DESIGNING SAFER PLACES

A Manual for **Crime Prevention** through **Planning and Design**

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Preamble

This publication was commissioned by the Division Crime Prevention (Social Crime Prevention) of the South African Police Service (SAPS). This division has a strong focus on community based crime prevention and supports local government in particular in fulfilling its role in this regard. *Designing Safer Places - A Manual for Crime Prevention through Planning and Design*, and a previous, complementary publication, *Making South Africa Safe - A Manual for Community Based Crime Prevention*, illustrate the Police Service's commitment to provide guidance in the creation of safer communities.

The manual has its origin in a draft publication entitled *Environmental Design for Safer Communities* published in 1998, which was the result of a research project conducted by the CSIR and the Institute for Security Studies (ISS). This project, funded by the Innovation Fund of the Department of Arts, Culture, Science and Technology, focused on Pillar Two (reducing crime through environmental design) of the National Crime Prevention Strategy (NCPS). The findings of the project, as documented in the draft publication, were discussed with various stakeholders and this, together with further studies, led to the development of this manual on crime prevention through planning and design.

The aim of the manual is to promote cooperation between the police, local government and other role players to improve local-level crime prevention through the design of safer environments. It highlights the role that those practitioners responsible for shaping the built environment - urban planners and designers, architects, landscape architects and engineers, etc - can play in creating safer communities.

The manual provides practical recommendations that will assist these professionals (private practitioners as well as government officials) in incorporating crime prevention principles into their thinking when planning and designing new developments. It will also provide guidance with regard to the improvement of existing environments to reduce crime and increase people's feelings of safety. As such, this publication will be of value not only to design professionals but also to the SAPS and other policing agencies, local government councillors and officials from various departments, as well as community groups.

The CSIR is continuing with research into local-level crime prevention and particularly into issues related to crime and the physical environment. Comment on this publication and other suggestions will be welcomed.

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Introduction

This manual deals with the relationship between crime and the environment and the influence that the physical location can have on people's behaviour. It outlines an important role in the fight against crime for planners, urban designers, architects and other practitioners involved in shaping the built environment. The manual provides these practitioners with an understanding of how to incorporate certain crime prevention principles into their conventional disciplines.

The manual has two sections. The first section outlines the concept of crime prevention through planning and design and explains how this can be applied. It provides comprehensive step-by-step guidance regarding the process of analysing specific crime problems, the physical environment and other relevant factors, in order to implement the recommendations contained in Section 2 in the most appropriate and effective way.

Section 2 provides practical recommendations on how to plan, design and manage the physical environment to reduce crime. It deals comprehensively with the following:

- **Planning strategies** - guidelines are provided on the implementation of planning policies that will improve the functioning of cities and towns.

- **Detailed design** - recommendations are made that will assist with the design of safer public spaces.

- **Management** - proposals are put forward with respect to the implementation and management of initiatives emanating from this manual.

Treat this manual as a guide and not as a set of standard formulas for reducing crime. Different types of crime cannot be addressed by using the same methods. Situations differ, therefore environmental design responses need to be based on a sound understanding of crime patterns, the physical and social environments, etc.

Assumptions

It is recognised that environmental design approaches appropriate to developed countries may not be as effective in South Africa, given the history of the country and some of the current realities. The effectiveness of the proposed interventions, in many instances, will depend on a normalisation of some of these conditions. The development of the recommendations contained in this manual were guided by the following:

- *The crime situation is exceptional.* In certain places crime is so serious that environmental design interventions are likely to be swamped by social factors and

cannot be expected to have a significant impact in the short term. The violent nature of crime in particular may limit the effectiveness of certain environmental design interventions. It is assumed that crime levels will reduce over time and that design changes implemented now will 'come into their own' and begin to function as intended.

- *Willingness to intervene* is affected by current conditions. Many of the recommendations depend on individuals or groups intervening to modulate criminal events. In many cases this may not happen. Other programmes aimed at building community responsibility are essential and the inclusion of communities in crime prevention strategies is critical.

- *Levels and effectiveness of policing are variable.* In environmental design terms, effective policing is part of the management of urban spaces and facilities. It is clearly an integral part of any crime prevention strategy and the design recommendations outlined should enhance good policing.

- *A functioning local government is needed.* In order for this manual to be effective, institutional structures hove to be capable of implementing the recommendations suggested and of managing the city effectively.

- *Little can be achieved without a coordinated crime prevention strategy.* Changes to the physical environment will, in most cases, have a limited impact on the level of crime if carried out in isolation. The implementation of the recommendations needs to be part of a multifaceted approach that involves many stakeholders including the full range of urban decision-makers. Not least of these would be the residential and business communities in which the design interventions are to be effected.

- *The degree of violent crime* in South Africa necessitates a more holistic approach to crime reduction where environmental design is supported by other measures. The crime prevention potential through remodelling the physical environment can only be effective when used in conjunction with the other crime reduction approaches - law enforcement, social crime prevention and a functioning criminal justice system.

Section 1
What crime prevention through planning and design means

Background

The notion that the physical environment can either increase or reduce opportunities for crime is not new. Internationally, it has been studied extensively over a number of decades. There is general consensus that if the environment is planned, designed and managed appropriately, certain types of crimes can be reduced. Environmental design has formed an integral part of many crime prevention initiatives in countries such as the UK, USA, Canada, The Netherlands and Australia.

The study of the relationship between crime and the physical environment has resulted in various theoretical approaches and a number of schools of thought have emerged since the early 1960s. Some of the more familiar approaches include Crime Prevention Through Environmental Design (CPTED, pronounced 'septed'), situational crime prevention and place-specific crime prevention. The CSIR bases its work on a South African interpretation of international approaches, as well as research conducted locally, and refers to the concept as *crime prevention through planning and design*.

The environment can play a significant role in influencing perceptions of safety. Certain environments can impart a feeling of safety, while others can induce fear, even in areas where levels of crime are not high. In this regard, planning and design measures can be utilised very successfully to enhance feelings of safety in areas where people feel vulnerable.

