
**8th International Seminar
ON ENVIRONMENTAL CRIMINOLOGY AND CRIME ANALYSIS
(ECCA)**

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Focus of seminar:

The intention is to focus on successful methods of designing out crime and the lessons learned in crime pattern analysis, particularly highlighting the practical issues related to implementation.

Title of Paper:

**DESIGNING SAFER LIVING ENVIRONMENTS -
SUPPORT FOR LOCAL GOVERNMENT**

By

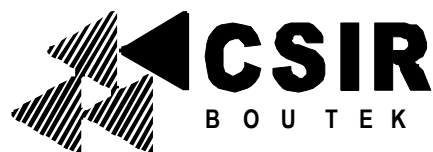
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Abstract:

This paper addresses the built environment, the opportunities it presents for crime and the role city planners and urban designers have to play in the design of safer cities and towns. City planners and urban designers can play a role in the creation of safer environments, by being aware of and employing the principles of crime prevention through environmental design. These principles and the entire approach, can be incorporated in Community Safety Plans, as part of the broader community development process, i.e. the IDP/ LDO processes, etc. Using their particular professional skills within the built environment, in terms of coordination, design and management, planners and designers can contribute to crime prevention in a pro-active and creative way. This will not only assist in addressing crime and the opportunities for it, but also in reducing the fear of crime in our cities and towns.

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1. INTRODUCTION

Crime is an every day reality in South Africa. An opinion poll conducted by the SABC, Idasa and Markinor has found that concern about crime and security has risen by nearly 50 percent in all provinces in this country¹. In another recent public survey done by the HSRC, crime prevention topped the list of priorities, even before “job creation”². In addition, the fear of crime is an integral part of the lives of many South Africans. Less than 30% percent of the population regularly report feeling safe³. The fear of crime changes lifestyles and influences use patterns. But, what is being done about this?

Given that crime prevention is one of the major priorities in South Africa, most South Africans believe that “fighting crime” should be the leading priority set for government during the next 10 years⁴. But while everybody agrees that crime should be addressed, the main question that comes to mind is who will be responsible to do it. Although crime prevention policies can and should be formulated at national and provincial levels, the actual application involving targeted crime prevention programmes, can only occur at local government level. This is especially due to two factors. Firstly, crime happens at a local level and it has been found that specific crime types occur in specific places. Secondly, if we consider crime prevention through design as an important element of crime prevention, it must be taken into account that spatial interventions also occur at a local level.

Bearing this in mind, the main target group becomes the body that governs the local area or community. This calls for Local Authorities to become seriously involved with crime prevention at a local level. However, while the need exists for local authorities to address crime prevention, many of them assume that only the police, criminologists, legal practitioners and politicians can address the problem. This, however, is not the case. Crime prevention and community safety do not only involve law

enforcement measures and social development programs. It is also concerned with the built environment and more specifically with the opportunities that the built environment presents for crime. In this regard city planners, urban designers and architects also have a role to play in terms of crime prevention and the establishment of safer cities for future generations.

This leads us to two main questions: why is it necessary to look at crime prevention through design in South Africa and if it is, who should be addressing this issue in this country? This paper focuses on the role of design and planning in crime prevention in South Africa and on the process of assisting those who can implement this concept in practice to the greater benefit of all citizens concerned with safety in the country.

The paper is structured in the following way. The scene is set by an overview of the current crime problem in South Africa with a specific reference to crime and its link to the built environment (section 2). The next section (section 3) focusses on the process of identifying specific types of locations that are problematic to crime prevention. Section four proceeds to highlight the support to Local Governments regarding crime prevention through planning and design.

2. THE SOUTH AFRICAN CITY: The place and its spatial characteristics

Powerful ideologies and modern town planning ideas paved the way for the typical South African city we are faced with today. Cities were transformed and urban residents came face to face with a challenging urban reality. In harmony with the spirit of the time, the single house on a large plot, grouped together in separated enclosed neighbourhoods, became the ultimate dream and therefore twentieth century planners hurried after these ideas in order to plan and control the ideal city. However, apartheid planners also saw in it an opportunity to implement their own ideology. With

separation as the aim and exclusion as the result, numerous townships were built on the peripheries of almost every South African city and town, with informal settlements growing around them. Other more fortunate residents, by virtue of race, found their dream in a single house within a quiet suburban area.

