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The impact of gated communities on spatial transformation in the Greater Johannesburg area

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UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

PROJECT ADMINISTRATOR

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THE IMPACT OF GATED COMMUNITIES ON SPATIAL TRANSFORMATION IN THE GREATER JOHANNESBURG AREA

AUGUST 2012

KARINA LANDMAN WILLEM BADENHORST

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SECTION 1

INTRODUCTION

Gated communities in South Africa have increased tremendously since the late 1990's, with various types spreading across the urban landscape. They can broadly be divided into two groups, namely enclosed neighbourhoods and new security developments. *Enclosed neighbourhoods* refer to existing neighbourhoods that have been fenced or walled in and where access is controlled or prohibited by means of gates or booms erected across existing roads. *New security developments* are private developments in which the entire area is developed by a private developer. These areas/buildings are physically walled or fenced off and usually have a security gate or controlled access point, with or without a security guard. This type can include large security estates, gated townhouse clusters/complexes and gated apartment complexes. These three sub-types are predominantly residential. New security developments can, however, also include gated office parks and gated mixed-use developments (Landman 2012). As a significant contributor to urban spatial transformation, there is a need to understand the current extent and impact of different types of gated communities in the greater Johannesburg area and implications for urban restructuring and sustainable development.

Given this, the main research question relates to the impact of gated communities on urban spatial transformation in the greater Johannesburg area. This translated into three objectives, namely:

1. To determine the extent of different types of gated communities in the City of Johannesburg.
2. To determine the impact of gated communities on spatial transformation in relation to processes of social, economic, environmental, institutional and political change.
3. To identify the implications for spatial restructuring and sustainable urban development in the City of Joburg.

The objectives were achieved through a 'mixed methods' approach to the research, which involves both qualitative and quantitative research. The qualitative research involved selected interviews with officials from the City of Johannesburg to determine the impact of gated communities on spatial transformation. Their views were obtained as to the key processes of social, economic, environmental and political change that influence the spatial transformation and how these developments, in turn, influence these processes. Their views were also sought on the implications for spatial restructuring and sustainable development.

The quantitative research involved GIS mapping of the extent and distribution of different types of gated communities in the greater Johannesburg area. These were then juxtaposed on to some of the key spatial initiatives identified in the Joburg SDF to identify the implications of spatial transformation through gated communities for spatial restructuring and sustainable development in the City of Johannesburg. The data for gated communities were obtained from Afrigis.

The research also drew on both primary and secondary data. The primary data sources have been discussed above. In addition, a comprehensive literature review was carried out to identify additional views of authors who carried out studies in the greater Johannesburg on key processes of social, economic, environmental and political change that influence the development of gated communities. The review then looked at how these developments, in turn, influence these processes. Secondly, the research obtained the views of these authors on the implications for spatial restructuring and sustainable development. It also included a web-survey of different types of gated communities listed and discussed on the internet. This was supplemented by field visits – driving around many parts of Johannesburg to identify and photograph different types of gated communities in the urban landscape. The methodology is summarised in Table 1.

TABLE 1: Project methodology

Objectives	Methods	Outcome
1. To determine the extent of different types of gated communities in the City of Johannesburg.	GIS mapping. Web-survey. Field observation. Web-survey.	A set of GIS maps with the distribution of different types of gated communities in the City of Joburg Municipal Area. Description of the distribution and extent.
2. To determine the impact of gated communities on spatial transformation in relation to processes of social, economic, environmental, institutional and political change.	Documentation review of existing studies on gated communities in Johannesburg. Selected interviews with a few key officials from the City of Joburg.	Description of the impact of gated communities on spatial transformation in relation to other processes based on the conceptual framework for spatial transformation.
3. To identify the implications for spatial restructuring and sustainable urban development in the City of Joburg.	GIS mapping. Selected interviews with a few key officials from the City of Joburg.	A set of GIS maps showing the key aspects of the Spatial Development Framework (SDF) of the City of Jobug in relation to the location of different types of gated communities. A description of the implications of gated communities for urban restructuring as outlined in the SDF.

Following the introduction, the document introduces the conceptual framework used in the project. This framework offers a model to consider the process of spatial transformation through gated communities in relation to processes of social, economic, environmental and political change in Johannesburg. The spatial transformation in Johannesburg through gated communities is discussed in the next section, followed by the implications of spatial transformation through gated communities for spatial restructuring and sustainable development.

SECTION 2

THE PROCESS OF SPATIAL TRANSFORMATION THROUGH GATED COMMUNITIES IN JOHANNESBURG

2.1 A FRAMEWORK TO UNDERSTAND AND MAP SPATIAL TRANSFORMATION

The study is guided by a conceptual framework that was developed to understand spatial transformation in cities and has been found to be well suited to describe the impact of gated communities on urban spatial transformation (Landman 2006; 2010; Roitman et al 2011). This framework offers a way to understand spatial transformation as a socio-spatial process. This happens through a process involving space, need, idea, order, form and meaning; and, parallel with these, the production and management of the spatial intervention in a specific context (see Figure 1). Space refers to the unbound natural or existing man-made space and is usually formed by particular needs at a specific time, which directly relates to the specific context. The need gives rise to an idea on how to address it. This is the beginning of order, of structural organisation to order the idea and guide form. Form is the physical manifestation of the need and idea and takes on a particular shape, texture, size, etc., which is measurable. It reflects the character of a space and contributes to the creation of a particular place which, in turn, can be modified over time. Space and place are not arbitrary. They encompass meaning. Spaces or places can, therefore, be "read" and "experienced" and can appeal to people's feelings or emotions – for example, feeling safe or unsafe in a specific place. This can thus influence the use of space and people's behavioural patterns and reactions to different spaces and places. These modified places can, therefore, elicit a number of responses which, in turn, can add to the transformation of specific spaces if considered necessary by a sufficient number of supporters. This returns the cycle to the beginning, where a need arises to change existing man-made space. This process is influenced by a range of players involved in the production and management of space, which constantly influences the need/demand, idea, form, order and meaning in settlements (Landman 2006).

Urban structure and form is dynamic and changing constantly in direct relationship to its producers and inhabitants through a continuous process of spatial transformation. As a result, when needs or urban activities change, urban form has to adapt to these and change as well. Over time, land-use patterns transform the arbitrary layout into structure filled with information, into a place filled with possibilities. This again sets up further possibilities and choices for physical reaction. Finally, because the structure is rich in information, the appearance and use of elements cannot be arbitrary in the future (Landman 2006).

This framework offers a model to consider the process of spatial transformation in relation to processes of social, economic, environmental and political change in a specific settlement. It therefore offers a good framework to understand and map spatial transformation through gated communities in the greater Johannesburg area.

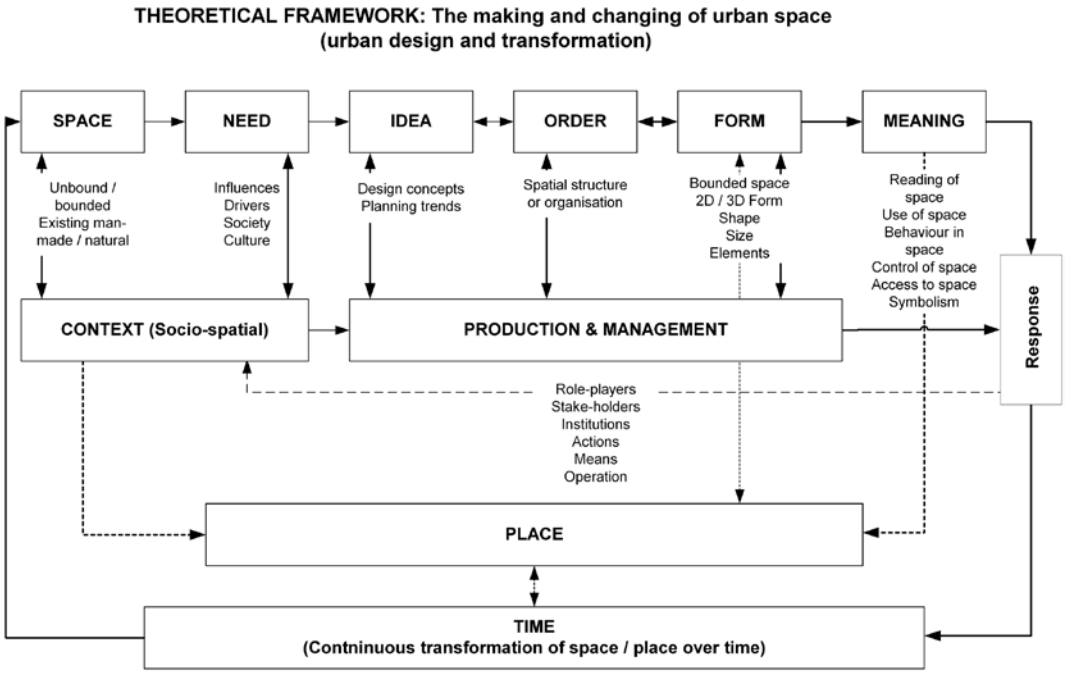


FIGURE 1: A theoretical framework to explain the making and changing of urban space (Landman 2006)

2.2 BROADER SOCIO-SPATIAL CONTEXT IN JOHANNESBURG

The spatial history of South Africa is characterised by racial segregation under the apartheid regime which, amongst other things, entailed the intentional segregation of neighbourhoods. This resulted in the centrally located neighbourhoods being reserved exclusively for whites, with non-white areas and areas of poverty located at the outskirts of the urban areas. This resulted in the scarring of the cities through decentralisation and sprawl (Prinsloo and Cloete 2002; Horn 2002). Apart from the immense task of reconciliation, South African cities were burdened with the spatial restructuring and integration of residents.

This raises many questions related to the appropriate nature of new developments to facilitate spatial integration in these cities and the role that planning and relevant policies should play to accommodate relevant transformation. Given the major role that planning had played in the spatial segregation of races in the country, the planning system too had to change to address this, highlighting four aspects that need consideration: the ethical values that should guide it, the assessment of new policies and practices, an examination of the processes of change and an inquiry into the transferability of new knowledge and ideas in a specific context (Harrison, Todes and Watson 2008). Section Two maps the spatial transformation through gated communities in Johannesburg and reconsiders these four aspects in the light of this.

The fall of apartheid and the transition to a democracy gave rise to large expectations for the City of Johannesburg. As the financial capital of South Africa it was expected that Johannesburg would become the gateway for South Africa's entry into the global economy. The city adopted a strategic plan and vision – Joburg Strategy 2030 – to promote Johannesburg as a world city and international metropolis. "Without the burden of apartheid, Johannesburg could be imagined as a global city" (Tomlinson et al 2003:xii). Despite the city's efforts, the perception that the city is dangerous and the economy unstable persisted. Therefore, although Johannesburg discarded one image – that of an apartheid city – it attracted another – that of the "crime capital of South Africa" (Palmery, Rauch and Simpson 2003:101), "crime city" (Beal, Crankshaw and Parnell 2002:176) and "an image of a crime-ridden and deteriorating city, an inner city in decline" (Tomlinson et al 2003:xii).

Robinson (2003) argues that Johannesburg's future is entwined in two of the most powerful discourses and sets of practices shaping cities: the idea of being a global city, reflecting the world city hypothesis; and the urgent need to improve the living conditions of the poor. These two approaches result in tensions within the city and leave the local governments with a dilemma as to how to address these tensions and the different expectations of various groups. Firstly, previously oppressed blacks view it as a test of government's commitment to social justice and democracy and a measure of government's ability to govern. Secondly, once-protected whites need reassurance that they are still important, which includes providing sufficient levels of safety and security, as well as efficient service delivery. Thirdly, international investors and corporate leaders view the dismantling of apartheid in the light of government's commitment to a neo-liberal global agenda (Robinson 2003). The reinterpretation of space, therefore, also depends on the vision of different stakeholders. As these differ for various groups, it raises questions about the changing spatial landscape in the light of competing agendas and broader social processes.

2.2 SPACE

The existing space that emerges in the City of Johannesburg is one filled with many opportunities but, at the same time, growing insecurities. In the post-apartheid era there are now as many Johannesburgs as there are cultural identities. Each group experiences the city differently and all of these differences are real and valid. However, less confined by the straight-jacket of apartheid, group relations are more problematic (Tomlinson et al 2003) and insecurities higher. Insecurity is as much about the fear of crime as about crime itself; and the fear of crime can serve to mask other fears and insecurities as well, such as the fear of other races and social differences (Beal, Crankshaw and Parnell 2003). As mentioned by Harrison, Todes and Watson (2008), one of the greatest challenges for planning and transformation in South Africa is that of multi-culturism and the problem of dealing with planning issues in places increasingly characterised by social and cultural conflict.

Crime patterns within Johannesburg differ, as does the perception of victimisation. While Dirsuweit (1999) points out that not everyone in Johannesburg is dictated to by crime, according to an Institute for Security Studies victim survey in Johannesburg, victims of crime in Johannesburg generally believed the areas in which they lived were the most unsafe in the city and felt particularly vulnerable at night in their neighbourhoods (Louw, Shaw, Camerer and Robertshaw 1998). Studies have shown that the fear does not necessarily match patterns of victimisation, nor can they be associated with places where levels of crime are comparatively low. Many citizens, including those in Johannesburg, perceive themselves to be threatened by the chance of becoming victimised, whether they have been a victim of crime in the past or not (Shaw and Louw 1998).

2.3 NEED

Need is at the start of a purposeful process of urban re-development and transformation. This can include personal needs or desires. For example the need to create places out of playfulness or demand where groups of people force institutions to change existing spaces. The concept should, therefore, be understood in a broader sense than mere individual needs (Landman 2006). In this case it refers to the drivers and factors influencing the proliferation of gated communities in the city. Spatial transformation through gated communities in Johannesburg has been influenced by a number of factors. The main motivation behind the proliferation of gated communities in Johannesburg has been found to be crime and the fear of crime and hence the search for safety and security (Juergens and Landman 2005; Landman 2006; Fabiyi 2006; Harrison and Mabin 2006). The 1980s were characterised by great upheaval and unrest. A culture of violence swept through Johannesburg in the 1980s and 1990s and, consequently, many people fled the inner city and suburbs around the inner city in search of places promising greater safety and security. For those who could afford it, the security estate or "security park", as referred to by Hook and Vrodljak (2002), became the

ultimate destination to escape the insecurity, violence, crime and grime. Fife (2002) also identified security as one of the main reasons why young people invest in large luxury estates.

Fear of crime is a major driver for estate living, especially with perceptions that crime is higher in South Africa than elsewhere. Spatial control also becomes a way to enforce social control and community protection. The establishment of estates attempts to offer harmonious living for like-minded residents within a demarcated area through a comprehensive set of rules, regulations and controls. As a result, the aspect of safety and security is prominently highlighted on the websites advertising estate living, for example Dainfern and Midrand Estates:

> Residents of Dainfern Golf Estate and Country Club can take comfort in the knowledge that their Johannesburg real estate is located in a gated community and that it is a safe and secure place to raise a family. People often walk around the estate in the evenings to enjoy the clean air and views of the river and golf course that will leave you feeling revitalised. (http://www.pamgolding.co.za/areas/dainfern/dainfern.asp).

> Security is not only a dream, but a reality at Midrand Estates. There were only 8 incidents in an 8 year period within the estates. This phenomenal result is achieved by the following: The entire estate has two high walls with electric fencing with an open 5 metre patrol zone. There are video cameras at all entrances and alarm systems on the boundary walls. The estate employs a security force of 200 guards. (http://www.pamgolding.co.za/lifestyles/prop-dev-midrand-estate.asp?complex_code=5054&Dev=True)

The search for safety and security is addressed and the feeling of safety enhanced by a large number of security measures. Interestingly, safety and security is also the most important factor influencing the choice and success of affordable medium-density mixed housing developments, as indicated in a CSIR study. These projects included a number of affordable gated housing projects in the inner city of Johannesburg. In the other two projects located in Johannesburg, both medium-density mixed neighbourhoods, residents continued to ask for more security measures such as target-hardening and security patrols (Landman et al 2010). The study was subsequently repeated by a number of final year students from the University of Pretoria to broaden the number of case studies and, again, safety and security was highlighted as the most important critical success factor in medium-density mixed housing. This also included Melrose Arch in Johannesburg, a medium-density mixed 'semi' gated community which allows access to the public, but under strict conditions of control and surveillance from private security.

In addition, a number of other motivations for gated communities have been highlighted, namely insecurity regarding the changing political systems, a reaction to government's inability to provide timeous and effective service delivery, financial security and the search for a specific lifestyle. With the fall of apartheid, residents of traditionally white neighbourhoods within the City of Johannesburg felt threatened by the new political system and uncertain about their future and what it may hold. As a reaction to this, many neighbourhoods were closed-off and residents started neighbourhood associations (Fabiyi 2006; Harrison and Mabin 2006; Dirsuweit and Wafer, forthcoming). This ensured that the residents maintained power over their neighbourhoods and resulted in the residents distancing themselves from the "new" political agendas and focusing their energy on creating new identities within the enclosed space (Dirsuweit and Wafer, forthcoming). It has also been found that residents enclose their neighbourhoods in response to local government's inability to supply proper services and safety to the neighbourhoods (Landman 2006).

Another motivation included sound financial investment. Fife (2002) points out that this is also one of the main reasons why an increasing number of young people (aged between 30 and 40) choose to live in a security estate such as Dainfern Estate. He points out that secure clusters or golf estates have proved to be great investments. This is also reflected on the estate websites, for example Aspen Estate:

> *Aspen Nature Estate is uniquely located. 'Far enough' and yet close enough to the CBD to make commuting convenient and pleasant. With South Africa's ever increasing housing demands, estates like Aspen will become extremely scarce in the very near future. One can't go wrong by investing in a location with such an incredible advantage. In a world where people jostle one another for a secure and pleasant place to reside, Aspen Nature Estate will not disappoint you. (*http://www.aspennature.co.za/).

This reflects the emphasis on security and a pleasant environment. In this way the need for safety and security is combined with the establishment of a specific environment to cater for a unique lifestyle usually associated with proximity to nature. This is evident in the following excerpts:

> At the end of the day, when you have left the work environment and head for home, you look forward to relaxing in a place of tranquillity and comfort, away from the problems and stress of the workplace. That is the beauty of Aspen Nature Estate. Instead of miles of highway, surrounded by concrete jungles, you suddenly find yourself among green hills, trees, flowers and parklands and instantly know that you have 'come home'.... you are in a world set apart! (http://www.aspennature.co.za/).

