compensate for gates and we said no, that is a problem. You are creating an isolated pocket of development within this which is not what we want".*

The north phase is more integrated than the south, especially the Reiger Park section. In the Reiger Park phase there is a good sense of integration seen in the west phase with social housing/walk-ups and the different unit size residential fours. To the east there is integration in layout between the different residential 4 units, but also how the east section of the residential layout falls over into the same pattern of the west section of the Parkdene development in a way that makes it flow as one development (see Appendix 9.9). The Parkdene section seems to take on more of an initial Cosmo City-like layout where the social housing and walk-ups have been put in the middle of the development. From my point of view if the aesthetics are not kept to a similar theme, it could possibly create an isolated island as seen in Cosmo City. So there is uncertainty in whether or not there is complete integration in the development, particularly in the south phase but as the planners noted, the availability in land left to use and the housing backlog which makes this even more challenging.

5.4.7. Coordinating State Involvement

It became apparent by my final interviews that there seemed to be little said about the role of provincial and national departments in the Leeuwpoort development. This may reflect the stage of the development and the interpretation of the people

I interviewed. But it was curious, given that the Premier of GDHS was the one who stated that 100,000 housing units would be built throughout Ekurhuleni in the next five years from 2015 onwards. Further to add, the project manager for Leeuwpoort noted that, "*the Human settlements department is the implementer of the development. We are the project owners and we are involved from all angles of the project…".*

Firstly, in talking to the Boksburg planners I noticed a common theme occurring in answers related to proposed infrastructure and facilities, which echoed conversations with ward councillors of the area. The development proposes a great amount of services and infrastructure for the area, but whether or not it would actually happen depends on provincial and/or national departments' willingness to invest in the proposal. At the same time, the financing for the service infrastructure is done by the council and municipality, from my understanding:

> *"To give a clearance certificate for this whole township is going to take 20 years or so by phasing into smaller pockets like this it becomes more manageable and you can then recuperate some money because services are actually a hell of a lot expensive to put in".*
>
> *"… currently on these two sites [Reiger Park and Parkdene] we are busy with putting in the services which is a huge-huge chunk of our budget that has to go in there".*
>
> *"That thing sucks energy out of everything; it sucks the budget dry at municipality- of province for schools and so on".*

The financing for the residential infrastructure that is not included in the subsidised unit's scheme provided for by the DHS comes from tax and levy returns from the housing occupants after construction:

> *"So we are going to put in some services, sell off the properties once they are in and use that money and take back into the development to carry on with the services. So you keep a positive cash flow all the time or else we*

will have to wait for money from national and provincial which will stall the development by years and years and years".

The economic concern though is priority is being given to the subsidised units in the north phase: whilst these are being constructed there will be little to no return in taxes and levies in the north phase of construction until the FLISP units start being developed.

To further understand who provides the budget for the services and infrastructure in Leeuwpoort beyond the residential stock, a planner from Kempton Park who sits on the EMM spatial framework board provided additional details when asked about the process of determining what infrastructure needs constructing for the development:

"The service infrastructure is done at municipal level (Ekurhuleni). Sewage and waste management is controlled by municipal owned company ERWAT; electricity is done through ourselves but in co-junction with Eskom for the reserves; water management and installation is done by us; and the engineering is done on our side. Province focuses on things like education and health".

The aspects determined by Province are important aspects needed in order to create a sustainable and self-sufficient development based on evaluations done on previous human settlements. With the GDHS as the owner of the Leeuwpoort development, the question comes as to why then is the project is being operated at a council level. The planners in Boksburg notified me about this when told:

"You see, currently at the moment we are just administrators where we check what the law states, we are not developers, we are not property owners in the respect we own that or this… Now the problem is this has been put on our shoulders which are not a function of local authority. Now they are saying we have failed you must takeover, which is fair enough but you must give us the resources and the people to do it".

Referring back to the IRDP, it makes sense as to why they are being given the responsibility, because at local level they know more about what is needed and required in the area than at provincial and national level and it suites intrastate management. When asking a spatial planner in Kempton Park if national or provincial level was needed in a development like this I was told, "*As a big metro we do not need province*". However the case, because housing is mandated as a provincial responsibility they are the owners of this type of development. The problem then lies in as to why there is not a budget from province given to the local municipality to use since they have been handed down the project from them.

> *"And also the only budget we get is our rates and taxes which isn't for these types of projects so the whole budget thing would have to be relooked at and put aside to the councils. Not all councils are doing these projects, only some were given permission and authorized local authorities."*

Currently, the existing provincial and national facilities are not sufficient enough to sustain the livelihoods of residents. Being a life-long resident in the Boksburg region I am aware of conditions we face in our schools and medical facilities, and the need for further and/or upgraded facilities, considering the population influence the proposed Leeuwpoort development will bring to the area. In speaking to ward councillors about the precautions taken out to determine what infrastructure is needed in the development, I was answered concerningly with:

> *"They have zoned areas for schools, this does not mean they are going to build schools, they have zoned areas for businesses but that doesn't mean they will build businesses".*

> *"There are no plans from the province for schools, nor to upgrade the R554, nor the K132. So although the province and the municipality are meant to work together on this, they are not".*

"Even if you take the schools, and the norm of how many people live in the area there is not a sufficient enough amount of schools planned for there on its own".

Looking at the situations of roads firstly, during my interview with the project manager I asked about the situation faced in regards to the roads (since it is a national department matter) I was responded to with:

"… So we will go to these departments [SANRAL and GAUTRANS] and Ekurhuleni department of transport and get their comment in terms of our plans because we have plans to widen and increase the number of lanes, so far they have all been approved".

I have been made aware and seen for myself construction taking place in widening roads take, mainly by Rondebult road at the moment as previously noted and shown. So as far as it seems the main success in national/provincial/municipal collaboration is the transportation and roads and even there seemed to be issues in planning. A planner in Boksburg further noted to me that:

"… a lot of the funding for the BRT comes from the national government so you know we can only plan the stuff, if we don't get the funding it falls apart. Most of those things we do look at, but yeah it's a difficult one and most of those roads are going to be upgraded as you can see currently on Rondebult road".

Relating this back to what the ward councillors pointed out earlier, a lot has been proposed but it does not necessarily mean it will happen, except for the housing. It all seems to hang on to whether or not national and provincial government provide funding, something none of the interviewees are sure will happen. One interesting piece of information I found out about this very point is that in speaking to Boksburg planners about why development had not taken place yet, I was told that especially in the Sunward park phase they had to do several rephrases as certain services like schools and open spaces did not cater enough for the population coming in, and that:

Planner A: *"The unfortunate part is council is not responsible for schools even though we are giving a property for a school, it's up to the Department of Education to build a school which is going to be a problem once houses start being built because if the schools don't get built first we are creating problems for the existing schools".*

Planner A: *"And a lot of these national government departments are bankrupt… So they don't have the funds to commit to these things".*

Planner B*: "**Yes!"*

Provincial government has handed down the development responsibility to local municipality, and of course the private developers who will construct the project, yet they as the council who plan the urban and spatial fragments of the development have no influence on what service infrastructure will be provided when the time comes. All they can do is provide an allocated spacing for it. Furthermore, later on in the interview when asking about the housing typologies and being told that the demand for the houses is there and that they would be all sold up, a point was made in relations to the other service facilities:

Planner A: *"This is reference to the houses, the other properties we aren't sure of".*

Planner B: *"Apparently the Department of Education won't build a school until that site is in their name, that's the last hurdle to transfer it to them and that's the problem because we won't transfer it to them".*

Planner A: *"They [Dept. housing] want the schools to be built before the houses to ensure it".*

Planner B: "*And we can't, we aren't the custodians".*

Planner A*:* *"The Department of Education wants the house demand needed for a school so…"*

Planner B: *"Fortunately we have asked our council at a higher level to take it up with them. That's all we can do".*

There is a lot of uncertainty as to whether or not these provided spaces for certain facilities will indeed end up being used. The more concerning fact is as the project manager stated to me, the people this development is intended for live in surrounding areas already, a lot of which will come from informal settlements. This point which was noted by a ward councillor, could affect around 17,000 families which could estimate to around anywhere between 60,000-70,000 people. So if provincial and national departments are waiting for houses to be built in order to ensure they will get a return on their investment on facilities development, the north phase of the project seems already to justify this reason as they are already in the area. Furthermore, in the south phase taking into consideration the informal settlements in that area around Vosloorus, Katlehong, and regions of Dawn Park and Windmill Park, there is even more justification to invest in education and health facilities immediately.

It is quite understandable that many of the departments are under fiscal strain, but their duties remain the same towards their residents. As the project manager states:

> "*When we do the designs and everything, they have to go through the different departments and they would give us their comments from the suggestions we have planned. It is an integrated responsibility between the different spheres of government in giving input with regards to the entire development; it's not just at municipal level where we decide what we want".*

Yet when I mention the topic of integration and the question on "is infrastructure for the development decided at municipal or provincial level, or is it a joint decision?" to planners and ward councillors I get responses such as:

> **Planner A:** *"Going back to the point I was making, we circulate this development to all national departments involved including Departments of. Health and Education and they come back and so no objections".*

> **Planner B:** *"I don't think the economic department has been involved in that. It is unfortunately a bit of a problem, we do work in silos and it's*

difficult because we are scattered all over such a large area that we battle to get comprehensive comments and inputs from everyone".

Ward Councillor A: *"The issue I have and no one is coming back to me nor the project manager, the roads contractors were going to come back to me but they were told not to, they must go through the contract manager, and [the project manager] hasn't reply to my question since January [2018]".*

All the planners can do is propose and set aside space in the layout for these different facilities and if the province or national departments want to take it up they fill in a special sites form to acquire it. As everyone else has said, it does not mean these facilities will be developed.

Coordination between the different spheres of government, different government departments and the project are complex and uneven. Locally-controlled processes are better coordinated. These include the bulk service upgrades and new service infrastructure (including roads at the national level); and housing plan layouts. The aspects such as: police stations; fire stations; medical facilities; education; public open spaces; and other community facilities that are controlled by either provincial and/or national level are all pending on provincial's success in delivering enough houses. There are also coordination challenges between local departments, for example around lack of open spaces located in the development:

Planner A: *"And also we try and chase them for their own comments to correct them, and like with our parks department as well, they give very vague comments".*

Planner B*:* *"Ya, they give us comments saying no objections to the development, and when you circulate it to them and say this is a council project what would you like to see? We have no objections to the application. And even like with our clinics, they have "mmmed and ahhed" about a reserved site in Comet, now they came back and said their policy is that clinics mustn't be closer than 5kms from one another but they want a clinic site here".*

> **Planner B:** *"So those are the type of issues we have, you have a clash of what people are telling you and what their department is telling you. And as Planner A said, with the parks department the people commenting on the layout are not the ones who budget to buy the equipment and cut the lawn, and there budget this year was cut so they saying we cannot take on anymore land yet those guys are saying we have no objections to your layout plan which indicates about 100 hectares they will be taking over so which one is it?"*

Overall, there seems to be a lack of cohesion, co-operation, coordination and communication between the different spheres of government related to the operations and planning in the Leeuwpoort development.

5.5 Media Analysis

The purpose of this section is to express how the media has portrayed the Leeuwpoort development. As stated in chapter 4 section 4.2, the media is a gatekeeping curator of information and as a result, information provided can be altered to suit the media outlets' preferred angle or approach to a certain topic. They can also be mouthpieces of particular vested interests or community groups. I am interested in how these media sources frame certain themes or concerns, rather than as some objective truth.

My main sources of media have been the *Boksburg Advertiser*, and several smaller sources like *Infrastructure News*. The *Boksburg Advertiser* is the main news source for the area in which the Leeuwpoort development is involved in. The first article found dates back to March 5th, 2015, and the last from the 14th of November, 2018. Approximately 15 news articles on the Leeuwpoort development were found, of which 11 are from the *Boksburg Advertiser*. The majority of articles were reports on previous meetings or sod-turning events; some were interviews with ward councillor concerning the development; and some were general informative reports for the readers on the development. I also found a radio interview with the MEC of Human Settlements on Radio 702.

From the outset, the local media outlets purported a rather negative connotation of the Leeuwpoort project. Most of the early media coverage referred to residential and council concerns with the development in regards to the potential it brings to the region. Overall, the coverage was quite general. Throughout the analysis, several subthemes or narratives surfaced. These recurring themes include: concerns from residents; ambiguity in understanding what the Leeuwpoort development is; what plans are in place for the development; and what the economic impact is of the development (of which there is a serious lack of information provided for throughout the media).

5.5.1. Resident Anxiety

The Leeuwpoort development has been portrayed as somewhat of a doomed project in the eyes of the local media, especially with respect to the social characteristics in the early announcement of its development in 2015. The views and concerns of the existing residents seemed to set the agenda of local news articles in which it came across as a development intending to upset the property values (more specifically noted by residents in Sunward Park) and standard of living in the area. In the north phase of the development, residents of Reiger Park and Parkdene highlighted their concern over already existing crime rates and what it would mean bringing in people into the area, who have no employment. A general concern raised by the residents in the north and south phase is the service infrastructure pressure and lack of understanding at the time of how it would be resolved as there are already existing problems related to services.

In a *Boksburg Advertiser* news article titled *"Concerns over new Parkdene Development"* (Unknown, 2015), it was stated that 2,800 high-density units were being proposed which, "Immediately, this raises concerns regarding the property value of Parkdene property as this new development will take shape basically across the road". Another *Boksburg Advertiser* news article raised similar negative views by residents about the development almost 2 years later (Mthupha,

2017a) titled *"Mixed reaction to mega Leeuwpoort Development"* in which it was noted,

> "Property owners in the two areas (north and south phase) are rallying against additional low-cost family homes and commercial properties to be built in their neighbourhoods. Those who object to it argue that it is most likely to lead to increased crime rates and overpopulation, devalue existing properties, bring people who have the lowest social status to their areas, put pressure on existing utility networks and put great strain on the existing infrastructure and public facilities, such as hospitals, clinics, schools and libraries, as well as roads".

Noted also was the lack of interest or willingness of the Parkdene residents to be involved in a housing development that saw the integration of the Reiger Park community and their community. Fears around increasing crime rates, lack of law enforcement and deterioration of houses into slums seemed to be the top agenda in the objection by Parkdene residents about the development (Unknown, 2015 & Mthupha, 2017a).

Certainly for the first two or three years of news about the development of Leeuwpoort since its announcement in 2015, little had been said about it. When information had been provided for, it was around raised concerns of residents on the impact of the development. Little to no responses were mentioned in the articles as to how these concerns and objections were being addressed which did not help the tone being set for the development through the articles.

Confusion and lack of clarity about the development's purpose in its nascent stages certainly seemed to play a key role in the views and opinions of the residents quoted:

> "The residents are concerned about the planned housing project, which, they feel, might leave them homeless" (Unknown, 2015).

> "Other reasons for the objection are the high number of stands to be developed, while others argue that the development is likely to deteriorate

> into a slum and as a result have a negative impact on the wildlife in the nearby streams and dams" (Mthupha, 2017a).

