

# Perceptions of crime hot-spots and real locations of crime incidents in two South African neighbourhoods

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**Abstract:** South Africa is characterized by high levels of crime and fear of crime that manifests in various ways at a local community level. The fear of crime is influenced by levels of social and physical disorder and the nature of the built environment, while the actual crime incidents are influenced by the land use patterns and presence of specific built environment elements such as the railway line. This paper explores the specific crime patterns and fear of crime in two neighbourhoods, Queenswood and Kilner Park, in the north-east of the City of Tshwane. The findings show that despite relatively high numbers of crime, and contrary to the view of law enforcement agents in the area, most community members do not display high levels of fear of crime. In addition, the use and avoidance of places in the neighbourhood do not always relate to the local crime hot-spots.

**Key Words:** Hot-spots of crime, fear and perceptions of crime, built environment, South Africa.

## Introduction

South Africa is characterised by high crime rates which over the past decade have increased significantly. De Kock (2015:13) indicates that “South Africa is sliding back into the crime crisis of the late nineties and early two thousands”. For example, while theft out of motor vehicles (-2.1 per annum), stock theft (-3.2%) and residential burglaries (-2.3%) have decreased in 2014/2015, partially due to increased target hardening efforts, there has been an increase in house robberies (5.2%), carjacking (14.2%) and aggravated robbery (9%)<sup>i</sup>. In addition, the National Victims of Crime Survey (VOCS) conducted by Statistics SA over the past three years have reported an increased fear of residential burglaries (now called home invasions) and street

robbery from the public (De Kock 2015:10-13). Furthermore, it has been indicated that in 2012 the murder rate in South Africa was 37.3 murders per 100 000 people, nearly five times the global murder rate of 7.6 murders per 100 000 (Breetzke et al 2013). It is therefore, not only the number of crime incidents that are problematic, but especially the violent nature of crime.

Consequently, many residents and communities have reacted to a sense of fear through target hardening (strengthening of physical boundaries) and access control in the built environment (Mistry 2004, Roberts 2008). Moving through any neighbourhood in South Africa one is confronted with the fortification of private homes, shopping malls, parks and open spaces and business complexes. High walls, burglar bars, electric fencing – all forms of target hardening, as well as guard dogs and private security firm signs are present everywhere. Various types of gated communities such as security estates, enclosed neighbourhoods and gated townhouse complexes are established throughout South Africa to provide pockets of real or perceived safety. Crime and the fear of thereof have a direct effect on how the current built environment is perceived and utilised in the country (Holtmann & Domingo-Swartz, 2008:115; Kruger, 2005:1; Landman, 2009:214).

This paper explores the specific crime patterns and fear of crime, as well as how the built environment is perceived and utilised as a result, in two neighbourhoods, Queenswood and Kilner Park, in the north-east of the City of Tshwane, which is the larger municipal area that includes Pretoria. The study examines the difference between the actual crime hot-spots within the built environment and the perceived areas of danger by community members and their responses in terms of the use or avoidance of the built environment.

This paper argues that the residents' behaviour to avoid crime in the built environment is influenced by a range of factors, of which physical disorder and the nature of the built environment are two. This would imply that the location of many crime incidents in a concentrated area would have a direct negative impact on the actual use patterns of the residents in the neighbourhood. Yet, as the paper will discuss, this is not always directly related. The paper commences with a brief overview of the relationship between crime, fear of crime and the built environment and then introduces this relationship in South Africa. Following this, is an outline of the specific study area and methodology, the findings and its practical implications.

## **The relationship between crime, fear of crime and the built environment**

The intricate relationship between crime, the fear of crime and the built environment has been studied extensively since the early 1960s. Some of the earliest studies include the work of Jacobs (1961) where she acknowledged the relationship that exists between street layouts, different combinations of land uses and crime and Newman (1972) who coined the term Defensible Space and continued to develop several guideline documents for the National Institute of Law Enforcement and Criminal Justice in the USA. During the 1980's Kelling and Coles (1997:12) developed the "*Broken Windows theory*", stating that social disorder and physical neglect of the built environment leads to crime and fear of crime within the built environment. More recent studies include those by Crowe (2000) who asserts that the proper design and effective use of the built environment can reduce the fear of crime and incidence thereof, while Ekblom (2013) also acknowledge the role of planning and design to address crime problems and increase the quality of life through improved safety. Many of these theories and strategies are commonly grouped and referred to as Crime Prevention through Environmental Design (CPTED) (Gibson and Johnson 2013), which has become a familiar field in contemporary crime prevention in many countries (Ekblom, 2011). In South Africa, a manual entitled "Designing Safer Communities" was developed for the South African Police Service (SAPS), promoting the incorporation of CPTED principles such as surveillance and visibility, territoriality, access and escape routes, image and aesthetics and target hardening to reduce the opportunities for crime (Kruger et al 2001)<sup>ii</sup>.