Today we are faced with the grim reality. Cities and towns in this country reflect a sad picture; an inherited footprint from the past. Urban environments are characterised by fragmentation and spatial dislocation, separation and mono-functional zoning, and by low-density suburban sprawl. A typical example of this can be found in the Khayalami Metropolitan Council Area.



Figure 1: A Diagram of the Khayalami Metropolitan Council area north east of Johannesburg, indicating the spatial fragmentation apparent in the area

Traditional mono-functional zoning in this area paved the way for separated urban precincts and isolated neighbourhood cells. In the past these isolated neighbourhoods was also used to accommodate different income and race groups. This resulted in a fragmented urban footprint and a dislocated lifestyle where people where forced to go to different areas for different functions, like for example living in one area, working in another, shopping in another, etc. The presence of large pieces of vacant or undeveloped land between these cells also exacerbates the spatial fragmentation within the KMC area. In addition, the nature of rapid transit

routes, bordered by large road reserves, strengthens the pattern of fragmentation. The result of this spatial pattern is cities of inequity, experiencing rapid changes in user patterns, and in many cases an environment of fear.

These spatial characteristics also create numerous opportunities for crime. Mono-functional zoning and land-use forces people to travel long distances to employment opportunities, leaving their properties, children and the elderly exposed to criminal activities in dormitory areas (figure 2).



Figure 2: Dormitory township

Large-scale commuting in turn, enforced by these dislocated functional cells, exposes travelers to more opportunities for crime on trains, at railway stations and taxi ranks (see figure 3).



Figure 3: More than 100 000 people daily passes through this taxi rank in Midrand.

This is especially true if these people are forced to travel in the dark or twilight periods. It also exposes them to crime opportunities when walking to and from these places early in the mornings and late at night. People travelling on rapid transport routes and using desolated, intersections with no surveillance, are also exposed to hijackings. Pedestrians who are forced to cross vacant and

undeveloped land are more susceptible to rape, mugging and assault from potential offenders hiding in bushes and due to a lack of surveillance in these areas (see figure 4).



Figure 4: Vacant land between suburban area and townships in Kempton Park, east of JHB.

Undeveloped public open spaces and a lack of maintenance and upgrading in degraded built environments, can establish a bad image, contributing to urban decay and open these areas up to criminal activities (figure 5).



Figure 5: Undeveloped public open spaces

A development pattern focussing on well developed suburban areas and Central Business Areas, serves to strengthen the pattern of exclusion, leaving many residents of poorly developed areas with limited access to recreation and other necessary facilities. The result is further increased commuting patterns to more developed areas, more regular visits to local shebeens or taverns or participation in gangster activities, etc., which in turn may exacerbate the opportunities for crime.

The specific spatial form and character of South African cities in general therefore allow certain types of crime to occur in certain places. In South Africa, violent crimes targeting property usually predominates in inner city areas. The poorer inhabitants of the city, especially those living in townships and informal settlements, are most at risk of violent crime. In contrast, suburban residents are more likely to be victims of property crimes. These crime patterns were also confirmed in the KMC area.

The location of crime is important and it is clear that there is a definite link between crime and the built environment in South Africa. Specific locations therefore allows for specific types of crime to occur. Crime prevention should therefore, not only be concerned with law enforcement and social development, but also with the nature of the built environment and the opportunities it presents for crime.

3. CRIME PREVENTION THROUGH DESIGN AND PLANNING: Identifying specific types of locations problematic to crime prevention

As architects, urban designers and planners, we are concerned with the nature of the built environment and its ability to perform well. In this regard, crime prevention becomes an indicator of an environment that is not functioning well or offering a quality life to its inhabitants. Given the fact that the spatial characteristics of South African cities allow crime to manifest itself, the aim then becomes one of identifying specific types of locations problematic to crime prevention.

This requires a process of careful analysis. The crime and environmental problems found in one neighbourhood is quite different from other such neighbourhoods and therefore each particular place will require different planning strategies and design solutions to address the specific place and crime situation.

The process of analysis therefore revolves around two main aspects, namely the type of crime that occur in that particular area and the type of location (place) where these crimes occur. In this regard we firstly establish the specific crime patterns apparent in the local areas in concern. A crime analyst usually does this according to the national crime statistics from the police. Secondly, the nature of the built environment where these types of crime occur is analyzed.