In a *Boksburg Advertiser* news article dated 3.03.2017, the question was raised about residents claiming to have not been made aware and consulted on the proposed development, in which it was stated [by Metro spokesperson Themba Gadebe] that,

> "Yes, and in this regard site notices were erected (at prominent points on and around the study area) on August 17, 2016… Consultation with residents was also done, through public participation meetings held in November 2016 and January 2017. Furthermore, an advertisement was placed in the Advertiser on August 26, 2016"

However, this appears almost a year after the first article on the Leeuwpoort development was published as noted at the beginning of this section. In an interview with *Talk702* (13.03.2017) the MEC for Gauteng Human Settlements Paul Mashatile made it clear that "There is no community that we will leave behind" in response to the concerns raised as Reiger Park residents started protests about the development in fear that the houses would not be given to them, and they would be left out as has been done before. In a previous news article by the *Boksburg Advertiser* (Matsimela, 2016), it was noted by the Reiger Park ward councillor that, *"the development could possibly be the answer to the many backroom and shack dwellers who are in need of houses in the area he serves"*.

Not until mid-2017, was it announced ground was being broken in the Leeuwpoort development and more precise information was published by the media, by which time existing residents had already made their mind up on their view about the development. Further concerns raised by residents noted in the article especially by the Parkdene residents in their objection to the metro's application for development at the tribunal is:

> *"*the amount of stands or units is too high and the stands are too small; increased traffic and pressure on municipal services; pressure on the environment and wildlife; insufficient schools, hospital and clinics; earth

> tremors; flood lines; health effects from mine dumps/slimes dams; backyard dwellings*"* (Mthupha, 2017d).

The majority of news articles since 2017 have seen a different tone being used by journalists, based more on the development goals and objections (informative) rather than residential opinions and critiques.

5.5.2. What is the Leeuwpoort Development?

The media identified has titled the Leeuwpoort development as a mega-development (Matsimela, 2016); mixed-income integrated development (Mthupha, 2017d; and a mega housing project (Naidoo, 2017). This contested titling of the development echoes the multiple labels raised in interviews. This opens the door for mixed interpretations.

In terms of its purpose, an article by *infrastructurenews* (Naidoo, 2017)) noted that, *"Masina said the new houses will be well-designed, sustainable, integrated and located in secured neighbourhoods"* and that,

> "According to the city, the new development will benefit informal settlement dwellers from Joe Slovo, Ulana Park, Hlahane, Driefontein, Crossroads (Roodekop Ext 3), Vosloorus, Kalamazoo and Katlehong… To date, already R2 billion has been invested in the project, which the city said 'is set to turn the tide on the challenge of informal settlements in Ekurhuleni'.

A less informative article by *Engineering News* (Van Wyngaardt, 2017) still simply notes what the housing target is of the development.

The *Boksburg Advertiser* produced a set of articles to provide details on what the Leeuwpoort development would be comprised of. In the first titled, *"The lowdown on the mega Leeuwpoort housing development"* (Mthupha, 2017a), the article mentions the need for upgrading service infrastructure in the area and the cost of the development, as well as whom the development is intended to benefit. The next articles titled *"Mega housing project well underway in Parkdene*"

(Mthupha, 2018a) and *"Housing project to alleviate Reiger Park's overcrowding on the go"* (Mthupha, 2018b) highlight the positive influence the development is having on the provision of services for the existing communities who have been struggling. The ward councillor 32 for Reiger Park in the latter article praised the development for addressing the housing issue in his community, saying, *"he welcomed the project with open arms because it will help address the housing backlog in the area"* and *that "'I'm glad that this project will at least alleviate the situation'".* In the former article, the ward councillor for Parkdene is noted as saying, *"the project is only in its initial phase as yet, but it's looking quite promising".*

Another article by the *Boksburg advertiser* (Mthupha, 2017d) explains that,

> "The metro added that the development would have a direct and indirect positive impact on the local economy during construction and during the operational phase. It would also transfer wealth to beneficiaries and buyers by providing them with a fix asset".

The development would also

> "…give lower income residents adequate access to economic opportunities, to integrate previously excluded groups into the city, and to provide a range of housing products to meet various affordability levels, thereby addressing the problem of informal settlements (squatter camps) and backyard dwellings".

5.5.3. Residential Plans for Leeuwpoort

Other articles on the Leeuwpoort development discuss the details of what housing units and amounts were planned for, but with great variety. What is considerable through my analysis is that the housing quantity in each phase has increased since the publishing of these articles as can been seen in the document analysis section in the appendices. The first article which details the housing plans for the

development was in the *Boksburg Advertiser* (Matsimela, 2016) in which it was noted in the Reiger Park phase by the ward councillor that,

> "The said development would consist of 339 erven, zoned residential 3 (200 square meters bonded stands), 158 erven, zoned residential 4 (112 square meters subsidised stands), 120 units, zoned residential 4 (120 units per hectare), 160 zoned residential 4 (160 units per hectare), 180 units zoned residential 4 (180 units per hectare), which means 957 units in total, which is not part of approximately 1,000 erven currently being developed".

However, an article by *Engineering News* (Van Wyngaardt, 2017) shared different figures about Reiger Park: *"Some 1,592 fully subsidised semi-detached housing and rental units, paired with partially subsidised housing and social housing units…"*. *Engineering News* (Mthupha, 2017a) noted further that, *"In Parkdene, 3,983 houses will be built, with many units falling into the finance-linked individual subsidy programme"*.

This matched the figures given by the *Boksburg Advertiser* later in the year (Mthupha, 2017d):

> "These will include 3,677 units built on 27 erven, 291 units built on individual erven… the development will include affordable homes for people in the R20,800 income bracket, 'gap housing' for people in the R15,000 income bracket, social housing for people in the R3,500 to R7,500 income bracket, and subsidised housing for people in the zero to R3,500 income bracket".

In the southern phase of the development *Engineering News* (Van Wyngaardt, 2017) highlighted that,

> "The southern part of the development will provide some 15,781 mixed housing units, as well as five primary schools, two secondary schools, one college, seven community facilities, a private clinic, a retirement village and a full spectrum of commercial and retail developments".

Infrastructure that has been noted to be planned for the development consists of two new schools in Parkdene 7: a primary and secondary. There are also plans on the table for sport and health care facilities (Matsimela, 2015). It is noted that, *"It is also located close to economic opportunities and next to Rondebult Road, which is set to become a future bus rapid transit (BRT) corridor".*

5.5.4. The economics of Leeuwpoort

One aspect of the Leeuwpoort development that has been ignored by the media is the economic impact of such a development not only on Leeuwpoort but also on the Boksburg region as a whole. Only one news article presented details on the economics of the Leeuwpoort development, and even then it was rather a summarised figure of the estimated cost of the development. The *Boksburg Advertiser* published an article on the 3.03.2017 on the '*lowdown of the Leeuwpoort development*' (Mthupha, 2017b) in which in a short paragraph highlighted the finances of the project,

> "The projected cost for the metro is R2.9 billion over the projected seven years construction period. The 19,453 housing opportunities are made up of subsidised, social, FLISP, bonded and commercial housing opportunities. The estimated costs for total bulk/link services are: water and sanitation – R170,574,387, roads and storm water – R2,471,162,018, electricity and street lighting – R446,379,351 and supervision – R44,491,446."

These vary quite substantially from the numbers published by the municipality (see Section 5.3). *Engineering News* (Van Wyngaardt, 2017) noted that the development of the Leeuwpoort project in Boksburg has been valued at R8.9 billion rather than what has been noted as R2.9 billion in the *Boksburg Advertiser*. Concern was also raised at the fact the development's service infrastructure would be costly at around R4 billion which is the municipality's entire capital spend. The Sunward Park ward councillor further noted that by the time the estimated

completion of the entire development, the service infrastructure would only just be about done in the south phase (Mthupha, 2017c).

In regards to prospects the development brings to the region concerning job opportunities and future investment growth, two articles note in the beginning, the first construction phase will bring in 250 job opportunities. In a *Boksburg Advertiser* article it was noted, "The project is expected to also create more job opportunities for the people of Ekurhuleni and across the province", yet not explaining how or when it would be expected (Mthupha, 2018b). Lastly, an article by the *Boksburg Advertiser* once more notes that, *"The metro added that the development would have a direct and indirect positive impact on the local economy during construction and during the operational phase".* Little detail is provided.

However, we can see that with the start of construction in 2017, news articles became less assumptive and more informative and as a result became less opinion-based and more statistical and analytical.

5.6. Conclusion

In conclusion to this chapter, as it stands, the development is well on its way with the majority of service infrastructure being constructed in the northern phase, in Parkdene, *"The main contractor, Civtek Civil Engineering Contractors, and its subcontractors have already started with the construction of roads, streets, sewer system, stormwater system and parks and the removal of unwanted vegetation"*. In Reiger Park, *"Construction crews from the main contractor, Gauflora, and its subcontractors are busy with civil works. This includes construction of roads, streets, sewerage system, stormwater system, parks and the removal of unwanted vegetation"* (Mthupha, 2018a). In this chapter I have examined where housing projects have been encompassed throughout regional SDFs in order to understand how policy is capturing the magnitude of proposed project plans. I have then gone on to look at more project focused documents based on the Leeuwpoort development in order to understand what the project is trying to achieve. I have

also expressed the views and opinions of interviewees to try and understand if what they have planned for is that which policy in previous sections has highlighted too. Lastly, I looked at how media has portrayed the development's early history, and how different sources of data have been curated through these media outlets.

I now move onto the final chapter, the discussion to assess the findings vis-a-vis the literature in order to understand the problem statement noted in the beginning of the thesis, and the answers to my research questions.

6. DISCUSSION

6.1. Introduction

This chapter will analyse the results which I discovered through my interviews, document, and media analysing, and what they mean for the overall significance of my research. I will go about this by laying out the main findings identified throughout my fieldwork process- both expected and unexpected. These include contested meanings of Leeuwpoort; the understanding of what Leeuwpoort's purpose is; relationships between different spheres of government; expectations from the development by different stakeholders; and the private-public investment influence. I then refer to my findings regarding what it means for the literature I have used in my second chapter and policy frameworks in Chapter three. I then demonstrate where the relationship between the two sets of information draws a consensus and where they diverge.

6.2. Main Findings

The main findings noted in this section are a compilation of the perceptions and themes noted by documents and interviews. Where necessary, I note the similarities and contrast between the different sets of information to understand the larger meaning of the topic. The main findings include: the meaning of Leeuwpoort; what Leeuwpoort's purpose is; concerns over environmental and health risks; intrastate coordination; the expectations of different stakeholders of the development; PPP's involvement and the wider economic 'fit' of Leeuwpoort within the city's plans.

6.2.1. Contested meaning of Leeuwpoort

From the start, the labelling of the Leeuwpoort development has been one aspect that has interested me as well as confused me. Even until this stage of my research, labelling the Leeuwpoort development is not straightfoward. There are several reasons for this multi-definitional titling of Leeuwpoort from its

beginning, particularly that of political influence, and/or a lack of intra-state collaboration.

Understandably, the media outlets portray the development according to what is being reported to them by those they speak to, whether it is the mayor; MEC of Human Settlements; planners; or even ward councillors. In the different media outlets I came across several titles for Leeuwpoort ranged from: "Leeupoort mega-development" (Matsimela, 2016); "Leeuwpoort housing development" (*Boksburg Advertiser*, (Mthupha, 2017a); "Mega housing project" (Naidoo, 2017); and "Mega Leeuwpoort housing development" (*Boksburg Advertiser*, 2017). Whatever the case, what has been more of an unexpected finding within the media source is the matter of different labels for the same development by the same media outlet (as seen in the above examples by the *Boksburg Advertiser*). Furthermore, labels provided for by different interviewee groups varied as well even between different urban and spatial planners from Kempton Park and Boksburg.

In chapter five, section .4.1., I noted in an interview with a spatial planner from Kempton Park's City Planning department, that at that very moment there was discussion between City planning departments in the region as to what should be considered mega and/or catalytic. They believe the development is not catalytic in any sense but rather just a "*mega housing project*", whereas the project manager believes it is catalytic ("*Leeuwpoort is a mega catalytic project")* due to the various housing typologies. This makes sense based on the premise that something catalytic tends to ignite a complete or total positive knock-on effect of growth and development. The Boksburg planners believe the development could be both an "*integrated mega housing development*" and "*mega/mixed-use development*". Although this is noted, there is indecision between the group of Boksburg planners as they agreed, and objected to the idea of it being catalytic and mixed-use or just housing. The ward councillors I interviewed also agreed on the fact that the development is mega in its approach, but not necessarily just about the housing. It is a megaproject in their view, minus the fact of it being an integrated development as the Boksburg planners feel it is.

As for the political motive behind the development's label, the use of words such as 'catalytic' and 'mega' make the development stand out once it is read or heard in such a light. As pointed out by interviewees as well as in the policy framework section (chapter three), housing is a mandate under the control of national and provincial government and as a result politicians of the ruling party need to promote these developments to their citizens to get their backing. Different regional planners noted that if given control in regards to the labelling of the development (rather than how politicians have labelled it), it would be simply considered as a residential infill (north phase), and a township (south phase) rather than these extravagant titles that can be misleading or hold false connotations. Understandably though, the use of official town planning words such as 'residential infill township' are not market attractive phrases, nor do they bring a certain appeal to private-public investment. The use of ancillary wording like 'mega' and 'catalytic', however spark that kind of interest trying to be attracted by the state to such development projects. With the national elections coming up in 2019, the use of such 'promising' branding could be politically influential in gaining the attention and persuasion for public votes.

Further to add, this notion of megaprojects and mega-developments is also a strategic move by the city of Ekurhuleni in an attempt to rebrand developments in the city, through its planned objective of creating an aerotropolis city (see 3.7; and 5.2.1). Furthermore, rebranding attempts by the city to focus project labels as catalytic mega projects shows the intent by the city to gain the attention and buy-in of government departments as well as investors. Not only could this political influence of labelling be used for voting power, but also to spur on public and state department investments to increase the impact of the developments. Furthermore, policies noted in previous chapters (see Ch. 3 and Ch. 5.2) at municipal, provincial and national level tend to influence and push a larger scale agenda on projects which are focused at the local level. The influence of such policies is well established and can be seen in how the province of Gauteng adapts policies to suit their development plans. This can also be seen within Ekurhuleni, through the adaption of housing policies to fit into the municipality's plans in

creating the aerotropolis. It goes without saying, the more investment the more likely the development success- if plans are followed correctly.

In conclusion to this section, while housing is the main contributing factor to this development, it is not entirely encompassed by housing and brings a multitude of social and service infrastructures to the area that is already needed and as a result it would be fitting to label Leeuwpoort a 'mixed-use housing megaproject'. Looking back to chapter 2.4 and 2.5, about the conceptualisation of megaprojects, the Leeuwpoort project can be considered internationally as a megaproject in that it is "a larger scheme with complex contents" (mixed residential uses, service industries, shared facilities, new transport facilities, etc.) (Orueta & Fainstein, 2009). There are also substantial similarities with local iterations, such as that of Cornubia described by Sutherland, et.al. (2015) and it meets their criteria of a megaproject in terms of its complexity; its extensive duration; its public-private partnerships and the scale of land-use transformations.