Despite the many benefits of crime prevention through planning and design, it should not be seen as a panacea and its limitations should be acknowledged. Environmental design interventions can only be implemented to address particular types of crime in particular locations. It is important to analyse each situation carefully before deciding on possible interventions. In many instances, environmental design interventions are much more effective if linked to other crime prevention measures. It should be taken into account that crime prevention measures applied in one area may cause crime ta move to other areas (displacement), and therefore interventions should not be implemented in isolation.

Crime and the environment

In order to understand the role of the environment in crime prevention, it is necessary to briefly discuss the elements of a criminal event, as well as the concept of crime prevention. The relationship between crime and the physical environment is then expanded upon.

For a criminal event to occur, the following are required:

- a ready, willing and able *offender;*
- a vulnerable, attractive or provocative *target/victim;*
- a favourable *environment;* and
- the absence of willing, able and credible *modulators.*

The person who commits the crime is referred to as the *offender.* In a case where property is the target of an offence, this would be described as a *hard target.* If a person is the target, then she or he is the *victim.* The physical and social environment can either inhibit or enhance opportunities for crime. *Modulators* encompass a range of factors that discourage crime, such as the possibility of intervention while the offence is being committed, and the degree to which the offender believes there will be follow-up after the crime.

The basic elements of a crime can be reduced to three sets of characteristics, namely those of the **offender**, those of the potential **victim/target**, and those of the **environment** or the crime location (the physical location, as well as the people and the activities that might deter or encourage the offender). These elements can be represented in the form of a 'crime triangle', as illustrated in Figure 1.

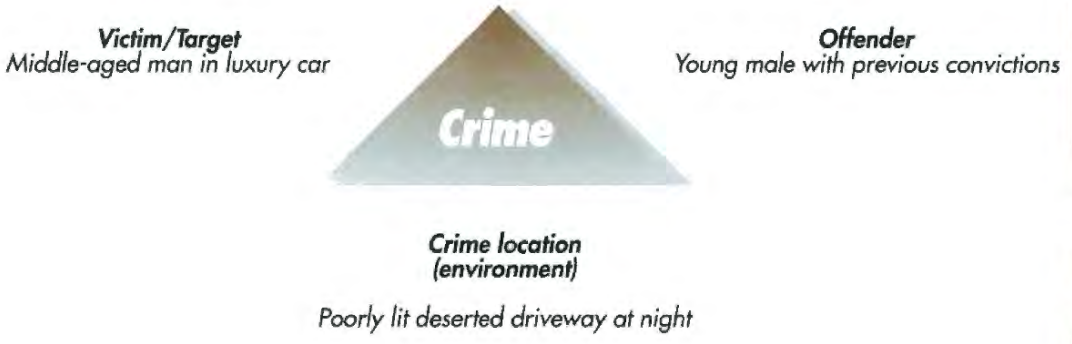


Figure 1: The basic elements of a crime

What is crime prevention?

Just as the occurrence of a specific crime depends on the presence of - and interaction between - the offender, the potential victim and the environment, so too does crime prevention involve a response to one or more of these elements. As indicated in Figure 2, crime prevention can involve a number of actions that respond to a specific crime problem. The more successful crime prevention strategies are those that focus on specific crime types (or a particular group of crimes) and aim to address these through a combination of targeted interventions.

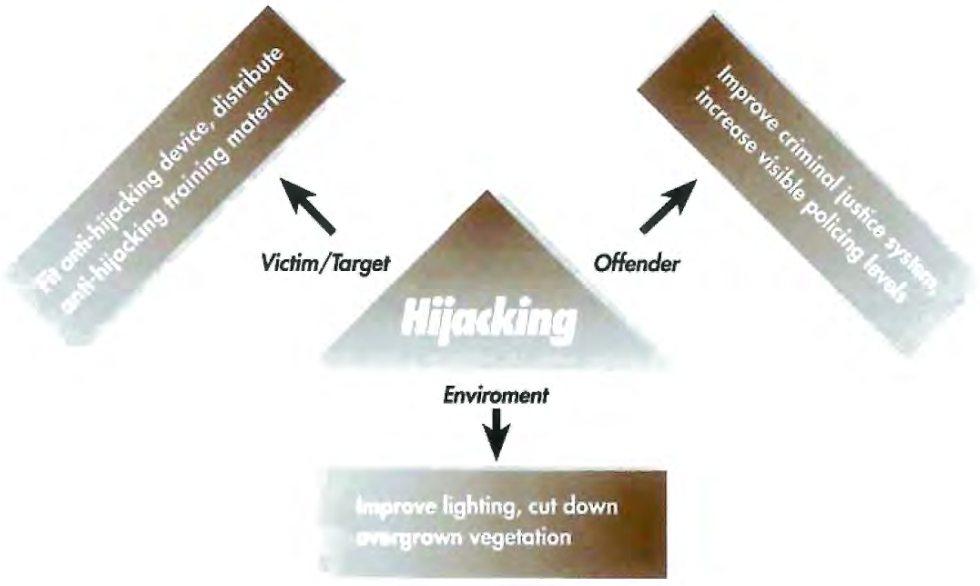


Figure 2: Combination of targeted measures to reduce crime

It is clear that the form and character of the built environment as the local setting of a crime can have as great an impact as each of the other two elements, namely the victim and the offender. A particular design feature or condition of the physical environment has the ability to hinder or enhance opportunities for crime to occur. It therefore follows that the role of the physical environment should also be considered when strategies are developed to reduce crime. Opportunities for crime prevention through planning and design should be exploited wherever possible.

Crime prevention is understood to mean all those activities which reduce, deter or prevent the occurrence of specific crimes by:

- altering the environment in which they occur;
- changing the conditions which are thought to cause them; and
- providing a strong deterrent in the form of an effective criminal justice system.

Crime prevention through planning and design

As indicated, certain types of crime can be addressed by altering the environment in which they occur. Changes to the physical environment aim to make it more risky and difficult to commit a crime. The environment can be planned, designed and managed in such a way that it requires more effort from potential offenders to carry out their criminal activities.