This is done according to the principles of crime prevention through environmental design developed by the CSIR in their book *“Environmental design for safer communities”*. These principles were formulated as a result of both international and local research and although they are based on international principles, they were prioritised to suit the characteristics and dynamics of South African cities. These five principles that are fundamental in the design of safer environments are:

- Surveillance and Visibility
- Territoriality and Defensible Space
- Access and Escape Routes
- Image and Aesthetics
- Target Hardening

In any given situation these principles need to work together to contribute to an effective crime prevention strategy. At the same time, they need to work alongside other planning principles for well-performing settlements.

The aim of this analysis is therefore to establish the relationship between specific types of crime and specific types of physical locations.

This process was also followed in a project, “Urban redesign for public safety”, that are carried out for the Khayalami Metropolitan Council. A local NGO did the crime analysis for the area in concern. This was done for both the metropolitan area, as well as the different local police station areas, since crime data are recorded according to police station areas. After establishing the four

most serious crime types for each police station area, we then proceeded to investigate the spatial characteristics of each local police station area. Together with the police we visited all the crime “hot-spots” and problem areas and recorded the different environmental characteristics contributing to crime in these areas.

The following types of locations were found to contribute to the occurrence of crime in the KMC area, either in terms of their location, design, character or management.

- The nature and layout of roads and the location and design of road or railway bridges
- The large areas of vacant or undeveloped land
- The layout of roads, development patterns, block sizes and mono-functional use
- Building types, the location of buildings on properties and the type of property enclosures
- The design and management of public urban spaces
- The design, location and maintenance of parking areas
- The design and location of public transport facilities
- A lack of or poorly developed infrastructure in especially townships and informal settlements
- The distribution, location and nature of recreation facilities
- The nature and location of commercial facilities and business premises.

It is however, unrealistic to expect to be able to prevent all types of crime using the same methods. A sound understanding of crime patterns in a particular place is therefore essential, in that particular types of crime can be addressed through particular design responses.

This issue has been researched internationally and several approaches have been developed in order to address crime and the fear of crime in the built environment. Some of these approaches include Crime

Prevention through Environmental Design, Place-Specific Crime Prevention and Situational Crime Prevention.

Crime Prevention through Environmental Design (CPTED) is aimed at reducing the causes of, and the opportunities for, criminal events, as well as addressing the fear of crime, through the application of sound design and management principles to the built environment⁵. The term **Place-Specific Crime Prevention** refers to coordinated programs of change (specifically physical design, security and property management changes) that are targeted to a particular place and its problems⁶. **Situational Crime Prevention** comprises opportunity-reducing measures that (1) are directed at highly specific forms of crime, (2) involve the management, design or manipulation of the immediate environment in as systematic and permanent way as possible, (3) make crime more difficult and risky, or less rewarding and excusable as judged by a wide range of offenders⁷.

In essence, these three concepts have more or less the same aim in mind, namely to change the physical environment, as well as to address the management, maintenance, use patterns of particular areas and daily activities of people, to reduce the opportunities for crime. All three approaches advocate an environmental design approach combined with management measures to address crime in particular areas. Their main contribution lies in the fact that they show that positive design interventions can make a difference in terms of crime prevention and that these design interventions should involve more than just target-hardening. They also emphasize the notion that all crime prevention aspects must be place-specific, since every crime situation is unique, and should therefore include tailor-made strategies for specific places and specific crime situations.

In South Africa, research has been carried out by the CSIR on this concept of environmental design to prevent crime. In their book, *Environmental Design for Safer Communities*⁸, five basic principles are identified as fundamental in designing to reduce crime. These principles have been formulated as a result of extensive research into international literature, and although they are universal in the design of safer environments, they have been adapted to suit the characteristics and dynamics of South African cities. Bearing this in mind, a thorough understanding of the principles is

necessary to establish a foundation for future planning and design intervention to prevent crime, as well as for strategy formulation.