> By blending the much appreciated and honest, yet unpretentious, European influenced architecture of Avianto with responsible environmental design and best green building principles within a Highveld country ambience – Avianto is creating an exciting and unique property investment opportunity focused on those who wish to live their dream. The planning of the integrated estate revolves around creating a perfectly enjoyable and secure family lifestyle within a beautiful and sensitive environment. (http://www.pamgolding. co.za/lifestyles/prop-dev-avianto.asp?complex_code=4985&Dev=True)

The attraction to estates is further enhanced by immediate access to various amenities and facilities within reasonable distance of the City of Johannesburg. This is again reflected on the various websites. For example, as related to Aspen Estate:

> Be part of the select few who escape the imprisoned lifestyle of suburban living. Make your home among the natural wetlands, lakes and parklands of the estate, away from the hustle and bustle of the city life. Aspen is remote enough to give you that 'away from it all' feeling and yet still allows you to be within easy access of modern conveniences. (http://www.aspennature.co.za/).

2.4 IDEAS

Dewar and Uytenbogaardt (1991) point out that *idea* translates the need and requirements into defined physical relationships. This idea, however, needs a specific context and process to make it a design – i.e. to concretise it into form. Considering the nature and characteristics of different types of gated communities in Johannesburg, there are a number of design ideas and planning trends influencing the development. These include the concept of Crime Prevention through Environmental Design (CPTED), the Urban Village Concept combined with traces of 'eco-living' and the creation of a new 'safe' suburbia.

CPTED has been implemented by many countries in the world and refers to the notion that specific interventions in the built environment can reduce opportunities for crime. Jane Jacobs was the first to promote 'eyes on the street' and hence the concept of surveillance and visibility. Oscar Newman introduced the idea of 'defensible space' based upon the concept of territoriality. This is achieved through an emphasis on target hardening. For example installing fences around housing estates and introducing access control. Alice Coleman (1989) supports the segregation of land uses and the creation of single use territories to reduce the opportunities for crime. She also recommends access control to ensure a defensible space. She advocates

limited, or no, communal play areas, as these may constitute "confused space" which limits territoriality and ownership. Poyner and Webb (1992) also promote the separation of conflicting land uses. In addition, they promote a number of target-hardening measures which include locking security, high fences at the side and rear boundaries of plots, a secure gateway at the front of the house and measures of access control, including limited road access and avoidance of through pedestrian routes (Landman 2008). Although the work on CPTED resulted in different streams of interpretation and intervention (Landman 2009), it is clear that the outcome of this particular stream had a direct influence on the nature and characteristics of gated communities to reduce opportunities for crime. The next sub-section will clearly show how a number of target-hardening measures and land use practices utilised in gated communities in Johannesburg reflect the CPTED ideas.

Another influential idea, which especially contributed towards the creation of security estates, is the Urban Village Concept, although in an adapted format. It is, therefore, not so much centred on a replication of the spatial characteristics as advocated in the UK and USA, but rather in terms of the intention to create urban villages in the city (Landman 2008). As Franklin points out (2004:4), the term "urban village" has become part of the contemporary lexicon of urban development across the globe and yet it has a multitude of meanings in practice. At the centre of this resistance to stable definition lies the contradiction inherent in the juxtaposition of "urban" and "village". In many cultures the word "village" connotes the qualities of rurality, tradition, continuity, rootedness, security, kinship, community, simplicity and harmony with the environment. This city reflects the opposite – a place of complexity, disconnection, transience, risk, danger, rootlessness, exploitation, progress and urbanity. However, to some country dwellers, the city is a place of fear and revulsion and is to be shunned. On the other hand, to selected city dwellers, the country is a place of poverty and backwardness to be avoided. For many village inhabitants there is a desire to escape and explore the adventures of the city, while many urban inhabitants view the village as a symbol of some idyllic place and time to which they will return some day. In this way the "good" aspects of the city and village are conceptually combined and captured in the idealised "urban village", while the "bad" qualities are rejected (Franklin 2004:4). As such, a number of gated communities in Johannesburg aim to recreate a rural atmosphere and lifestyle within an urban context, while still being close enough to the opportunities presented by large metropolitan cities. In some cases, this yearning for 'country-life' is combined with the increasing emphasis on urban sustainability. Consequently many security estates promote greater sustainability through a focus on 'eco-living', including the preservation of scarce natural resources and living in harmony with nature.

In addition, some of the gated communities have also been influenced by old trends in planning, but retrofitted with a new hat. This refers to the establishment of a new 'safe' suburbia behind gates. Although some of these characteristics can be found in a few estates, this is especially true of enclosed neighbourhoods. Existing areas are closed off in retrospect for the purpose of security, allowing all the benefits and original attraction of a suburban home, but adapted to address crime and the fear of crime within Johannesburg. Gated communities in Johannesburg are, therefore, influenced by different ideas and planning trends; with some ideas playing a stronger role in certain types, as will become increasingly evident in the remainder of this document.

2.5 FORM AND ORDER

In a city, order is represented by the structure that organises urban elements and form which, in turn, facilitates actions. In this way it provides people with a sense of orientation. It also becomes the guiding force that provides a foundation to accommodate changing needs in terms of land use and built form. The initial spatial layout and form serves as a framework to which people react over time, to ensure a diverse and complex environment through transformation and enrichment.

As a response to the expectations and needs of a range of stakeholders and a combination of various ideas, different types of gated communities have emerged in Johannesburg. Issues of crime, violence and insecurity

are invoked to justify creating fortress enclaves and controlled spaces for different land uses. These range from shopping malls and office parks to predominantly residential gated communities such as enclosed neighbourhoods, large security estates, medium-income secure townhouse complexes, gated affordable housing complexes and even the gated ghettos of the poor according to Beal, Crankshaw and Parnell (2003). Examples are some of the hostels in Soweto.

However, despite an increasing body of literature on gated communities, there is a lack of agreement on the definition of gated communities. This is the case internationally, within South Africa and even within Johannesburg. While some urbanists only consider security estates as gated communities, others also include enclosed neighbourhoods and/or townhouse complexes. Some even refer to hostels as 'gated ghettos for the poor' as mentioned above. If, however, one maintains a focus on the spatial and returns to the physical roots of the term "gated community" or "neighbourhood", it clearly refers to the physical characteristics of the area. Hence, a gated community can be defined broadly as a physical area that is fenced or walled off from its surroundings – either prohibiting, or controlling, access to these areas by means of gates or booms. In many cases the concept can refer to a residential area with restricted access, so that normal public spaces are privatised or their use is restricted. It does not, however, only refer to residential areas, but may also include controlled access areas for work, commercial and/or recreational purposes (Landman 2006).

Bearing in mind this definition,it is possible to distinguish between two broader types of gated communities in Johannesburg – namely enclosed neighbourhoods and security villages (considering 'village' in a very broad sense). Enclosed neighbourhoods refer to existing neighbourhoods that are closed-off for security purposes, while security villages or developments include new private gated developments with a variety of land uses, depending on the sub-type. As indicated in Figure 2, these sub-types range from large estates to medium and smaller gated townhouse complexes and apartment complexes and can even include predominantly non-residential gated or security parks with a range of different land uses. Following is a more detailed discussion of each of these types and sub-types.

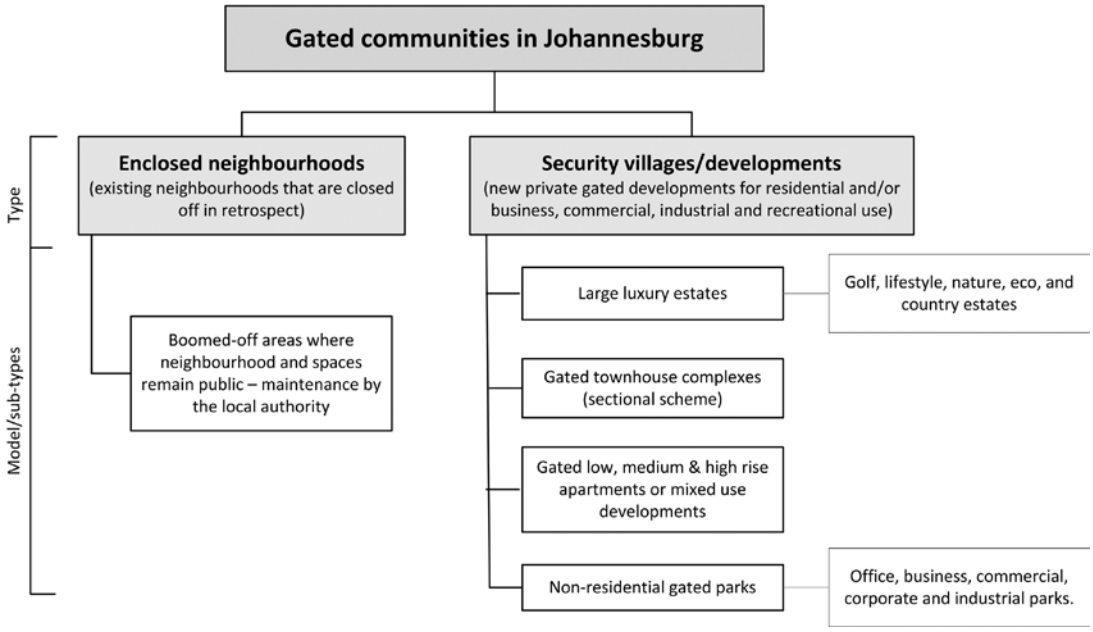


FIGURE 2: Different types of gated communities in the greater Johannesburg area

a) Enclosed neighbourhoods

Enclosed neighbourhoods refer to existing neighbourhoods that have controlled access through gates or booms across existing roads. Many are fenced or walled off as well, with a limited number of controlled entrances/exits and security guards at these points (Figures 3 – 8). The roads within these neighbourhoods were previously, or still are, public domain, depending on the model used. There are two models of enclosed neighbourhoods in South Africa. These include a public approach, a private approach, a combination of the two, or both. Municipalities may support one of the two, a combination of the two, or have both approaches from which residents can then choose. The implications of these two approaches are very different. According to the public approach, the roads, parks and sidewalks are still owned by the local authority and the local authority is, therefore, responsible for the maintenance of these areas. If the areas have, however, been taken over by the residents' association, these areas become private space and the residents are responsible for their maintenance, giving rise to a private approach (Landman 2000; 2006). Within the City of Johannesburg, only the public approach is possible.



FIGURE 3: A road closure as part of an enclosed neighbourhood in the central to northern parts of Johannesburg, indicating a side gate that is permanently closed to restrict access into the neighbourhood.



FIGURE 4: A sign with emergency contact numbers next to the gate. This is especially important to assist emergency services of the city.



FIGURE 5: An enclosed community with four different gated townhouses within the enclosed area. This enclosed community is located in the northern suburbs of Johannesburg



FIGURE 6: An enclosed community which comprises freestanding houses. This is the only entrance into the enclosed area. This enclosed community is located within the eastern suburbs of Johannesburg

As is evident from Figure 9, most of the enclosed neighbourhoods are located in the north of greater Johannesburg.

Since 5 March 1999 the Rationalisation of Local Government Affairs Act, No 10 of 1998, enabled communities in Gauteng to apply to the local authority for the restriction of access to public places for security and safety purposes. As a response to both the Act and the huge demand from communities in Johannesburg, the City of Johannesburg developed a policy on access restriction to ensure that this Act is interpreted correctly and to guide residents and officials of the City of Johannesburg towards achieving the goals as intended by the Act.

Enclosed neighbourhoods also have different implications for accessibility. According to the South African Constitution it is the right of all people to have access and free movement to all public space. The important issue is whether the enclosed area remains under public control or is taken over as "private space" by the residents' or homeowners' association. If the enclosed area stays under public control, all people have the right to enter the public spaces.



FIGURE 7: An enclosed community in the eastern suburbs of Johannesburg comprising freestanding houses with their own private fencing.



FIGURE 8: An enclosed neighbourhood with security booms and a security guard. Access into these enclosed communities is not as stringent, so anybody can easily enter into the area.

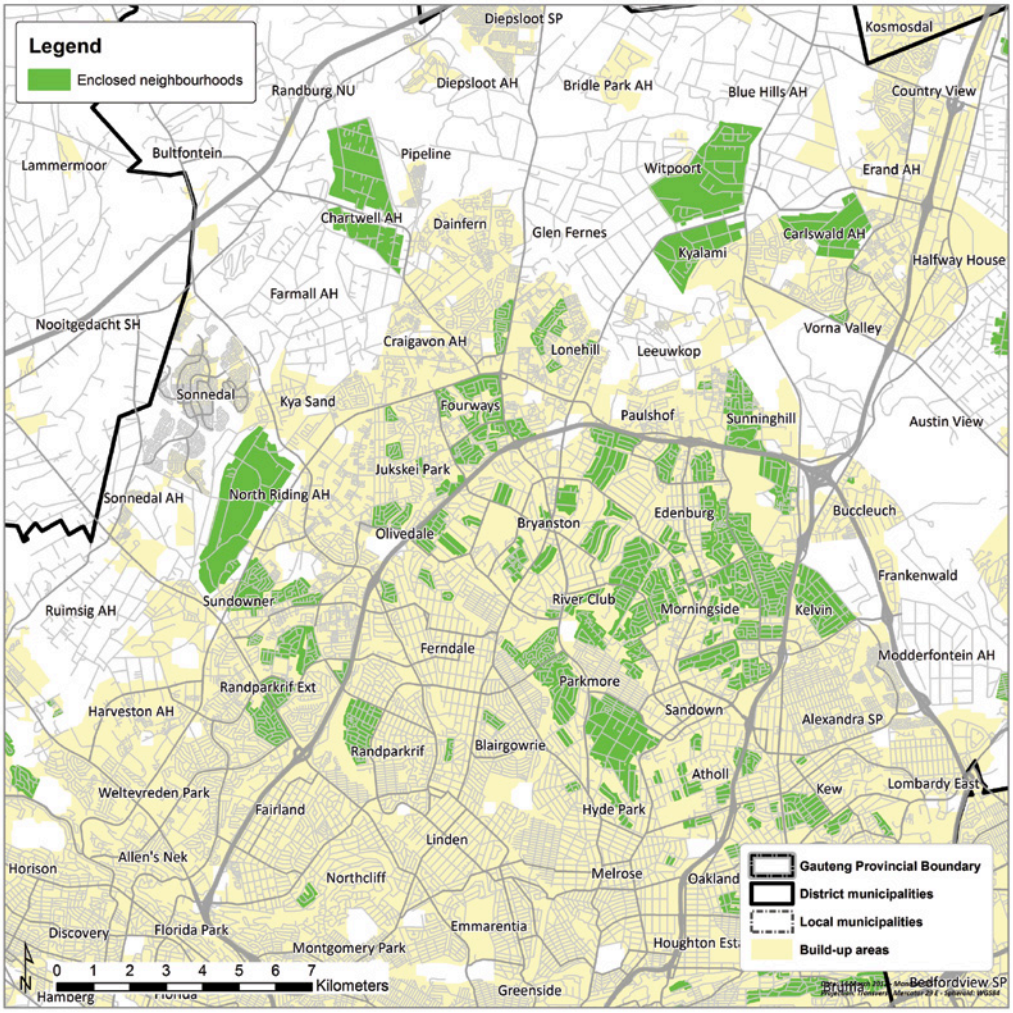


FIGURE 9: Distribution of enclosed neighbourhoods in the greater Johannesburg area

b) Security estates

The website, *Estate property developments* (http://estata.co.za/propertydevelopments), identifies a number of different types of estates in South Africa. These include coastal estates, golf estates, nature estates, lifestyle estates, senior estates and wine estates. Although they do not provide any definitions of these types of estates, a comprehensive list of examples is provided, which starts to point towards certain characteristics of these estates. From these examples, the website identified the presence of only three types of these estates in Gauteng and, more specifically, in the greater Johannesburg area. They include golf estates, nature estates and lifestyle estates. However, it is likely that these definitions are used more for advertising purposes – as some estates are listed under both nature and lifestyle estates. Examples are Mogham Farm, Olive Crest and Blair Athol Estates. Afrigis uses a slightly different system of classification and refers to Country, Eco, Fly-fishing, Private and Residential Estates and Retirement Villages (see Figure 17). As estates are private developments, it is not clear what the difference is between private estates and the other. In addition, the other types of estates also include residential land use. This highlights the difficulty in trying to identify the differences between different types of estates. It would almost be more appropriate rather to use the key characteristic (i.e. a golf course) to classify the different estates.

Supported by additional information from other websites as well as previous studies and field observations in the city, it is possible to identify three major types of estates in Johannesburg– namely golf estates, nature or eco-estates and lifestyle estates. There is, however, not always agreement on the interpretation of the type of estate. Some golf estates are also classified as golf and country estates (for example Dainfern) or as golf and nature estates (for example Blair-Athol estate). Others are exclusively classified as country estates (for example Arlington Estate). In some cases estates are classified as both nature and lifestyle estates (for example Olive Greek Estate). A typical example from each of these types will be discussed briefly.

i) Golf and/or country estates

Golf Estates, as the name suggests, are mainly characterised by the presence of a golf course within the boundaries of the estates. One of the most prominent golf estates in Johannesburg is Dainfern, which is designed around the Jukskei River and the golf course (Figure 10). The entire estate comprises a number of smaller neighbourhoods, each with its own name and particular atmosphere. The character of the neighbourhoods is also reflected in their names – for example Riverwood, Sherwood, Fernwood and Woodlands. This reflects a search for a rural or country village within an enhanced natural environment, as well as a nostalgia for faraway places – namely England in this case.

Dainfern offers a wide range of services to its residents, ranging from intensive security services to water and garden services. The estate has a 24-hour, seven-day-a-week security service supported by a leading paramedic service provider, whose company guarantees a response time of 15 minutes or less. Safety and security are ensured through a system of strict access control at the two manned gatehouses and entrance gates. Residents are issued with their own access cards and make use of a separate lane to ensure fast access. All visitors are required to make use of the visitors' lane and are only admitted on a resident's prior notice or after telephone authorisation on arrival.

The estate also provides access to wide range of facilities and amenities to its residents, including a country club, golf course, pavilion, nature club, garden club, a private college and a wide range of other sports facilities. Homeowners have the privilege of automatic membership of the country club with its facilities which include a restaurant, members' bar, four tennis courts, two squash courts, two swimming pools and a volleyball court. A multi-purpose oval caters for soccer, rugby and cricket in the appropriate seasons (www.dainfern.com). These are all located in close proximity to the clubhouse which is a major focal point in the



FIGURE 10: The design and layout of Dainfern
(Source: www.dainfern.com)

design and serves as the main social gathering space inside the estate. It accommodates a wide range of functions including administrative functions, entertainment facilities (verandas, restaurant and conference facilities) and commercial functions, such as the golf shop. The estate also has its own educational facility consisting of a preschool, primary school and high school.

In 2003 more than 1,157 homes were constructed, with 46 under construction. Houses range from 450m² to over 800m², and are sited on plots which range from 790m² to 1600m². Dainfern has various styles and sizes of houses. The smallest house (170m²) will go for approximately R1,8 million and the largest (1,200m²) will set you back about R15 million. Generally stands are between 200 and 1,150m² (McDonald and Aarde 2009).

ii) Nature / eco-estates

Both the terms "nature" and "eco"-estates are used to advertise the benefits offered by these types of developments. One of the main features is the proximity to nature and the incorporation of many natural elements and sometimes wildlife as well. One of the prominent nature estates is Aspen. The estate is designed around a number of soft open spaces with a river running through the estate and beautiful, unspoilt countryside – complete with rolling hills, lakes, parks and walking trails (Figure 11).