Crime prevention through planning and design can be described as follows:

> ***Crime prevention through planning and design*** **aims to reduce the causes of, and opportunities for, criminal events and to address the fear of crime by applying sound planning, design and management principles to the built environment.**

Within the South African context, it incorporates the following:

- **Planning** - physical urban planning approaches used at a strategic level, including the promotion of mixed land use, the reduction of vacant land, etc.

- **Design** - the detailed design of the different urban elements, such as the movement system and the roads, the public open space system, and individual buildings on their separate sites.

- **Management** - the management of the entire urban system and the different elements and precincts that make up the urban area. This includes infrastructure maintenance, the enforcement of by-laws, etc.

Changes made to the built environment to reduce crime often elicit a response from offenders. People change their behaviour, crime shifts its locale, or the type of crime changes. Environmental design can therefore not always be totally preventive and, for this reason, crime prevention measures require constant review to continue to ensure their effectiveness.

It must also be remembered that what works in one situation might not be appropriate in another. Because numerous factors influence the type of crime, as well as where and when it occurs, it is necessary that planning and design principles work together with other crime prevention approaches. It is also essential to have a clear understanding of the possible causes of the different types of crime being addressed. The process that should be followed when implementing the concept of crime prevention through planning and design is described in Chapter 5.

Crime prevention through planning and design - it does make a difference

The concept of crime prevention through planning and design has been implemented successfully in many countries including Britain, the United States of America, Canada and the Netherlands. Exomples to illustrate how certain types of crime can be limited if the environment is designed oppropriately include the following:

- In Canada the Peel Regional Crime Prevention Services Unit noted a drop of 85% in all crime incidents at a school in their area of jurisdiction as a result of pinpointing problem areas and implementing various physical design changes. The school had been experiencing escalating crime problems, including assault, weapons possession, armed robbery, sexual assault, theft and wilful damage to property. Simple and relatively cost-effective alterations to the physical environment that were implemented included the reorientation of the parking area and the clear definition of transitional zones and controlled areas. A territorial environment was thus created which allowed students, faculty and staff a sense of campus ownership (McKay).

- In Toronto, improvements to the Bay Street Underpass, including better pedestrian lighting, the glassing in of the walkway and the upgrading of exit points resulted in a more tolerable underpass and thus assisted in reducing crime (Wekerle and Whitzman,1995:32).

- The Clason Point Gardens project in New York's Bronx showed a significant 54% drop in the crime rate during the first year of implementing environmental design measures. Physical modifications included 'subdividing much of the property to increase proprietary feelings of residents over those grounds; reducing the number of pedestrian routes through the development to intensify the use of remaining walks; widening the remaining walks to include play and sitting areas; resurfacing the exterior of the row houses to improve their appearance and image and assigning space for each group to use to avoid conflicts with residents from within the development' (Sorensen, Walsh and Myhre,1998:90).

- Successful application of environmental design principles are cited as one of the reasons for the relatively low crime rate experienced on Washington DC's Metro (public transport subway system). The architects and planners deliberately created a design to deter criminals and make commuters feel comfortable and secure. Many of their efforts to create good architectural form also promoted a secure environment. Among numerous features it was noted that the design was directed towards creating a balance between aesthetics and security by adopting an approach that increased passengers' perceptions of safety and allowed for safety in numbers (Clarke, 1997:286).

Whose responsibility is it?

This chapter outlines the legislation that frames the crime prevention responsibilities of various agencies. It identifies key role players ond highlights specific roles for those professionals involved with planning, designing and managing the physical environment.

Policy framework

In line with international thinking, South African legislation is geared towards local level crime prevention. It is acknowledged that crime needs to be addressed through targeted, locally developed interventions that are based on an understanding of the local conditions where the crimes occur. Environmental design interventions, in particular, should be developed at a local level. In the majority of cases, the local authority will be in the best position to take the lead in this regard.

A number of policy documents frame the role of local government in supporting the SAPS with the development and implementation of crime prevention initiatives. In particular, the *White Paper on Safety and Security*, published in September 1998, clearly identifies local government as a key player in local level crime prevention.

Supporting legislation

Crime prevention is underpinned by legislation from two government departments, namely **Safety & Security** and **Provincial & Local Government:**

- the White Paper on Safety and Security (September 1998);
- the South African Police Service Amendment Bill No 39 of 1998, regarding municipal policing;
- the SAPS Amendment Act No 83 of 1998 and the proclamation dated 05.02.99 regarding this Act, all under the jurisdiction of Safety & Security;
- the White Paper on Local Government (March 1998) and the Department of Provincial Affairs & Local Government's Local Government Transition Act of 1993; and
- the Municipol Structures and the Municipal Systems Acts (1999 and 2000) from the Department of Provincial & Local Government.

Legislation and policy emanating from the **Department of Acriculture & Land Affairs** is also relevant. This includes the:

- Development Facilitation Act (DFA) of 1995;
- White Paper on Spatial Planning and Land Use Management (July 2001);
- Resource document on Chapter 1: Principles of the DFA (May 1999); and
- Manual on Chapter 1: Principles of the DFA (May 1999).

Mechanisms such as Integrated Development Plans (IDPs) and Land Development Objectives (LDOs) compel local authorities to respond to the needs of their communities. Crime is often identified by communities as a priority problem, which places a particular responsibility on local authorities to provide safer living environments.

Stakeholders and participants

Environmental design initiatives should ideally be coordinated by the local authority in collaboration with the SAPS. Local authorities are responsible for most of the functions that relate directly to environmental design and are well positioned to adopt policies and introduce and enforce regulations in support of crime prevention through planning and design.

Key role-players within local government include professionals such as physical planners, urban designers, architects and landscape architects. In addition, those officials involved in transport and roads, parks and public open spaces, and housing, as well as the strategic decision-makers and those involved with public safety, by-law enforcement, etc, can also contribute significantly. Private sector practitioners involved with shaping the built environment also have an important role to play.