These five basic principles of crime prevention through design, aimed at crime prevention in the built environment and specifically relevant to city planners and urban designers are:

However, while international researchers and protagonists agree that there is a link between crime and the built environment, and that city planners and designers have a role to play in terms of crime prevention, South Africans are still hesitant and in many cases unaware of these issues. Many role-players, including planners and designers, remain oblivious of crime's link to the built environment and continue to maintain that law enforcement and community development/social crime prevention are the only ways to address or prevent crime. However, both the National Crime Prevention Strategy (NCPS) and the White Paper on Safety and Security (1998) address this issue. Pillar Two of the NCPS seeks to promote crime prevention through environmental design. The White Paper on Safety and Security promotes Situational Crime Prevention, and environmental design (CPTED), as part of it.

Given that this link between crime and the nature of the built environment exists, the following are necessary in terms of crime prevention in South Africa:

- That all role-players should realize and understand the link between crime and the built environment.
- That intervention in the built environment is necessary in order to address crime prevention and to reduce the opportunities presented for crime, and that the relevant role-players should accept their responsibilities in this respect.

Given that appropriate intervention in the built environment is necessary, it then becomes the onus of those specialists concerned with the built environment, namely city planners and urban designers, to be involved in these interventions. This does not suggest that these players should be the only role-players, but rather emphasizes that these professionals have an important function in terms of crime prevention in the built environment.

4. URBAN PLANNING AND CRIME PREVENTION: THE ROLE OF CITY PLANNERS AND URBAN DESIGNERS IN TERMS OF CRIME PREVENTION.

Broadly speaking, the role of city planners and urban designers is to utilize these approaches and principles in their projects and to ensure that these are part of broader crime prevention strategies at local level. But, how should they do it?

It is necessary to keep three aspects in mind when planning for safer environments and these can be classified as the 3 P's of Crime Prevention through Planning and Design:

- *Place*
- *Process*
- *Partnerships*

PLACE – to ensure context-specific design and management of the built environment to prevent crime

*The crime situation is, however, not only influenced by the nature of the physical environment, but also by the use patterns and the daily routine activities of people using the physical environment. It must be remembered that each community is unique. Crime in a particular environment will be influenced by the specific physical, social, economic and political characteristics of that environment. Therefore, all programmes to prevent crime must be treated on their own merits. This should include the prioritization of specific projects in order to respond to the specific needs of a particular community and environment. It also implies that while the principles of the above-mentioned approaches to address crime prevention in the built environment, are universal, the application should be place-specific and tailor-made for the particular crime situation in that place.

PROCESS – to contribute to and ensure the planning, implementation and management of local crime prevention strategies, planning/design guidelines and pilot/future projects.

a) Policy Framework

Government realises that crime prevention can be more effectively addressed at the local level and consequently the White Paper on Safety and Security identifies Local Authority as one of the key agents. Local Government is thus mandated to design and implement programmes targeted at specific crime problems. The potential of such programmes is broad and encompasses environmental design initiatives, diversion programmes for young offenders, etc. Such problems need not fall within the traditional core functions of local line functions or provincial departments⁹. These programs do however play an important role as part of a local crime prevention partnership to address crime in a specific area.

Crime and the fear of crime have been prioritised as a major issue through the LDO/IDP processes of many Local Authorities. However, few Local Authorities have a clear idea of how to take this process further. In this regard, the National Crime Prevention Strategy (NCPS) has commissioned the CSIR to compile a manual on how to design a community crime prevention strategy. This covers the identification of local crime problems in a specific environment, the prioritisation of specific crime prevention focus areas for the particular environment, the management of identified projects and their monitoring and evaluation.

Example:

The city of Toronto, Canada has compiled its own place-specific design guidelines to assist planners and other role-players in planning for a safer city. The *Toronto Safer City Guidelines* (1997) is the third edition of a project that started as *A Working Guide for Planning and Designing Safer Urban Environments* (1992). The manual focuses on the following aspects: the legislative framework for Toronto's Planning guidelines, the process of designing safer environments, factors that enhance safety and security in public places and problematic places.