FIGURE 11: Aspen Estate
(source: http://www.aspennature.co.za/).

Aspen Nature Estate is protected by a leading security company. The estate installed advanced access security and perimeter protection, Advanced techhnology systems monitor boundaries and access to all entrances 24 hours a day. There is also a 24-hour armed response vehicle patrolling the estate. A Security Commitee has also been formed whereby voluntary residents play an active role in upholding the high levels of security and awareness (http://www.aspennature.co.za/).

There are a variety of houses of different sizes and styles within the estate. Stand sizes range from 600 to 1,200m² and are available now at competitive prices. Charming streetscapes integrate the public and private areas to create a park-like ambience. Architectural specifications have been sensitively formulated to maintain the aesthetics and to ensure that all homes blend into the surrounding countryside. The intention behind the specifications is to ensure that home owners enjoy the benefits of a well-organised, secure residential area with sustainable and enhanced future property values. The Aspen Hills Home Owners Association has the right to alter or amend the specifications or controls from time to time to maintain the environmental quality and distinct character of the residential estate(http://www.aspennature.co.za/).

iii) Lifestyle estates

These are estates where characteristics of golf/country estates and nature estates are combined with an emphasis on amenities and facilities that accommodate a specific lifestyle.



FIGURE 12: Entrance to a luxury estate located in the north of Johannesburg (Midrand). There are separate entrances for residents and visitors and entry is controlled by private security guards and boom gates.



FIGURE 13: Side entrance to a large luxury estate in the north of Johannesburg. This estate has more than one entrance controlled by private security guards and boomed gates.



FIGURE 14: Entrance to a 'luxury' gated housing estate located in the eastern suburbs of Johannesburg. Each house on the inside of the gated community has its own fence. The security within this estate is quite stringent where the residents are phoned by security guards before visitors can enter.



FIGURE 15: A luxury gated community that is very stringent with residents having access by means of access cards. Before visitors can enter into the area, the security guards phone the residents to ask permission. This gated community is located in the northern suburbs of Johannesburg.



FIGURE 16: A luxury gated golf estate that is very stringent. Residents have access cards and before visitors can enter into the area, residents are phoned to give permission. Before private golfers can enter into the area, the pro shop is phoned to confirm the golfer's booking. Each house within the gated community has its own private fence. This luxury golf estate is located in the northern suburbs of Johannesburg



FIGURE 17: A luxury gated golf estate. The residents have access cards and visitors have to sign a register and are given visitor access cards. This housing estate consists of a variety of housing types, with townhouses and freestanding houses. This golf estate is located in the northern suburbs of Johannesburg.

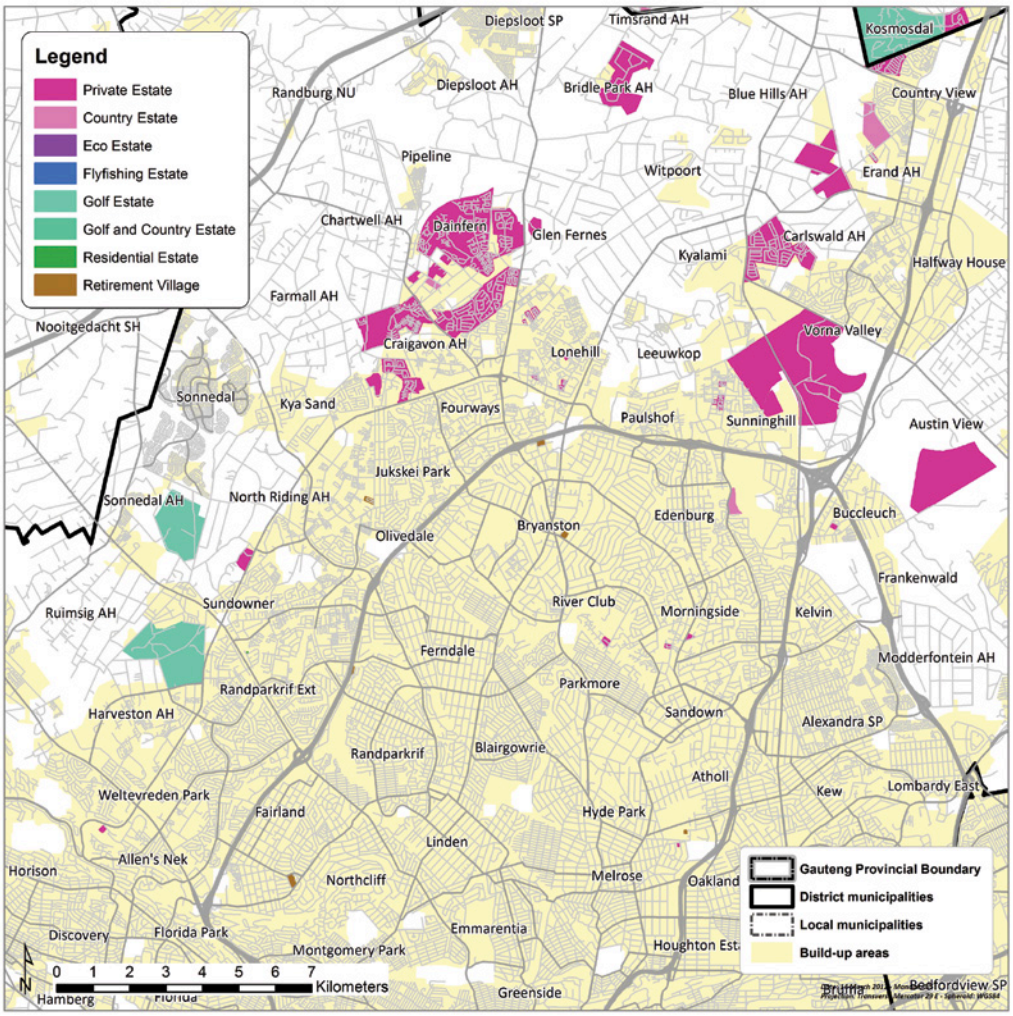


FIGURE 18: Distribution of security estates in the greater Johannesburg area

In summary, different types of security estates in Johannesburg are mainly located on the urban periphery, in close proximity to natural elements such as a river, dam(s), pond(s) and/or luscious vegetation and often with a view over the countryside (Figure 18). Entrance is strictly controlled by a range of security measures such as perimeter walls or fences with electric wiring in many cases, surveillance cameras and alarm systems, access control by means of booms and/or gates and security patrols. Most entrance gates constitute very formal structures and start to reveal the identity of the estate through the size and the architectural style. There is also a variety of amenities and facilities present, ranging from sports facilities such as golf courses, cycling and walking routes to clubhouses with small shops and/or a private school on site.

c) Secure townhouse complexes

Secure or gated townhouse complexes refer to sectional title schemes that are fenced or walled and have controlled access through a gate and sometimes a boom-gate as well. This entrance can be operated through remote-control and/or managed by a private security guard, depending on the size of the complex and the level of income of the residents (Figures 19-22). These complexes range from luxury villas in secure complexes to smaller units catering for the lower to middle class in Johannesburg. The units are mostly single or double storey with a separate entrance at ground level.

The complexes are governed by the Sectional Titles Act, which defines common property as that part of a sectional title scheme which does not form part of any section. "Examples of common property are driveways, parking bays and garages, private gardens and gardens, swimming pools, corridors, lifts and entrance foyers to name a few. Some parts of the common property can be designated as exclusive use areas under section 27 or section 27a and allocated to a particular owner for exclusive use" (Sectional Title Act, http://www.ihfm.co.za/ihfm/faqs.php?fcid=1).

Sectional title schemes or townhouses are located throughout the greater Johannesburg area and tend to conglomerate in larger bands along major highways, including the Ring Road and the N1 north (Figure 23).



FIGURE 19: A secure gated townhouse located in the far northern suburbs of Johannesburg. Access is controlled and the entire perimeter is protected by a wall and electric fencing. The architectural style of the wall also contributes to the identity of the complex.



FIGURE 20: A gated townhouse surrounded by a solid wall. The security is very stringent with security guards, key codes, booms, a security fence and CCTV cameras surrounding the place. This townhouse is a three storey walk-up and located in the northern suburbs of Johannesburg.



FIGURE 21: A three storey townhouse located in the northern suburbs of Johannesburg. The security consists of access cards, CCTV cameras, fencing and booms.



FIGURE 22: A luxury gated townhouse surrounded by a solid wall. The security is very stringent with security guards, key codes, booms, a security fence and CCTV cameras surrounding the place. This townhouse is a two storey walk-up and located in the northern suburbs of Johannesburg.

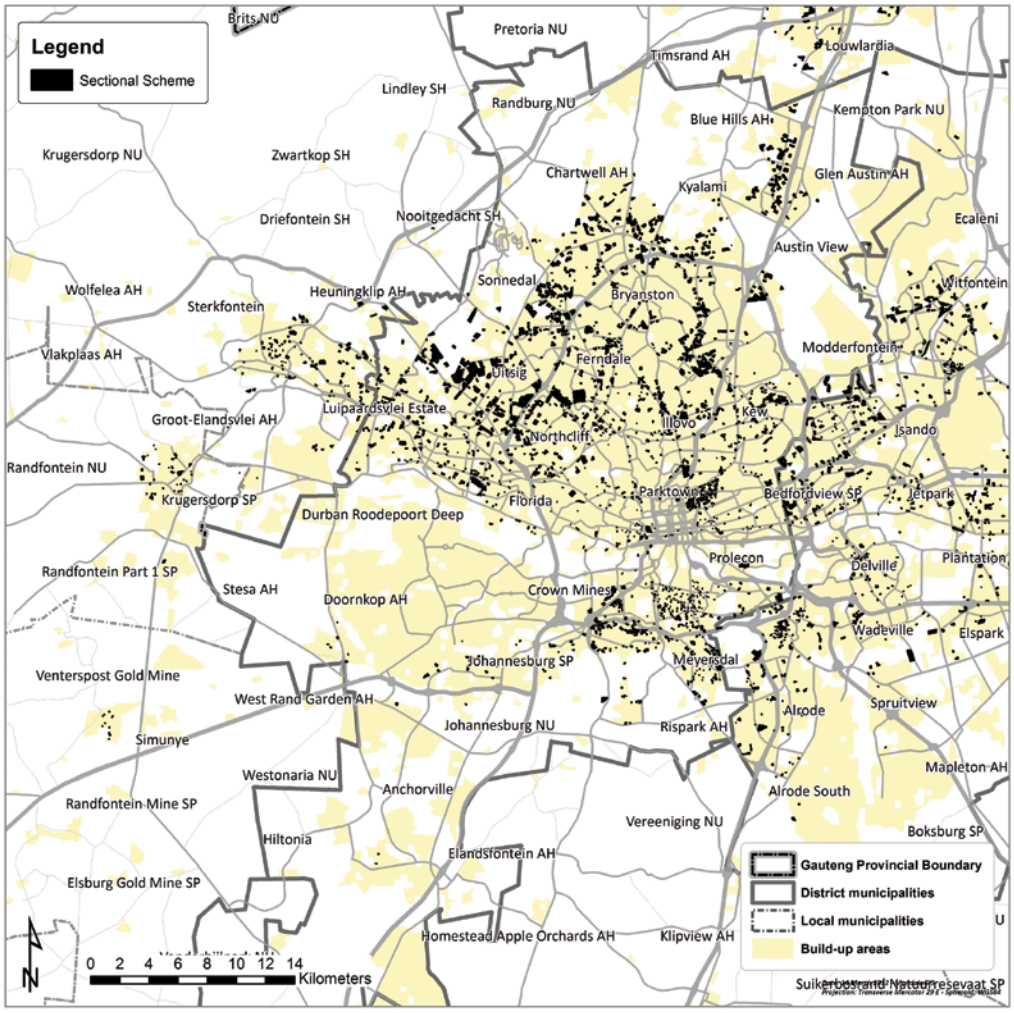


FIGURE 23: Different types of townhouse complexes or sectional title schemes in the greater Johannesburg area

d) Secure apartment blocks

Secure or gated apartment blocks are fenced or walled and have controlled access through a gate and/ or boom-gate. The entrances are operated by remote control or managed by private security guards. These blocks or complexes can range from large luxury apartments and those catering for the upper middle classes (Figures 24 – 27) to gated apartments for the lower income groups, including affordable and low income housing units (Figures 28 –30). There is even an example of very low income housing units were the security guard house is much larger than the rooms which are let to low income earners (Figure 31). The entire complex is protected by a fence with strict access control through gates and enforced by security guards.





FIGURE 24 and 25: These two images show four storey apartments surrounded by a solid wall and the security consists of a security guard and booms. People residing in the area have remotes to open the booms and visitors have to sign a register. This development can be found within the northern suburbs of Johannesburg.

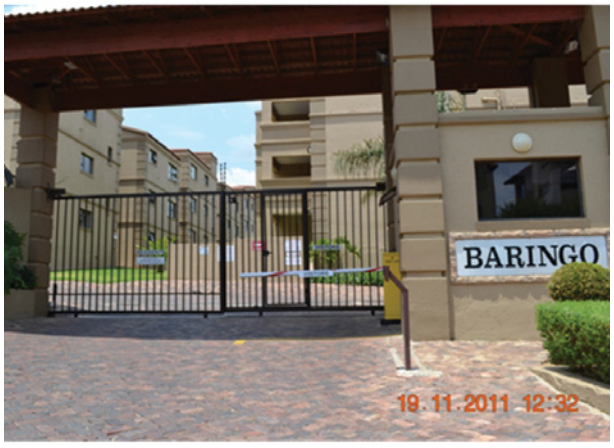


FIGURE 26: This image indicates a three storey walk-up, covered by a blank frontage. The security measures are quite stringent with security gates, a boom and a security code upon entrance. This gated townhouse is situated within the northern suburbs of Johannesburg.



FIGURE 27: A block of four-storey walk-up apartments located in the far northern suburbs of Johannesburg with access control and perimeter walls with electric fencing.

In addition, there are vertical gated apartment blocks in the inner city of Johannesburg which are increasingly catering for professionals during the week. They have strict access control and residents are even forced to hand in their identification documents upon entry. Some of these apartments are governed by the Sectional Titles Act, while others are managed as social housing schemes. The apartment blocks vary in size. They may include individual four-to-five storey blocks scattered on the site or larger perimeter blocks that start to define the street space or even blocks with separate rooms and communal bathroom and kitchen facilities for very low income earners.



FIGURE 28: Entrance to a secure affordable housing complex in the inner city of Johannesburg (also see Figure 29). Access is controlled through perimeter fencing, gates and security guards.



FIGURE 29: Entry into this affordable housing project is controlled and pedestrians have to pass through security and either have a resident's card or state the purpose of their visit.



FIGURE 30: Entrance gate and guardhouse to a large mixed-income housing complex in the inner city of Johannesburg. Access is controlled through gates and security guards with CCTV surveillance cameras.



FIGURE 31: Gated village with secure affordable rooms to let in Alexandra, Johannesburg. Access is controlled through perimeter fencing, gates and security guards.

e) Secure office parks and mixed developments

Gated communities in Johannesburg are, however, not only restricted to residential land use but also often include other land uses such as business, commercial and even industrial. These can also vary in size from a small urban block to large office or commercial parks. These developments are fenced or walled and have controlled access through a gate and/or boom-gate. The entrances are usually manned by private security guards requiring identification and purpose of visit from potential visitors. Afrigis distinguishes between the following sub-types: Business Estate and Park; Commercial Park; Corporate Park; Industrial Estate, Park and Village; Production Park; Office Block, Court, Estate and Park (Figure 34). The majority of these types are located in the northern part of the city along major transport routes – with the largest concentration along the N1 in Midrand.

In addition there are also gated communities, although limited in number, which start to incorporate a broader mix of uses. An example is Melrose Arch in Johannesburg. Although, strictly speaking, any member of public may venture into the area, it is strictly controlled by private security guards who monitor all movements of people. In this sense it starts, therefore, to resemble other private spaces open to the public which are strictly controlled, such as shopping malls. However, in another sense it also resembles enclosed neighbourhoods where the public may enter but under strict surveillance.

2.6 PRODUCTION AND MANAGEMENT

As mentioned earlier, many people influence the modification of space. In this sense it is also necessary to understand the production and management of space in a wider context. Cities are produced and reproduced, constantly changing and transforming to address emerging needs and accommodate new ideas. The concept of the production of space has a central role in Lefebvre's thinking: "space as social and political product, space as product that one buys and sells" (Lefebvre 1991). He argued that the organisation of environment and society and the layout of towns and regions are all dependent on the production of space and its role in the reproduction of the socio-economic foundation.

As discussed before there are two types of gated communities – namely enclosed neighbourhoods and security villages or developments. The two follow different approaches towards the production of modified space. In the case of enclosed neighbourhoods, residents in Johannesburg have to apply for permission to close-off the area in terms of the policy for access restriction. The policy (2003:5) states that the preferred long-term solution to combating crime is the conventional solution of:

- Encouraging the public to take all reasonable measures to protect itself;
- Discouraging crime by measures to increase employment and reduce poverty;
- Discouraging crime by a visible and effective police force;
- Discouraging crime by the active identification and prosecution of criminals.

In the short-term the following specific street-related security measures are supported by the City, namely:

- Purpose-built, privately-controlled cluster homes, office parks and industrial parks – provided these are not so large that they interfere with mobility within the city.
- Street guards only, with no access restrictions.
- Closed circuit TV surveillance.
- Security access restrictions in accordance with the Gauteng Rationalisation of Local Government Affairs Act No. 10 of 1998, Chapter 7: Restriction of access to public places for safety and security purposes and in terms of the City of Johannesburg's Specification and Procedures or what has been referred to as enclosed neighbourhoods.