6.2.2. Infrastructure Development Expectations

The sheer size and immensity of what the Leeuwpoort development plans to bring to the area of Boksburg and Ekurhuleni as a whole has brought with it certain expectations. Across my data, there are several expectations that have been viewed in the same light and some not so alike. From the outset, the Leeuwpoort development contributes significantly towards the formalisation of housing and eradication of informal settlements. Both the documents reviewed and interviewee groups commend the development for the large stride taken in housing units the development makes provision for, and what it means for informal settlement eradication in the municipality. Furthermore, expected and needed revitalisation and upgrade in bulk service infrastructure in the area that comes with such a large development, is one that is further appreciated and agreed upon as a benefit for everyone. However, more specific aspects of the development seem to be torn down the middle by different groups as what is expected from the development.

As noted in several media sources and documents in Chapter five, it has been stated that the development would finish construction within the next five to seven years- to keep in line with the MEC's 100,000 housing mandate for 2020. The influence of the political power used by the MEC of Human Settlements in 2015, and with the 2019 national elections around the corner, it is clear to see why planners and ward councillors hold very different development completion expectations. The latter groups expect the development of Leeuwpoort to only be completed within the next 20 to 25 years, whereas even the project manager holds the view of completion being in the next seven to 15 years with construction of housing units starting either December 2018 or January 2019, which has not been the case.

As for the social and economic infrastructure planned in Leeuwpoort, certain departments expect certain infrastructure to be constructed before they commit, which on its own is creating concerns. Certain departments do not want to commit to allocations as they either do not want to commit to them or cannot afford to, yet development regulations noted in the policy framework in chapter three (3.7 & 3.8) state that certain infrastructure is required and necessary per total population in an area, which in Boksburg as noted is already required. Residents and ward councillors in the area impacted on by the development, from those I have spoken to, expect social infrastructure like medical facilities, schools and police stations to be constructed first because they are needed in the area currently. However, the city planners, urban planners and project manager all point out that the houses in this development are the priority for construction.

Other infrastructure, such as business sites; open spaces; schools; medical facilities, police and fire stations, etc., all vary from document to document in chapter five, section two, of which not all meet the existing requirement in Boksburg currently, nor the proposed requirements for Leeuwpoort as well. There is a lot left to ponder as to what exactly will be developed in Leeuwpoort after the housing target is achieved. With that said however, the proposed main benefits of the development which can be expected across the views of all the different stakeholders include: bulk service infrastructure upgrades for the existing area;

economic activity and employment opportunity during and after the construction period in the area- future employment potential regardless of as what employment exactly; and provision for thousands of formal housing, and the eradication of informal living in the region. The latter sits uneasily with the reality that informal settlements are a core part of the urban fabric (Huchzermeyer, 2009), and the call for upgrading, rather than eradicating them. There is also uncertainty in the expectations of Leeuwpoort due to the lack of coordination, cooperation, and collaboration between departments and stakeholders involved.

6.2.3. Concerns over Future Health Risks

There is no questioning the land being put aside for the development is considered environmentally unfriendly, especially in the north phase. Considering the amount of undermining and slime dumps located in the north phase, the EIAs noted in the previous chapter (5.3.4 and 5.3.5) state the poor condition of the acquired land. However the case, the land-use proposal for the development has been considered the most effective and environmentally justified. However, there is no significant or concrete proof provided for in the EIAs or by the interviewees that health risks in the future would not be a matter of concern.

Several plans have been considered cleaning up the land. The removal process of seeped slime in the land's soil is one plan; but there are concerns that not enough soil is being removed according to regulations. The fact that concrete slabs will be laid over the land does not justify approval considering irregular farming, gardening and further seeping of radon could occur during rainy periods, resulting in nearby residents coming into contact with the radon- affecting their skin and lungs.

Furthermore, interviewees from the Boksburg planning team noted they were still awaiting actual approval letters for clearance for soil removal. Further to add, the document relating to the Leeuwpoort catalytic fact sheet in chapter 5.3.1 recommended development is to not occur on this site due to environmental concerns and waste. This is still one of the greatest threats to the potential this

development has in the area, especially in the north phase, and yet there has been little research done on it. This is certainly a topic of interest for future research.

6.2.4. Intrastate Dilemma

The claim by the MEC of Human Settlements and his department through the megaprojects document (GDHS, 2015), that the developments would be inter- and intra-governmentally integrated through its planning and implementation, made for promising intentions. In understanding this and researching through documents related to the Leeuwpoort development, it was clear that several different levels of government departments were involved in the impact assessment stage and planning stage of the development.

The EIAs by Bokamoso identified numerous email conversations between different provincial and municipal departments like GDED; Environmental Resource Management; City Planning; and GDARD to name a few. All these email conversations were based on how concerns and objections through tribunals and departments were going to be addressed and solved during the development. In understanding this and speaking to the project manager of Leeuwpoort in the early stages of my research, a similar type of view was given that all departments were made aware of the project and asked for objections and suggestions, and that nothing was done by the DHS alone. The documents and project manager, however, hold different views and experiences to some of the ward councillors and local planners in charge of laying out the plans for Leeuwpoort.

The local planners spoke of a lack of cooperation; coordination; and collaboration between departments. Firstly, the planners stated that the development was not even theirs to plan; it was just put on their shoulders by Province without the assisted budget or workforce to do so as currently they do not have the capacity or capability. Secondly, they received inadequate responses to plans and layouts that were sent to departments. The planners noted they spent too much time following up with departments with regards to what they wanted to see in the development, and when they did, they received requests that went against their department and

Redbook[4] guidelines. As a result, as stated in chapter five, section four, the planners had no option but to reserve space in the development for those departments that were not willing to finalise a decision or just did not come back with responses.

Thirdly, and most confusing of the discoveries was the provincial standoff between a number of key departments highlighted by the Boksburg planners and also noted by the city planner from Kempton Park. Departments such as Education and Health noted that they do not want to commit to building hospitals and schools in the area until they are guaranteed there is a housing population to ensure the developments of said infrastructure. However, the DHS wants the opposite, in that they want schools and medical facilities constructed to ensure the population demand of the development, at which time they would then confirm their allocated spaces in the development. With the demand for such facilities needed in the Boksburg area already, it is unsure why more houses need to be built to ensure the demand is necessary for other departments to invest in the planned infrastructure, when the population intended for the development already lives in the area.

Lastly, the communication process for space allocation in the development layout has been another concern around the cooperation and collaboration between departments, especially at the provincial level. The planners receive emails from department officials agreeing to certain allocations- like City Parks who would receive 100 km^2 of open space or the Health department who have been allocated another clinic, and once allocated they received email responses about the department not having any objections to the development. Yet when final layouts are circulated, departments like City Parks and Health comment back notifying that they cannot agree to the plans as they contradict department policies or Redbook guidelines or they do not have the budget or equipment to accommodate the space provisioned for. The majority of the time, the planners notified me that they had to go around telling departments what they should and should not do,

[4] The Redbook is a quality assessment guideline designed by the Council for Scientific and Industrial Research (CSIR) with the purpose to provide practical guidance on quality development.

and they will just reserve space for them if they want it, because it would take years to finalise the layout plans at the rate things were going.

6.2.5. The role of the State, and the Private Sector

In the past it was well recorded through examples used in the literature review in chapter two that the government and the national DHS played a key role in the planning and implementation of housing projects across the country. Some of the more significant results of this were a greater amount of money was being used by the state on projects than expected for; and that projects were not being planned or completed due to poor management of roles and responsibilities and a lack of knowledge in the task. As noted in the Megaproject document in chapter three, there is now a focus away from this to promote PPPs, in which the state withdraws itself from unnecessary responsibilities and empowers public-private sector management and operations. The Leeuwpoort development highlights this shift, with the state taking on the role of project owner and implementer- as noted by the project manager, and assigning private businesses management the role of developers. As my interviewees have noted, the local council of Boksburg has been mandated as the development planners and assisted by Urban Dynamics; and the LDC (PTY) LTD and BigenGroup (incl. BigenAfrica) have been mandated as the project developers and engineering consultants respectively.

What this enables is the state and the national DHS to focus their responsibilities more primarily on the housing aspect of the development and refocus a larger amount of financing towards the subsidy scheme unlike in the past- which has also been noted to be more economically inclusive. What this division of labour will mean for the efficiency of project implementation remains to be seen: the Leeuwpoort project is too early in its development stage but would be interesting for future research.

6.2.6. There is more to Leeuwpoort than just a Megaproject

The Leeuwpoort development seems to play a greater role than the one it is being given in the area of Boksburg, as a mega integrated/mixed-use (housing) development. Having analysed the site-specific documents and the region's development plans, the Leeuwpoort development holds two roles- both at the project-specific level and municipal level. Going through the various RSDFs for region A, the Leeuwpoort development looks to play the role of one of many spanners in a cog that intends to create the aerotropolis in Ekurhuleni. With the aerotropolis being defined as an urban form based around the central location of an airport and expands out to around a 30 kilometre radius (EMM, 2015: III), it consists of an airport city and various corridors and clusters; different residential developments; and aviator-linked businesses. The Leeuwpoort development plays its role well in this sense then in contributing towards the provision of thousands of housing units in the region through different residential development types; not only by means of various housing typologies and different finance schemes, but also seeing as the north phase is an urban infill and the south phase is a new township establishment.

Throughout my interviews, there had been no reference made to the aerotropolis and the municipality's intentions of Leeuwpoort's contribution neither to it nor in the media analysis. However, in all RSDFs for region A (location of Aerotropolis and Leeuwpoort) there was consistent reference to the aerotropolis and what needed to be developed, including types of residential, businesses, transport systems and so on. With aspects such as the economic and transport provision within Leeuwpoort unclear, in interviews with the planners, they pointed out that this (economics) is not the main purpose of the development.

Although noted, they also clearly stated that there were several other plans intended for development that focused on these other specific aspects (economics and transport) that lack in Leeuwpoort. Backtracking through the RSDFs of region A in section 5.2, the points noted in the interviews about lack of economic and transport provision correlate to other plans in the region and not necessarily what is intended for in Leeuwpoort. Furthermore, what these other planned

developments in the region lack in residential and social services is provided for through Leeuwpoort. Although Leeuwpoort does not hold a strong claim towards aspects such as economic significance and employment opportunities, it seems to play a bigger role in contributing to the plans of the municipality of Ekurhuleni rather than just region A and F.

Regarded as a megaproject, it is clear that the development has its objectives to achieve as noted in chapter 3's policy framework. Looking at the Leeuwpoort development as an individual singular project there are weaknesses in its economic plans. However, once the development is put in context with the city's bigger development plans of creating an aerotropolis city, it does significantly better in its economic 'fit'.

6.3. Findings in Conversation with the Literature

In this section, I will speak to how the findings from my research relate to the literature in chapter 2 on the state of housing development policy and practices, not only in the practices of the new approach of megaprojects but housing developments in general since its conception. The purpose of this section is to understand where my research findings correlate and/or contrast to past research on the national housing policy and megaprojects.

6.3.1. Megaproject/Mega Human Settlement Research

One of the main interlocutors for my research is the small but growing literature related to megaprojects in South Africa. One of the focal points of knowledge about the topic is the special issue of the journal *Transformation* (2017), which is an accumulation of academic research by Richard Ballard; Margot Rubin; Sarah Charlton; Alison Todes; and Philip Harrison. These scholars investigate where and how this new policy of mega housing projects in South Africa is being planned and implemented- something I aspire to help with through this case study of Leeuwpoort. As we are in the early stages of the policy's implementation, there

is little case study evidence of the new practice as of yet, other than Charlton's (2017) research on Lufhereng, Johannesburg. The lack of case study evidence is a further reason for my research topic choice in Leeuwpoort.

One interesting point made about the megaproject labels brought up by Ballard and Rubin (2017) is that developments are being approached by the municipality in the same way they intended to originally (urban infill and densification). The only difference is, "they have re-labelled and re-packaged their projects in line with national and provincial rhetoric" of megaprojects (Ballard & Rubin, 2017: 23). This can be seen quite clearly in Leeuwpoort, which ostensibly began a decade before the megaprojects announcement with land assembly and the intention of the north phase set out being an infill and the south phase a new secondary node. This also accommodates the municipality's development plans of an aerotropolis in the MSDF and RSDF plans for region A, not just alignment with MHS.

Ballard (2017) notes megaproject approaches hold five assumptions: large scale developments are economically and efficient ways to address the housing backlog; state-led city-building developments are catalytic; they bring development to areas otherwise unthought-of; they combat the previously bogged down relationship between inter and intrastate departments of government; and the designs for these developments ensure integration and combat previous urban fragmentations.

In speaking back to assumption one and five, the Leeuwpoort development goes far in helping the backlog and readdressing the urban fabric and fragmentation of Boksburg - if implementation goes according to plan. One view that must be highlighted which is shared between Ballard (2017) and a ward councillor from Sunward Park, is that these developments are large and take many years to develop as well as plan; Leeuwpoort has been in the pipeline since as early as 1997. If plans become revised and cut down it could, by the time it is complete, have less of an effect than thought due to its construction duration. Looking at assumption two concerning state-led city-building developments being catalytic, it is without debate in the opinions of all my interviewees (except the project

manager) that this megaproject is not catalytic. The centre-piece of the developments is its housing targets, which in itself relies on service infrastructure to be implemented successfully. Catalytic developments by nature create growth within itself and revitalise economics of growth in surrounding areas. The Leeuwpoort development is a project intended to address the housing backlog first and foremost whilst including mixed-use buildings to compliment it. In terms of assumption three, considering the condition and quantity of open space in Ekurhuleni, the land-use planned for in the Leeuwpoort development is the best land-use in order to maximise space in relation to the EIA and marketing assessment However, there are environmental and health risks that need to be further explored. Lastly, assumption four speaks to intrastate relationship building. The Leeuwpoort experience resonates with Ballard (2017: iv): "rather than uniting government, megaprojects might provide entirely new ways for different government spheres and departments to disagree with one another".

6.3.2. Expectations vs Reality (five years of housing promises)

One constant theme that has been noticed between my results, and the literature I have encountered is this 'five-year mandate/goal in developing X amount of housing units' when a new national housing practice is unveiled. The truth is that none of these five-year mandates or goals over the past 24 years has been achieved. When the RDP was introduced in 1994, it was noted by Bond & Tait (1997) that there was a five-year plan to develop one million housing units for the poorest population in the country. As it turned out, by 1999 there had only been a recorded amount of just over 700,000 units built (DHS, 2014) (Table 1), with an unrecorded total of these being fully serviced.