The relationship between crime, the fear of crime and the built environment primarily consist of two elements. The first relates to fear of crime, which can be described as "an emotional reaction characterised by a sense of danger and anxiety produced by [although not limited to] the threat of physical harm" (Garofalo, 1981:840). Fear of crime can also be related to community memory, where although the crime has been committed a long time ago and the physical environment has been improved, the memory still exists, leading to a lag between fear of crime and actual risk (Innes 2014). Secondly, the built environment can directly influence the experience of fear of crime and consequently influence the activity patterns of individual's daily lives in terms of how the built environment is perceived, utilised (or underutilised) and interpreted (San-Juan, *et al.* 2012:656, Bannister & Fyfe, 2001:809). As indicated by Garofalo (1981:840) the risk of physical

harm is the main factor initiating fear of crime, although visual cues such as drugs, social disorder and urban decay can also result in a fear of crime (Loader *et al* (2001:891).

Different visual cues will emit different levels of fear to individuals utilizing the same space. Woman and the elderly are usually more afraid of crime although they tend to be at lower risk of crime compared to for example young men (Scarborough *et al*, 2010:819; Schweitzer *et al*, 1999:60; Nasar & Fisher; 1993:187; Bannister & Fyfe, 2001:807). Within the South African context, fear of crime is amplified due to the nature and severity of crime, especially violent crime. Individuals in the country do not even feel safe in their own homes, and often even less so in the broader neighbourhood or city (Misty, 2004; Kruger, 2005; Benjamin 2008; Zinn, 2010).

These visual cues or fear of crime generators can relate to either the situation or the site and more specifically to the following fear of crime constructs: (1) social disorder *within* the built environment, (2) physical disorder *within* the built environment and (3) the physical nature *of* the built environment (see Figure 1).

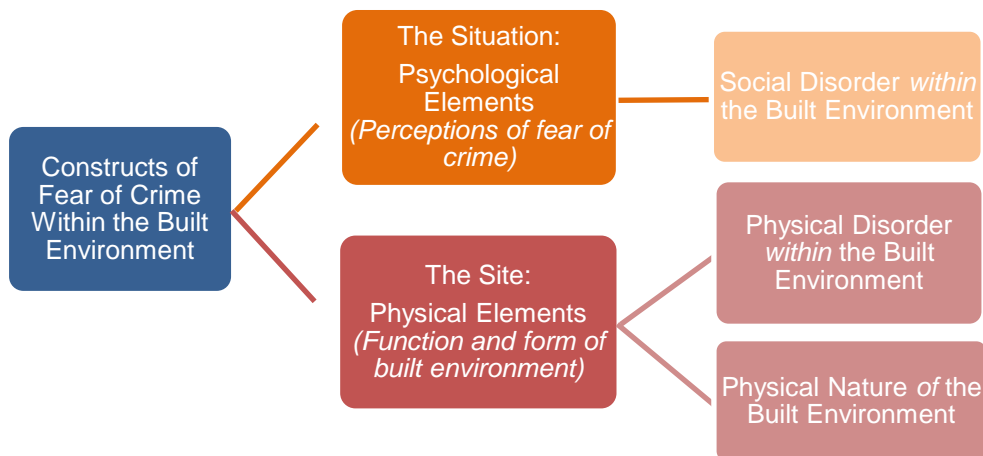


Figure 1: Constructs of Fear of Crime within the Built Environment

Firstly, *social disorder* within the built environment relates to psychological elements influencing fear of crime and entails elements such as prostitution and drug trafficking, gang-related activities, conflicting demographic characteristics of a neighbourhood, previous incidences of violence, incidence of rowdiness and the presence of homeless individuals. These

in turn defines the *situation* within the built environment. There is a direct link between social disorder within the built environment and the perception of crime and fear of crime (Ceccato, 2012:17; Kelling & Coles, 1997:15; Nasar & Fisher, 1993:195; Pitner *et al*, 2012:43; Scarbrough *et al*, 2010:820).

Secondly, *physical disorder* provides visual cues of the likelihood of criminal activity within the built environment. Neglect, urban decay and the resulting degradation of the urban space leads to the perception that the built environment is unsafe and fosters a fear of victimization. Visual cues include elements such as vacant and unkempt gardens and lawns; unkempt houses and fences – signs of neglect; neglect of open spaces and children play areas; poor or broken street lights; graffiti and vandalism of public properties; damaged roads, sidewalks and road signs and littering and dumping in public areas or open spaces (Abdullah, *et al*. 2015:5; Bannister & Fyfe, 2001:809; Kruger & Landman, 2003:7; Iqbal & Ceccato, 2015:3; Yavuz & Welch, 2010:2494).