In addition, security companies are also required to sign a declaration that personnel manning the access control points will only monitorand observe activity. In line with the requirements of the South African



FIGURE 32: Entrance to secure office park near Wanderers, Colette Drive



FIGURE 33: Entrance to Melrose Arch – secure mixed development

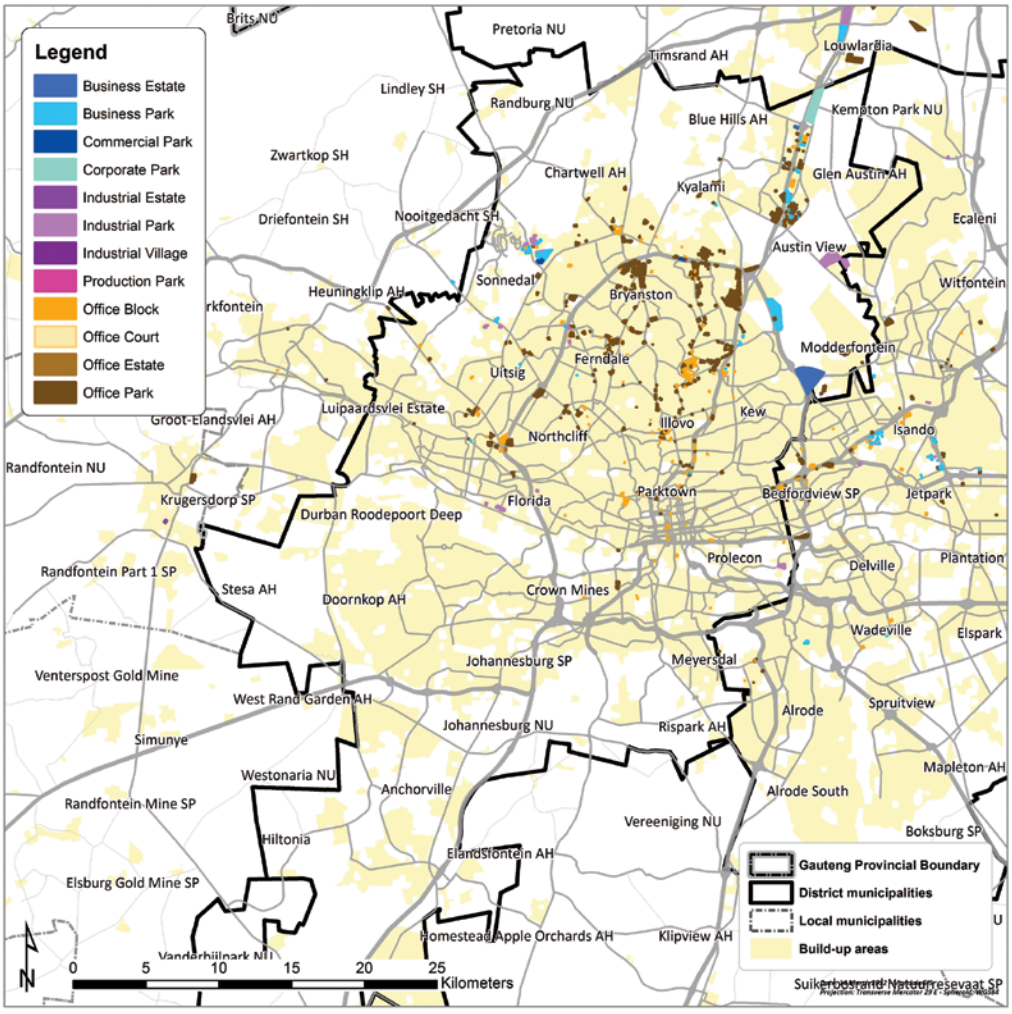


FIGURE 34: Different types of non-residential gated communities in the greater Johannesburg area

Constitution, they may not search vehicles or people, may not require the filling in of a register or supplying personal information nor delay traffic other than the absolute minimum required to open any gate, or boom. In other words, no person or vehicle may be denied access to any area, at any time and the public should have access to the area at all times. Unfortunately, this does not always happen in practice and, due to the large number of enclosed neighbourhoods, these rules are rarely enforced.

The policy further requires that at least two thirds of the residents in the area should support the application. The application has to include a traffic impact assessment and a motivation for closure in terms of the current crime patterns. It also requires that all those affected should be consulted and that their comments should be considered. Applications are lodged at the Johannesburg Road Agency (JRA) and if it adheres to the criteria stated in the policy and there are no (or limited) objections to the closure, it is likely to be approved. It may, however, mean that one third of the residents or residents from the surrounding areas do not support the application, which often leads to conflict between different groups in the community and conflict between community members and the City, depending on which side they support and whether the application is approved or denied. The management and operation of the enclosed neighbourhoods are carried out by a homeowners' association. As the process is managed by the Road Agency, decisions are taken mostly from a technical point of view, with a focus on operational aspects. The establishment of enclosed neighbourhoods has never really been taken on by the planning department and therefore tends to remain a road-related issue, with no direct acknowledgement of its potential impact on spatial transformation.

Security villages are private developments that are established by private developers. They obtain the land and the rights to develop the property and establish a new township or sectional title scheme. Developers of large security estates tend to make use of the process outlined in the Development Facilitation Act to develop these areas and are usually required to provide the infrastructure required. Once the houses or units are completed and the infrastructure installed, the units are sold to individual property owners. Depending on the nature of the development, the organisation and management is carried out by a body corporate in sectional title schemes and a homeowners' association in private residential estates.

2.7 MEANING

The form of the city embodies meaning and reveals something of the nature of the wider society. The meaning of particular parts of the built environment is not anchored permanently but floats in a sea of competing ideas, differing values and antagonistic political and economic forces (Short 1996:394). Meaning is not only conveyed through urban form or physical space, but also through images or perceptions of space, place or physical interventions. Short (1996) maintains that the city is more than a physical entity, more than just a place where people live and work. The city is a place symbolic of many things, representing a variety of things. The city is a work of imagination, a metaphor and/or a symbol where physical space/place can be considered through perspectives or myths that are totally a product of social construction.

a) Physical impact: control of space and access to it

As mentioned, gated communities represent the transformation of open space to closed space, which has a number of implications in terms of integration and accessibility. Larger gated communities in Johannesburg such as large security estates and office parks, as well as enclosed neighbourhoods, contribute to spatial fragmentation on a metropolitan and neighbourhood level. In this regard, Tomlinson maintains that implicated in the spatial transformation through gated communities is the rising residential fragmentation of the metropolitan area of Johannesburg. The dismantling of apartheid structures has led to greater residential mobility and heightened demands for security, bringing with it a new spatial segregation (Tomlinson et al 2003).

As large areas are physically closed-off, pedestrians and cyclists are displaced and forced to use the remaining open roads. While planners can still try to reduce the negative impact on private developments

and because many of the large estates are on the urban periphery, the impact on pedestrians and cyclists is not that severe. It is, however, the enclosed neighbourhoods that cause the controversy – as restriction of access to public roads impedes residents' constitutional rights. As soon as an enclosed neighbourhood has been implemented or erected, visible fragmentation occurs in the form of road closures. These road closures not only deny access to the neighbourhood, they also cause problems in terms of access and traffic congestion on main arterials, as well as displacement of traffic to neighbouring areas in Johannesburg. The greater the traffic congestion and the longer vehicles spend on roads, the more Greenhouse gases are released into the atmosphere (Bénit-Gbaffou, 2007). As a result, the report by the Human Rights Commission on enclosed neighbourhoods maintains that they cause social division, contribute to dysfunctional cities and lead to further polarisation of the city. The Human Rights Commission does not support the use of boom gates and gated communities. In addition, closing off existing roads also has an impact on the response rate of emergency services and service delivery as well as road maintenance, especially in the northern parts of Johannesburg.

In other cases, the rapid rate of development has impacted on service delivery. Chipkin (date unknown) points out that new gated communities (luxury estates and townhouse complexes) emerging in the north and north western parts of Johannesburg have developed at a tremendous pace, but the infrastructure has not expanded to accommodate the rapid growth. This has resulted in severe traffic congestion and lack of water and electricity supply.

b) Social impact: behaviour in, and use of, space

Different types of gated communities in Johannesburg also influence behaviour in, and the use of, urban space. Enclosed neighbourhoods hamper social integration as gates are erected around an existing neighbourhood of homogeneous households to exclude "others" and maintain the "integrity" of the neighbourhood (Fabiyi, 2006). This is a way of reinforcing apartheid or segregation, not so much in terms of race, but specifically in terms of economic class (Bénit-Gbaffou, 2007). Some commentators therefore maintain that enclosed neighbourhoods are thus associated with wealth (Dirsuweit and Wafer, forthcoming) and that security becomes a financial privilege (Hook and Vrdoljak, 2001). In fact, the majority of enclosed neighbourhoods are situated within the north of Johannesburg which contains the wealthiest areas in the country (Dirsuweit and Wafer, forthcoming). With regard to security villages/estates, luxury estates create the sense of exclusivity and autonomy for those who reside within them, creating an Utopian setting to live in whilst removing themselves from the city and the country's dynamics and struggles (Hook and Vrdoljak, 2001).

On the other hand, new developments and townhouse complexes are communities of great diversity as there is no historical connotation connected to the area, thus making it easier for residents to accept one another (Chipken, date unknown). It was also pointed out that gated communities do not only occur in traditionally high income areas nor do they cater exclusively for the rich. As security is a priority for everyone in the city, affordable gated and social housing complexes offer an alternative to many middle and lower income households that choose to reside in a gated housing complex (Landman et al 2010). This raises interesting questions around the debate on urban segregation and the division between those inside and outside gated communities.

c) Institutional impact and the reading of changed spaces

Tomlinson et al remarks that "in post-apartheid Johannesburg, spatial divisions persist, though no longer solely based on racial differences. In turn, these spatial divisions – as they did under apartheid – reinforce existing structures of privilege and make it difficult to create a just, democratic and egalitarian society" (2003:1), which is the expectation of many blacks and liberal whites embracing the "new" South Africa. Yet many blacks and lower income households also aspire to stay in a gated community for security reasons, raising questions around the norms and values that should guide future planning interventions and the position of local municipalities regarding the development of gated communities.

From a policy and governance perspective the challenge facing the new municipality in Johannesburg – given its vision – is, therefore, to incorporate the egalitarian and social justice impulses of the anti-apartheid struggle, while recognising the imperatives of global capitalism and its neoliberal mode of governance (Tomlinson et al 2003). There is a need to move away from a divided cities approach – where some people and places are interpreted as structurally irrelevant and others as globally powerful – to one where all cities are understood as complex, diverse and contested environments for living. This will require changes in the ways urban theory and urban policy-making are implemented (Robinson 2003).

2.8 RESPONSE

If one maintains that physical space embodies meaning and that meaning may be interpreted differently, it is fair to assume that different actors will not always respond in similar ways or, in the words of Short: "Between the production of urban form and its consumption falls the intervention of multiple, contested, changing readings" (1996:406). There is also a gap between different aspirations and what actually gets produced. Different groups, when passing through the public space of streets, learn different cues, scripts and performances. In some cases this involves pre-coded ideas or perceptions (Short 1996). Short (1996) points out that, in mixed economies, the production of the built environment is rarely the simple unfolding of market forces or the pure outcome of State actions. Rather, there is conflict, negotiation and tension between sets of agents working with different principles, goals and strategies or aspiring to different outcomes. For example the responses of different resident groups in cities (often from opposing viewpoints) and the response of the State.

The City of Johannesburg has responded to the demand for enclosed neighbourhoods through the development of a policy on access restriction for security purposes, which has already been discussed in section 2.6.

The public hearings on access restriction held in Johannesburg in 2002 offered an opportunity to all stakeholders to present their views. The hearings highlighted the contentious nature of gated communities and especially enclosed neighbourhoods as opposing groups, including a number of political parties, argued the merit of their case. While many pointed out the need for safety and security, others led an outcry against what was considered as fragmentary and segregating practises that further divided the city. Those in favour focused on positive aspects related to gated communities – namely crime reduction, safe places for children and community involvement; while those against highlighted the negative aspects – including the adverse impact on service delivery, urban management, spatial and social integration. Even within political parties there was a lack of agreement as to whether gated communities should be supported or not, which makes co-ordinated responses difficult. This dilemma is further unpacked by Harrison and Mabin (2006) who raise the difficulties faced by policymakers in the context of profoundly controversial and contested gated developments, and specifically enclosed neighbourhoods, in Johannesburg. They furthermore argue that the existing policy may only be a partial and temporary resolution to a deep contradiction. This illustrates that the transformation of space through gated communities is not without contestation. Changes in urban space lead to different reactions depending on the viewpoint and involvement of different stakeholders, as well as the position taken by particular policies.

The GSDF[1] also acknowledges the impact of gated communities in Gauteng, although the document only considers private residential estates. Both the disadvantages and advantages of residential estates are highlighted. The framework permits private estates located outside the outer development area, "as long as these developments are themselves ecologically conceived and sound, cost-neutral in terms of their infrastructural requirements from the province or local authority point of view, and do not 'privatise' the asset on which they are based and do not stray unduly from the asset" (GSDF 2010:180). However, private low density residential estates within the outer development area are not encouraged, but permitted if they comply with the principles and precepts of the GSDF and adhere to a set of criteria[2].

SECTION 3

THE PATTERNS OF SPATIAL TRANSFORMATION THROUGH GATED COMMUNITIES IN JOHANNESBURG

This section discusses the extent and distribution of different types of gated communities on various scales – in Gauteng, the City of Johannesburg and in the northern parts of Johannesburg – to identify the patterns of spatial transformation in and around the city.

3.1 GATED COMMUNITIES IN GAUTENG

The City of Johannesburg is part of the Gauteng City Region and can, therefore, not be considered in isolation from the other two major metropolitan councils and the rest of Gauteng. It is also likely that development patterns in these areas, especially the other two metropolitan areas, will have an influence on the emerging patterns in Johannesburg. The majority of gated communities in Gauteng are located in the north of Johannesburg, south-east of Tshwane and west of Ekhuruleni. These gated areas are highly accessible through a good road network and are in relatively close proximity to Oliver Thambo International Airport. In this way they tend to form a diagonal band across the province on the border of the municipalities where there is vacant land available for development and access to natural features (Figure 35).

In contrast, most of the townhouse complexes (sectional title schemes) and enclosed neighbourhoods are located within the built-up areas, while the private estates are located just outside the built-up areas on the urban periphery. As mentioned before, the estates are characterised by their inclusion of natural features and large amenities and facilities, which give rise to developers seeking large greenfield sites with natural features and space to develop facilities. Many of the business and office parks are also located just outside the built-up area and are often concentrated alongside a number of residential estates. This starts to create smaller pockets of private gated communities which are often located just adjacent to major transport routes and just outside the built-up areas. The most significant influence on spatial transformation on a provincial scale is, therefore, the development of vacant land on the urban periphery.

3.2 GATED COMMUNITIES IN THE GREATER JOHANNESBURG AREA

The gated communities in the City of Johannesburg are concentrated in the northern parts (Figure 36). While there are a few examples of townhouse complexes, one estate and one enclosed neighbourhood in the south, these are very scattered and do not have a significant impact on spatial transformation in the area.

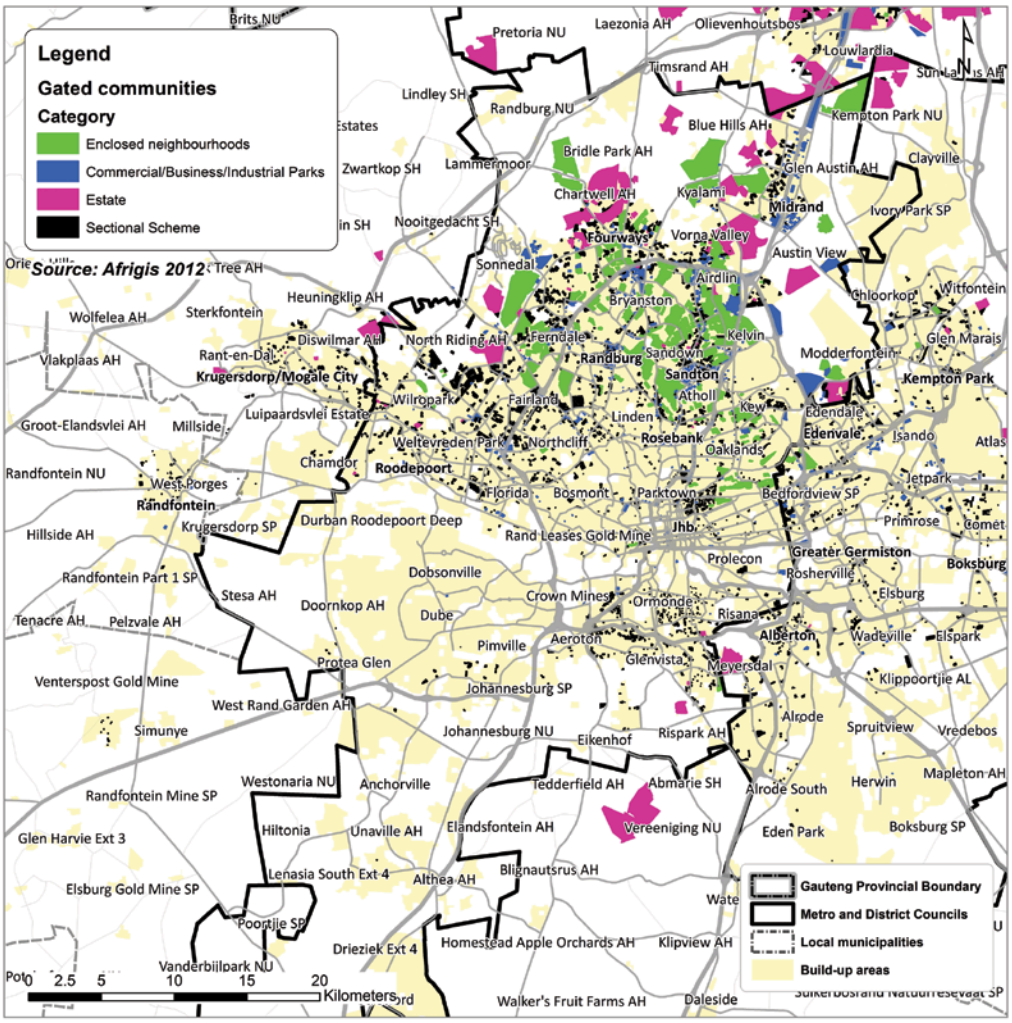


FIGURE 35: Gated communities in COJ with relation to the built-up areas in Gauteng

Enclosed neighbourhoods are mainly concentrated in the north, located predominantly in the inner ring formed by the Ring Road (N1 and N3 highways) and, to a large extent, west of the M1. There are also a number of enclosed neighbourhoods located just outside the Ring Road, just north-west of the N1 highway and a few large ones in Midrand and Chartwell. It is noteworthy that many of the enclosed neighbourhoods tend to occur in the more established older neighbourhoods of Johannesburg, closer to the Central Business District and within the Ring Road. The reconfiguration of these neighbourhoods starts to change the existing road patterns, from an often integrated grid, or skewed grid, system to a closed road network where the roads within these areas are only accessible through a limited number of entry points. This changes the urban fabric from a finer to a coarser grain and contributes to spatial fragmentation on a metropolitan scale, especially in the northern parts of the inner ring.

The estates are mainly distributed along the north-western edge of the metropolitan area, showing about 10 large security estates in Midrand, Fourways, North Riding and Ruimsig. These estates are outside the built-up area and therefore extend the built-up area into the surrounding landscape. This may threaten high potential agricultural land and/or transgress the COJ urban edge, thus impeding attempts at urban consolidation or compaction. It therefore transforms the existing natural landscape into inaccessible pockets of development across the landscape. This is especially concerning as the amount of undeveloped land in the City of Johannesburg is very limited.