With the failure in the RDP five-year goal, once the BNG policy was implemented in 2004, a new five-year goal was mandated. This time, Charlton & Kihato (2006) state the goal was to create integrated and sustainable developments within the next five years up until 2009, and furthermore within the next ten years eradicate informal settlements in Gauteng. However, according to Lemanski (2009), Haferburg (2013), and Charlton (2017), this five-year plan was

not fully fulfilled quantitatively, nor in terms of its integration nor sustainability- not that certain achievements were not met, but rather the necessary extent of what they achieved. Moreover, in Ekurhuleni the ten-year plan for informal settlement eradication was unsuccessful; or else five years later on from the 2004-2014 target period, the Leeuwpoort development would not be working to assist in the informal settlement eradication objective of the province and municipality of Ekurhuleni, as it is noted in doing so by the Premier for Gauteng back in his 2014 mandate speech. This also reflects a fundamental misunderstanding of informal settlements: for as long as it has been known in the field of planning and development, informality and informal settlements/slums have existed. These systems of informal living are vastly complex and unique, and need to be upgraded rather (Huchzermeyer, 2009).

With this said, an additional housing practice under BNG called 'Megaprojects' was implemented in 2014 by the National Department of Human Settlements (Harrison & Todes, 2017), in which it is noted that 1.5 million housing units will be developed over the next five years, another five-year housing project promise (Ballard & Rubin, 2017). My findings through interviews with ward councillors note that in 2015, the Gauteng Premier and his Department of Human Settlements made a declaration that 100,000 housing units would be developed in Ekurhuleni as part of the megaproject approach in which it would make strides into the previous [2004-2014] mandate. The reality of this situation is Leeuwpoort is the first and largest of the megaprojects in the municipality, and with it only being in its first phase of bulk service infrastructure by last quarter of 2018/first quarter of 2019, no houses have yet been erected. Therefore, not only did the Premier's declaration to develop 100,000 housing units by 2019/20 fail, but furthermore, so has the 1.5 million housing unit mandate outlined by the Department of Human Settlements.

The consistent pattern of political declaration/promise/dedication failure to meet reality when considering the development of human settlements that are not only integrated but also sustainable is one of the concerns raised throughout my research. Ballard (2017: ii) covers this difference between intentions and

outcomes/plans by stating that, "But good outcomes do not necessarily follow from good intentions". During my interview process, this was the same notion given by not only the ward councillors but also the planners, 'that all these nice things could be planned for but we have seen in the past in Soweto, Cosmo City and Westlake that plans are not always kept to'. Furthermore, it is not necessarily down to just poor implementation, but also faults in policy itself, where those in power who hold strong aspirations and visions for area development do not consider the poor or feel they do not fit into the plans- resulting in the poor taking up the role of planner and developer for themselves through informal settlements (Ballard, 2017: iv).

As noted in the RDP mandate by the likes of Blumenfeld (1997), Bond & Tait (1997) and Tomlinson (1998), not even that simple development of one million units was completed in five years due to the lack of its socio-economic and spatial planning. The 1.5 million and 100,000 housing unit mandate is planned to be done in a sustainable and integrated way- which differs from the previous mandate, including multiple existing social and economic aspects. If development in the past was planned in a more qualitative manner (sustainable and integrated), as is planned for now instead of quantitatively (Peripheral RDP islands), the quantitative measure needed today would not be as vast as is required. The fact of the matter is that we are faced with this situation, and the mandates have not changed in size or quality expectations. Ballard and Rubin (2017: 4) argue the policies put in place today are a result of an accumulated failure over the last two decades where the state finds itself in a situation where it "now feels that it needs to offer ever more decisive solutions to enduring problems of poverty and inequality in order to stay in power".

Departments have to put forward mandates that are manageable and achievable on all levels. Interviewed town and spatial planners note that this is impossible to do in five years when planning and servicing such a large scale development on its own can take up to twice the projected years (10 years). The lessons learned in previous development failures need to be recorded and used when compiling new mandates. If not, we end up in the same situation where citizens and residents are

met with false promises and words, and the housing backlog continues to increase due to failed sustainable and integrated developments. Integrated and sustainable developments need to start in the planning phase, not only between spatial, economic and social aspects; but also between inter and intra-governmental spheres through expectations.

6.3.3. More Inclusive Subsidised Housing Schemes

When the housing subsidy scheme was originally announced in 1994 with the introduction of the RDP (Tomlinson, 1998), the scheme set to support the financing of houses for the very poor. Tomlinson (1998) highlights with the exclusiveness of the housing subsidy scheme only addressing the very poor, economic stress and pressure was being put on the state due to little to no return being made on projects. As a result, the state started pulling out of projects with the lack of money being made out of it. With the scheme focused on the poorest of the poor, the state would be subsidising all the units and there would be no return on the development due to cost to construction.

With the introduction of BNG down the line, it was still identified that the most marginalised of people both socially and economically were still affected the most as a result of the change in subsidy levels (Charlton & Kihato, 2006). Going back to the concerns raised by the above academics, in 2009 the National Housing Code was revised under Breaking New Ground's Housing Subsidy Scheme to reassess this matter to create a new financing arrangement (DHS, 2009). The new subsidy scheme is more inclusive and has introduced several different levels of qualification, and several different financing plans for people who earn between several different income brackets. The Leeuwpoort development has adhered to this financial scheme according to the plans that have been laid out, which identify housing units related to several different levels of financing- from fully to partially state subsidised; to individual mortgages; and other forms of social housing which cater for numerous income groups in between. Through my document analysis in chapter five, DEMACON and Bokamoso have both done assessments on the affordability and accessibility to housing and services in the

Leeuwpoort development, in which the outcome was assessed as Leeuwpoort being a development that is both inclusive and integrated in its approach to housing and service provision.

In chapter three, the NDP states the severe fragmentation and urban fracture caused by past development impacts on the cost of housing, and faced with this major challenge there would be need to refocus the property market to be more economically inclusive to allow for justified compensation for the previously disadvantaged (NPC, 2012). The newly proposed more economically inclusive subsidy scheme addresses this economic fracture, that also in doing so revises the social standards of living in which different levels of financing allows for more households to hold onto more of their money which can be contributed towards payments for access to services like water, electricity and transport- which through the use of the Westlake Village case study by Lemanski (2009) in chapter 2, identified as a major result in the return of informal living. With the location and upgrading, as well as new development of certain service infrastructure, this is more than achievable.

Given its relatively new implementation for megaprojects, future research done on these developments would do value to assess the social impact such a wider economic inclusive subsidy scheme achieves for households.

6.3.4. Megaprojects: Self-sustaining; self-sufficient; self-contained; and self-balanced?

With the Leeuwpoort development being one of the first megaprojects being constructed, and thinking about its location, I refer back to Harrison & Todes' (2017) point that megaprojects aim to promote self-sufficient; self-balanced; self-contained; and self-sustaining human settlements. However, Leeuwpoort is not an easy fit with this, given its integration into the urban fabric and economy of Boksburg and Ekurhuleni, rather than a stand-alone new town.

Ballard and Rubin (2017) state that megaprojects look to be economically self-sufficient and sustainable, since economics had not been a central aspect of human settlement planning before (Harrison & Todes, 2017).

Looking at the Leeuwpoort development, and its apparent lack of project-scale economic planning, it is clear it cannot be self-contained in its own economy or social activities, considering the fact that the north phase is an infill operation and the south phase is part of a major plan to revitalise the connection between the north and south as a secondary node. This notion holds closely with the Masseyian view of space and place, in which nothing is self-contained but rather shares an amalgamated relationship with surrounding places (Massey, 1994). Some interviewees have noted that it could be a positive development for local and small and medium-sized enterprises (SME), however, on the grander scale of things for the economy of Boksburg and Ekurhuleni it could cause a further drain as Boksburg's economy is already struggling. There are simulatenously wider plans for Leeuwpoort in relation to the aerotropolis concept.

Therefore in assessing the economics of the development; it is rather contradictory in itself. On the one hand there is the view which is held by the RSDF of Ekurhuleni and noted by the project manager where there are specific projects planned for specific objectives which will eventually result in the development of the aerotropolis. On the other hand, there is the view of self-containment and self-balance within megaprojects which is contradictory of itself as it is noting Leeuwpoort will focus its economic involvement form outside (the CBD, surrounding light industrial areas, and future planned economic developments in conjunction with the aerotropolis vision).

Concern of Inter-State and Inter-Department Cohesion

As noted in chapter five, the concern about state coordination, cooperation and collaboration is unexpected compared to the promise of greater intra-state understanding and cooperation within megaproject developments. The only such example is from Ballard and Rubin (2017: 8), where the creation of an executive council for minister and members known as MINMEC was mandated to align

provincial and national policy and programme co-ordinations. The concern, however, is that municipal level governance was not included as part of the policy procedure, and Ballard and Rubin (2017: 9) highlight that the first inclusion of municipalities (who are the implementers of these developments) was five months after the policy's launch. This pattern of lack of inclusion and equal communication/participation is a pattern I have noted to be taking place in the Leeuwpoort development.

The plans put forward are impressive, but as noted by several planners and ward councillors; just because it is planned for in the layouts does not mean it will be developed, a notion Charlton (2017) holds as well. The accessibility of the infrastructure and services planned for as highlighted by both DEMACON and Bokamoso is well established and thought through, but the concern is capacity and coordination for implementation. Ballard (2017: iv) raises this point on the residential side of developments, as generally during the lengthy processes and periods the total unit amounts get revised during future stages to complete development on time/or sooner. As understood from the Boksburg planners, the unit amounts in the north phase had to be revised and increased and the south phase had been revised and decreased due to space restrictions, but the concern pointed out by ward councillors is 'it is all fine and well making provisions for this and that but it does not necessarily ensure that they will be developed'. Being raised by planners and ward councillors in Leeuwpoort is inter-departmental lack of communication and commitment to the bigger picture. The majority of department-related infrastructure, including police and fire stations; public medical facilities and schools have all been reserved for but not confirmed in layouts. These dynamics related to how Ballard (2017:i) describes the state as coming across as a "satisficing developer" in the sense that in Leeuwpoort, the housing aspect is being well planned in order to successfully be developed and that 'if' anything else is provided for it would be an added bonus- but you have been given your sustainably integrated housing nonetheless.

6.3.5. Urban Integration or Urban Incubation

How Leeuwpoort contributes to urban integration will remain to be investigated. For now, it is important to note the inequalities *within* the project. For example, the vast difference between space availability in the north phase compared to the south phase. The socio-economic comparison between the communities in the north phase and the south phase are noticeably different- with the south phase surrounded by private schools and medical facilities and several middle, to higher-income residential estates, whilst the north phase is a previously identified apartheid buffer zone for lower-income residents. As a result, the Leeuwpoort development identifies itself between spaces that are already unequally and unevenly divided. What is intriguing here through the literature based on "urban incubators" by Charlton (2017: 102) is that from what is assessed in the plans for Leeuwpoort, it could be viewed as an urban incubator itself. This notion refers to the development of improved and important services and structures needed for survival, however, their development is recognised in a situation that is already one of existing uneven and unequal development, making their reliance even more important to avoid the continuous spread of uneven development.

What is planned for in comparison between the two phases has been done to try and fit in with the appearance of the existing communities, to integrate the development amongst the existing area. With that said, the two phases in themselves note aspects of unevenness through the social facilities and different residential units planned for. So whilst the development does a significant job in providing for formal housing to equalise the standard of living in the area, and provide access to material conditions like water and electricity; it itself still contributes to this idea of fractured urbanism. This was a point noted by some of the planners as they analysed the housing layout and considering rather mixed and not integrated between the different phases of Leeuwpoort. The end result is still a development that contributes to the existing urban fracture of unequal and uneven development; even though the development does a good job in knitting the two areas of Boksburg together, it is done so in a way that notices and accepts these aspects.

6.4. Conclusion

This chapter has identified the main findings that emerged during my fieldwork. These included: inter and intra-state cooperation and coordination; lack of understanding between stakeholder expectations of the development; contested understandings and meanings of the Leeuwpoort development; uncertain health risks, and the influence of regional development plans. The findings have also been assessed in relation to research done on housing developments in South Africa to identify where the patterns are, in similarity and contrast. Amongst these similarities are: lack of intra-state cohesion and similar patterns of miscommunication and coordination; the notion of false political promises which contradict what is expected and what is realised in relation to the development of housing projects. Contrasts appear in relation to Leeuwpoort's infill – rather than peripheral – nature, and its unclear work in 'knitting' the apartheid city together.

7. CONCLUSION

7.1. Key developmental policies and how and where the Leeuwpoort Development addresses it

In speaking to my research sub-question one and two more specifically, *Demacon* analysed the Leeuwpoort development in relation to different levels of government policy. Through this policy analysis, we can understand where exactly the Leeuwpoort development fits in with regards to the category of mega human settlements/megaprojects; and secondly, we can understand what processes based on social and economic development planning for mega human settlements/Megaprojects in Ekurhuleni and Leeuwpoort more particularly have been considered.

The National Development Plan (NDP)

Through the assessment done by D*emacon,* they find the project to be aligned with the NDP (as outlined in Section 3.1) in the following manner. First, there is integration between employment areas and economic activity. Furthermore, and more importantly it ensures basic living standards are adhered to with regards to water, sanitation, electricity, housing, and employment. However, there is an environmental concern in relation to this development regarding not only to the type of land being used for the development, especially in the north (undermined land and mine dump areas), but also there has been no explicit involvement with regards to participating in a green economy. The potential for keeping intact with educational aspirations by the NPD, proposal has been put forward that keep in align with this.

Breaking New Grounds (BNG)

Demacon also see alignment between BNG (as outlined in section 3.2) and Leeuwpoort as the project does not focus on only providing basic shelter, it looks at the move to a sustainable development with other social and economic factors included. The project is mainly focused on moving informal settlement residents into more formal housing so informal settlements in the region can be eradicated.

Delivery services are included in the 1st phase of the development as being the implementation of bulk infrastructure and the project not only increase housing delivery but also promote social cohesion through the various housing typologies.

The Gauteng Spatial Development Framework 2030 (GSDF)

The Leeuwpoort development is adhering to the GSDF 2030's request for infrastructure led investment through its development, as the first phase is focused on bulk infrastructure provision. Furthermore, the entire north section of Leeuwpoort is considered an urban infill development, and the use of underdeveloped land through the entire development shows signs of promoting densification.

The Ekurhuleni Growth and Development Strategy (GDS)

The mission of the Ekurhuleni GDS is as follows: "Ekurhuleni provides sustainable and people-centred developmental services that are affordable, appropriate and of high quality.". Furthermore, a key focus is to demarcate the urban edge to prevent urban sprawls. *Demacon* argues that Leeuwpoort development works to redirect outwards growth to inwards growth through the urban infill and densification patterns, which further strengthens the identification of the urban edge. The redevelopment of roads, and other services being contributed to the townships which are receiving the bulk of the budget of the development shows interest in re-urbanisation and re-generate.

The Ekurhuleni Metropolitan Spatial Development Framework (MSDF)

The spatial objectives set out by the MSDF **(see Section 3.7)** have been adhered to in the development through providing adequate spacing for streets; promoting densification; having a variety of different land uses; development of high density; and promoting affordable residential options which provides opportunity for previously disadvantaged communities to be integrated.