The role of the planner and urban designer should revolve around facilitation, cooperation and coordination in the development of such a community safety strategy. This will include:

- Facilitation (as part of the project team) of focus groups, workshops, etc. to gather information during the analysis and identification of the crime problems in a local area.
- Cooperation in terms of the analysis of the physical and social environment from an environmental design perspective, including the crime patterns in a specific location, use patterns and the nature of the physical environment.
- Coordination in terms of the formulation of a focus area/thrust to address crime prevention through planning and design.

b) Planning and Implementation

Community Crime Prevention Strategies should emphasize more effective and efficient use of existing resources through the prioritization of specific focus areas and crime prevention projects to address local crime problems. One of these areas can focus on environmental design or situational crime prevention and this is where planners and urban designers can contribute to crime prevention in an effective way.

The role of the planner and urban designer will revolve around the planning and implementation of environmental design/situational crime prevention strategies, planning and design guidelines and pilot projects. This will include:

- Encouragement of local, context-specific environmental design crime prevention efforts
- Assisting with the development of environmental design strategies
- Incorporating environmental design approaches/principles in design and planning projects
- Applying these principles when designing new or upgraded areas
- Applying these principles and understanding their implications on the zoning and recommended land-use of areas.
- Formulating and establishing by-laws pertaining to the physical environment and crime prevention
- Implementing pilot projects to act as an example of how planning and design

intervention can address crime prevention and to learn from practical examples.

- Ensuring community awareness and participation when implementing a project to ensure support and ownership of the project.

Example:

The Khayalami Metropolitan Council (KMC) has embarked upon an intensive program to assist the SAPS and to improve the Public Safety Situation within the Khayalami Metropolitan Area (KMA), as well as neighbouring areas. The first phase of the program consisted of deriving a Public Safety Strategy Plan for the KMC. The plan was finalized in October 1996 and comprises eight major thrusts focussing on improving the performance of the overall Public Safety System within the boundaries of the KMA. Thrust No 5 focuses on *Urban Redesign for Public Safety* and entails the systematic assessment and determination of environmental design factors that enable the enhancement and/or detriment of safety and security in the KMA. The KMC has recently commissioned the CSIR to develop a strategy for Urban Redesign for Public Safety.

c) Management

The success of a Community Safety Plan and the implementation of resulting projects will largely depend on the degree and level of management involved. Without management continuity no strategy or project can be successful in the long run. It is therefore necessary to appoint a responsible body or person to manage the project and to coordinate the crime prevention projects at local level. This will also imply the involvement and coordination of all relevant role-players involved in the various projects.

The role of the planner and urban designer will revolve around the management, coordination/cooperation, as well as monitoring and evaluation of crime prevention projects concerned with planning and design. This will include:

- The management of their particular crime prevention projects

- Coordination and cooperation with other relevant role-players and crime prevention projects
- Assisting with the monitoring and evaluation of crime prevention projects concerned with planning and design.
- Reviewing the feedback from the community and other stakeholders and adapting the crime prevention through design approaches if necessary.

PARTNERSHIPS – to assist the Local Authority to initiate the development of local crime prevention partnerships, especially those concerned with environmental design, and incorporate relevant role-players in the process.

Crime prevention is not only about law enforcement and community development/social prevention, but also about situational crime prevention. It should therefore involve a wide range of role-players. The Local Authority needs to exercise its position and take the lead in the development of local crime prevention partnerships.

There are many role-players involved that need to be part of crime prevention partnerships.

These include councillors and officials of the local authority, community based organisations, local and organized business, NGO's, taxi-organizations, etc. (also see figure 6). The partnerships should aim to pull together all relevant role-players for the specific crime prevention project. Together these actors can prioritise the most serious crimes in their area, plan how to reduce them and ensure appropriate and ongoing management of crime prevention projects. Such partnerships would benefit from shared skills, resources, knowledge of the area and commitment to action. These local crime prevention partnerships can take on different forms ranging from partnerships directed at specific projects to partnerships approaching crime on a specific neighbourhood or area level (see examples).