It is essential that local police stations become involved with environmental design initiatives, particularly crime prevention officers. They are usually able to identify problems related to the physical environment and they know where different types of crimes occur within their precincts.

Involve the users

Often the most important stakeholders in environmental design initiatives are the users of the spaces under consideration. These could be local residents, business people, pedestrians, etc. These people are generally those most aware of the type of problems encountered in the areas that they use.

The role of planning and design professionals

When aligning local government functions with crime prevention objectives, officials involved with urban design, town planning and architecture could be responsible for a number of activities. These include:

- developing and implementing design and urban planning guidelines aimed at reducing crime;
- designing retrospective improvements to physical environments in support of crime prevention;

- ensuring that building regulations are compatible with the principles of crime prevention through planning and design;

- promoting performance zoning in support of crime prevention and applying a flexible approach to zoning standards - for example, reducing large areas of vacant land by identifying appropriate land uses;

- ensuring context-specific design and management of the built environment to reduce crime;

- contributing to the planning and implementation of integrated crime prevention strategies, especially with regard to aspects related to the physical environment; and

- assisting with the development of appropriate by-laws.

Planning, designing and managing safer environments need not necessitate additional activities, effort or resources. It may merely require emphasising particular aspects of the conventional functions of officials and professionals such as architects, urban planners and designers.

Communication between the different role players is essential. In particular, planning and design professionals should have a closer working relationship with the SAPS. Effective coordination of environmental design initiatives is also important. Due to the nature of their work, professionals involved with shaping the built environment generally have experience in coordinating the activities of various role-players. These professionals are therefore well placed to coordinate and drive environmental design initiatives.

The urban condition

The recommendations contained in this manual will assist in the designing of safer buildings or environments in urban as well as rural parts of South Africa. However, it is expected that this manual will be more frequently implemented in urban areas. It is therefore important to understand the broad urban crime patterns, as well as the characteristics of South African cities and towns, given South Africa's particular history.

Crime and the city

Most of those responsible for the planning, design and management of the physical environment are not familiar with analysing crime patterns. However, in order for environmental design to be effective, some understanding of the crime situation in South Africa is required.

Two features of crime in South Africa have important implications for interventions in the built environment. These are that

- crime levels are high, and
- crime affects different people in different parts of the city differently.

Crime levels in the country are high

In many countries where crime prevention through planning and design measures are successfully implemented, the levels and nature of crime differ from those experienced in South Africa. Some of these measures may be less successful in South Africa, and it is therefore essential that the potential success of planning and design measures is evaluated for each situation in order to adopt the most appropriate approach.

Due to the nature and level of crime in South Africa it is also essential that planning and design measures be planned and implemented as part of a broader integrated strategy to prevent crime. Often the success of planning and design interventions is linked to the effectiveness of complementary crime prevention measures.

Another issue that needs to be considered is that South Africans generally display high levels of fear of victimisation. The fear of crime can influence the way in which people use the environment - for instance, inner city areas may be avoided by certain people for fear of being mugged. Environmental design has the potential to address the fear of crime in particular locations.

Crime affects different people and parts of the city differently

The fact that crime types and patterns vary between different parts of the city has important implications both for the planning and the prioritisation of design interventions. In particular, crime patterns and trends in the poorer areas, such as townships and informal settlements, differ from those in wealthier suburbs - which again differ from those in inner city areas.

- The **poorer inhabitants of the city** are generally most at risk of violent crime, although they also experience a significant proportion of property crime.

- **Suburban residents** are more likely to be victimised by property crime, and experience comparatively low levels of violence.

- In **inner city areas**, violent crimes that target property, such as muggings, predominate.

Given that crime patterns differ, interventions should not only take into account the ease of implementation, but should also consider which problems are more conducive to resolution through design. It is necessary to understand where the impact of planning and design is likely to be greatest.

SA city characteristics

Many of the planning and design crime prevention measures have been developed over many years for use in other, mainly developed, countries. Their adaptation to the South African situation requires a particular understanding of local urban characteristics and dynamics, and their implementation similarly requires an acknowledgment of our previous planning policies and how this has affected the form and structure of the South African city.

Much has been written on the subject of the apartheid city. While acknowledging that these cities, which still bear testimony to our history, are the primary settings in which crime takes place, this manual challenges their negative aspects and makes them the objects of change in addressing the causes of crime and its settings.

The following spatial characteristics need to be challenged and comprehensively addressed:

- the spatial dislocation of the poor, which results in long and costly commuting patterns;

- the separation of communities and the vacant land used in the past to divide people;

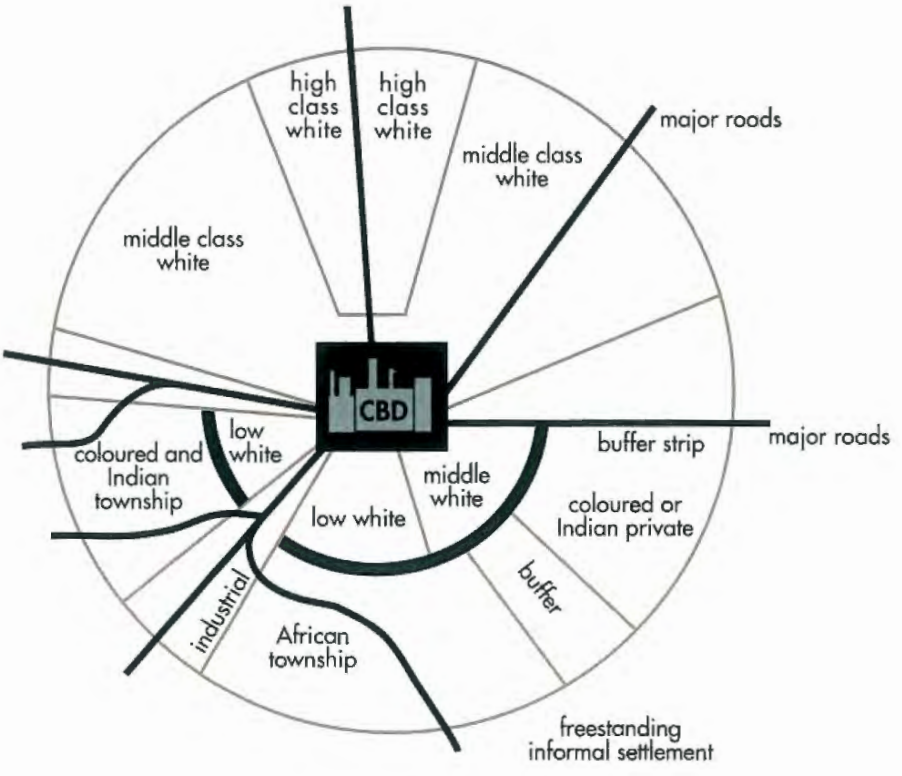
- the stigma attached to living in certain parts of the city;