The townhouse complexes are scattered over a much larger area, stretching from the inner city of Johannesburg to the north, west and – to a lesser extent – to the east. Smaller pockets or concentrations of townhouses also occur around certain intersections or alongside a major road. Examples are just east of the inner city, alongside the Western bypass (N1) in the vicinity of Northcliff and Fairland, just south of Ruimsig, around Fourways and Lonehill and around Vorna Valley in Midrand. There are also concentrations in Bramley and Sandton. There is a smaller concentration of sectional title schemes south of the inner city scattered around the southern bypass (N3).

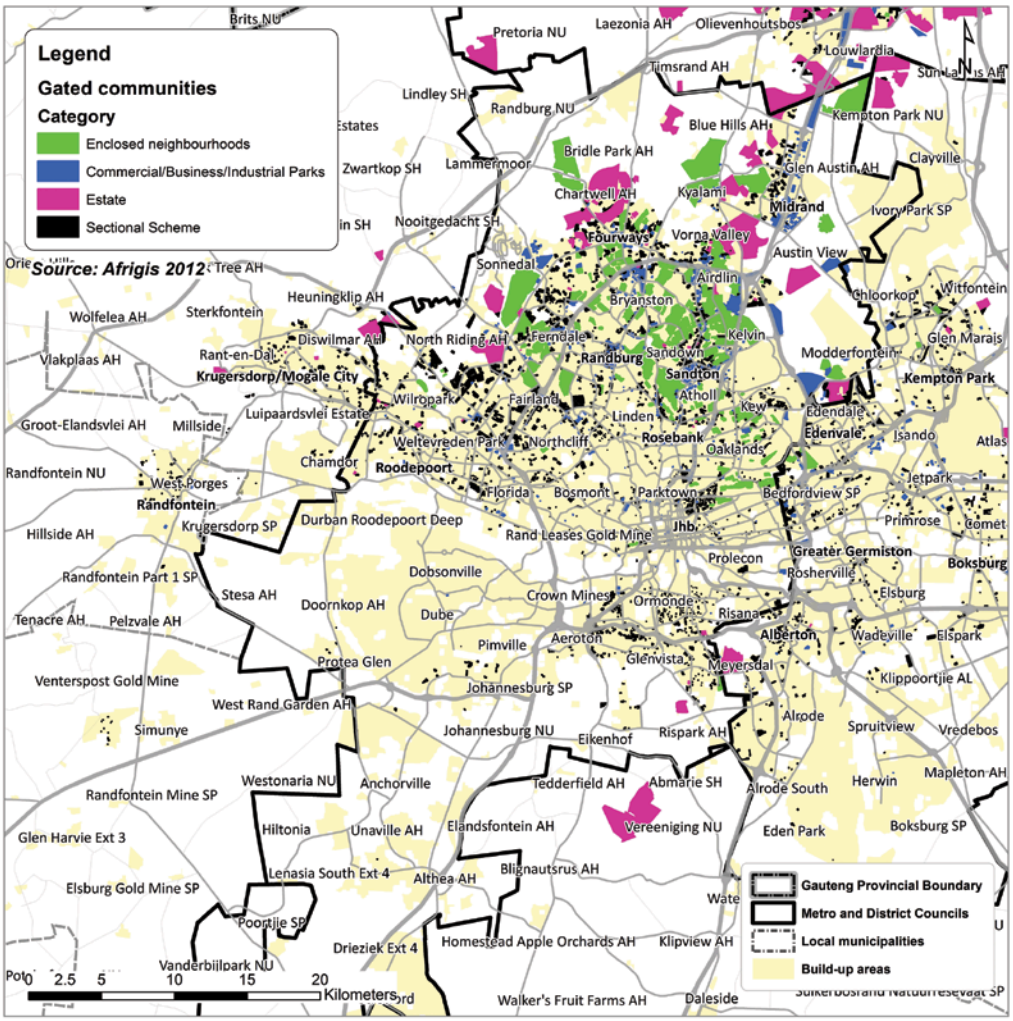


FIGURE 36: Gated communities in COJ with relation to the built-up areas in COJ municipal area

3.3 CONCENTRATION OF GATED COMMUNITIES

As mentioned above, the townhouse complexes in the north tend to cluster around nodes or along prominent roads (Figure 36). There is a fairly large concentration of townhouses in Sandown, Atholl Gardens and Strathavon. They offer good accessibility to the growing nodes in Rosebank and Sandton and the new Gautrain stations in these areas. The concentration is then spread out upwards in the direction of Morningside, almost creating a corridor of sectional title schemes and transforming these roads to closed-off tunnels in many places. There are also a number of larger complexes in Buccleuch, Sunset Acres, Sandhurst Ext 4 and Country

Life Park. The non-residential gated communities also tend to follow similar spatial patterns to the town-house complexes and are often clustered along the major transport routes or smaller nodes – for example in Sandown and Ferndale. These are mostly the office blocks and parks, while those located outside the Ring Road in small clusters tend to represent Business Parks/Estates and Industrial Parks (also see Figure 34).

The enclosed neighbourhoods are concentrated within the northern parts of the Ring Road, closing off access to neighbourhoods located between the major transport routes (Figure 37). Again, this creates large scale urban fragmentation of the urban landscape and changes the previous structure to that of major transport routes connecting closed-off neighbourhood cells. This is very reminiscent of the aims and outcome of twentieth century town planning movements, such as the Radburn Super Block, Environmental Planning Zones and the Neighbourhood Unit Concept. A number of enclosed neighbourhoods also tend to cluster just north of the N1 (outside the Ring Road) in areas such as Fourways, Northriding and Randparkrif and west of the N3 (outside the Ring Road) in Kew and Oaklands. These tend to be further apart from each other or occur in small concentrations in particular areas – for example in Fourways. It almost gives the impression that closing one small area influenced all the other areas in the immediate surrounding area to close off as well. This is often what happens in practice. The largest enclosed neighbourhoods, however, tend to occur on the north-western outskirts of the metropolitan area, just within or without the formal built-up areas in Midrand, Chartwell and Northriding. These could, therefore, also include small-holdings on the urban periphery. In these cases, they start to resemble larger security estates.

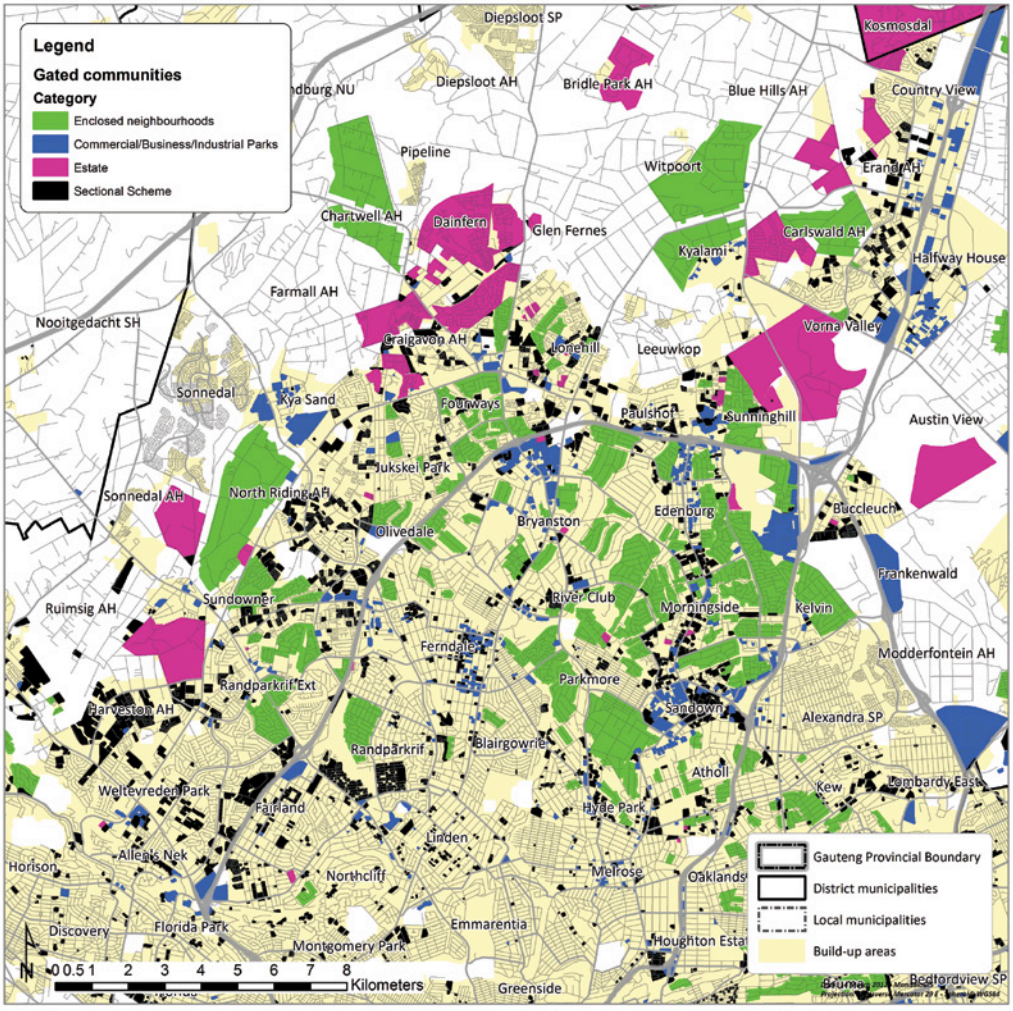


FIGURE 37: Gated communities in northern parts of Johannesburg

3.4 CRIME, GATED COMMUNITIES AND SPATIAL TRANSFORMATION

As mentioned in sections 2.3 and 2.4, one of the major drivers behind gated communities is crime. It therefore suggests that the distribution of crime would also have an impact on the location of gated communities and, therefore, indirectly on spatial transformation in Johannesburg. The distribution of different crime types varies in Johannesburg. The establishment of gated communities or choice to reside in these areas are especially influenced by property crimes and, more particularly, the threat of burglary or robbery[3]. Burglary at residential properties is particularly high in the police precincts of Honeydew, Linden, Sandton and Midrand[4] (Figure 38). Considering the distribution of gated communities in relation to crime types reveal an interesting pattern. Figure 38 shows that there are very large concentrations of both private estates and sectional title schemes in all three of these police station precincts, which had the highest number of incidents of burglary of residential properties in 2010/2011 in the Johannesburg area. Other clusters of sectional title schemes and private estates also occur in precincts with higher incidents of burglary, especially in Douglasdale and Randburg.

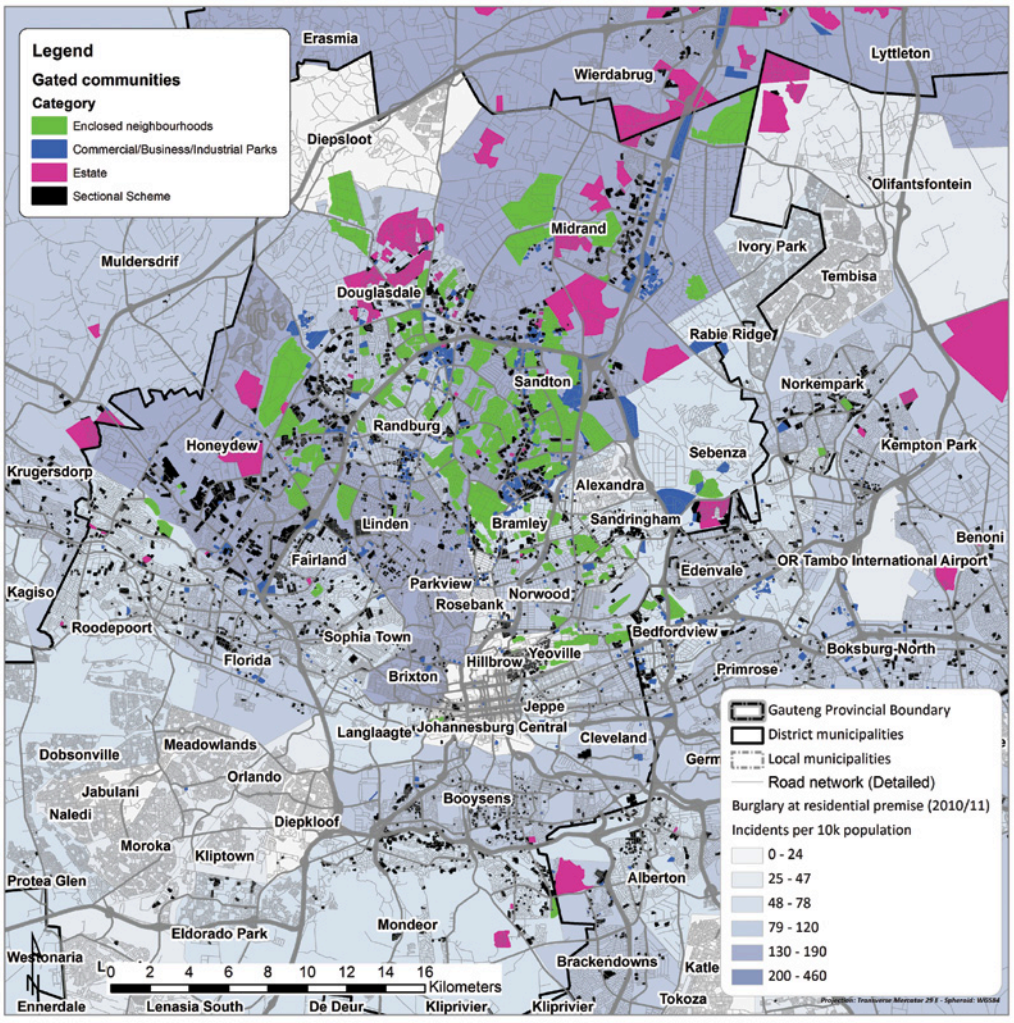


FIGURE 38: Gated communities in Johannesburg in relation to burglaries at residential premises

The crime pattern for robberies at residential premises differs slightly. The highest number of incidents per police precinct recorded in 2010/2011 was in Honeydew, Sandton, Midrand and Muldersdrift, followed by Rosebank and then Douglasdale, Randburg, Linden, Fairland, Parkview, Brixton and Sebenza (Figure 39). Edenvale and Bedfordview police station precincts also fall within the same category, but are located in the Ekhuruleni Municipality. A very similar pattern, however, is evident if one considers robberies at residential properties in relation to the distribution of different types of gated communities. Large numbers of different types of gated communities are concentrated in the Honeydew, Sandtonand Midrandpolice station precincts. Most of the other private residential estates and enclosed neighbourhoods also occur in the Douglasdale, Linden and Randburg police precincts in the west and Norwood in the East, with two enclosed neighbourhoods in Sebenza. Larger concentrations of sectional title schemes also coincide with this category – for example Honeydew, Douglasdale and Linden[5] .

However, not all types of gated communities are predominantly residential. In Johannesburg, businesses and offices continuously relocate to gated office or business parks. One of the main influencing factors is crime. Burglaries at business premises are the most prominent in Midrand, Randburg, Rosebank, Central Johannesburg and Sebenza. Compared to predominantly residential gated communities, there are far fewer business and office parks in Johannesburg. If one investigates the relation between these and burglaries at

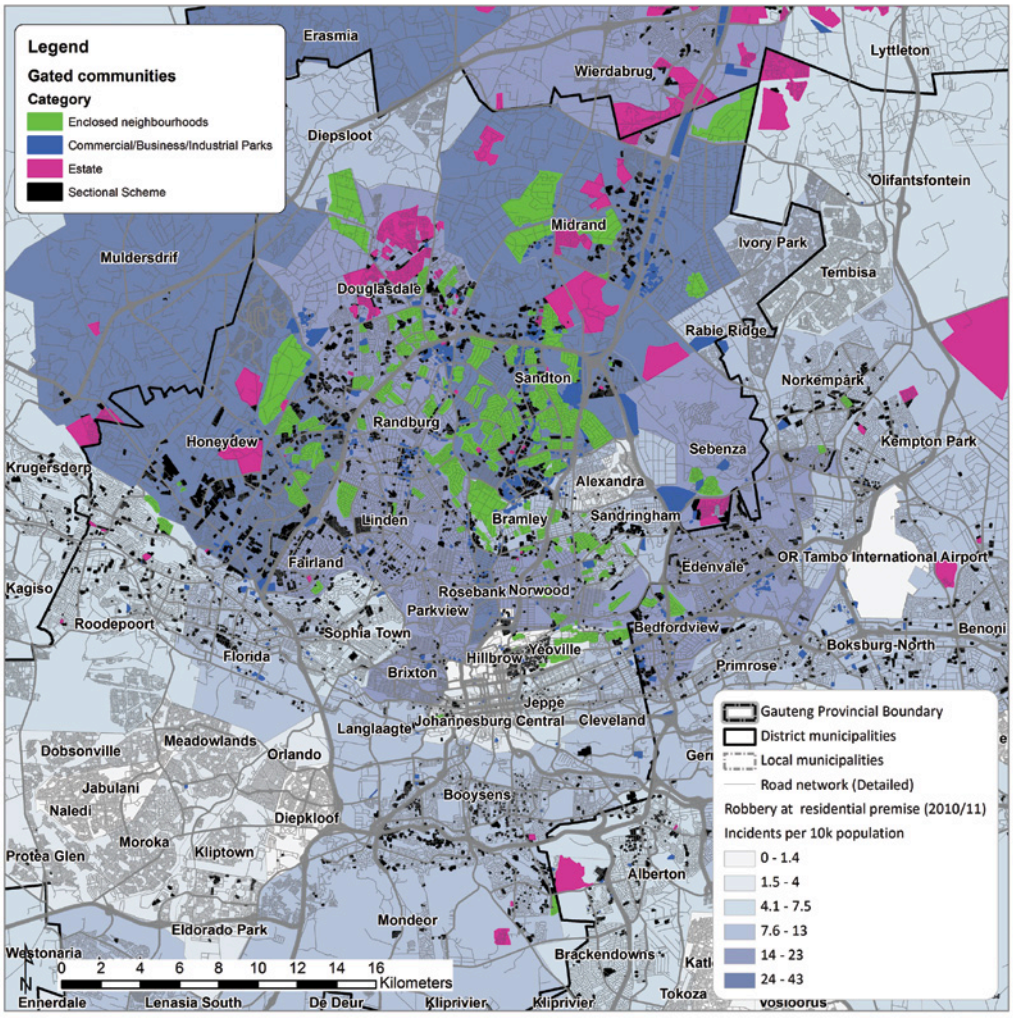


FIGURE 39: Gated communities in Johannesburg in relation to robberies at residential premises