The role of the planner and urban designer in these partnerships should revolve around coordination, cooperation and specialized input. This should include:

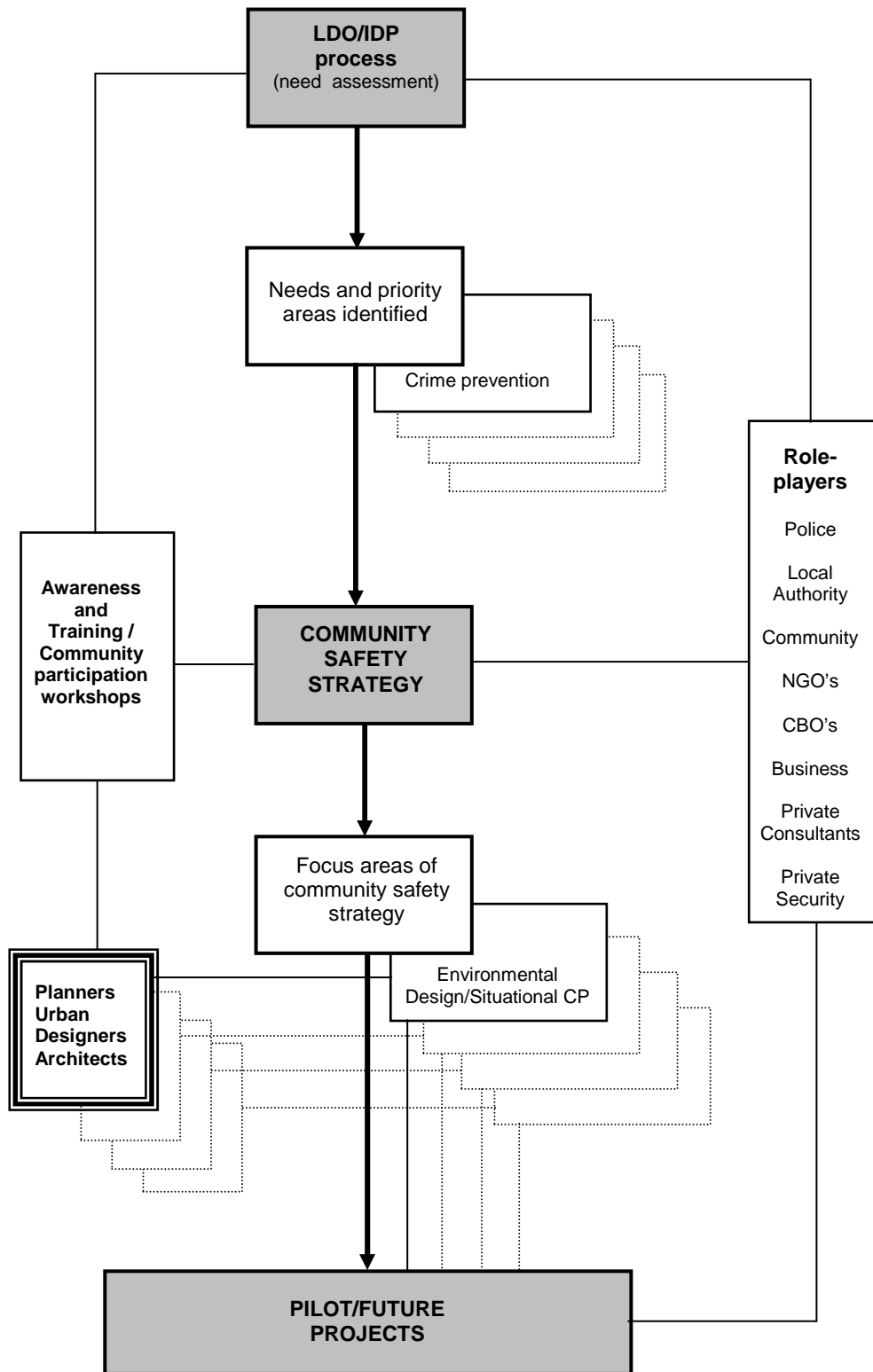
- Formulation of relevant partnerships concerned with planning and design for safety.
- Coordination of these partnerships.
- Cooperation in other relevant crime prevention partnerships where specialized input from a planning and design perspective can add value.

Example:

Safer Cities: Greater Johannesburg has established several partnerships to assist the process of crime prevention in Johannesburg. These include:

- As part of the *Safer Cities Project*, a creative and dynamic partnership was established, involving a broad range of local role-players to design, develop and implement local projects. At the initial stage of the project the primary focus of the partnership was at a strategic level, engaging a wide range of actors in developing key focus areas for the project.
- Specific project intervention partnerships were also established at a later stage, for example a *car guard program*, which engaged the Police, traffic department, corporate and small business, provincial government, marketing and tourism, community police fora, Business Against Crime and other NGO's.
- Partnerships approaching crime on a specific neighbourhood or area level have also been developed. The integrated crime prevention pilot project planned for the *Joubert Park Precinct*, has created a primary partnership between local government and the local communities and will subsequently be developed through the inclusion of other actors as well, including planners and urban designers. The *Inner City Partnership* is another example of the development of a geographic focused partnership, also involving planners and urban designers.