- the wide disparities in living levels evident in the depressed quality of life and degraded built environments experienced by many in the apartheid city;

- the effective exclusion of many city residents from the amenities and economic opportunities offered by the city; and

- the rigid mono-functional zoning of land which leaves some areas deserted at night and others deserted during the day, and reduces residential areas to virtual dormitories.

The impact of these issues on the crime situation cannot be underestimated. As previously indicated, different crime types reflect the different parts of the city and highlight the correlation between crime and the physical and social environments. It remains the function of urban design and planning practitioners to address these issues as part of their responsibility and to play their roles effectively, in order to reduce crime and make cities safer places.



(After R.J.Davies cited by Napier, M. 2000)

Figure 3: Characteristics of South African cities

How to implement the manual

This chapter provides important information that will assist with implementing the recommendations contained in Section 2 of this manual in the most appropriate way. It provides step-by-step guidance through a process that will lead to an understanding of crime in an area within the context of the broader physical environment. It will also assist in identifying the spatial characteristics of a particular crime location.

It is recommended that the manual *Making South Africa Safe* is consulted when implementing the process described in this chapter. This explains the context and the rationole behind it, thereby providing a better understanding of the benefits of the process thot is described.

The process outlined in this chapter may be adapted to suit particular needs and will depend on the way in which the recommendations are to be applied.

The recommendations can generally be implemented in three different ways, namely:

- **They can be introduced as targeted measures to reduce specific types of crime in particular locations.**

  For instance, a particular intersection may be the scene of repeated handbag snatching from the passenger seats of motor cars because overgrown roadside vegetation and poor lighting provide easy cover for the perpetrators.

  In such a case the process of implementing the recommendations could be relatively simple ond would involve the identification of a crime pattern and the physicol inspection of the crime location. An analysis of this information could indicate thot specific design recommendatians from Chapter 9 could be introduced to address the problem, such as controlling the vegetation at the side of the road and improving the level of lighting. This is a very focused intervention and involves a low level of analysis, which may result either in the problem not being solved entirely, or the crime merely being displaced.

- **They can be incorporated proactively into the design of new developments or the upgrading of existing areas.**

  For instance, a local authority may require that the principles of crime prevention through planning and design should be adhered to when developing new areas or sites.

  In order to do this, the planners and designers of these developments will need to have an understanding of the local crime situation in addition to their

understanding of the structure and chorocteristics of the physical environment. An analysis of these aspects will therefore be required in order to provide guidance with regard to the implementation of the planning and design recommendations contained in Chapters 8 and 9.

- **They can form part of an integrated community safety plan.**

  For instance, a local authority may identify crime prevention through planning and design as one of the focus areas of its strategy to reduce crime at a local level.

  In order to develop a strategy that will ensure that the recommendations contained in this manual are implemented appropriately, a comprehensive analysis of the local crime situation, the physical environment at a broad as well as a detailed level, and the social environment, etc, would be required. This analysis may form part of the broader analysis conducted during the process of developing an integrated community safety plan.

Regardless of the way in which the recommendations are to be applied, it is essential that information regarding the nature of crime as well as the environment be analysed. This will provide a better understanding of the dynamic relationship that exists between crime and the environment as described in Chapter 2.

The importance of a thorough analysis should not be underestimated. It is strongly recommended that the process described in this chapter be followed in order to ensure that the crime problem is addressed in the most effective way. If at all possible, a strategy for crime prevention through planning and design should be developed as part of a comprehensive local crime prevention strategy. This will ensure that appropriate crime prevention responses are implemented and complicating factors such as crime displacement are addressed.

In order to integrate a strategy for crime prevention through planning and design into a comprehensive local crime prevention strategy, this manual should be implemented in conjunction with *Making South Africa Safe*.

Assessing and analysing crime and the environment

The process described below will assist in approaching local crime problems systematically as opposed to an ad hoc response. It will also provide factual information so that decisions are based on sound judgement. This, in turn, will reduce the possibility of decisions being influenced by the sometimes different opinions of stakeholders, some of whom might have vested interests or hidden agendas.

Activity 1

Identify the crime problem

- *Crime pattern and trends*
- *Crime hot spots*

Activity 2

Assess the physical environment

- *Macro level*
- *Micro level*

Activity 3

Assess the social and institutional environment

- *Social characteristics*
- *Existing crime prevention initiatives*
- *Local authority capacity*

Activity 4

Synthesise and analyse the information

- *Macro level - crime patterns and the spatial configuration of the area*
- *Micro level - hot spots and neighbourhood characteristics*

Activity 5

Develop an appropriate response

- *Macro level - crime patterns and the spatial configuration of the area*
- *Micro level - hot spots and neighbourhood characteristics*

Figure 4: Process for implementing this manual

The aim is to identify a few critical problems and to develop targeted approaches that will make optimal use of limited resources.

The process will assist in developing a strategy for crime prevention through planning and design that comprises two complementary elements, namely:

- a longer-term approach that will address crime at a strategic or policy level, based on the planning recommendations contained in Chapter 8, and
- more immediate environmentol design interventions that will address particular crime problems in specific locations by utilising the design recommendations contained in Chapter 9.