Thirdly, *the physical nature* of the built environment offers a setting for crime. The physical arrangement or structure of the built environment has a direct effect on crime and the fear of crime. Dark, lonely, unattractive or uncared-for places are particular locations that heighten fear of crime. Criminals respond to and view the physical environment differently and utilize the physical environment to their benefit for criminal activities. Poorly designed urban environments thus create the opportunity for crime (Abdullah, *et al*. 2015:1; Brantingham & Brantingham, 1993:7; Pain, 2000:36; Yavuz & Welch, 2010:2494).

The following main structural elements within the physical built environment influence crime and generate fear of crime: physical infrastructure of buildings; movement network (roads, rail, bridges, highways, pedestrian walkways); transit system (predominantly public transport); land use (e.g. node configuration) and design and architecture (Brantingham & Brantingham, 1993:5; Yavuz & Welch, 2010:2494). For example, property crimes tend to occur at or near major personal attractors such as the place of work, shopping centres, parks and major roads connecting these places, while criminals tend to target places along their major pathways (Brantingham & Brantingham, 1993:10-11). Furthermore, mobility and public transit opportunities play a key role in reducing social exclusion by offering access to life activities. However, as transport systems

encompass the total transport environment, they generate opportunity for social convergence that have been associated with crime susceptibility and perceived as unsafe (Cecatto and Newman 2015). The elements of physical disorder and physical nature of the built environment are therefore visual cues that may lead to avoidance of the built environment due to the negative image it portrays and the unpredictable and uncontrollable fear it holds.

### **Crime and the built environment in South Africa**

South Africa is facing numerous challenges which influence both the current state of crime and fear thereof, as well as the response within the built environment. As indicated by Kruger & Landman (2008:79) the crime situation within South Africa is exceptional due to the “extreme levels of violent crime, severe levels of poverty and inequality, the distorted urban form and spatial characteristics of the South African landscape [primarily due to Apartheid planning], varying levels and effectiveness of policing, and a poorly functioning local government”.

While various communities or residents react in different ways, two main forms of crime prevention approaches are dominant in the South African built environment. The first approach entails communities reacting to crime and fear of crime by means of barricading themselves in various types of gated communities. The second approach involves target hardening measures against property crimes in non-gated communities, including locks, electrical fencing, alarms systems, walls, burglar-bars etc. (Breetzke *et al*, 2014:124; Kruger & Landman, 2003:1; Landman, 2012:240). For those who can afford it, the response within the built environment therefore primarily comprise *fortification* of private and public entities alike in an attempt to prevent crime (Breetzke *et al*, 2014:125; Kruger & Landman, 2003:1; Zinn, 2010:155).

In addition to fortification and the associated ‘bunker mentality’, individuals display *avoidance* behaviour with limited movement outside of their homes, which leads to limited social interaction, diminishing social cohesion and limits physical activities within the neighbourhood. Consequently, individuals become alienated from their neighbours, children do not play in the streets and parks and public space are not utilised. Hence, due to crime and fear of crime a sense of community weakens and in turn a sense of place (Kyle & Chick, 2007:212; Lorence *et al*, 2012:759; Plain 2000:370; Perkins *et al*, 1992:22).

Given this, it becomes evident that people responds to crime and/or the fear thereof in two ways. The first is the *avoidance* of the built environment, especially public spaces and the second the *fortification* of private and public entities (Yavuz, & Welch, 2010:2491, San-Juan, *et al.* 2012:656; Loader *et al*, 2001:886). Given the high crime rates and levels of violence in the country, it therefore raises the question as to how local communities would react to social and physical disorder and the nature of the built environment in terms of fear of crime and the utilisation of public spaces in their neighbourhood,

### **Methodology and study area**

This paper explores the specific crime patterns and fear of crime, as well as how the built environment is perceived and utilised as a result, in two non-gated neighbourhoods in the north-east of the City of Tshwane, which is the larger municipal area that includes Pretoria. This particular area was chosen as the study area, because it 1) comprises one Policing Precinct and represents one Policing Sector; 2) involves an active Community Policing Forum (CPF)<sup>iii</sup>; 3) includes the operation of several private security firms, 4) is a non-gated community; 5) incorporates physical elements that have been associated with crime and 6) has a diverse demographic profile. The aforementioned criteria also allow for the study to be replicated in other neighbourhoods with similar characteristics, of which there are a fair number in the country.

The research approach utilized within this study is a mixed method approach, including qualitative and quantitative data, which is informed by a case study research design, addressing social and spatial elements (Bryman, 2008:637). The qualitative data comprise of *interviews* and *focus groups*. Interviews were conducted with local law enforcement and related parties, consisting of members of the Villieria SAPS, Private Security Firms located and operational within the study area, Community Policing Forum Members and Community Policing Liaison Members. A total number of 18 interviews were conducted, which include interviews with three police officers (station and sector commanders), five members of Private Security firms (directors and patrol officers), three members of the local CPF, four members of the Community Policing Liaison and 3 members of the Mon Ami Trauma Groups.