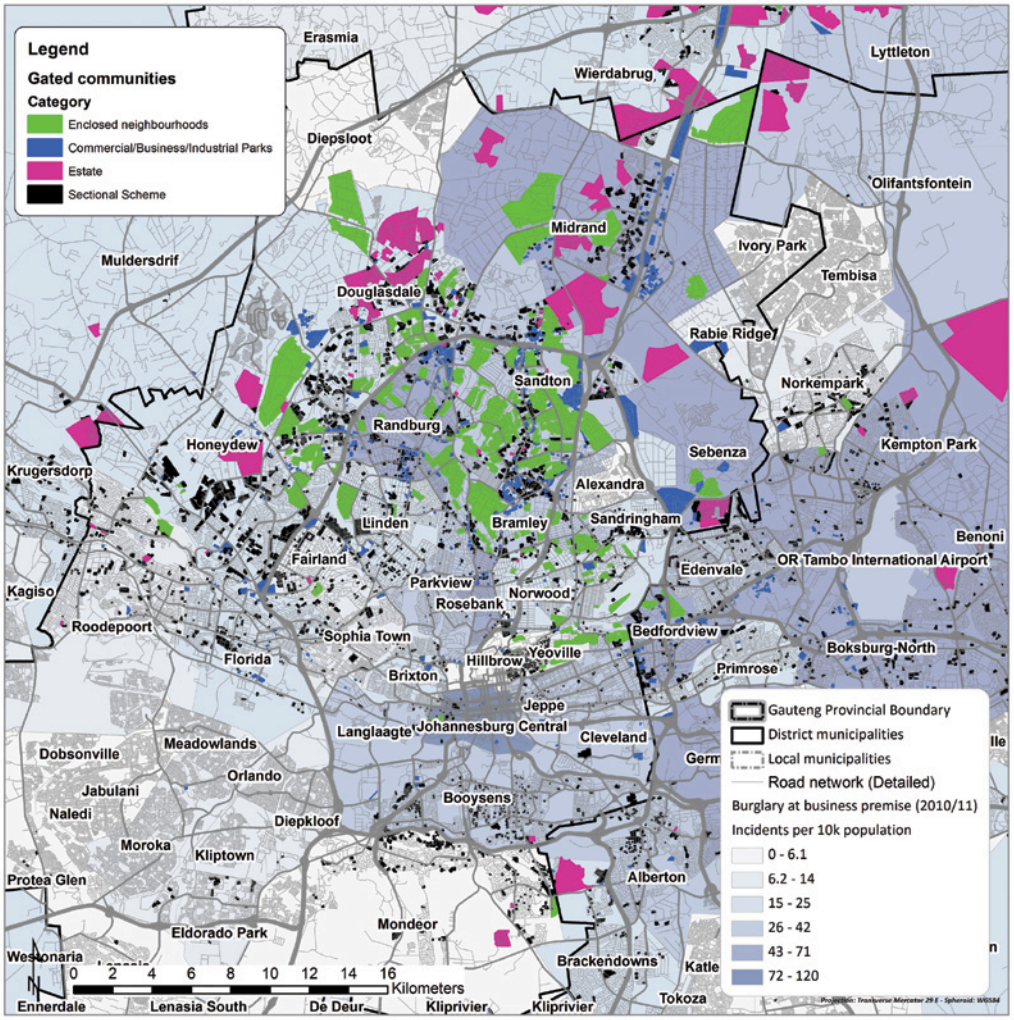


FIGURE 40: Gated communities in the COJ in relation to burglaries at business premises

business premises, Figure 40 shows quite a number of business/ office parks in the Midrand and Randburg police station precincts. There are, however,also larger numbers of business and office parks located in the Sandton and Douglasdale police station precincts, which falls into a slightly lower category. It may, therefore, be that there are other significant factors influencing the location of business and office parks other than crime.

The crime pattern for robberies at business premises differs from that of burglaries generally. The highest number of incidents per police precinct recorded in 2010/2011 were in Midrand and the Central Johannesburg police station precincts, followed by Langlaagte, just south of Central Johannesburg (Figure 41). Higher incidents of burglaries and robberies at business premises are, therefore, not only restricted to the northern parts of Johannesburg. Coinciding with the high crime rates in Midrand, larger numbers of non-residential gated communities, such as business and office parks, are concentrated along the N1 highway in Midrand. However, while there are also many businesses and offices in the central Johannesburg police station precinct – and hence opportunities for robbery –most of these are not in gated parks. They may, however, have a number of security measures that tend to resemble gated apartment blocks in the inner city. In addition, there are a larger number of business and office parks in Douglasdale, Randburg and Sandton, with fewer incidents per precinct.

When one compares the distribution of gated communities in the greater Johannesburg area to the distribution of two types of violent crime – murder and Assault GBH (Appendix A) – it is evident that most of the types of crime and their location are much closer related to the distribution of property crimes, as discussed above.

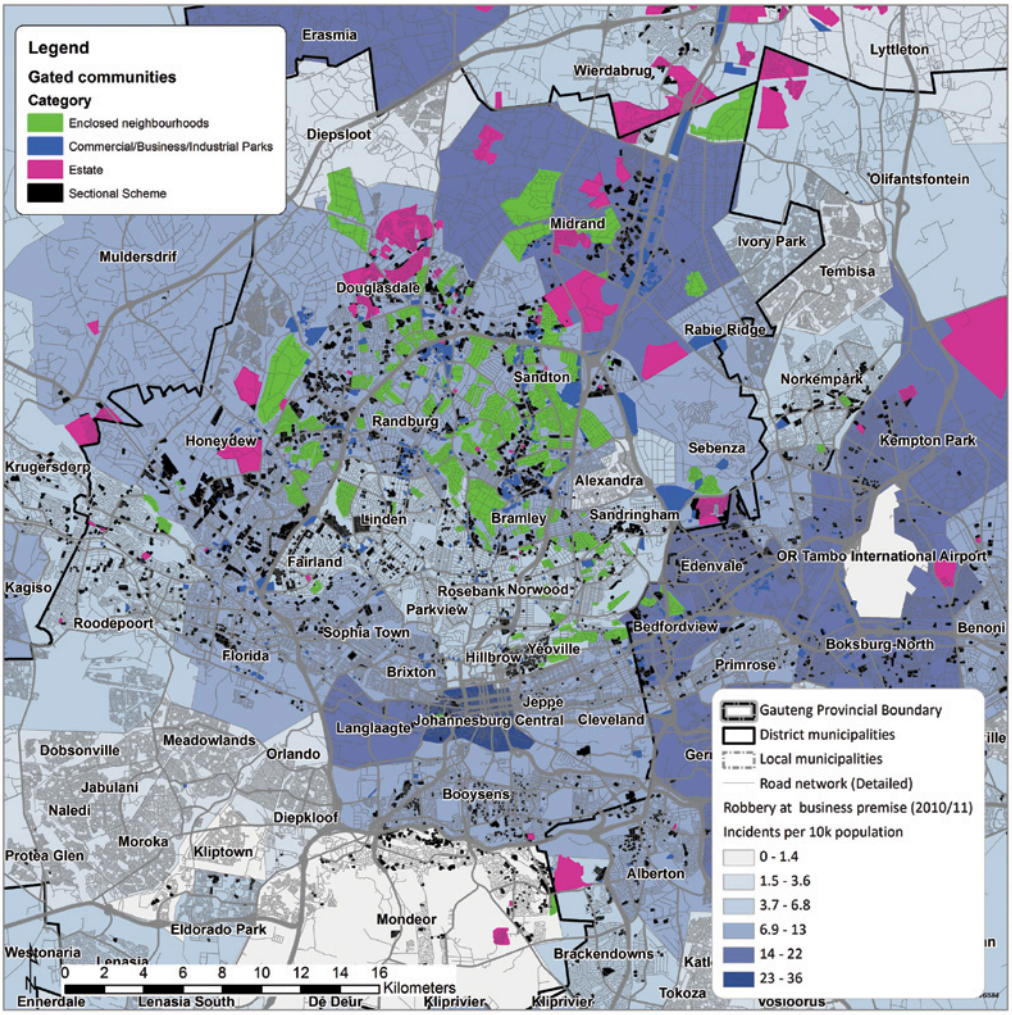


FIGURE 41: Gated communities in the COJ in relation to robberies at business premises

SECTION 4

IMPACT AND IMPLICATIONS OF SPATIAL TRANSFORMATION THROUGH GATED COMMUNITIES

The previous sections highlighted the process of spatial transformation in Johannesburg through gated communities and the impact thereof as perceived by different commentators and stakeholders. It also highlighted the nature of spatial transformation caused by the different types of gated communities. Taking that into consideration, this section explores the implications thereof for spatial restructuring and sustainable development in the City of Johannesburg.

The previous discussion started to suggest that it is necessary to look at the implications of different types of gated communities at different scales – as the meaning of spatial transformation is likely to be different at the various scales. The implications for spatial restructuring will, therefore, be considered at the provincial level or that of the City Region in terms of the Gauteng Spatial Development Framework (GSDF), at the metropolitan level in terms of the Joburg SDF and at a district and precinct level in terms of the spinal development promoted by the GSDF.

4.1 SPATIAL TRANSFORMATION AND RESTRUCTURING OF THE GAUTENG PROVINCE

The GSDF is one of the key documents giving direction for spatial restructuring in the Gauteng Province. One of the key precepts of the GSDF is that the "horizontal spatial extent of the urban system is kept tight and an outer development boundary is placed on outwards sprawl" (GSDF 2010:41). Figure 42 depicts the distribution of different types of gated communities in relation to the suggested areas for consolidation and future consolidation in Gauteng. Most of the residential estates are located within the areas demarcated for consolidation and future consolidation. They will have implications for attempts to densify and compact the city in these areas. This appears to be more important in the City of Johannesburg as there is comparatively less developable land left within the boundaries of the CoJ. It therefore also highlights the importance of location and the criteria defined for future development of residential estates in Gauteng to avoid a perpetuation of the current pattern. It also highlights the need to promote the establishment of these estates in areas outside the outer development area. This would then still accommodate the spatial choices people make – another precept of the GSDF – and address their concerns about safety and the desire to live in an 'urban village' close to nature.

Figure 43 focuses specifically on the City of Johannesburg, presenting an enlarged view of the distribution of different gated communities in relation to the intended areas of consolidation. This map indicates the presence of a number of large residential estates in areas marked for urban consolidation – for example in Midrand and Modderfontein. It will, therefore, impede urban consolidation in these areas due to the low density of these estates. In addition, there are also a number of residential estates in areas marked for future consolidation, especially in the northwestern part of Johannesburg, west of Midrand and north of Chartwell. These estates will also have implications for future consolidation efforts. While there is not much one can do about those that have already been developed, it raises interesting questions in terms of future applications for residential estates in these areas. According to the criteria stated in the GSDF, these should be discouraged and not permited. However, enforcement of the criteria is likely to lead to further tensions as almost the entire CoJ area is set out for present or future consolidation due to its strategic location and value of land, leaving little or no open land for future residential estates.

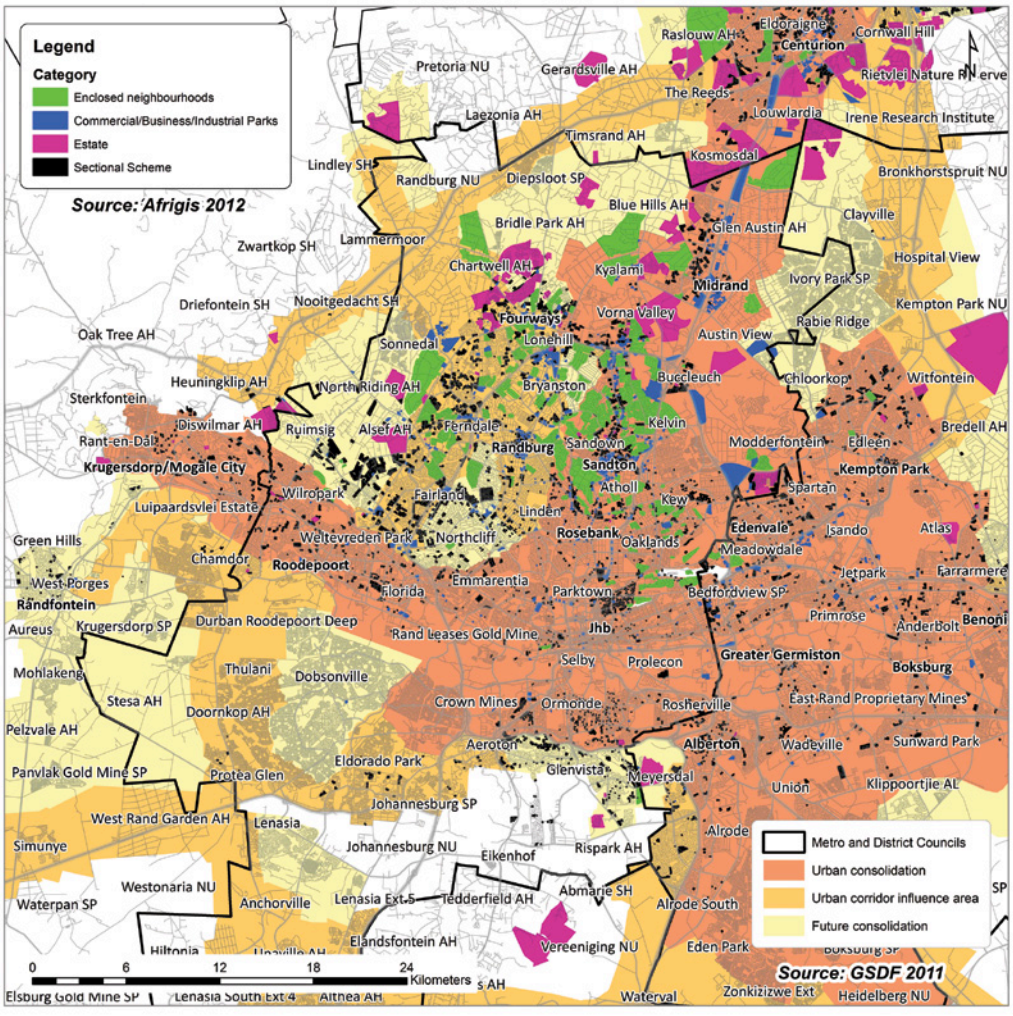


FIGURE 42: Gated communities in central Gauteng in relation to the GSDF

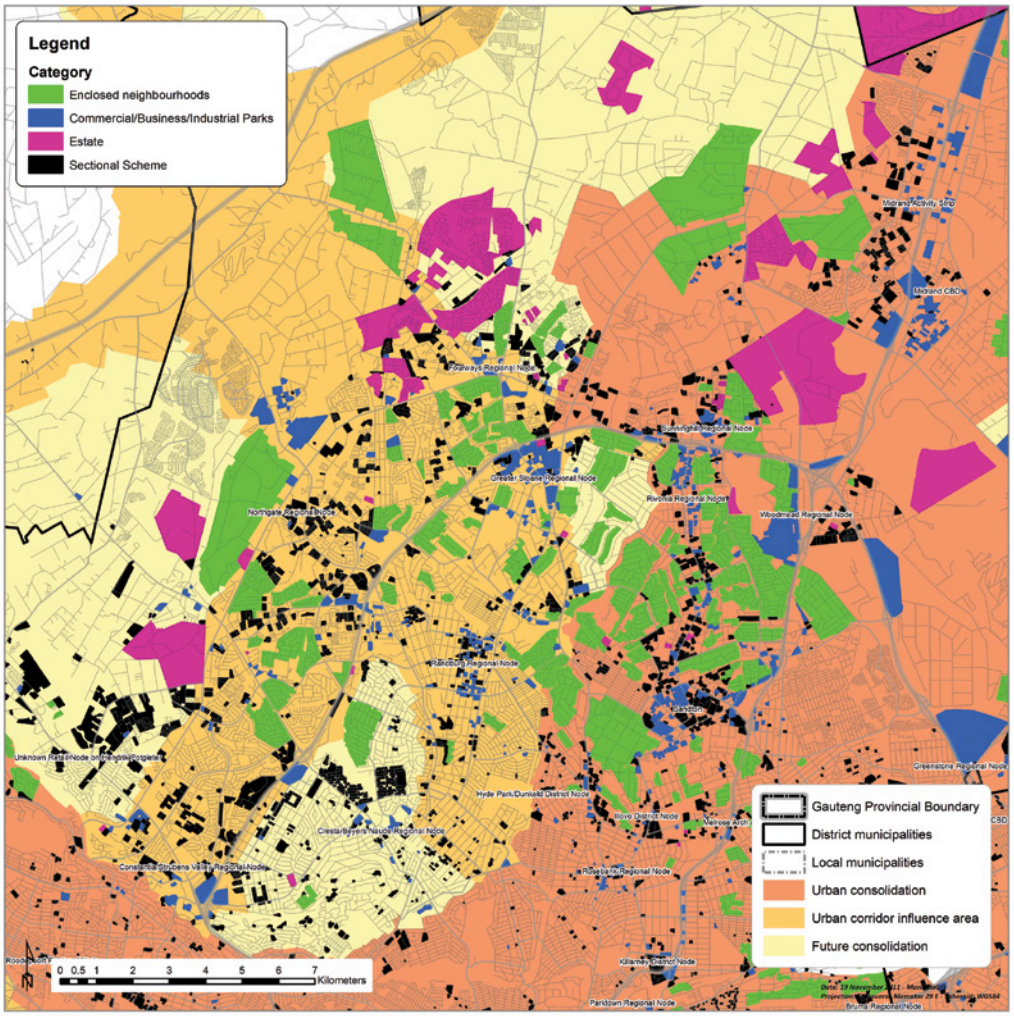


FIGURE 43: Gated communities in the COJ in relation to the GSDF

4.2 SPATIAL RESTRUCTURING IN THE GREATER JOHANNESBURG AREA

As mentioned before, the CoJ also promotes the regulation of peripheral growth and urban sprawl and that growth should be facilitated within a poly-centric hierarchy of nodes connected by a viable transport system. Figure 44 depicts the distribution of gated communities in Johannesburg in relation to the strategic public transport network and public transport influence areas – two key aspects of the COJ SDF. In this case, the large residential estates are not likely to have major implications for spatial restructuring as they all fall outside the public transport influence areas and very few are directly connected to the strategic transport network.

Enclosed neighbourhoods, however, are likely to a have a far greater impact on integration and accessibility. Many of the enclosed neighbourhoods in the north, especially those falling within the ring road, are located directly adjacent to the roads forming part of the strategic transport network. In addition, many also fall within the public transport influence areas. Whereas the aim behind the strategic transport nodes is to create greater integration to the neighbourhoods and facilitate accessibility, the enclosed neighbourhoods do not facilitate this. Not only do they limit access to secondary roads from the main strategic transport roads, but

they also limit through traffic through large parts of the urban environment in the north. It therefore changes the urban fabric from a fine grain to a much coarser grain, leaving a series of major transport routes binding a collection of closed neighbourhoods inside. This creates a very unfriendly and often uncomfortable environment for pedestrians and cyclists having to negotiate space with fast-moving traffic on the remaining open roads.