This process consists of five octivities:

Activity 1: Identify the crime problems
Activity 2: Assess the physical environment
Activity 3: Assess the social and institutional environment
Activity 4: Synthesise and analyse the information
Activity 5: Develop an appropriate response

This is not a lineor process - many aspects of these activities should be addressed in an iterative and integrated fashion. The remainder of this chapter is devoted to outlining the process in more detail.

Activity 1 Identify the crime problems

During this activity, information regarding the local crime situation is gathered in order to be able to identify the nature of possible links with the physical environment. Broader crime patterns and trends as well as specific crime hot spots need to be considered.

Crime patterns and trends

As indicated in Chapter 2, environmental design interventions can anly address certain types of crime that occur under certain conditions. For this reason it is necessary to understand as much as possible of the local crime situation in order to focus on those cases where planning and design interventions will be most effective.

Consider the following:

- what **types** of crime are accurring in the area;
- **where** the different types of crime accur;

- **when** the different types of crime occur;
- **how** the crimes are committed;
- how the **rates of crime** differ according to different circumstances;
- how the **risk of crime** differs and what the factors are that cause the differences; and
- what the **impact** of crime is in terms of number of injuries, loss in financial terms, ability of victims to respond or recover (eg through insurance), etc.

Crime hot spots

The local police should be asked to identify the areas where certain crimes are committed frequently - the so-called crime hot spots. This could be a particular intersection where hijackings are common or an open area where muggings are repeatedly committed. Tables with crime statistics are not always very useful when having to analyse data and compare it with other information. Map the information according to geographical locations in order to be able to analyse it in conjunction with information pertaining to the physical and social characteristics of the area.

The most effective way of collecting crime data is to collaborate closely with the local police station and particularly with the crime prevention officers. They should have up-to-date statistics that will provide a good base from which to work. In most cases the data merely needs to be collated and represented in a format that allows for comparative analysis.

Supplementary information can be obtained from other sources such as private security firms, municipal police agencies, victim surveys, victim support centres, community groups, and others.

Activity 2 Assess the physical environment

During this activity, information regarding the characteristics of the physical environment is gathered. This involves investigations at a macro level (the form and structure of the environment) as well as at a micro level (specific areas and crime locations).

Macro level

At the broader scale, aspects to consider include:

- **Existing natural features**
  Water bodies, hills and ridges, mining dumps, general topography, etc.

- **The existing layout**
  Roads, erven, etc.

- **Existing public facilities and their distribution**
  Schools, parks, recreational facilities, crèches, police stations.

- **Land use**
  Mixed use or mainly residential, industrial, commercial, etc.

It should be possible to extract this information from land development objectives (LDOs), integrated development plans (IDPs) or other documents available from the local authority planning department. Map all information in a way that makes it possible to compare it to the maps containing information on the crime situation and social characteristics of the area.

Micro level

At a more detailed level, specific areas such as neighbourhoods, particular precints and crime hot spots need to be visually assessed. The aspects that should be considered are described in activity 4, since activities 2 and 4 could be undertaken simultaneously.

Activity 3 Assess the social and institutional environment

This activity involves the gathering of information on factors that need to be considered in addition to issues related to crime and the physical environment. These factors may influence decisions on priorities and the nature of the strategy that is eventually developed. This activity deals with the people who will be affected by the strategy (social issues), those that can contribute to the strategy (existing initiatives) and those responsible for implementing it (local authority capacity).

Social characteristics

It is important to gather information about the people and their social conditions in the area under consideration, since this could provide reasons for the occurrence of certain types of crimes and highlight priority areas for crime prevention initiatives. Important social factors include population figures and growth rates, age, gender, poverty levels, levels of inequality, youth and community activities, etc.

Information about local social characteristics should be obtainable from LDO and IDP reports. Relevant statistics and information could be extracted and mapped where possible for analysis in conjunction with other information.

Existing crime prevention initiatives

It is useful to establish what other organisations or agencies are already involved in an area and what their activities entail. These could include initiatives such as victim support

centres, Community Policing Forums (CPFs), private security firms, safe-schools projects, etc. The intention is to avoid duplication and encourage the coordination of activities for them to complement each other. Since crime prevention through planning and design should ideally form part of a broader crime prevention initiative, this information will be useful in identifying areas where environmental interventions could be implemented most effectively in conjunction with existing initiatives.

Local authority capacity

The type of crime prevention actions that a local authority can get involved in will be influenced by its human as well as financial resources. Environmental design responses will require certain capabilities in the fields of town planning, urban design, architecture, engineering, etc - whether they be in-house (officials) or external (consultonts).

Activity 4 Synthesise and analyse the information

This process effectively starts while the information in activities 1, 2 and 3 is being collected. The aim is to identify possible links between certain crime patterns and the physical environment. Factors at both the macro and the micro levels should be considered.

Macro level: Crime patterns and the spatial configuration of the area

Consider the impact of the greater social and physical context on crime patterns and identify environmental problems at a broader scale. This means that an understanding of the impact of major structuring elements such as the transport network and the natural environment on the functioning of an area is necessary. Other aspects that need to be considered include access - or a lack of access - to recreational facilities and other opportunities for all residents, land use patterns and the efficiency of the management and operation of the area.

The understanding goined through this analysis should assist in deciding which of the planning recommendations in Chapter 8 need to be implemented in order to address some of the more strategic problems. For instance, one of the problems identified at a broader scale may be that of vast quantities of vacant land. This issue needs to be addressed through a policy decision by the local council to actively reduce vacant land through measures highlighted in the planning recommendations.

The structure of the physical environment and social characteristics of on area may have a distinct influence on broader crime patterns. For instance, the mining ridge in certain parts of Johannesburg has a major impact on the functioning of the area and this in turn leads to certain crime patterns that can be clearly identified when analysing the maps of these different aspects.