Regional Spatial Development Framework

This framework notes the need for a strong core relating to the proposed aerotropolis ORITIA; and developing anchor nodes; compact urban development; development of a major north-south linkage-corridor; and the development of an east-west linkage/corridor. The Leeuwpoort development is located, according to *Demacon's* analysis, in an ideal position for mixed-use development typologies and high-density residential based on its relation to the N17 (major corridor). In addition to this, the Leeuwpoort development is located in the Tri-Cities Economic Development Region of the Aerotropolis Economic Development Region which means it should have considerable focus on retail; education and skills training; Aerospace manufacturing; and tourism and culture.

In understanding this, the development has obtained a multi-scale integration with policy plans and development methods both noted above and during the interview analysis in section 5. The sheer size of this development, and what is encompassed in its planned layouts does justice to its labelling as a mega human settlement; as not only is housing a contributing factor, but numerous economic and social activities much needed in the region. The potential for considerable contribution to the municipality's achievement of an aerotropolis state is significant, as well as the total housing and economic investment the development potentially has on the greater region of Boksburg, and the city of Ekurhuleni.

With this said, there are grey areas around the process of determining what social and economic plans are considered in such a large scale/mega-development. As noted especially in the interview analysis, many things can be planned for and included in the layouts, however, there needs to be a significant amount of coordination between departments at different levels with an inter- and intra-state understanding of what is expected by and for them through such developments.

7.2. Overview of Thesis

This research has aimed to contribute to the understanding and evaluation of the policies and practices taken into consideration with regards to shifts in South Africa's housing policy approach. There has been little academic research done on the current state of housing under the newly implemented housing 'megaprojects' approach; and therefore little evaluation in comparison to previous housing policies. The concern raised by nascent research about the new housing approach include its potential tendencies to reinforce the problems of old housing approaches – continued urban fragmentation, economic exclusion, etc. I aimed to delve into this research gap, and work towards a better understanding of where and how the megaproject policy 'lands' in place, how it is understood by stakeholders and how it differs from its policy precedents. With little empirical research yet on the implementation of the new housing practice, the Leeuwpoort development in Boksburg – as the first such megaproject in Ekurhuleni - proposed to hold promising insight as to how the approach will be implemented. It also held particular potential as an infill mega project, rather than peripheral, case.

In this shift to mega housing projects, the state assumes that the only way to combat the increasing housing backlog they are faced with is by using large-scale interventions. With the failed implementation of previous housing developments, the megaprojects within themselves have to include social and economic aspects of living that need to be addressed at the same time to achieve actual integrated and sustainable livelihoods. In doing so, the state understands the need for greater inter and intra-state cooperation; coordination; collaboration; and communication to achieve integrated and sustainable living through such large-scaled projects, which encompass characteristics beyond just housing capacities. Therefore, the role of PPPs has been emphasised in a manner that allows for greater steps to be taken towards integration and sustainability through creating more specialised and capable management of operations in developments. Moreover, in the integrated planning of site-specific developments, developments such as Leeuwpoort are part and parcel of larger development plans not only at a municipal level, but also at a regional level.

Within this shifting policy framework, my research question was to understand how key stakeholders within and working with the state understood Leeuwpoort's relation to the mega human settlements agenda as well as older housing approaches, and what the megaproject's socio-economic plans were in the context of a declining regional economy. As the Leeuwpoort development is just in its planning phase, the research focused on stakeholders involved in these planning processes, rather than the final completed project (e.g. beneficiaries, local businesses, etc.). To this end, my research was conducted through three sites of data collection and analysis: regional and project document analysis; stakeholder interviews with state officials, planners and ward councillors; and local media analysis.

My research demonstrates that the Leeuwpoort development holds its own as a megaproject both as an infill and township establishment, however, it still characterises itself as predominantly a housing development- in this case an integrated mega housing development. The socio-spatial aspects of the project have been well and thoroughly planned out from both social and service infrastructure existing and proposed. The environmental impacts have also been more carefully addressed than public opinion has posited, but some future health questions remain unanswered. There has been less integrated economic planning compared to the social and housing aspects. Furthermore, the integration and sustainability of the development is debateable with regards to the influence of the economic perspective rather than socially. The vast amount of social characteristics and evidence noted throughout chapter five highlight the development possibilities in the success of social integration and sustainable; the opposite could be said about its environmental health effects and economic future.

My research identified challenges not only in the development process, but also in my approach to the research. There is evident ambiguity between intra-department expectations and responsibilities in the development. Some of this is related to confusion about the naming and labelling of the project in the first place – whether 'catalytic', etc. A lot of the proposed plans hang on the balance of the housing implementation aspect of the project, instead of an integrated

commitment from each department, which would allow for a quicker planning of site allocations/provisions in the layouts. For the most part, sites have been left as reserved instead of allocated due to uncertainty. Further to add, the lack of communication between departments and planners is an aspect that has delayed plan approvals several times and left unclear what the completed product will become. From the experience understood here, the phrase ‘satisficing developer’ holds a strong connotation as all the plans for other social and service infrastructure are heavily reliant on the success of the housing implementation.

7.3 Recommendations

This research emphasises the significant need for research that could and needs to be done on the inclusion of state-driven housing developments from an inter- and intra-state perspective. Future research would do well to look into the policy responsibilities that are related to both provincial and national departments with regards to ‘the 3 C’s protocol’ highlighted under the Megaproject’s policy. My research challenges can also inform future researchers in their strategies and timelines for gaining access to the state.

As noted, planners have no authority in what will be constructed but rather can only advise what would be best suited in the development. Assessing the differences would be interesting in how it affects the results in comparison to what policy stipulates. Therefore, the door has also been opened for research to be done on post-construction in the Leeuwpoort development, in assessing the expectations verse realities compared between both the planners and beneficiaries (whose voices are left unheard until this stage).

Lastly, there has been a growing interest throughout my research in understanding the process of acquiring city approval for the removal of environmental waste. There has been a lot left unanswered regarding potential health risks of developing on such land, as well as questions raised concerning the methods used to ensure environmental protection, more specifically in the north phase of Leeuwpoort.

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8.1 MAPS

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9. APPENDICES

9.1. Appendix 1- Clearance certificate

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Vigus-Brown

CLEARANCE CERTIFICATE	PROTOCOL NUMBER: H18/06/39
PROJECT TITLE	The state of housing in Ekurhuleni: Urban infilling vs megaprojects. The Leeuwpoort development, Boksburg
INVESTIGATOR(S)	Mr M Vigus-Brown
SCHOOL/DEPARTMENT	GAES/
DATE CONSIDERED	22 June 2018
DECISION OF THE COMMITTEE	Approved
EXPIRY DATE	23 July 2021

DATE 24 July 2018 CHAIRPERSON (Professor J Knight)

cc: Supervisor : Dr S Butcher

DECLARATION OF INVESTIGATOR(S)

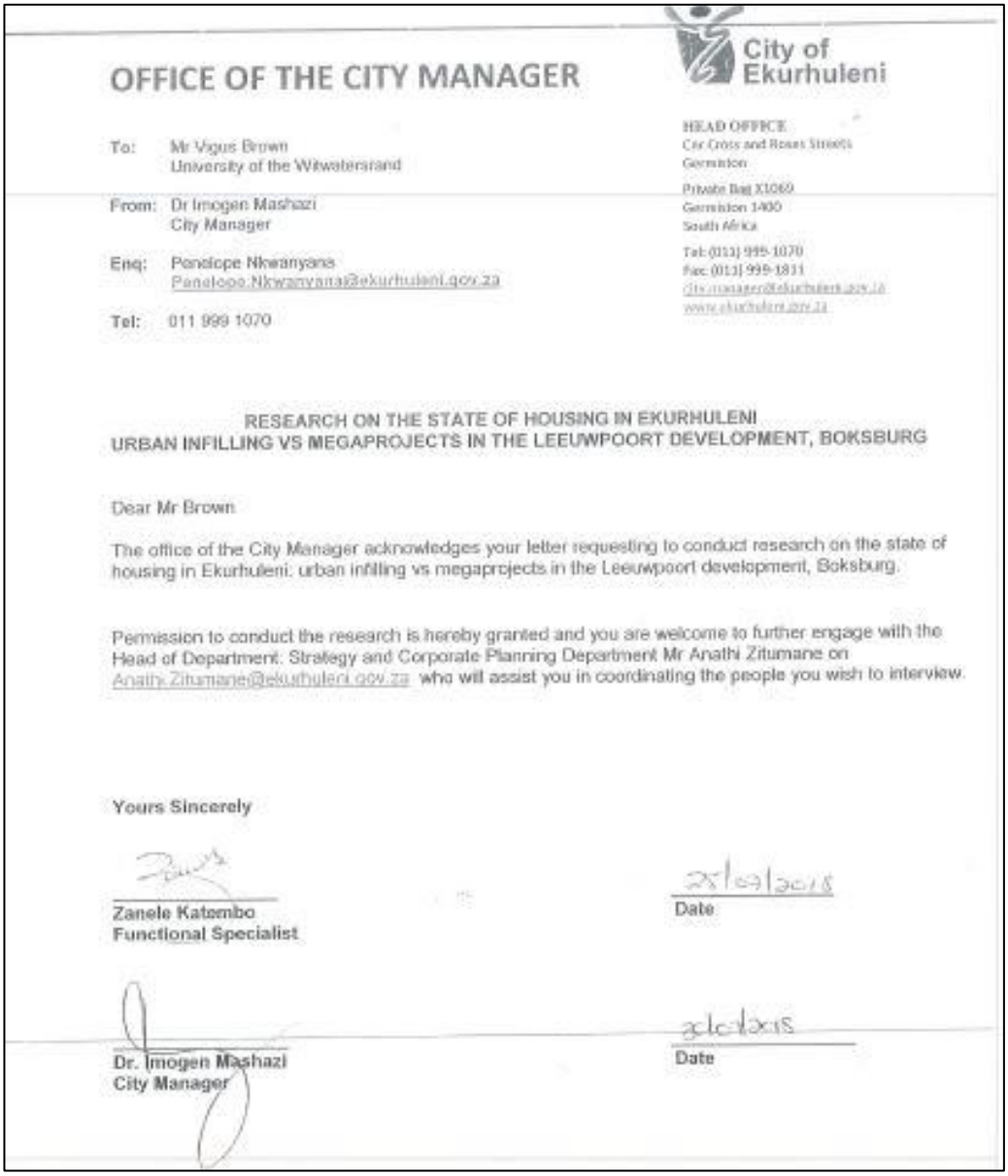
To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University. Unreported changes to the application may invalidate the clearance given by the HREC (Non-Medical)

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**

Signature Date

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

9.2. Appendix 2- Institutional Permission Letter



OFFICE OF THE CITY MANAGER

City of Ekurhuleni

HEAD OFFICE
Cnr Cross and Roses Streets
Germiston
Private Bag X1069
Germiston 1400
South Africa
Tel: (011) 999-1070
Fax: (011) 999-1811
city.manager@ekurhuleni.gov.za
www.ekurhuleni.gov.za

To: Mr Vigus Brown
University of the Witwatersrand

From: Dr Imogen Mashazi
City Manager

Enq: Penelope Nkwanyana
Penelope.Nkwanyana@ekurhuleni.gov.za

Tel: 011 999 1070

RESEARCH ON THE STATE OF HOUSING IN EKURHULENI
URBAN INFILLING VS MEGAPROJECTS IN THE LEEUWPOORT DEVELOPMENT, BOKSBURG

Dear Mr Brown

The office of the City Manager acknowledges your letter requesting to conduct research on the state of housing in Ekurhuleni: urban infilling vs megaprojects in the Leeuwpoort development, Boksburg.

Permission to conduct the research is hereby granted and you are welcome to further engage with the Head of Department: Strategy and Corporate Planning Department Mr Anathi Zitumane on Anathi.Zitumane@ekurhuleni.gov.za who will assist you in coordinating the people you wish to interview.

Yours Sincerely

Zanele Katombo
Functional Specialist

25/09/2018
Date

Dr. Imogen Mashazi
City Manager

26/9/2018
Date

9.3. Appendix 3- Official and Planner Participation Information Sheet

School of Geography, Archaeology and Environmental Studies

Private Bag 3, Wits 2050, South Africa, Enquiries: **GEOGRAPHY:** TEL: +27 11 717-6503 • FAX: +27 086 651 6366
ARCHAEOLOGY: TEL: +27 11 717-6045 • FAX: +27 086 651 6366
http://www.wits.ac.za/geography/



Greetings potential participant,

My name is Martyn Vigus-Brown and I am a postgraduate Masters student in the Department of Geography at the University of Witwatersrand (Wits University). For my masters research I am undertaking a research project on, "The State of Housing in Ekurhuleni: Urban Infilling Vs Megaprojects. The Leeuwpoort Development, Boksburg". The aim of my research is to understand the social and economic planning taken into consideration when developing policy and practice of Mega Human Settlements/Megaprojects. It also seeks to understand the social and economic expectations of different stakeholders (state officials, planners and beneficiaries) involved and included in the development of the Leeuwpoort development.

It is for this reason I am inviting you to participate as you are either a state official or planner involved with housing in the Ekurhuleni area and Gauteng city-region. With your permission, I would like to invite you to take part in an interview with myself at a place that suites your comfortability. It will take around 45 minutes of your time and will actively involve questions asked about your own personal experiences and opinions. I would also like to with your permission voice record the interview.

There will no direct benefits in your participation in this research study. With this in mind, the extent of your contribution as a participant in this study is fully up to you and your decision on this will not result in any disadvantages or penalties towards you. You have the power to decide which question you do not feel comfortable in answering and you may stop the interview at any time you wish to. The interview will be kept confidential, i.e. will only be used for the purpose of my research. While I will not use your name unless permitted, your institutional positioning will be named; hence your identity may not be anonymous.
Any and all information you provide me with will be held securely in a password protected folder within my privately owned password protected laptop. None of the information you give me will be used by anyone else. If you do feel any feelings of insecurity or distress during the interview period, we will stop the interview immediately and continue with it at a time you feel safer and more appropriate for you, if this is your wish.

If you have any questions after our interview, feel free to contact me or my supervisor at any time. This study will be written up as my Master's thesis report (which will be accessible to anyone who has access to the internet and the Wits website) and possibly other academic outputs with approval provided by the Wits ethics committee. If you wish

to receive a summary of this report, I will be more than happy to send it to you once it has been completed and handed in to the University. If you have any queries, concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (non-medical), telephone + 27(0)11 717 1408, email Shaun.Schoeman@wits.ac.za.