In addition to the interviews, five focus groups (comprising of 21 participants in total) were conducted with community members residing within the study area. Unfortunately, due to the sensitive nature of this particular research topic, no personal information was formally recorded of the community members participating in the focus groups. Yet, the focus groups were age, race and gender representative. Owing to the complexity and sensitive nature of the study, it was difficult to gain community members' trust and participation in the focus groups. The focus groups were set up by means of a combination of a direct and social media approach. The participants' residential addresses were geo-spatially plotted. From the spatial distribution, it can be concluded that the focus groups were representative of the study area. Most of the participants have been residing in the area for a long time - on average for 21 years. This was very valuable to the study, as although the focus group sample size is small, the participants indicated the changes they observed and experienced within the study area and specifically the built environment due to crime and fear of crime over the past two decades.

The quantitative data on the other hand, comprise of *statistical data*, obtained from the Villieria SAPS and is representative of the study area. The statistical data obtained from the Villieria SAPS was primarily used to compare the actual crime incidents recorded (location and type) by SAPS, in relation to the interviewees and focus group participants' perceptions of crime and fear of crime types and location. In addition, the statistical data was graphically represented by means of a Geographic Information System (GIS). The actual crime incidents, as identified within the statistical data, were graphically represented by a 150m spot to protect victim's identity. Buffer areas were identified to indicate and calculate the actual crime incidents within an identified area, for example, a 500m buffer area was identified surrounding the railway line, a 150m buffer area surrounding the open space system and parks, and a 300m buffer area surrounding the shopping nodes. The expanse of the buffer areas is related to the crime opportunity associated with each structuring element. For example, a 500m buffer area was utilized along the railway line as the railway line serve as an easy escape route, and criminals thus venture further into the neighbourhood. The 500m buffer along the railway line is reinforced by Local Insurance Companies levying higher insurance rates to households / businesses located within a 500m buffer area of a railway line due to the high number of recorded crime incidents<sup>1</sup>. The open space system on the other hand, is more isolated and provide hiding places, accordingly criminals do



not venture further than 150m looking for possible victims. In addition, heat-maps were used to identify statistical hot spots of crime with the Villieria Precinct. The triangulation outcome of the two sets of data (qualitative and quantitative) assisted with the exploration of the subject being studied (Creswell, 2009:211).

As mentioned, the chosen study area is a non-gated, non-enclosed community, Kilner Park and Queenswood. The study area is located within the Villieria Police Station area of jurisdiction, within Sector 2. In terms of the physical built environment, the study area includes numerous legibility elements which define the area. The study area is diverse in its role and function, and includes the following uses (see Figure 2 – *the numbers indicated within the bullets below relates to the numbers indicated on the map*).

Two primary schools within Queenswood	Laerskool Queenswood <sup>1</sup> Laerskool Nellie Swart <sup>2</sup>
One combination primary and secondary school	Eduplex <sup>3</sup> (a private school) located within Queenswood
Four shopping nodes	The primary nodes consisting of Queens Corner <sup>4</sup> located within Queenswood, and the Kilner Park Spar Complex <sup>5</sup> , located in Kilner Park The secondary nodes comprise of the Queens Galleries <sup>6</sup> node located within Queenswood
Three old age homes,	Huis Herfsblaar <sup>7</sup> , located within Queenswood, which is relatively large, accommodating the elderly in a frail care section, residents in individual flats and in townhouses, Susan Strijdom Home <sup>8</sup> , located within Queenswood, caring for the elderly and disabled, Ebenhaeser <sup>9</sup> , located within Kilner Park, accommodating the elderly in a frail care section, residents in individual flats and in townhouses
Higher density residential units	Apartments blocks are located within both Kilner Park and Queenswood
Open space areas,	Three formal parks with playground equipment are located within Queenswood, with additional open space, with a memorial site <sup>10</sup> , in Kilner Park along the stream area

Four medical centres / facilities:	A medical day care center <sup>11</sup> , located within Kilner Park with general practitioners, dentists, a day clinic etc. The Ear Institute <sup>12</sup> in Queenswood, The Eye Institute <sup>13</sup> in Queenswood The Bloodbank <sup>14</sup> in Queenswood
A nursery <sup>15</sup>	Located on the border of Kilner Park

In addition, the following main physical structuring elements define the study area and add to the legibility of the area (see Figure 3 – *the numbers indicated within the bullets below relates to the numbers indicated on the map*).