Micro level: Hot spots and neighbourhood characteristics

At a more detailed level, the possible impact that the physical environment has on specific crime patterns needs to be investigated through visual inspection and analysis. Aspects that need to be considered include the structure of a neighbourhood or area (eg the street layout, proximity to connector roads), the nature and location of activities taking ploce (eg shebeen close to schools), the land use (eg mixed use or single use) and lighting, vegetation and landscaping (eg a lack of adequate lighting or overgrown vegetation along pedestrian routes). The principles of crime prevention through planning and design as described in Chapter 7 should underpin the analysis. They provide the necessary framework far assessing the performance of specific environments or crime locations.

This analysis will enable you to decide on the most appropriate design recommendations among those contained in Chapter 9.

Activity 5 Develop an appropriate response

Based on the analysis, a response can be developed that will address the priority problems effectively. In order to develop this response, you need to identify those areas where you believe a crime prevention through planning and design approach would be most appropriate. When this is complete, a comprehensive strategy for implementing the recommendations contained in this manual should be developed and implemented.

Identify priorities

This involves the selection of certain problems or areas for which targeted responses will be proposed. In order to do this, a set of selection criteria needs to be developed. Issues that should be considered include:

- the urgency of the problem;
- the likelihood of it being addressed successfully;
- the possible positive impact it may have in other areas;
- the cost of the intervention; and
- the availability of resources to implement the response.

The information gathered during activity 3 therefore plays an important role in identifying priarities. Remember that the area with the greatest need or the problem that seems the most urgent might not necessarily have the highest priority. Existing community support, social networks and capacity (the so-called sacial capital) are also important. When a response is based not only on need, but also on the commitment and support of the beneficiaries, the potential of the intervention to succeed increases substantially.

It is worthwhile to include in a strategy a number of interventions that are likely to achieve successes in a relatively short space of time. This is good for morale and will inspire those involved to continue with the implementation of the strategy.

Prepare a strategy for crime prevention through planning and design

In response to the identified priorities, a strategy can now be developed with programmes and projects that respond appropriately. This strategy will clearly identify goals, objectives, time schedules, budgets, activities, and the agencies or people responsible for implementation, etc.

Implement and evaluate the strategy

Chapter 10 provides some guidance with respect to the implementation and management of the projects and programmes identified in the strategy..

It is essential that planning and design professionals within the local authority play an active role in driving the strategy and in ensuring its successful implementation. It is also useful (and often essential) to have the support of someone who is strategically positioned in the local authority who can act as champion for the process (eg the CEO, city manager or a councillor).

As with many initiatives, the success or failure of implementing a strategy for crime prevention through planning and design depends largely on the commitment and motivation of the individual people concerned. Therefore, excitement and enthusiasm about the potential of this approach and the benefits of the strategy will be essential to generate action and to get others involved in the initiative.

In order to ensure that specific projects and interventions achieve their intended purpose, it is essential to monitor and evaluate them continuously. To do so, indicators need to be developed and agreed upon at the outset. Also, the evaluation phase should be planned into the process from the start and a budget should be allocated to enable this.

Section 2
Planning and design recommendations

Introduction to the recommendations

Section 2 commences with an outline of the five principles of crime prevention through planning and design. These principles provide a framework for determining how the built environment either provides opportunities for crime or inhibits crimes being committed. Chapters 8 to 10 contain practical recommendations for creating a safer physical environment.

In order to implement the recommendations in the most effective way it is important to understand the way in which they have been structured and why. This chapter explains how the recommendations of each category should be applied.

Structure of the recommendations

The recommendations are divided into the following categories:

- **Planning** recommendations
- **Design** recommendations
  - Cross-cutting issues
  - Detailed design
- **Management** recommendations

Planning recommendations

Five planning strategies are proposed, aimed at addressing the spatial characteristics identified in Chapter 4. These strategies deal with the following:

- vacant land
- 24-hour land use
- pedestrian use of infrastructure
- equitable provision of facility
- urban renewal.

The planning recommendations should be applied at the macro scale and, as such, can be adopted as strategic objectives for the city or town as a whole.

Often the planning recommendations will address problems similar to those addressed by the design recommendations. It is important to cross-reference, since certain problems need to be addressed at a strategic planning level as well as a more detailed design level.

Design recommendations

The design recommendations are presented in two categories. The first category focuses on three **cross-cutting issues** that generally have to be considered in most types of environments. These are:

- lighting
- signage
- landscaping.

These recommendations should be referred to in conjunction with the other design recommendations when existing areas are being assessed or new areas designed.

Example

Since appropriately designed lighting is very often an important safety factor, the recommendation regarding lighting needs to be referred to when dealing with most types of environments, including streets, parks, subways, railway stations and shopping complexes. Similarly, landscaping and vegetation need to be considered when dealing with sports fields, playgrounds, parks, streets, etc.

The second category of recommendations contains **detailed design recommendations** that provide practical assistance with the design of different public spaces.

They are grouped according to the categories of conventional planning and design systems, namely:

- soft open spaces
- movement networks
- hard open spaces
- public facilities
- site layout and building design.

By these terms the following is understood:

Soft open spaces

Soft open spaces are the open and undeveloped areas within a settlement, such as parks, golf and water courses and similar recreational facilities. These spaces generally have a natural surface, such as vegetation, earth, water, etc.

Movement networks

Movement routes are configurations of 'fixed' movement infrastructure that cater for a variety of different transport types, including roads, railways, pedestrian routes, pathways as well as the links and junctions that connect these different movement routes and systems such as railway stations and taxi ranks.

Hard open spaces

Hard open space refers to all public open spaces with a hard edge or surface that are accessible to the public. This includes streets, squares, open parking lots, etc.

Public facilities

Public facilities include all those developments that fulfil a social, cultural, recreational and other similar service function. Examples include schools, hospitals, libraries, sports areas, post offices, police stations, places of worship, etc.

Site layout and building design

This category refers to the location of the building on its site, its articulation and relationship to its immediate context as well as its actual physical design and use.

The management recommendations

These recommendations are concerned with the management and implementation of environmental design initiatives stemming from this manual. They include issues related to institutional structures and requirements, infrastructure maintenance, etc.