Yours Sincerely,
Martyn Vigus-Brown, 809165@students.wits.ac.za, 0825443645
Supervisor: Dr. Sian Butcher, Sian.Butcher@wits.ac.za, 0117176573

9.4. Appendix 4- Expert Participation Information Sheet

School of Geography, Archaeology and Environmental Studies

Private Bag 3, Wits 2050, South Africa, Enquiries: **GEOGRAPHY:** TEL: +27 11 717-6503 • FAX: +27 086 651 6366
ARCHAEOLOGY: TEL: +27 11 717-6045 • FAX: +27 086 651 6366
http://www.wits.ac.za/geography/

Greetings potential participant,

My name is Martyn Vigus-Brown and I am a postgraduate Masters student in the Department of Geography at the University of Witwatersrand (Wits University). For my masters research I am undertaking a research project on, "The State of Housing in Ekurhuleni: Urban Infilling Vs Megaprojects. The Leeuwpoort Development, Boksburg". The aim of my research is to understand the social and economic planning taken into consideration when developing policy and practice of Mega Human Settlements/Megaprojects. It also seeks to understand the social and economic expectations of different stakeholders (state officials, planners and beneficiaries) involved and included in the development of the Leeuwpoort development.

It is for this reason I am inviting you to participate as you have experience in the planning section of the development through the environmental aspect of the development and in an experts position within your field of work. With your permission, I would like to invite you to take part in an interview with myself at a place that suites your comfortability. It will take around 45 minutes of your time and will actively involve questions asked about your own personal experiences and opinions. I would also like to with your permission voice record the interview.

There will no direct benefits in your participation in this research study. With this in mind, the extent of your contribution as a participant in this study is fully up to you and your decision on this will not result in any disadvantages or penalties towards you. You have the power to decide which question you do not feel comfortable in answering and you may stop the interview at any time you wish to. The interview will be kept confidential, i.e. will only be used for the purpose of my research. While I will not use your name unless permitted, your institutional positioning will be named; hence your identity may not be anonymous. Any and all information you provide me with will be held securely in a password protected folder within my privately owned password protected laptop. None of the information you give me will be used by anyone else. If you do feel any feelings of insecurity or distress during the interview period, we will stop the interview immediately and continue with it at a time you feel safer and more appropriate for you, if this is your wish.

If you have any questions after our interview, feel free to contact me or my supervisor at any time. This study will be written up as my Master's thesis report (which will be accessible to anyone who has access to the internet and the Wits website) and possibly other academic outputs with approval provided by the Wits ethics committee. If you wish to receive a summary of this report, I will be more than happy to send it to you once it has

been completed and handed in to the University. If you have any queries, concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (non-medical), telephone + 27(0)11 717 1408, email Shaun.Schoeman@wits.ac.za.

Yours Sincerely,
Martyn Vigus-Brown, 809165@students.wits.ac.za, 0825443645
Supervisor: Dr. Sian Butcher, Sian.Butcher@wits.ac.za, 0117176573

9.5. Appendix 5- Consent Form for Interviews- Officials/Planners

School of Geography, Archaeology and Environmental Studies

Private Bag 3, Wits 2050, South Africa, Enquiries: **GEOGRAPHY:** TEL: +27 11 717-6503 • FAX: +27 086 651 6366
ARCHAEOLOGY: TEL: +27 11 717-6045 • FAX: +27 086 651 6366
http://www.wits.ac.za/geography/



Formal Consent Form for Interviews- State Officials/Planners

I …… (Name, print clearly), freely agree to participate in Martyn Vigus-Brown's project "The State of Housing in Ekurhuleni: Urban Infilling Vs Megaprojects in the Leeuwpoort Development, Boksburg".

He has explained the following:

- He is a Masters student in the school of Geography, Archaeology and Environmental Studies at the University of Witwatersrand, Johannesburg.
- His research project seeks to understand the social and economic planning taken into consideration when developing policy and practice of Mega Human Settlements/Megaprojects. It also seeks to understand what the social and economic expectations of different stakeholders (state officials, planners and beneficiaries) involved and included in the development of the Leeuwpoort development.
- I have been invited to participate in this research as I am a state official/Panner in one of the departments for the city of Ekurhuleni or Gauteng.
- As participation is voluntary, I am free to refuse to answer any question and to withdraw from the study at any time.
- The interview material will remain confidential, for use in this research only
- While my personal identity may not be named, my institutional position as a state official will not and therefore-
- My identity may not remain anonymous
- I am welcome to ask any questions during the interview or once the interview is completed, using the contact information provided.
- I am welcome to ask for a summary of the research after completion.
- Both he and I will keep a copy of this consent form.

(Please Tick preference)

I agree to be interviewed for this research
YES NO

I agree that my institutional position will not remain anonymous.
YES NO

I agree that the researcher may use anonymous quotes in his thesis
YES NO

I agree that the interview may be audio recorded
YES NO

PARTICIPANT		**RESEARCHER**	
……	Name	……	Name
	Signature		Signature
……	Date	……	Date

9.6. Appendix 6- Consent Form for Interview- Experts

School of Geography, Archaeology and Environmental Studies

Private Bag 3, Wits 2050, South Africa, Enquiries: **GEOGRAPHY:** TEL: +27 11 717-6503 • FAX: +27 086 651 6366
ARCHAEOLOGY: TEL: +27 11 717-6045 • FAX: +27 086 651 6366
http://www.wits.ac.za/geography/



Formal Consent Form for Interviews- Experts

I …… (Name, print clearly), freely agree to participate in Martyn Vigus-Brown's project "The State of Housing in Ekurhuleni: Urban Infilling Vs Megaprojects in the Leeuwpoort Development, Boksburg".

He has explained the following:

- He is a Masters student in the school of Geography, Archaeology and Environmental Studies at the University of Witwatersrand, Johannesburg.
- His research project seeks to understand the social and economic planning taken into consideration when developing policy and practice of Mega Human Settlements/Megaprojects. It also seeks to understand what the social and economic expectations of different stakeholders (state officials and beneficiaries) involved and included in the development of the Leeuwpoort development.
- I have been invited to participate in this research as I am an expert in my field of work and have had an involvement or contribution in the Leeuwpoort Development.
- As participation is voluntary, I am free to refuse to answer any question and to withdraw from the study at any time.
- The interview material will remain confidential, for use in this research only
- While my personal identity may not be named, my institutional position as an expert in my field of work will not and therefore-
- My identity may not remain anonymous
- I am welcome to ask any questions during the interview or once the interview is completed, using the contact information provided.
- I am welcome to ask for a summary of the research after completion.
- Both he and I will keep a copy of this consent form.

(Please Tick preference)

I agree to be interviewed for this research
YES NO

I agree that my institutional position will not remain anonymous.
YES NO

I agree that the researcher may use anonymous quotes in his thesis
YES NO

I agree that the interview may be audio recorded
YES NO

PARTICIPANT	**RESEARCHER**
…… Name	…… Name
Signature	Signature
…… Date	…… Date

9.7. Appendix 7- Interview Research Questions

Researcher: Martyn Vigus-Brown, studying my MSc Geography, in the school of Geography, Archaeology and Environmental Studies (GAES).

Research Topic: "The State of Housing in Ekurhuleni: Urban Infilling Vs Megaprojects in the Leeuwpoort Development, Boksburg".

Interview Schedule for State Officials

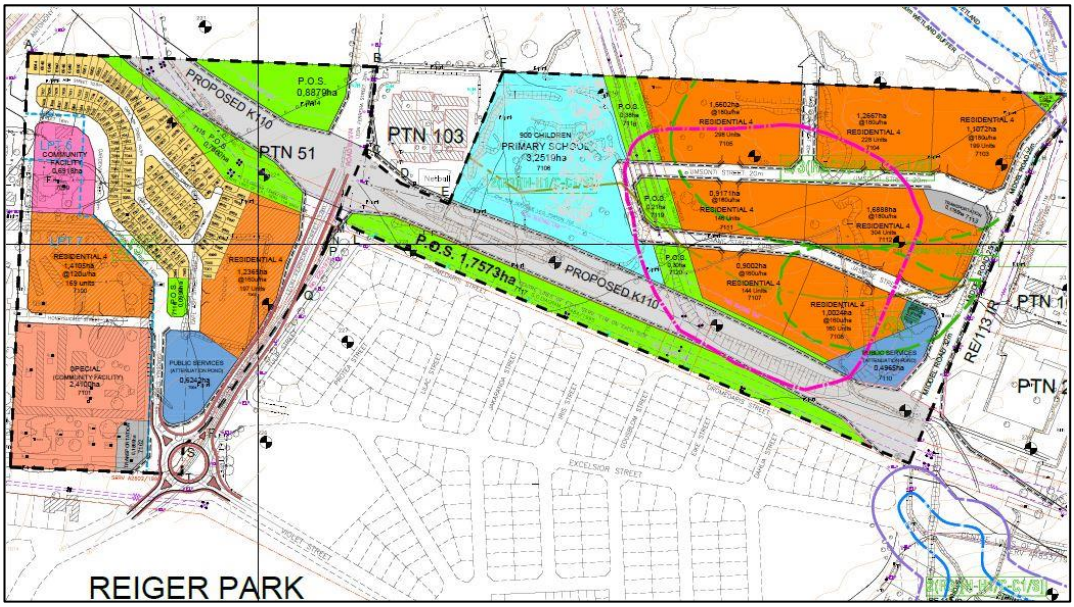
1. Could you please provide me with some background knowledge of the Leeuwpoort development and the housing approach in Ekurhuleni?
2. What is the estimated delivery rate per annum with regards to housing units, and have any types of housing in this delivery rate been prioritised, and for what reason if so?
3. How is your department included in the Leeuwpoort development?
4. What were the main reasons behind the locations of the Leeuwpoort development considering the open spaces in the Ekurhuleni?
5. How are the ideas of MHS interacted with and considered in the development of Leeuwpoort Development?
6. How does labelling such a project a "mega housing project" allow for it to be differentiated from the general policy and practices of a mega human settlement announced by the Gauteng Premier in 2014?
7. Do you believe this concept of "mega human settlements and megaprojects" is being used by the government in order to get housing projects done quicker and larger?
8. Do you consider this to be an urban infill taking into consideration the several different locations of it?
9. Do you feel splitting the Leeuwpoort development over several different sites is better than one large location as stated in the policy of megaprojects?
10. Who is the Leeuwpoort Development first and foremost meant to directly benefit, and why?
11. Have any precautions been taken into considering individually, the age and circumstances of those who get selected as beneficiaries of full and halved subsidized houses in Leeuwpoort? Or is the beneficiary selection primarily focused on their current living location to the proposed development location?
12. With regards to the layout and formatting of the housings in the development, do you consider it more of an integrated income residential area or a combined residential area?
13. What kind of integration (residential, social and economic) do you think this style of development brings to the area and greater region of Boksburg and itself?
14. What is the process of determining what infrastructure is to be constructed in the Leeuwpoort Development is the decision made at provincial, municipal or co-joint level? Has there been any consideration for what the population being brought into the project would like to be provided for them?
15. What are the precautions being taken to manage and minimize further congestions such as: already overcrowded schools, traffic, sewage systems, electricity management and future loss of natural wetlands and animal habitats? Using an example, developers of Lufhereng development in west Soweto acknowledge the increase in population size due to the development and will be developing a new electrical sub-station to release tension on electricity demands.
16. Have the planners designed an Economic Development Plan to ensure economic opportunity and growth in Leeuwpoort in order for it to maintain sustainability and self-sufficiency, considering the economic growth within the region is slow in its own rights?

Bearing in mind provisional allocation for economic activities and opportunities is one of the 4 broad ways megaprojects like Leeuwpoort contribute to the Gauteng economy says the Gauteng Provincial government.

17. Backyard dwellings are a very popular and easy way for people to create an income for themselves. Have the developers taking into consideration any guidelines or restrictions that prevent or promote such activities within the projected area? Of which is noted in Cosmo city's guidelines.

9.8. Appendix 9.8.1. Site location of Reiger Park ext. 19 in Leeuwpoort

(adapted from Urban Dynamics, 2018).



9.8. Appendix 9.8.2. Reiger Park housing typology legend

(adapted from Urban Dynamics, 2018 (clarity compromised in original).

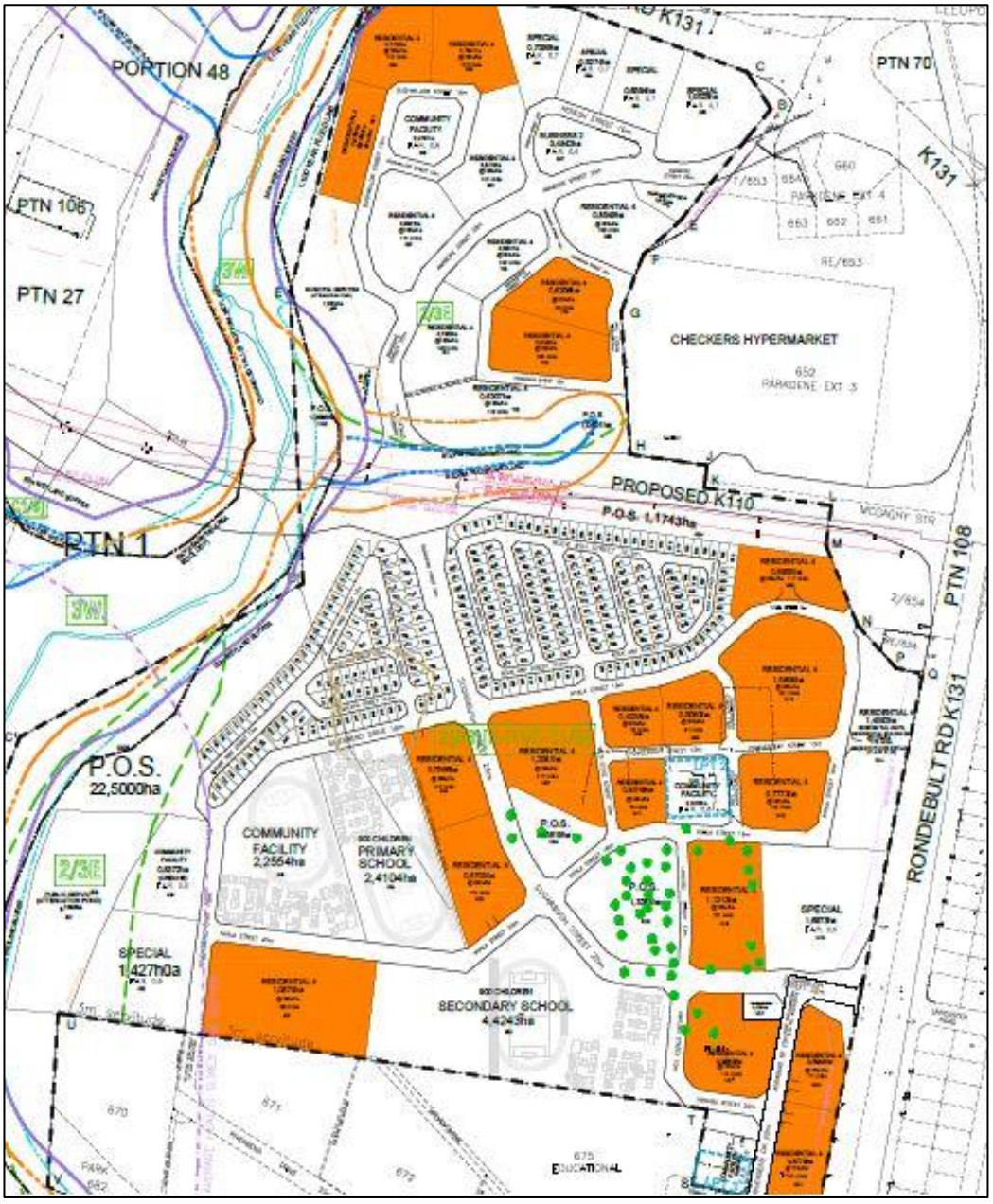


LAND USE TABLE

ZONING	LAND USE	ERF NUMBERS		No. OF STANDS	AREA OF STANDS& STREETS	% OF AREA
RESIDENTIAL 2	RESIDENTIAL 112m² subsidised stands	6944–7002,7005–7098		153	2,3485	6,38
RESIDENTIAL 4	FLISP UNITS 180u/ha, 4 storeys (450 units)	7107,7108,7111	1845 UNITS	3	2,8197	7,66
RESIDENTIAL 4	FLISP UNITS 180u/ha, 4 storeys (1029 units)	7103–7105,7112		4	5,7229	15,55
RESIDENTIAL 4	SUBSIDY UNITS 160u/ha, 4 storeys (197 units)	7003		1	1,2365	3,36
RESIDENTIAL 4	SUBSIDY UNITS 120u/ha, 4 storeys (169 units)	7100		1	1,4105	3,83
PUBLIC SERVICES	ELECTRICAL SUBSTATION ATTENUATION PONDS, MUNICIPAL SERVICES	7004,7109,7110		3	1,1988	3,26
SPECIAL	COMMUNITY FACILITY	7101		1	2,4100	6,55
COMMUNITY FACILITY	PRIMARY SCHOOL 900 CHILDREN	7106		1	3,2519	8,83
COMMUNITY FACILITY	COMMUNITY FACILITY F.A.R. 0,6	7099		1	0,6918	1,88
TRANSPORTATION	PUBLIC TRANSPORT STOP	7102,7113		2	0,3654	0,99
P.O.S	PARK	7114–7121		8	4,4708	12,15
ROAD	K110 PROVINCIAL ROAD				5,0739	13,79
	STREETS				5,8023	17,77
TOTAL				178	36,8030	100%