The N1 freeway <sup>1</sup>	Passing through the area in a north-south direction, dividing Kilner Park into an eastern and western section,
The Metro Rail <sup>2</sup> line	Passing through the area in an east-west direction, dividing Queenswood and Kilner Park into northern and southern sections,
The Moreleta stream <sup>3</sup> and wetlands area	Runs through the area in a north-south direction, further dividing Kilner Park into an eastern and western section,
The main movement spines within the area are:	Stormvoël Road <sup>4</sup> , which becomes Nico Smith Street, providing movement in an east-west direction, bordering the study area to the north, CR Swart Drive <sup>5</sup> , providing movement in a north-south direction, forming the divide between the suburbs of Queenswood (to the west) and Kilner Park (to the east), Soutpansberg Road <sup>6</sup> , providing movement in an east-west direction, Stead Avenue <sup>7</sup> , providing movement in a north-south direction, bordering the study area to the west.

## Findings

The discussion of the findings is structured in three sub sections, firstly dealing with the actual crime statistics vs perceptions of crime, secondly, linking the place of crime to the nature of the built environment and thirdly, explaining the relationship between crime, fear of crime and the built environment.

i) Crime and fear of crime perceptions

The map (Figure 4) indicates the current state of crime within the Villieria Police Precinct, for the time period April 2014 to March 2015. From the figure it is clear that Property-Related Crime is the most dominant crime type within the study area and that it fluctuated a lot during the twelve-month period. Property-Related Crime peaked during the months of June 2014, October 2014 and February 2015. Contact crime, which is the main fear of crime generator, was a lot less prevalent and peaked during the months of July 2014 and March 2015. Figure 5 graphically represents all crime incidents within the Villieria Police Precinct, for the time period April 2014 to March 2015. Note the study area falls within Sector 2.

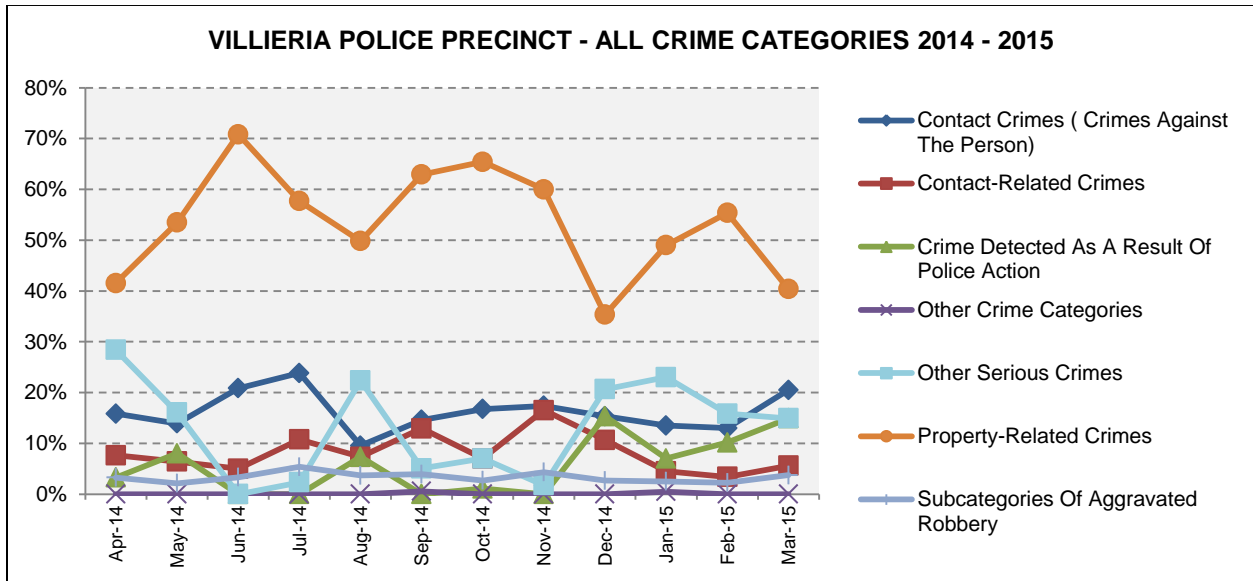


Figure 5: Current State of All Crime Categories (April 2014 – March 2015)

Source: Snyders, E. 2015 ex Villieria Police Precinct Data

The observation by De Kock (2015) that the crime situation within South Africa is worsening was supported locally by the law enforcement and related parties voicing their concerns regarding increasing crime incidents within the study area. From the interviews conducted with the Community Liaison and CPF Members, it is clear that they are of the opinion that crime within the study area is quite *bad* and *concerning*. The Private Security Companies indicated that criminals are relatively active within the study area, leading to a high incidence of crime which is concerning. The Police Members referred to crime as being very *intense* within the study area,

especially over the past two years. The Trauma Troup Members indicated that crime is not only bad and increasing within the area, but that the severity of the crimes is also increasing, especially related to contact crimes. This also reflects some of the broader crime trends in South Africa highlighted by De Kock (2015).