Figure 6: Process and relationships of crime prevention at local level with specific reference to crime prevention in the built environment.



CONCLUSION: TOWARDS COMMUNITY SAFETY THROUGH RESPONSIBLE URBAN PLANNING

The location and environment where crime occurs is important and empirical evidence proves the link between crime and the built environment. Therefore, crime prevention should not only be concerned with law enforcement and social development, but also with the nature of the built environment.

International crime prevention through planning and design approaches provide a basis for South African practitioners to build upon. The implementation of these approaches will not only add to the overall repertoire of available crime prevention initiatives in South Africa, but will also address some of the more pressing needs our country is confronting today. In addition, it extends the playing field of crime prevention agents and gives an opportunity to others, traditionally not involved with crime prevention, like planners and designers, to contribute to crime prevention in South Africa. Crime prevention is not only concerned with the nature of offenders or possible offenders, but also with the built environment and the opportunities it presents for crime. In this regard, the table is laid for fruitful intervention to reduce the opportunities for crime in the built environment and along with it, the fear of crime as well.

Planning and Design to prevent crime, does therefore, offer a great **opportunity** for all city planners and urban designers to:

- Address crime and the fear of crime in the built environment;
- Contribute to crime prevention in a proactive and creative way;
- Assist traditional crime prevention agents, for example the police, etc. with local crime prevention
- Be part of local crime prevention partnerships
- Contribute to better and safer environments for future generations

In order to address this opportunity, they need to **focus** on the following **three aspects**:

- Be aware of the built environment's link with crime and of the characteristics within the built environment which contributes to opportunities for crime;
- Be aware and understand the crime prevention approaches addressing crime in the built environment

- Incorporate these approaches and principles in planning and design projects, and to ensure that these are part of broader crime prevention strategies at the local level.

Design and planning alone, is not the ultimate answer. It needs to be combined with other crime prevention efforts and management principles to ensure the maximum effect in the long run. Design and planning to prevent crime, needs therefore, to be part of a holistic approach to address the current state of our cities and the crime within it. It needs to be context-specific and therefore the local authority is in the best position to initiate this holistic approach to crime prevention and identify the responsibilities of all the other role-players.

City planners and urban designers can contribute to community safety through responsible urban planning. The incorporation, of planning and design principles for safer environments, does not necessitate a complete alternative approach, if the design of well-performing and vibrant cities is the aim. However, when analysing the city precincts in South Africa, it becomes evident that in many cases these principles have been ignored to the detriment of the cities' residents. What seems necessary then, is an awareness that cities and neighbourhoods can be planned and designed to be safer.

The built environment is the set where our everyday life activities take place; it is the stage where the play of life is performed. It is also the stage where criminal activities take place. Crime happens in particular places and is dependent on specific opportunities presented by these places.

The challenge then, for planners and urban designers, is to get serious about safety and to take up their role in building a better environment for future generations.

¹ News Bulletin.

<http://www.sabc.co.za/radio/news/news.htm>

² Loock, S. "Crime fight must be No 1". *Citizen*, 1 March 1999.

³ Ibid.

⁴ Ibid.

⁵ Ibid.

⁶ Feins et.al. *Solving Crime problems in residential neighbourhoods: Comprehensive changes in design, management and use*. US Department of Justice, Office of Justice

Programs, National Institute of Justice. 1997, p 74-75.

⁷ Clarke, R.V. (ed.) *Situational Crime Prevention: Successful Case Studies*. Second edition. New York, Harrow and Heston, 1997, p 2.

⁸ Napier, et.al. *Environmental Design for Safer Communities*. Pretoria, CSIR Publication, 1998.

⁹ Robertshaw, R, S Singh and G Reid. 1998. "The challenges of local crime prevention in Johannesburg. Safer Cities, Johannesburg". Paper delivered at the *International Conference for Crime Prevention Partnerships to build community safety*, Johannesburg, October 1998.