9.9 Appendix 9.9.1. Site location of Parkdene ext. 7 in Leeuwpoort

(adapted from Urban Dynamics, 2018).



9.9. Appendix 9.9.2. Parkdene housing typology legend

(adapted from Urban Dynamics, 2018).

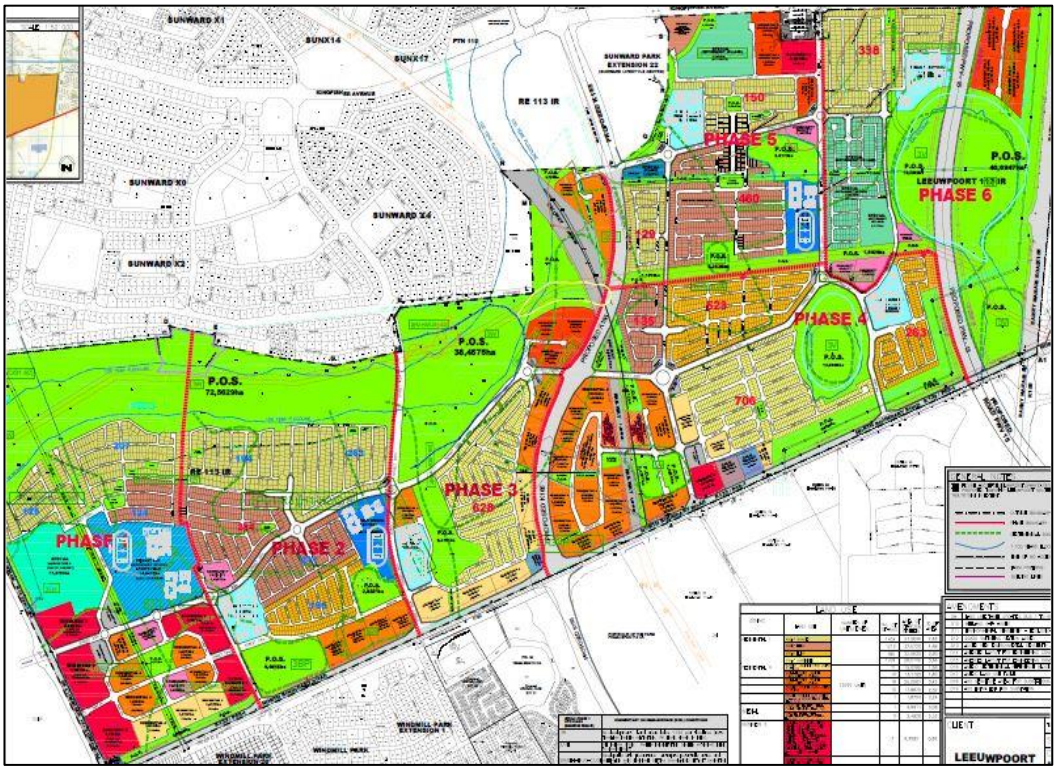


LAND USE TABLE

ZONING	LAND USE	ERF NUMBERS	No. OF STANDS	AREA OF STANDS& STREETS	% OF AREA
RESIDENTIAL 2	RESIDENTIAL 200m bonded stands	706–819,829–1005	291	6,7809	7,14
RESIDENTIAL 4	FLISP UNITS 120u/ha, 4 storeys (266 units)	1018,1020,1021	3	2,2953	2,42
RESIDENTIAL 4	SUBSIDY UNITS 160u/ha, 4 storeys (556 units)	687–689,704,705	5	3,5840	3,77
RESIDENTIAL 4	SUBSIDY UNITS 180u/ha, 4 storeys (832 units)	690,691,695–702	6	4,6386	4,89
RESIDENTIAL 4	FLISP UNITS 160u/ha, 4 storeys (557 units)	1006,1010,1013,1016	4	4,1109	4,33
RESIDENTIAL 4	FLISP UNITS 180u/ha, 4 storeys (944 units)	825,826,827,1007, 1008,1009,1011	7	5,2541	5,53
RESIDENTIAL 4	FLISP UNITS 120u/ha, 3 storeys (175 UNITS) INCLUDING GROUND FLOOR RETAIL (F.A.R. 0,10)	1014	1	1,4592	1,57
SPECIAL	COMMUNITY FACILITIES AND ANY OTHER USE WITH APPROVAL OF THE LOCAL AUTHORITY. F.A.R. 0,6	822,1015	2	3,1243	3,29
	FOR ANY SUCH PURPOSE AS THE COUNCIL MAY SUPPORT WITH A SPECIAL CONSENT USE APPLICATION F.A.R. 0,7	693–696	4	2,9490	3,10
BUSINESS 2	BUSINESS PURPOSES, SHOPS, RESTAURANTS, MEDICAL CONSULTING ROOMS, GYMNASIUM, PLANT NURSERIES, SERVICE INDUSTRIES, PARKING BAYS, PARKING GARAGES F.A.R. 0,6	697	1	0,4842	0,52
PUBLIC SERVICES	ELECTRICAL SUBSTATION ATTENUATION PONDS, MUNICIPAL SERVICES	686,821	2	3,3366	3,51
COMMUNITY FACILITY	SECONDARY SCHOOL 900 children	828	1	4,4243	4,66
	PRIMARY SCHOOL 900 children	824	1	2,4104	2,54
	COMMUNITY FACILITY F.A.R. 0,8	692,820,823,1012,1019	5	4,6104	4,85
TRANSPORTATION	PUBLIC TRANSPORT STOP	685,698,1017	3	0,4560	0,48
P.O.S	PARK	703,1022–1027	7	28,0609	29,53
ROAD	K110 PROVINCIAL RD			3,0628	3,22
	STREETS			13,9693	14,55
TOTAL			343	95,0112	100%

9.10. Appendix 9.10.1. Site location of South phase in Leeuwpoort

(adapted from Urban Dynamics, 2018).



9.10. Appendix 9.10.2. South phase housing typology legend

(adapted from Urban Dynamics, 2018).

LAND USE					
ZONING	LAND USE	NUMBER OF UNITS/ERVEN	No. OF STANDS	AREA OF STANDS& STREETS	% OF AREA
RESIDENTIAL 1	400m² BONDED		1404	57,5640	7,48
	300m² FLISP		1212	37,5720	4,88
	220m² FLISP		981	22,5630	2,93
	200m² SUBSIDISED		1334	28,0140	3,64
RESIDENTIAL 4	SUBSIDY 120u/ha (1809 UNITS) 3 Storeys		11	15,0780	1,96
	SOCIAL HOUSING 120u/ha (1693 UNITS) 3 Storeys		10	14,1162	1,83
	SOCIAL HOUSING 160u/ha (4208 UNITS) 4 Storeys	10797 UNITS	18	26,2987	3,42
	BONDED 150u/ha (2662 UNITS) 4 Storeys		10	17,8879	2,32
	BONDED 120u/ha (225 UNITS) 3 Storeys & GROUND FLOOR RETAIL F.A.R. 0,10		1	1,8754	0,24
SPECIAL	[illegible]		1	0,6611	0,08
	[illegible]		2	2,4808	0,32
BUSINESS 2	[illegible]		3	6,3082	0,82
	[illegible]	1933 UNITS	5	16,1064	2,09
SPECIAL	CLINIC F.A.R. 0,5		1	1,1067	0,14
	RETIREMENT VILLAGE, FRAIL CARE AND ASSOCIATED USES	639 UNITS	256	19,3067	2,51
	AGRICULTURE & USES BY CONSENT (NOT DEVELOPABLE)		1	11,2798	1,47
PUBLIC SERVICES	ELECTRICAL SUBSTATION		4	2,4491	0,32
COMMUNITY FACILITY	COMMUNITY FACILITY F.A.R. 0,6		7	7,6585	0,99
	PRIMARY SCHOOL 4500 LEARNERS		5	18,8558	2,45
	SECONDARY SCHOOL 2700 LEARNERS		2	9,8962	1,29
	PRIMARY AND SECONDARY SCHOOL		1	14,9473	1,94
PUBLIC OPEN SPACE	PARK		84	244,6586	31,78
TRANSPORTATION	RAILWAY, STATION, TAXI RANK		17	14,8082	1,92
ROADS	PROVINCIAL ROADS			55,4800	7,21
	STREETS			122,8805	15,97
TOTAL			5370	769,8531	100%

9.11. Appendix 9.11. Reiger Park ext.19 housing typology and mixed-use infrastructure breakdown

(adapted from Mathibela 2016: 8).

Zoning	Description	Size (Hectares)	Number of stands/ Units Sept 2016
REIGER PARK ext.19			
Residential 3	200m2 FLISP stands	(50du/ha) 4.6782	184
Residential 3	112m2 Subsidised stands	2.3485	151
Residential 4	FLISP units	180 u/ha 2.5563	459
Residential 4	FLISP units	160u/ha 0.9083	145
Residential 4	RDP units	160u/ha 0.9083	220
Residential 4	RDP units	120u/ha 4.0291	483
Primary School		2.7826	1
Community Facility		0.6918	1
Transportation		0.3589	2
Public Open Space/Park		4.9079	8
Roads		11.3265	

9.12. Appendix 9.12. Parkdene ext.7 housing typology and mixed-use infrastructure breakdown

(adapted from Mathibela 2016:8).

Zoning	**Description**	**Size (Hectares)**	**Number of stands/Units Sept 2016**
PARKDENE ext.7			
Residential 3	112m2 Subsidised stands	3.5611	273
Residential 4	FLISP Units	120u/ha 2.2953	274
Residential 4	RDP Units	160u/ha 1.8153	289
Residential 4	RDP Units	180u/ha 3.7697	675
Residential 4	FLISP Units	160u/ha 4.1109	657
Residential 4	FLISP Units	180u/ha 5.5177	992

Residential 4	FLISP Units	120u/ha 1.4592	175
Special	Community facilities	1.7559	1
Industrial 2	Industrial 2	2.949	4
Business 2	Shops, restaurants, medical consulting rooms, etc…	0.4842	1
Secondary School	Sec School	4.6319	1
Primary School	Prim School	3.2175	1
Community Facility	Community facilities	1.4234	3
Public transport	Transportation	0.456	-
Park	POS	29.766	-
Roads	R & S	16.355	-

9.13. Appendix 9.13. Leeuwpoort South housing typology and mixed-use infrastructure breakdown

(adapted from Mathibela 2016: 25).

Zoning	**Description**	**Size (Hectares)**	**Number of Stands/Units Sept 2016**
LEEUWPOORT SOUTH			
Residential 1	Bonded 400m2	69.93	1 554
Residential 1	Bonded 500m2	6.59	103
Residential 1	FLISP 300m2	47.92	1 576
Residential 1	Subsidy 300m2	7.66	244
Residential 3	FLISP 220m2	32.80	1339
Residential 3	FSH 200m2	28.28	1 289
Residential 4	Subsidy 120 u/ha	23.97	2 876
Residential 4	Subsidy 160u/ha	2.94	468
Residential 4	FLISP 160u/ha	17.78	2 845
Residential 4	FLISP 120u/ha	1.72	206
Residential 4	Bonded 160u/ha	7.32	1 171
Business 2	shops, restaurants, etc.	18.90	8
Business 3	Offices 2	2.94	2
Special	Clinic	1.11	1
Special	Retirement Village	19.22	532
Community Facility	Community	5.82	5
Primary School	School	13.82	4
Secondary School	School	20.85	4

Park		190.43	71
Undetermined		11.80	
Public transport		13.70	
Special	Gate Houses	0.11	21
Roads		194.62	62

9.14. Appendix 9.14. Proposed residential typologies and mixed-use infrastructure in Reiger Park ext.19

(adapted from DEMACON, 2016: 23).

REIGER PARK EXT.19			
Zoning	**Description**	**Size (hectares)**	**Number of Stands/ Units**
Residential 3	FLISP	220m2	184
Residential 3	Subsidised	200m2	483
Residential 3	Subsidised	112m2	151
Residential 4	Subsidised	160 u/ha	220
Residential 4	FLISP Social	180 u/ha	459
Residential 4	FLISP Social	160 u/ha	145
Primary School	1 erf	2.8 ha	-
Community Facility	1 erf	0.7 ha	-
Transportation	1 erf	0.4 ha	-
Public Open Space	1 erf	4.9 ha	-

9.15. Appendix 9.15. Proposed residential typologies and mixed-use infrastructure in Parkdene Ext.17

(adapted from DEMACON, 2016: 23).