Unexpectedly, however, from the focus group discussions it was clear that most of the community members participating in the study were not aware of the actual state of crime within the study area. They indicated that they feel safe, although still vigilant to some degree. Due to participants' limited knowledge of official crime statistics, crime in the study area is viewed as typical, more or less in line with national crime trends as portrayed by the media. However, three participants who are members of the local community radio program and being informed of the current state of crime within the study area, indicated that the crime situation within the study area is *very active, increasing and concerning*. The local law enforcement agencies and informed community members' observations of the current state of crime within the study area are in line with the statistical findings.

However, the law enforcement agencies were not aware of the community members' knowledge about crime in the area. They thought that the community members were aware of the current state of crime due to the presence of Facebook groups, Zello groups, WhatsApp groups and the community radio system. They also thought that the community members feared crime due to 1) the national state of crime, 2) the presence of visible policing in the area and 3) security measures and signs of fortification in the built environment.

However, this assumption did not reflect the views emanating from the community focus group sessions, which indicated that most of the community members are mostly unaware of the current state of crime within the study area. The focus group sessions did, however, indicate that community members are aware of crime due to the national crime situation fuelled by the media and therefore have taken the necessary precautionary measures, such as installing fences, electrical fences and burglar bars. As a result, only a few of the participants indicated living in actual fear of crime. These fearful participants have unfortunately been victims of contact crime which intensifies a continued fear of crime. This may be an example of community memory (Innes 2014) or personal memory influencing the fear of crime. It also seems that in this case the

media plays a role in fostering and increasing a fear of crime (Ceccato 2012:10; Breetzke *et al* 2014:125).

*ii) Crime location and the nature of the built environment*

The statistical data obtained for the Villieria SAPS was utilized to identify the crime hot-spots. With the statistical data mapped by means of a GIS system (see Figure 6), it is evident that the predominant hot-spots of crime are at or surrounding the shopping nodes, with the most crime incidents recorded at Queens Corner.

The various law enforcement agencies and the community members were also asked to identify likely hot-spots of crime. The interviews conducted with local law enforcement agencies (excluding the Trauma Troup members) revealed a number of crime hot-spots within the study area, with certain predominant crimes linked to the various hot-spots. SAPS made it clear that the hot-spots change over time as criminals change their modus operandi. The crime hot-spots identified by the Community Liaison Members included the Queens Corner Shopping Centre along the railway line close to the N1 freeway and along the main movement streets (for example Nico Smit Street, Soutpansberg Road and CR Swart Road – refer to Figure 3 for physical locations). The main movement spines link up with the access and escape routes out of the study area. The CPF members identified Queens Corner Shopping Centre, along the railway line and close to the N1 freeway as hot-spots of crime. Additionally, two of the CPF members alluded to the drug houses operational within the study area, and drug dealing within the parks. The views from the Police members corresponded with the Community Liaison and the CPF members, with strong emphasis on the drug related hot-spots. The Private Security members confirmed the crime hot-spots as identified above, with the inclusion of the stream (open space system) area. Given that most of these agencies have access to the official police data, they tended to identify hot-spots reflected by the official statistics.

Unfortunately, the focus group participants (community members) did not identify any crime hot-spots as they were unaware of actual crime incidents within the area. This observation is in contrast to the findings of Kruger & Landman (2008:84) indicating that “people best know the areas where they live and/or work and these people are often in the best position to point out where particular crime problems are experienced”. One explanation may be that the community

is not actively involved in crime prevention on a day-to-day basis and also do not utilize many public spaces; hence being unaware of the crime situation. Therefore, while the local law enforcement and related parties who mainly work in the area tend to be aware of the actual state of crime and hot-spots, the local residents whom stay in the area appear to be unaware of the actual state of crime and any crime hot-spots.

*iii) Crime, fear of crime and the built environment*

The focus group discussions, however, revealed that community members fear certain urban spaces due to a perceived risk of victimization without there having been an incident of crime there. Although, community members were not able to identify any formal hot-spots of crime, they indicated that woman and children will not utilize parks or the stream or open spaces system during the day and definitely not at night. This reaction is due to unnerving or suspicious characters in the parks and open spaces area, people staying or sleeping under the bridges by the stream within the open space system, unmaintained grass along the open space system and no lighting provided within the parks and open space system. In addition, community members will preferably not walk, run, or cycle near the railway line due to poor visibility, limited street lighting, overgrown grass close to the railway line providing hiding places to potential criminals and the broken fence bordering the railway line. Consequently, it is evident that specific types of spaces, e.g. parks in general are feared and accordingly avoided, although these spaces are not necessarily hot-spots of crime. The fear of crime of specific types of places is fuelled by the media and / or of people talking among each other, referred to as “crime talk” (Caldeira 2000).