Townhouse complexes or sectional title schemes are also likely to have a larger impact on spatial restructuring than estates. The map indicates that many of these townhouse complexes are located along the strategic public transport roads or within the public transport influence areas. Due to the extent and nature of these complexes, they challenge the principle of settlement-restructuring that considers the urban design and finer detail of neighbourhood development as equally important as urban form. The potential influence for urban design and spatial restructuring at a district and neighbourhood level is even more pronounced if one considers the number of townhouse complexes clustered alongside major transport routes and within public

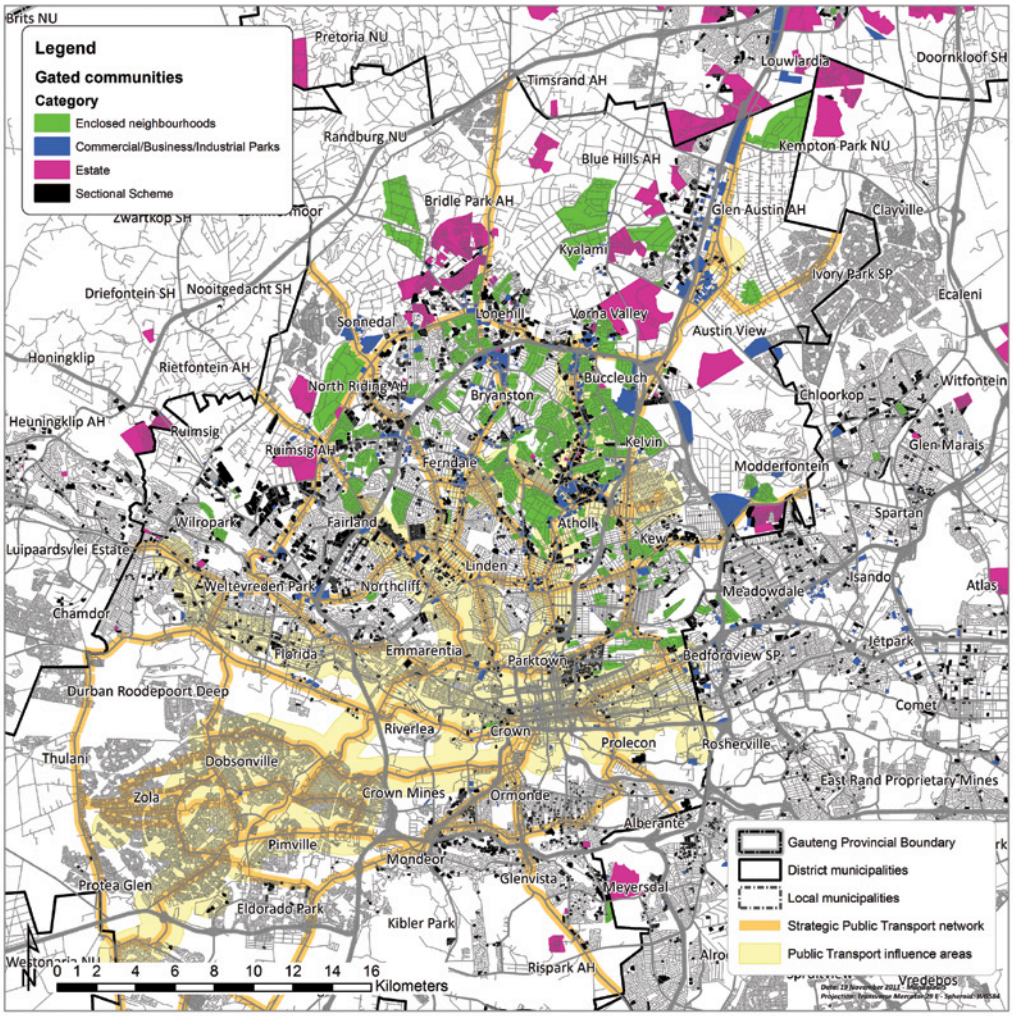


FIGURE 44: Gated communities in the COJ in relation to the Joburg SDF

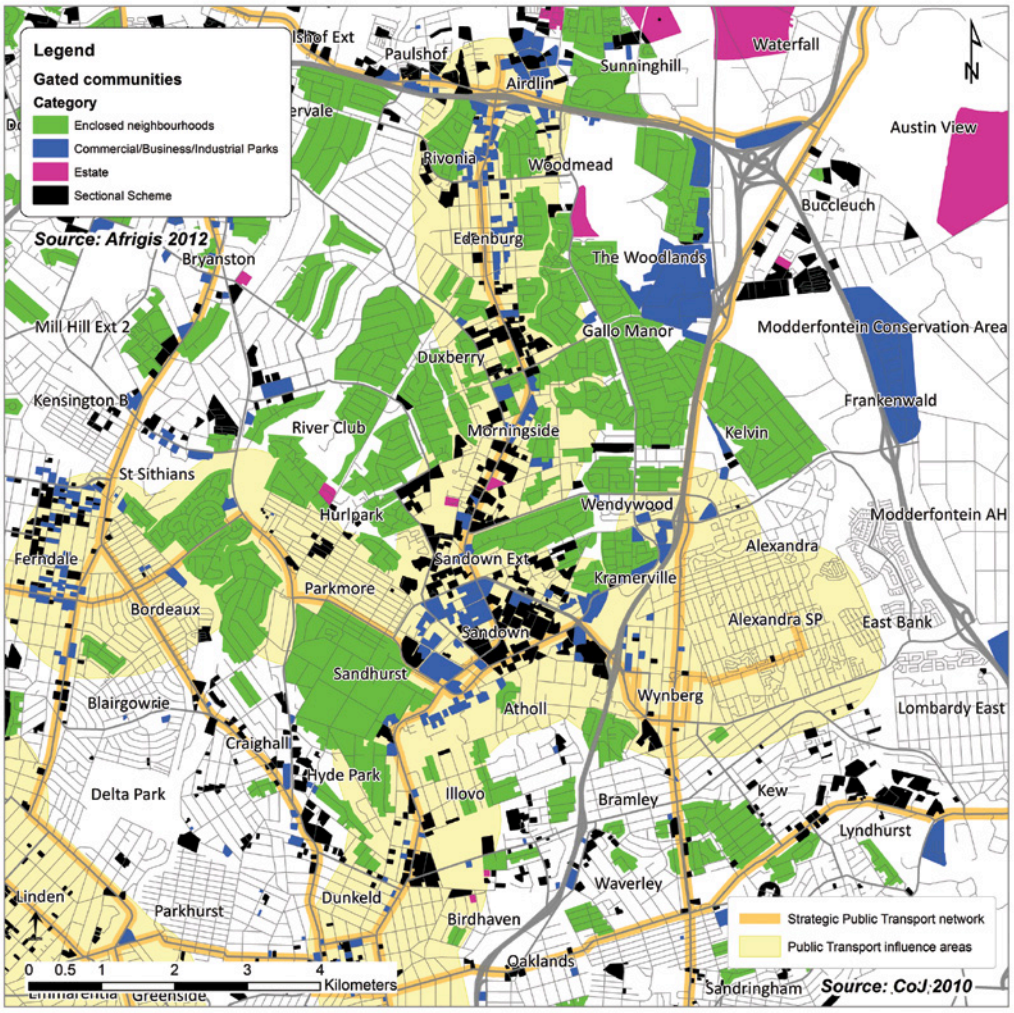


FIGURE 45: Gated communities in the northern part of the COJ in relation to the Joburg SDF

transport influence areas, as depicted in Figure 45. In some cases these clusters – for example in Sandown and Atholl Ext 12, Ferndale and Morningside Manor – start to transform the original grid pattern in larger urban blocks, restricting mobility within the clusters. This has implications for pedestrian access and the creation of a finer urban fabric.

The City of Johannesburg's planners are aware of the potential implications of gated communities and acknowledge that it is one of a number of contributing factors that may influence the SDF in terms of the chapters on movement, public transport and land use. It may also have implications for the implementation of certain principles as it has a direct influence on the transformation of the public spaces into 'pseudo' private spaces and influences pedestrian access in the city. It was also acknowledged that one has to recognise the different types of gated communities and that their implications would differ. Although the current SDF does not directly address the issue of gated communities, it was pointed out that these developments may play a more prominent role in the next review.

4.3 SPATIAL RESTRUCTURING IN DISTRICTS AND NEIGHBOURHOODS

Similar to the CoJ SDF, the GSDF also promotes development along activity spines, where urban structuring elements such as consolidation zones, urban corridors, urban activity nodes and activity spines are defined to create a 'skeleton' to guide future urban development and structure urban form over time. The activity spines also start to give direction for urban densification[6] . Figures 46 – 47 depict the relation between gated communities and the GSDF spinal influence areas in two areas in the northern part of the CoJ.

An interesting pattern emerges where many sectional title schemes are located within the spinal influence areas. On the positive side, it means that densification is already underway and that sectional title schemes in fact facilitate spatial restructuring in this regard as most townhouse complexes can be considered as medium density housing. On the negative side, however, the built form does not facilitate integration between these complexes or with the public realm outside as they are mostly designed as cluster houses that are orientated towards the inside, with high walls surrounding the complexes. In this way they are not appropriate for zones facing the spines directly. Yet many are already located in these areas and may, therefore, have negative implications for spatial restructuring in terms of the desired built form and integration with the public realm. Those townhouse complexes that are located outside the spinal influence areas are

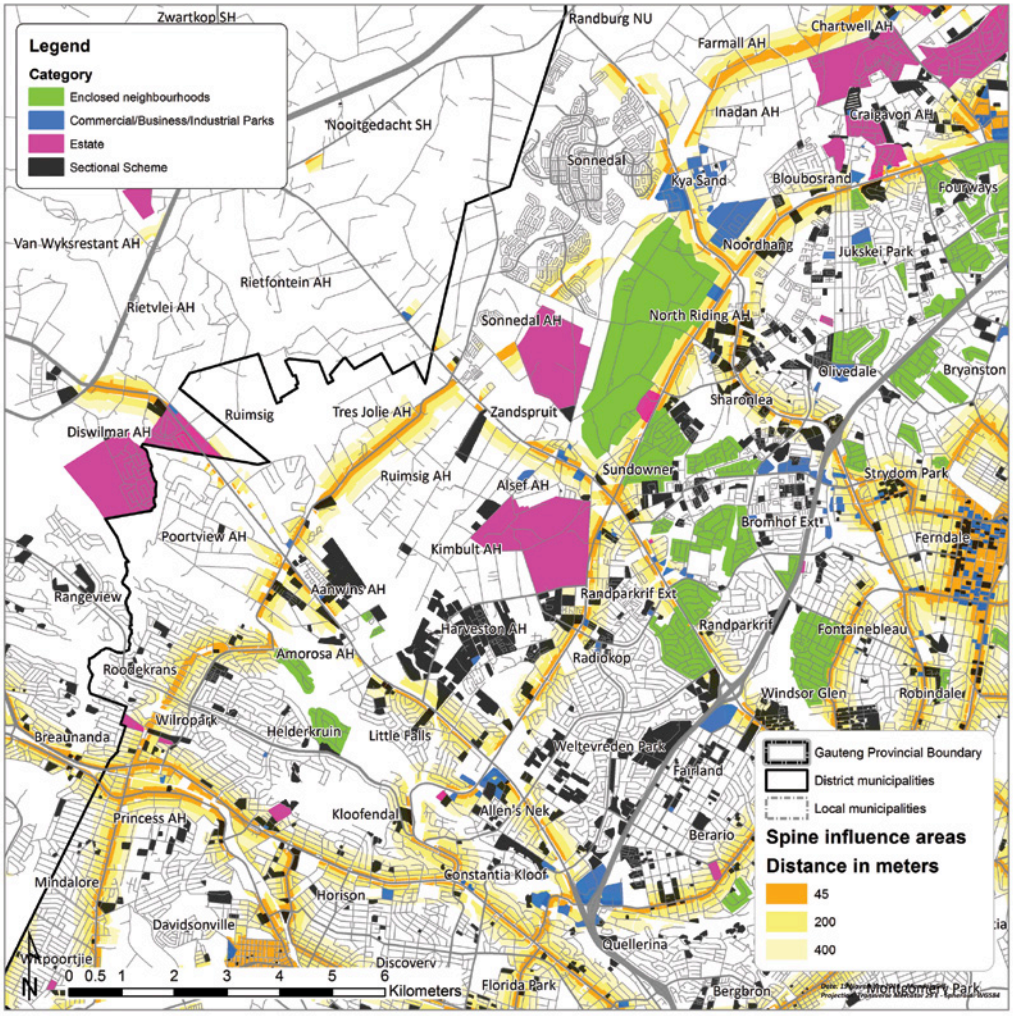


FIGURE 46: Gated communities in north-west Johannesburg in relation to the GSDF spinal influence areas

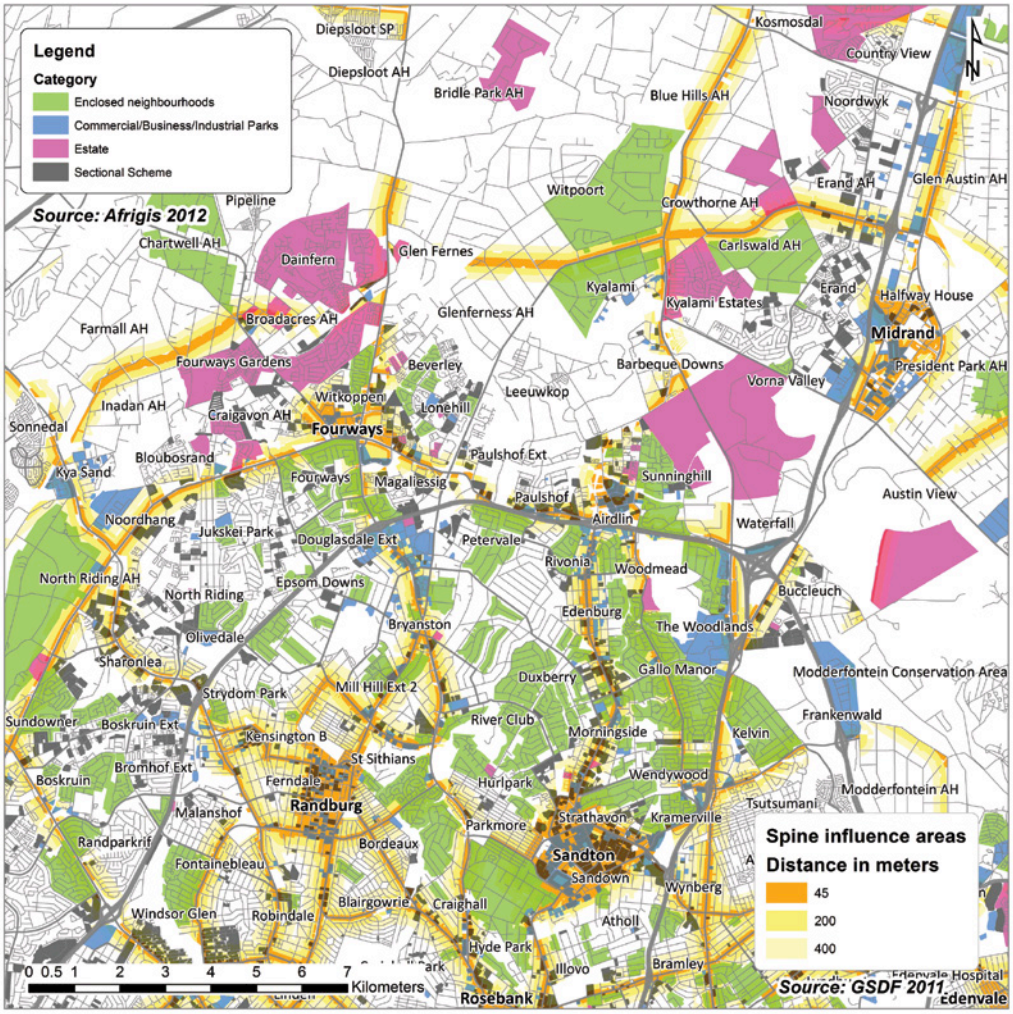


FIGURE 47: Gated communities in the northern part of the COJ in relation to the GSDF spinal influence areas

likely to have little impact on spatial restructuring as they comprise approximately one, or even less, of an urban block and will, therefore, have a limited effect on accessibility.

While the townhouses tend to cluster along the major transport routes and within the spine influence areas, the enclosed neighbourhoods almost always fall in behind these; therefore creating a series of different closed-off spaces within the urban environment. Apart from restricting access through these neighbourhoods, they do not affect the spine areas in a direct way. In other cases, however, the enclosed neighbourhoods are located directly adjacent to the spines and fall directly within the spinal and transport influence areas – for example in Sandhurst, Willowild, Wendywood and Gallo Manor. These neighbourhoods consequently restrict access along the spines and defeat the purpose of trying to facilitate greater integration along the spines. This is especially a concern as the main intention behind the spinal and main transport influence areas is that people's first or last point of entry onto the public transport system should be accessible within walking or cycling distance. This includes people both living and working in these areas. Given this, a person should not be forced to use a private vehicle to reach this point of entry. However, due to the location of some of the enclosed neighbourhoods and street closures within the spinal influence areas, many bus and taxi access points are not accessible within walking or cycling distance.

Gated apartment blocks or affordable housing complexes should, however, be considered in a different light. While some of these follow the form of townhouse complexes and are orientated inwards – for example Carr Gardens in Newtown – others, in spite of being gated with controlled access, start to adhere to the principles of densification. However they still acknowledge the public realm through the orientation of the buildings towards the street – for example Brickfields in Newtown. It may, therefore, be that these types of developments have no, or little, negative implications for spatial restructuring and may in fact start to assist with the process of densification. At the same time they may offer an acceptable form of housing to those who still wish to stay behind walls and gates.

It is stated in both the GSDF and the COJ SDF that the aim of spatial restructuring is to facilitate the creation of more sustainable settlements. This implies that adherence to the principles and criteria discussed above is likely to promote sustainable settlements, while the opposite is also valid. It is, however, not such a simple debate as there are so many factors influencing the sustainability of cities. Also different types of gated communities have different implications for sustainable development. The complexities of this relationship between gated communities and sustainable development has been explored in relation to different aspects such as the implications for the implementation of sustainable principles (Landman 2000), the implications for sustainable development in South Africa (Landman 2007; Landman and du Plessis 2007) and the impact of urban fortification for sustainability (Landman 2012). Suffice to say that gated communities in Johannesburg will raise similar concerns. Or as Harrison, Todes and Watson remarked "there is a growing fashion for eco-estates of various kinds, including estates, but it is doubtful that the construction of large gated estates, with poor access by workers, high levels of class separation and which are dependent on transport by motor car, can be seen as a model for sustainable development" (2008:168). However, again it is important to distinguish between different types of gated communities as their influence in this regard will differ substantially.

SECTION 5

CONCLUSION

The focus of the discussion has been on spatial transformation through gated communities in the greater Johannesburg area. This document has indicated that there are many different types of gated communities in Johannesburg and that these all contribute to spatial transformation by changing traditionally open spaces to closed spaces with controlled access. The discussion has also indicated that, when considering spatial transformation through gated communities, one has to consider three aspects – namely the process, the outcome and the impact of gated communities.