PARKDENE EXT.17			
Zoning	**Description**	**Size (hectares)**	**Number of Stands/ Units**
Residential 3	Bonded	200m2	275
Residential 3	Subsidised	112m2	273
Residential 4	Subsidised	180 u/ha	675
Residential 4	Subsidised	160 u/ha	289
Residential 4	FLISP Social	180 u/ha	992
Residential 4	FLISP Social	160 u/ha	657
Residential 4	FLISP Social (retail)	120 u/ha	175
Residential 4	FLISP Social	120 u/ha	274
Primary School	1 erf	3.2 ha	-
Secondary School	1 erf	4.6 ha	-

Community Facility	1 erf	1.4 ha	-
Transportation	1 erf	0.5 ha	-
Industrial 2	1 erf	2.9 ha	-
Business 2	1 erf	0.5 ha	-
Public Open Space	1 erf	29.8 ha	-

9.16. Appendix 9.16. Proposed residential typologies and mixed-use infrastructure in Leeuwpoort South

(adapted from DEMACON, 2016: 24).

LEEUWPOORT SOUTH			
Zoning	**Description**	**Size (hectares)**	**Number of Stands/ Units**
Residential 1	Bonded	400m2	1554
Residential 1	FLISP	300m2	1576
Residential 1	Bonded	500m2	103
Residential 1	Subsidised	300m2	2444
Residential 3	FLISP	200m2	275
Residential 3	FLISP	220m2	1523
Residential 3	Subsidised	112m2	424
Residential 3	Subsidised	200m2	1772
Residential 4	Bonded	160 u/ha	1174
Residential 4	Subsidised	180 u/ha	675
Residential 4	Subsidised	160 u/ha	977
Residential 4	Subsidised	120 u/ha	2875
Residential 4	FLISP	180 u/ha	1451
Residential 4	FLISP social	160 u/ha	3646
Residential 4	FLISP social (retail0	120 u/ha	175
Residential 4	FLISP social	120 u/ha	480
Community facility	1 erf	3.3 ha	-
Community facility	1 erf	6.5 ha	-
Clinic facility	1 erf	1.1 ha	-
Retirement Village	1 erf	19.2 ha	532
Primary school	1 erf	19.8 ha	-
Secondary school	1 erf	25.5 ha	-
Industrial 1	1 erf	2.9 ha	-
Business 2	1 erf	19 ha	-
Business 3	1 erf	2.9 ha	-
Transportation	1 erf	13.5 ha	-
Public open space	1 erf	277.1 ha	

9.17. Appendix 9.17. Distribution and pricing of proposed bonded/FLISP units

(adapted from DEMACON, 2016: 7).

Unit type	Unit size	distribution	Number of units	Price range
1 bedroom (FLISP / Gap)	48m2 - 65m2	30.5%	261	R240 000 – R350 00
2 bedroom (FLISP / Gap)	65m2 - 110m2	23.5%	226	R350 000 – R600 000
3 bedroom	110m2 - 200m2	22.1%	172	R600 000 – R1.5 million
4 bedroom	200m2+	16.1%	95	R1.5million – R3million+

9.18. Appendix 9.18. Distribution and pricing for proposed social housing units

(adapted from DEMACON, 2016: 7).

Unit type	Unit size	Project distribution	Number of units	Monthly rental range
1 bedroom	48m2 - 65m2	24.4%	2 066	R500 – R1 000
2 bedroom	65m2 - 110m2	39.4%	3 332	R1 000 – R2 000
3 bedroom	110m2 - 200m2	36.2%	3 057	R2 000 – R2 500

9.19. Appendix 9.19. Feasible; possible; and necessary social facilities in the Leeuwpoort Development (adapted from DEMACON, 2016: 14).

Facility	Parameter per facility	Total increase 2016 - 2026	Number of project linked units
Crèche	2 400	5,5	6
Primary School	7 000	1.9	2
Secondary School	12 500	1.0	1
Clinic	24 000	0.1	1
Day-Hospital	100 00	0.5	-
Community Hospital	300 000	0.0	-

Library	20 000	0.7	1
Community Centre	10 000	1.3	1
Sports Stadium	200 000	0.1	-
Post Office	10 000	1.3	1
Police Station	60 000	0.2	-
Fire Station	60 000	0.2	-
Municipal Offices	100 000	0.1	-
Sport Fields	60 000	0.2	-

9.20. Appendix 9.20. Infrastructure input of North phase Leeuwpoort

(adapted from Bokamoso 2016a & 2017).

Reiger Park x19	**Description**	**Total Units**		**Parkdene x7**	**Description**	**Total Units**
Residential 4	Bonded	151		Residential 3	Bonded	274
Residential 4	Subsidies 4-storyey walk-ups	2161		Residential 3	subsidised	162
Public Service	Electrical, municipal and attenuation	3 erven		Residential 4	3-storey walk-ups	20
Community Facilities	Primary and Secondary school	2 erven		Public Service	Electrical, attenuation and municipal	6 erven
Transport		2 erven		Community Facility	Primary and secondary School, and community facility	3 erven
Public Open Spaces		8 erven		Special	Community facility	1 erven
Roads	K110 provincial road and streets			Transportation		4 erven
				Private Open Spaces	Parks	12 erven
				Roads		

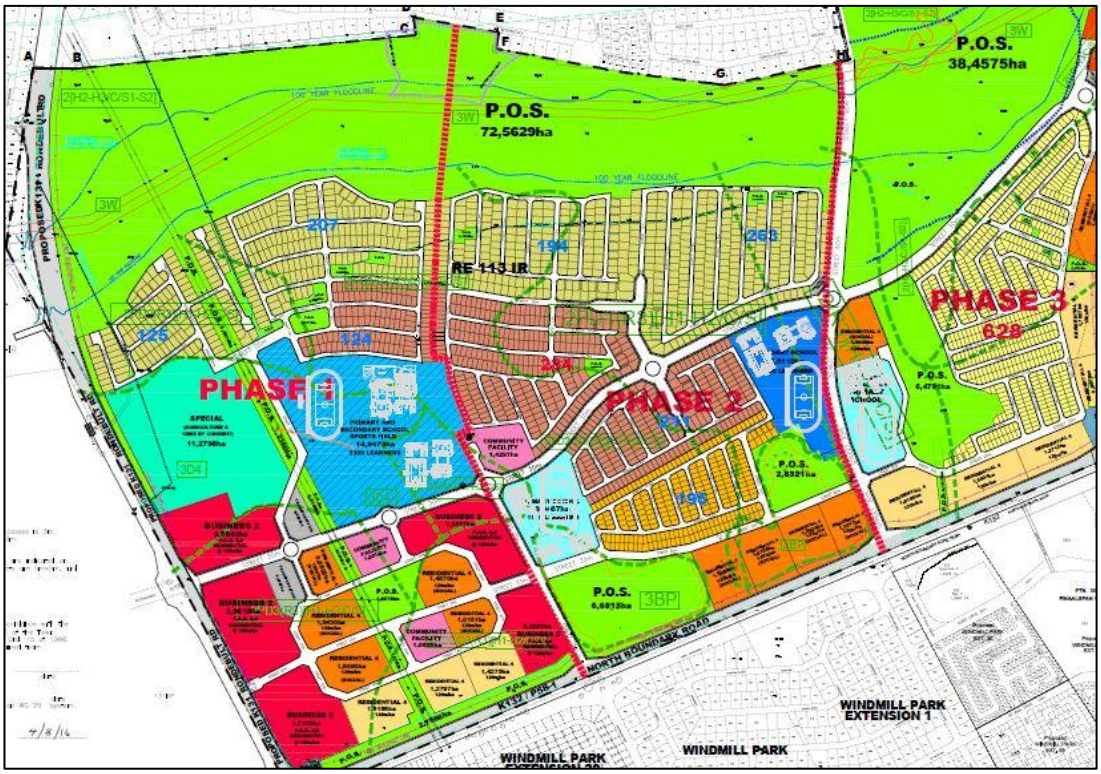
(For a more accurate reading please refer to tables 9 and 10 appendices… …)

9.21. Appendix 9.21. Proposed residential typologies and mixed-use infrastructure in Parkdene Ext.17 (adapted from Bokamoso, 2016: 23).

Zone	**Size and type**	**Total units**
Residential 3	200m² - 50u/ha	1743
Residential 3	220m² - FLISP- 46u/ha	1514
Residential 1	300m² - FLISP	1988
Residential 1	400m² - Bonded	1732
Residential 1	500m² - Bonded	190
Residential 1	700m² - Bonded	170
Residential 4	120u/ha - Subsidised	21
Residential 4	160u/ha - Subsidised	21
Residential 4	180u/ha - Bonded	5
Primary School	n/a	3
Secondary School	n/a	3
Public Open Spaces	n/a	96
Transportation	n/a	7
Electrical sub-station	n/a	1
Business 2	Shops and Restaurants	10
Business 3	Offices	5
Clinic	n/a	1
Retirement Village	n/a	1

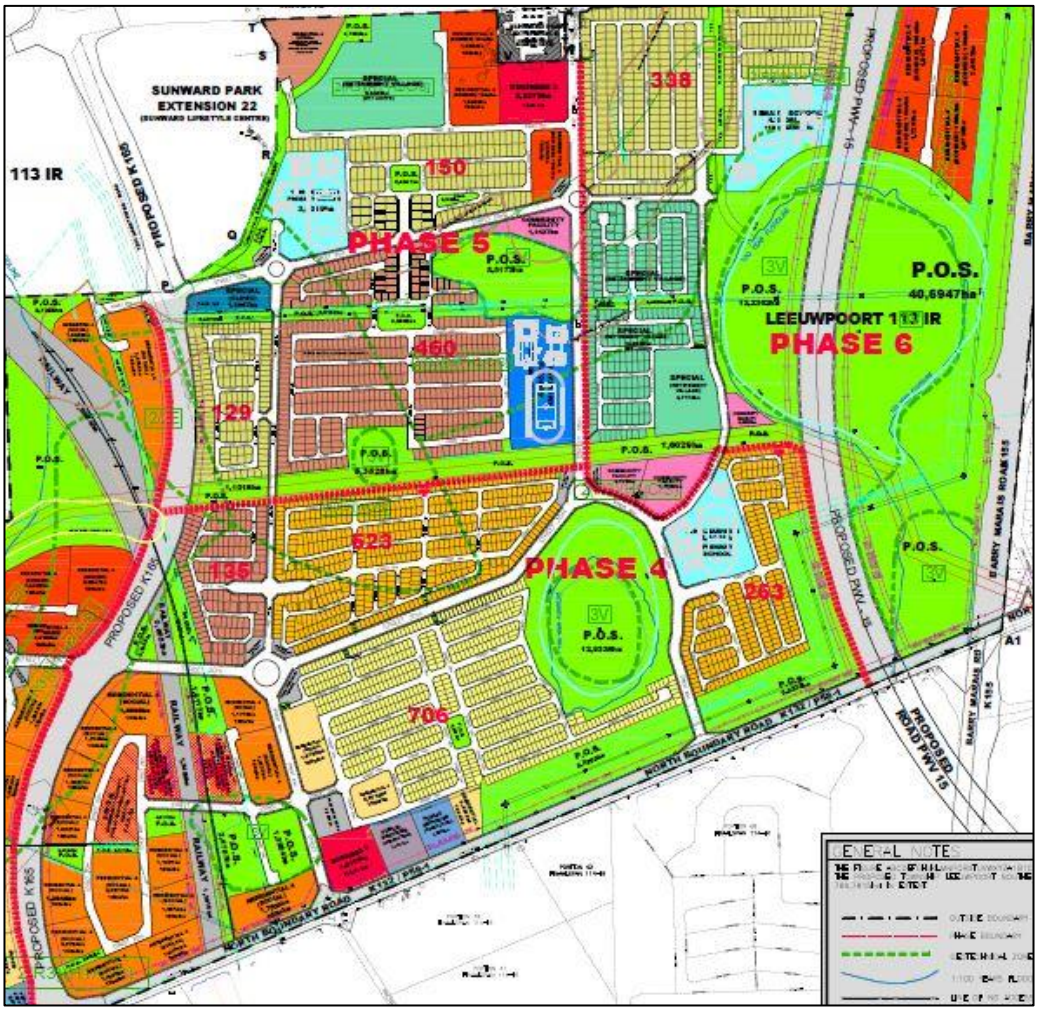
9.22. Appendix 9.22. Phase 1-3 of the Leeuwpoort south residential layout

(adapted from Urban Dynamics, 2015).



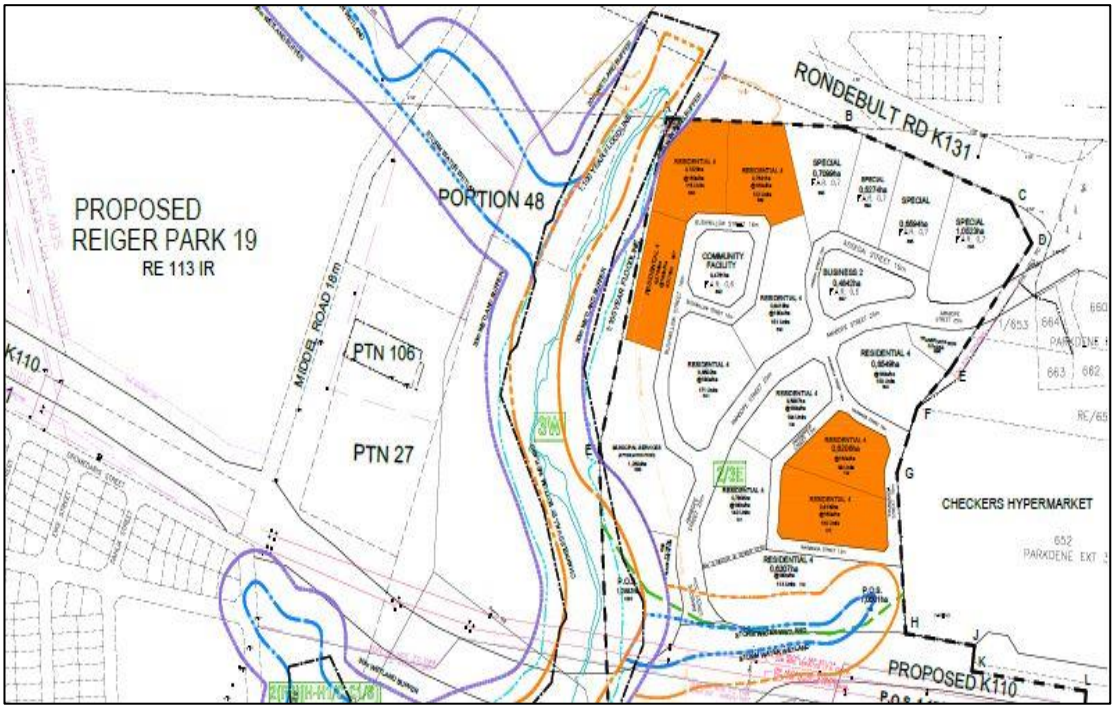
9.23. Appendix 9.23. Phase 4-6 of the Leeuwpoort residential layout

(adapted from Urban Dynamics, 2015).



9.24. Appendix 9.24. East to West section layout of north phase from Reiger Park to Parkdene

(adapted from Urban Dynamics, 2015).



9.25. Appendix 9.25. Parkdene residential south section layout

(adapted from Urban Dynamics, 2015).