To determine if community members’ fear of crime at identified perceived hot-spots are realistic, the total number of crime incidents were analysed within buffer areas along the railway line (500m), parks and open space system (150m) and the shopping nodes (300m). Figure 7 graphically represents the *railway line buffer* (500m) and the corresponding reported crime incidents for the time period April 2014 to March 2015. From the statistical analysis 46% of all crime incidents within the study area occurred within the railway line buffer, supporting the community members’ fear of crime. It is interesting to note that within the South African context insurance companies levy a higher monthly fee to households located within a 500m radius from a railway line due to the related crime risk factor linked to railway lines. The aforementioned

statement is supported by Ceccato's (2012:19) observations indicating that "areas that are highly assessable (served by arterial roads, railways, bus routes) can be more susceptible to crime".

The *parks, stream and open space areas* (150m buffer) and corresponding crime incidents are graphically represented in Figure 8. From the statistical analysis 29% of all crime incidents occur within 150m of the parks and the stream and open space areas. Iqbal & Ceccato (2015:1) states that "parks [and open spaces] that is a magnet for crime and disorder becomes deemed an unsafe place", which in turn leads to the *avoidance* of the parks and open spaces, especially after dark (Nasar & Fisher, 1993:198). As highlighted by the local law enforcement and related parties, most of the crime incidents within the parks are drug related. The avoidance of and fear of crime associated with the parks, stream and open space system by community members are thus substantiated by the statistical data and the local law enforcement and related parties' observations.

However, community members did not identify the shopping nodes as fear of crime generators or as hot-spots of crime. These spaces, according to the community members, are well designed with proper lighting, limited hiding places, high security fences, car guards and even CCTV camera systems with high pedestrian and vehicular movement related to perceived "eyes on the street". Although, from the GIS run simulation, statistical analysis (refer to heat map in Figure 6) and from the interviews conducted with local law enforcement and related parties, the shopping nodes, with specific reference to Queens Corner, was identified as the geographical area with the most crime incidents per square meter recorder. Given this, the total number of crime incidents within a 300m buffer area of the shopping nodes was also analysed. Figure 9 graphically represents the 300m buffer area and the corresponding crime incidents for the shopping nodes within the study area. Queen's Corner was identified as the predominant hot-spot of crime. In total 27% of all the crime incidents are recorded for all three shopping nodes located within the study area. Most of the crime incidents related to the shopping nodes are primarily property-related crime, representing theft out or from motor vehicle and theft of motor vehicle or motorcycle.

From the above buffer area and hot-spot crime analysis, it is evident that the communities' fear of crime in relation to the railway line, parks and open spaces correlated with the high number of reported crime incidents identified within the respective buffer areas. However, a discrepancy arises between the actual and perceived crime and fear of crime within the shopping node buffers. From the analysis it is clear that most of the recorded crime incidents occurred within the shopping node buffers, subsequently highlighting these areas as hot-spots of crime. Notably, these spaces are not perceived as fear of crime generators by community members, notwithstanding that they are the primary crime hot-spot.

### **Discussion and practical implications of the findings**

In terms of South African legislation, the *Constitution of the Republic of South Africa* (1996, No 108) clearly indicates that all citizens have the right to “freedom and security of the person, which includes to be free from all forms of violence from either public or private sources”. In addition, the National Development Plan (2011:349) of South Africa states that “safety and security are directly related to socio-economic development and equality”. The National Outcomes Approach (2010:1), guiding development within South Africa, directly speaks to crime prevention; Outcome 3 highlights that “all people in South Africa [should be] protected and feel safe” to ensure optimum future growth and development of the country. These policies and plans recognize that personal safety is a necessary condition for quality of life, development and productivity. However, although it is a national priority of the South African government to ensure all citizens' safety, the country experiences high levels of crime, which government struggles to address.

The findings of the study indicated that in the two neighbourhoods, Kilner Park and Queenswood, contrary to indications of National Victim Surveys, that most of the community members taking part in the focus groups discussions, with the exception of a few who have been victims of crime, were not fearful of crime. This is contrary to the belief of most of the local law enforcement agencies operating in the neighbourhoods, who believed that most community members were fearful of crime. However, despite not being afraid of crime, community members displayed avoidance behaviour in that they indicated a reluctance to visit many parks and open space systems due to the presence of perceived criminal activities, homeless people, a



lack of lighting and unmaintained grass. It therefore appears that, although communities may not acknowledge any fear of crime, their actions reflect some fear of specific places. Limiting opportunities to become victims of crime is, therefore, not only related to taking precautionary measures to protect individual homes, but also by a retreat from many public places in the built environment that is not essential for daily living. However, not being able to visit a park may in fact reduce the quality of life of a person, which is contradictory to the national priorities discussed above.