Gated communities are not evenly spread through the greater Johannesburg area and tend to occur in clusters of concentration in the north and north-western parts of the metropolitan area. As a result, they will not have a major impact on spatial transformation in the entire metropolitan area, but are likely to have a significant impact in the areas of concentration. The impact is also likely to differ depending on the various types of gated communities and the extent of these types in different concentrations. While large estates tend to have an influence on urban consolidation and the availability of high potential agricultural land on the outskirts of the metropolitan area, townhouse complexes and enclosed neighbourhoods are more likely to impede intended spatial restructuring along major transport routes and spines in the older well-established neighbourhoods of the city. The intention of the spines and their influence areas, as well as that of the strategic transport routes identified in the COJ SDF, is to facilitate greater integration and accessibility. However, in some cases, these two types of gated communities do not accommodate the achievement of this intention. This is especially a concern in terms of large enclosed neighbourhoods that comprise an entire neighbourhood.

It also raises a number of questions regarding planning and transformation. As mentioned before, due to the role that planning had played in the facilitation of spatial segregation, the planning system also needs to facilitate the spatial restructuring of South African cities to address this. Given this, Harrison, Todes and Watson (2008) highlighted four aspects that need consideration. Each of these is valid for the reconsideration of gated communities and their role in the City of Johannesburg.

The development of gated communities raises many issues related to the ethical values that should guide the future development and restructuring of Johannesburg. On the one hand planners are driven by the vision to promote integration and accessibility and open up urban opportunities for the poor, but on the other hand they are faced with challenges to promote safer urban environments. While these two agendas do not necessarily have to oppose each other, they often do so in practice, creating many tensions between the planning ideal and the contextual reality. Interestingly, gated communities in Johannesburg are not only the domain of the rich. Increasingly, residents of all income groups associate greater levels of security with

increased security measures such as target hardening and access control. It may, therefore, appear that gated communities for the upper income group has created a precedent to be aspired to. As a result, a variety of gated housing complexes is being developed to cater for the lower income households as well. This raises very interesting questions about ethical values and for whom planners should plan the city.

This also has an impact on the development of new policies. The transition to a democratic system and the gradual modification of planning and development policies to reflect the ideals of the new democratic state set out to achieve a number of noble principles – including equity, efficiency, integration, sustainability and good governance. However, certain development practices – such as gated communities – may challenge the implementation of these principles in practice, necessitating a renewed assessment of the alignment of new policies and current practices within the built environment.

This will, therefore, require an examination of the processes of change to determine to what extent gated communities reflect the aims of the new policies. The discussion has indicated that, while gated communities in Johannesburg may facilitate some of the intentions towards positive spatial restructuring as outlined in the GSDF and CoJ SDF, there are many concerns related to its impact on urban consolidation and densification at a metropolitan level, as well as attempts towards greater integration and accessibility at a neighbourhood level. Therefore, only by examining these processes of spatial change and, in this case, by understanding the implications of gated communities for urban restructuring, can existing spatial frameworks be adapted to reflect these changes and redirect future change.

This, however, also implies an understanding of the processes that influence spatial change and the impact of new knowledge and ideas in a specific context. The document illustrated that spatial transformation through gated communities is influenced by a range of social, economic, environmental and political issues and that the changed spaces, in turn, influence these issues. Therefore, as levels of insecurity related to personal safety, financial stability and environmental resources remain a major driving force, urban residents will turn to existing ideas from abroad to address these needs. This raises questions about the relevance of, for example, the CPTED and 'urban village' concepts within the South African context and in relation to the broad goal of spatial integration.

NOTES

1 In 2008 the Gauteng Department of Economic Development developed a long-term development plan for Gauteng Province. This regional spatial plan is the first of its kind in South Africa in terms of scale, scope and time horizon and therefore signifies a new era in the pursuit of planning for shared, equitable, sustainable and inclusive growth and development in the country. The Gauteng Spatial Development Framework (2010) is a key part of this initiative. The objectives of the GSDF are to "provide a clear future provincial spatial structure that is robust to accommodate growth and sustainability; specify a clear set of spatial objectives for municipalities to achieve in order to ensure the realisation of the future provincial spatial structure; propose a set of plans that municipalities have to prepare in their pursuit of these objectives; provide a common language and set of shared planning constructs for municipalities to use in their planning processes and plans; and enable and direct growth" (GSDF 2010:10).

2 The criteria include the following: "They are not permitted in any portion of the urban system that has been designated for higher intensity urban consolidation; they may not create significant discontinuity in the movement system of the urban structure; they are required to have a system of public or semi-public transport that links them to a wider system of public transport; they may not be assembled at a scale beyond 100ha without incorporating one or more through roads and a linked system of public open space; they are to be designed and approved to demonstrate that future integration into the urban system is possible in terms of road linkage and open space systems, both for natural migration and bio-diversity purposes as well as public 'walkability'; they may not be constituted as private management associations beyond a period of 30 years without a review clause in terms of which the province/local authority can require full planning control and integration of the estate back into the urban system or further extensions of such private management association administration reviewable on a 10 year basis; and the articles of association/rules/deeds attributable to properties within such estates are to stipulate that, after a period of 30 years, individual owners have the option to revert to the Town Planning Scheme in operation at that time as the basis of urban management (that is, they have the right to apply for amendment to the development rights governing their properties in terms of due public process and other owners have the right to object to such amendment as afforded by due public process)" (GSDF 2010:181).

3 Housebreaking or burglary refers to unlawful entry into property without the use of violence, while robbery includes the use of weapons and violence.

4 The crime statistics are weighted according to the number of incidents per 100 000 of the population to take into account the variation in densities in the different areas.

5 It would also be important to compare the distribution of household income levels to the distribution of crime and gated communities, as property crime tends to be concentrated in middle to higher income areas and certain types of gated communities, such as large estates, enclosed neighbourhoods and upmarket sectional title schemes as well.

6 The approach to densification in the GSDF is summarised as follows: "The activity spines are to form the basis forre-development and densification.Properties in these districts that are located on identifiedurban activity spines that can accommodate publictransport are to be regarded as favourable for urban intensificationand/or re-development at higher densities and atappropriate land uses and at heights of 2 to 4 storeys. Properties that do not face directly onto the active spines,but form a contiguous zone abutting those properties thatdo face directly onto activity spines, can be re-developed atincreased densities.Properties fronting onto local parks or public open spaces are also to be targeted for densification purposes.Areas that do not form part of the above criteria are to betargeted for selective densification and should retain theinherent character of the existing area" (GSDF 2010:76).

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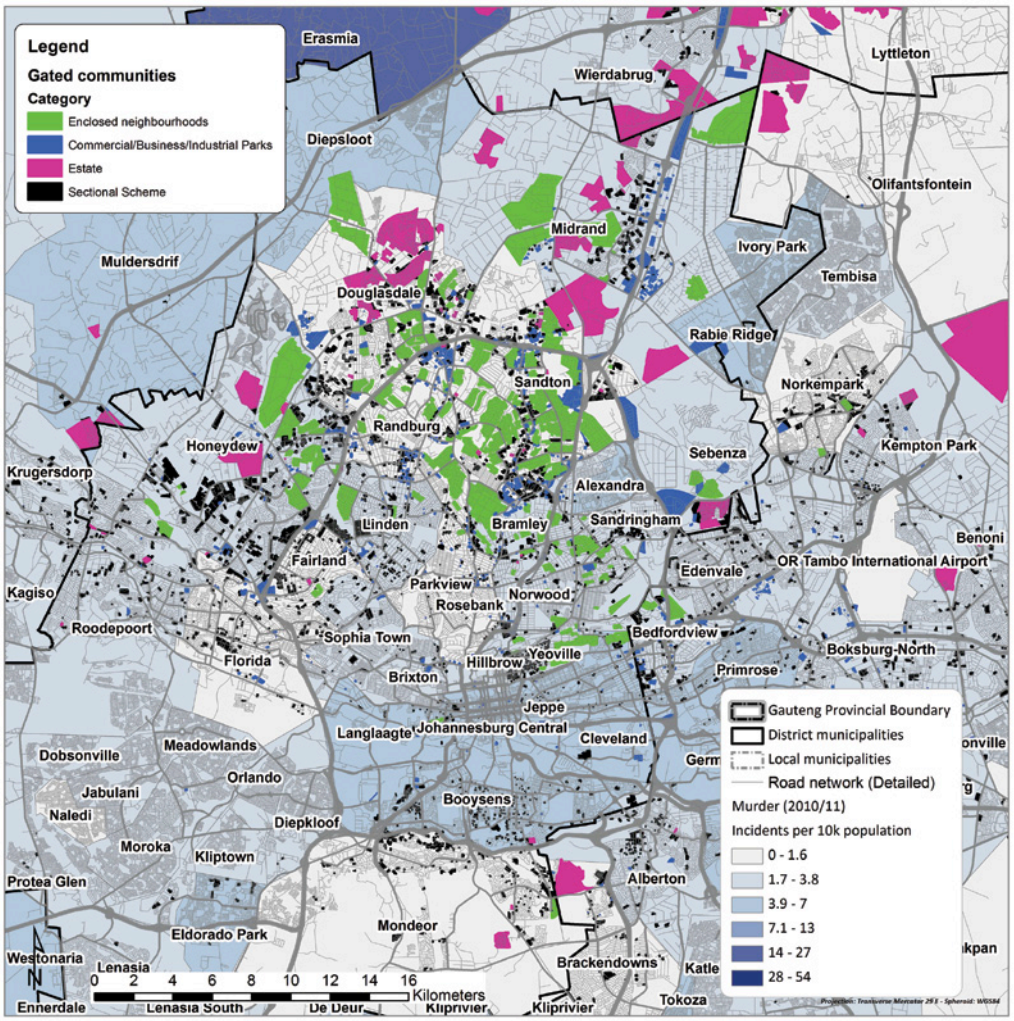
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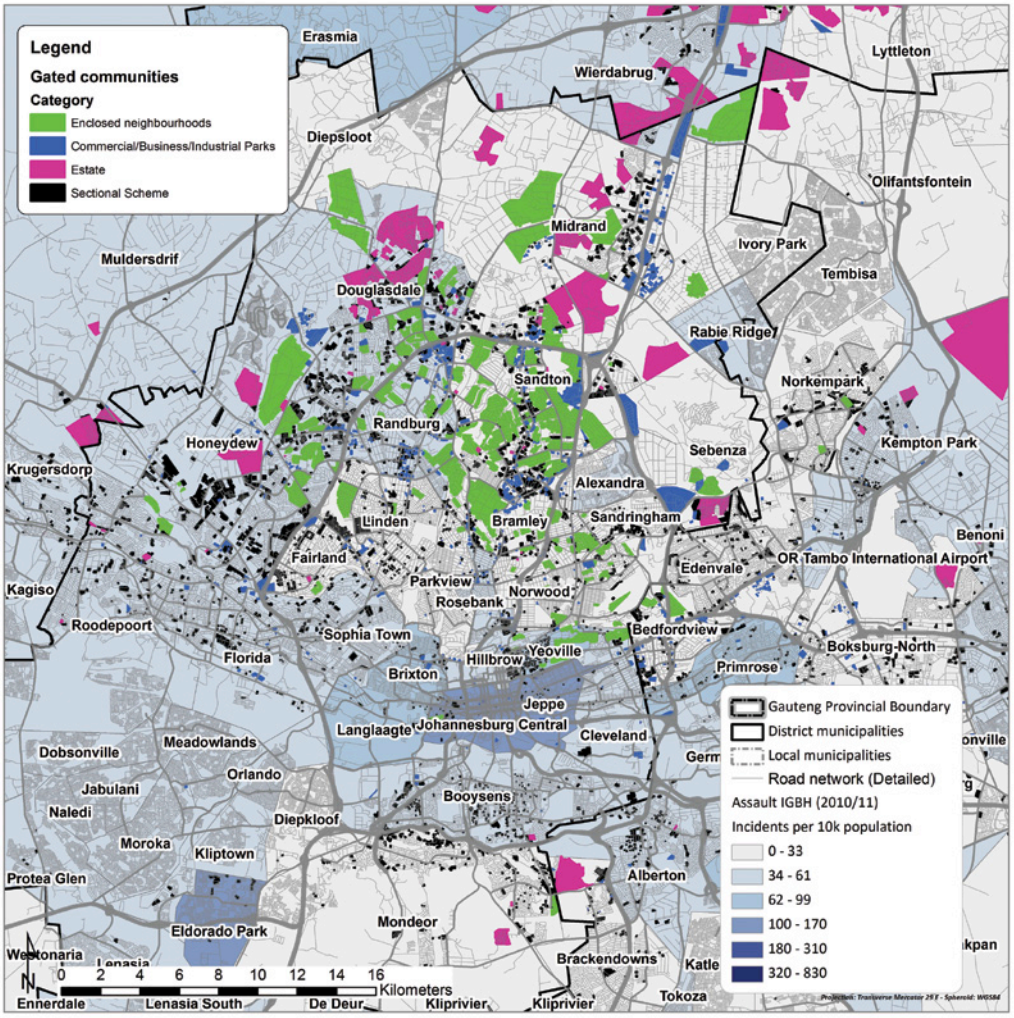
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APPENDIX A: Violent crime and gated communities




Legend
Gated communities
Category
Enclosed neighbourhoods
Commercial/Business/Industrial Parks
Estate
Sectional Scheme
Erasmia
Wierdabrug
Lyttleton
Diepsloot
Olifantsfontein
Midrand
Ivory Park
Muldersdrif
Tembisa
Douglasdale
Rabie Ridge
Sandton
Norkempark
Randburg
Honeydew
Kempton Park
Krugersdorp
Sebenza
Alexandra
Linden
Bramley
Sandringham
Benoni
Fairland
Edenvale
OR Tambo International Airport
Kagiso
Parkview
Norwood
Rosebank
Roodepoort
Bedfordview
Sophia Town
Yeoville
Boksburg-North
Florida
Hillbrow
Primrose
Brixton
Jeppe
Gauteng Provincial Boundary
District municipalities
Local municipalities
Road network (Detailed)
Assault IGBH (2010/11)
Incidents per 10k population
0 - 33
34 - 61
62 - 99
100 - 170
180 - 310
320 - 830
Langlaagte
Johannesburg Central
Cleveland
Dobsonville
Meadowlands
Orlando
Jabulani
Booysens
Naledi
Diepkloof
Moroka
Kliptown
Protea Glen
Alberton
Mondeor
Eldorado Park
Brackendowns
Katle
Tokoza
Ennerdale
Lenasia South
De Deur
Klipriver
Kliprivier
0 2 4 6 8 10 12 14 16
Kilometers

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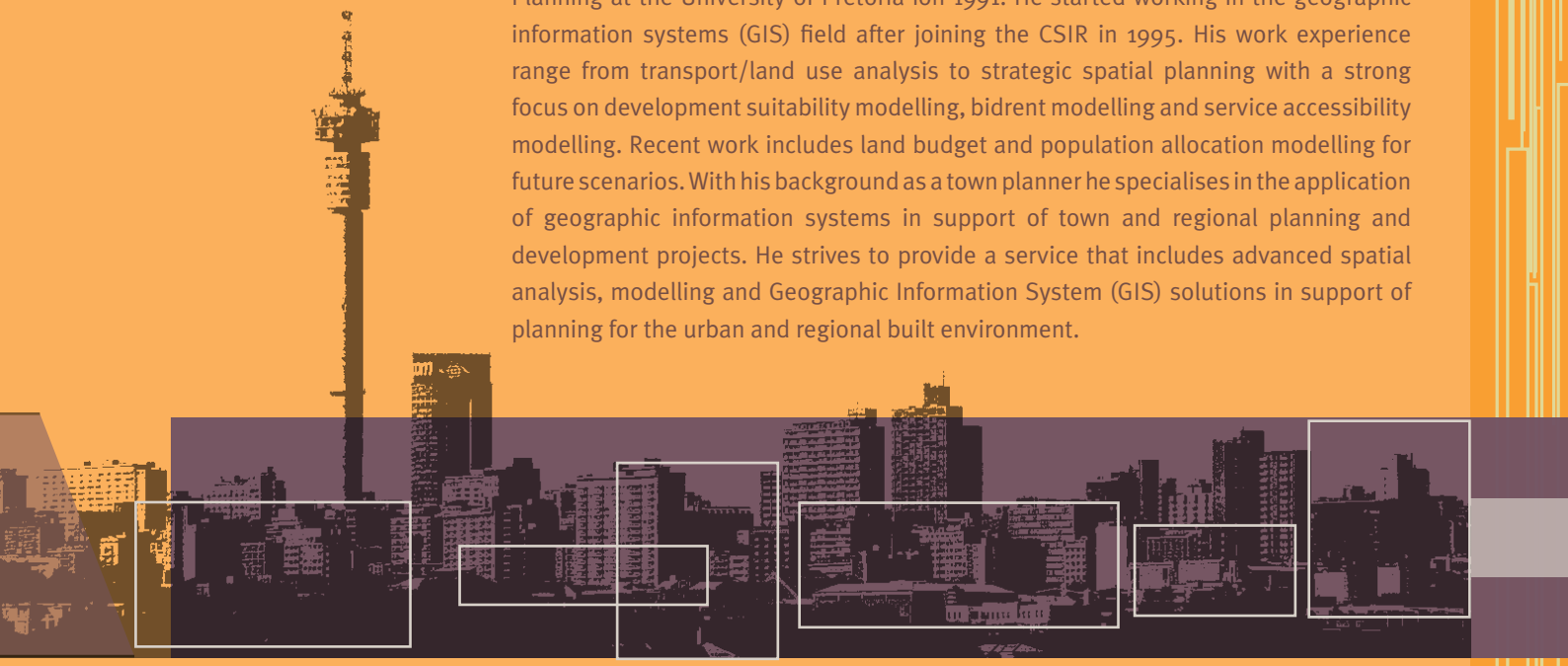
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KARINA LANDMAN joined the Department of Town and Regional Planning in August 2009 as a senior lecturer. She has a background in Architecture, Urban Design and City Planning, with a PhD in Urban Design. Karina has extensive experience related to urban and spatial transformation, crime prevention in the built environment, housing and sustainable development. Other areas of research include the privatisation of urban space, services and local governance; gated communities, urban segregation, medium density mixed housing developments and affordable housing. Karina has published widely in these fields, including published articles, book chapters and conference papers presented at national and international conferences and symposia.

WILLEM BADENHORST completed his Bachelors' degree in Town and Regional Planning at the University of Pretoria ion 1991. He started working in the geographic information systems (GIS) field after joining the CSIR in 1995. His work experience range from transport/land use analysis to strategic spatial planning with a strong focus on development suitability modelling, bidrent modelling and service accessibility modelling. Recent work includes land budget and population allocation modelling for future scenarios. With his background as a town planner he specialises in the application of geographic information systems in support of town and regional planning and development projects. He strives to provide a service that includes advanced spatial analysis, modelling and Geographic Information System (GIS) solutions in support of planning for the urban and regional built environment.



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