The findings also indicate how the constructs of fear interact with each other, yet not always leading to the same outcome or reflecting the actual crime statistics. Therefore, while the elements of social disorder were highlighted by the law enforcement agencies, most notably the drug houses, this did not seem to increase the sense of fear among community members. However, the presence of homeless people in the parks contributed to many avoiding these areas. This, along with aspects of physical disorder such as a lack of maintenance in the parks and poor lighting, increased the fear of crime of these specific places. Finally, while literature emphasises the tendency of crime to occur at or near major attractors, including shopping centres, these places were not feared or avoided by the community members. It may therefore be that the fear of crime is related more to the types of place, e.g. a park or railway line, rather than whether many crime incidents have occurred there. Similarly, regardless of the number of incidents occurring at the shopping centre, this type of place is not feared. In addition, it may be linked to the types of crimes that may occur there. In this case, the perceptions of fear may be linked to a fear of violent crime, which may be associated with parks and the railway line and not a fear of property crime linked to the shopping centre.

Given this, it is therefore, essential that municipal and local level crime prevention strategies acknowledge the role of social and physical disorder and the nature of the built environment, particular that of specific types of places, on the fear of crime and even more importantly, avoidance behaviour of residents. Consequently, it is imperative that local crime prevention strategies not only deal with law enforcement and social crime prevention initiatives, but also include measures aimed at dealing with the physical disorder and the nature of the built environment, commonly referred to as CPTED interventions or in a broader sense, situational crime prevention (described by Clarke 1995). At the same time, planning and design policies

also need to acknowledge the role of the built environment to enhance or reduce opportunities for crime and the fear of crime and consequently keep CPTED and situational crime prevention concepts in mind when engaging with spatial planning and land use management.

## **Conclusion**

This paper explored the specific crime patterns and fear of crime in two neighbourhoods, Queenswood and Kilner Park, in the north-east of the City of Tshwane, the municipal area which includes Pretoria. The discussion indicated that according to international literature, the fear of crime is influenced by various levels of social and physical disorder and the nature of the built environment, while the actual crime incidents are influenced by the land use patterns and presence of specific built environment elements such as the railway line.

The study indicated that contrary to the belief of local law enforcement agencies, most members of the community who participated in the focus group discussions were not fearful of crime. However, their utilisation of the built environment was influenced by 1) social disorder within the built environment, primarily related to the fear of others such as the homeless and the drug dealers; 2) physical disorder within the built environment, related to visual cues of urban decay, neglect, uncut grass, and poor street lighting and 3) the physical nature of the built environment in terms of the association of crime with specific types of places such as parks and areas near the railway line whereby the built environment provides hiding places for potential criminals. The actual crime incidents were influenced by land use patterns and the presence of specific built environment elements. The highest number of crime incidents, notably theft of and from motor vehicles, occurred around the shopping centres. The presence of built environment elements such as the railway line and the green open space system also presented opportunities for crime, but comparably less than the incidents occurring around the shopping centres.

However, the findings also revealed that the use and avoidance of places in the neighbourhood do not always relate to the official crime hot-spots. The avoidance of the parks and open space system is based on a perceived risk of victimization. The actual main crime hot-spots (the shopping nodes) which adhere to all the safety and design guidelines, including high fences, CCTV camera's systems and opportunities for "eyes on the street", are not feared, despite the

chance of victimization being much higher at the shopping nodes compared to the avoided park and open spaces. This seems to suggest that fear of crime is not always related to actual incidents of crime and secondly that the specific location of crime incidents or hot-spots are not the only factor influencing people choices of where to go or not to go in the neighbourhood, but that their behaviour may also be influenced by perceptions related to a specific type of place and the dangerous generally assumed to be linked to the spaces.

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<sup>i</sup> The definitions of crime are not universal and as such it is useful to also highlight the UK equivalent of the crimes mentioned to clarify this to a more international and UK audience. The UK equivalent of the following South African crimes are provided in brackets: theft out of motor vehicles (theft from a vehicle), house robberies (robbery of personal property), carjacking (aggravated vehicle taking), stock theft (wildlife offences), residential burglaries (burglary in a dwelling) (User Guide for Crime Statistics in England and Wales, 2015: 104-109).

<sup>ii</sup> Passive surveillance refers to the casual observance of public spaces by its users, while active surveillance refers to the police or other law enforcement agents, whose function is to police areas, watching public spaces. Visibility is the degree to which the environment is made visible through lighting etc. Territoriality refers to a sense of ownership which is encouraged when users or residents identify with particular spaces. Certain types of criminal actions can either be facilitated by easy access or escape routes, while at the same time this may assist potential victims to escape to safety. Finally, target gardening reduces the attractiveness of vulnerability of potential targets through the strengthening of building facades or boundary walls (Kruger et al 2001).

<sup>iii</sup> Community Police Forums in South Africa refer to community organisation to enable improved community-police relations and facilitate communication between the police and the community. It is a legal structure established in terms of the South African Police Service Act and members are elected during formal election processes (Community Safety Forums Policy).