Principles of crime prevention through planning and design

Based on international studies and guided by the local context, five principles have been identified which are crucial to establishing how the physical environment either reduces or increases the opportunities for crime. These are:

- surveillance and visibility
- territoriality
- access and escape routes
- image and aesthetics
- target hardening.

These principles are not in conflict with other sound planning and design principles. Although they are aimed at creating a safer physical environment, they also support the creation of well-performing living environments in general. Qualities that have been identified for well-performing living environments are embodied in the principles of crime prevention through planning and design (Building and Construction Technology, CSIR, 2000, Chapter 3). These include prioritising a human scale, planning and designing for activity, and designing and planning for a more compact city form.

- **Surveillance and visibility**

Passive surveillance is the casual observance of public and private areas by users or residents during the course of their normal activities. _Active surveillance_ refers to surveillance by police or other agents whose express function is to 'police' an area.

Passive surveillance is often referred to as the presence of 'protective eyes' or 'eyes on the street'. The extent of visual contact that people have with a space, together with the degree of their being visible to others determines the extent to which they can intervene and whether the users feel safe.

This depends on a range of factors that include windows, doors and other openings, the distances between buildings, the sizes of the public spaces, vacancy rates, and the extent, degree and type of use that the spaces are put to. The zoning of areas of the city and the functionality of buildings are key elements in determining whether protective eyes are present day and night, or not.

Visibility is the degree to which an environment is made visible by elements such as lighting and uninterrupted lines of sight.

Surveillance is improved if there is good visibility. Dark or twisting streets, alleys, entrances and doorways can act as havens for potential offenders and increase feelings of unsafety. The way in which lighting is designed and positioned, and the way roads and paths are laid out, can obviate many of these problems and render both the physical environment and the users visible to others using the environment.

- **Territoriality**

A sense of ownership and responsibility for a particular environment improves the chance

Territoriality is a sense of ownership of one's living or working environment. Territoriality and a sense of ownership are encouraged when residents *identify* with the spaces and where the space and its configuration are *legible* to them.

of passive observers intervening (as modulators of a crime). Places should be designed and managed in ways that encourage owners/users to take responsibility for their use, upkeep and maintenance. Territoriality can be increased through clearly defining public and private spaces, utilising the human scale, limiting unused open space, etc.

Mechanisms such as landmarks that reflect local cultural values, clear signage and a comprehensible layout can contribute to people being able to identify with an area or neighbourhood and orientate themselves within this built environment. Identifying with an area could increase the sense of ownership. By being able to orientate themselves within the area the users can increase their sense of safety. (Orientation is linked to the degree of legibility within the built environment.)

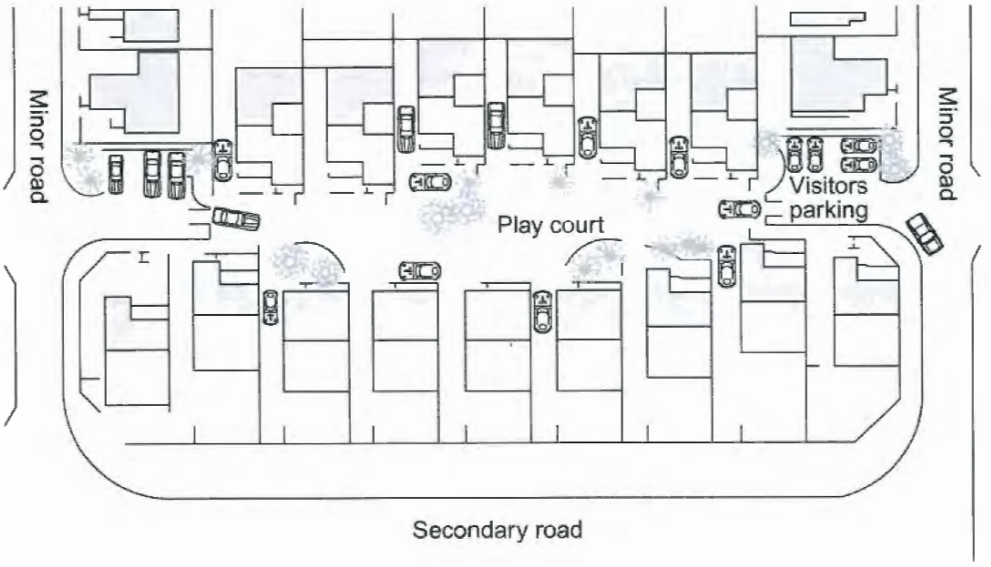


Figure 5: Example of territoriality. The Dutch 'woonerf' allows through-traffic and provides a safe play area under the surveillance of adjocent houses. The intention of the design is to encourage ownership or territoriality of the communal space by the surrounding residents.

- **Access and escape routes**

Certain types of criminal events and sites are often deliberately chosen for their ease of access to escape routes. Similarly, the availability of access and escape routes also adds to the safety of potential victims.

Areas of refuge, such as vacant land, where people can hide and which have clear routes of escape from a crime, are obvious havens for offenders. For example, houses or neighbourhoods near or adjacent to tracts of open land are often the targets of repeated burglaries. Car hijackings are often planned to allow quick escape. The layout of the transport routes and the juxtaposition of different types of space influence the ease of access and escape.

Clear signposting of streets, buildings and exit routes are important ways of assisting potential victims. The design of elements such as subways also needs to be considered carefully to reduce perceptions that one will not be able to escape from an offender.

- **Image and aesthetics**

The image projected by a poorly maintained building or a public area has been clearly linked to levels of crime and particularly to the fear of crime. This link is often referred to as 'crime and grime'.

Urban decay and the degradation of neighbourhoods make people using these areas feel unsafe: this effectively reduces the number of users, which could exacerbate the crime problem.

Good design and the effective management of spaces in the city are necessary factors that prevent precincts from becoming actual or perceived 'hot spots' for crime. Vacant land that is not maintained, or unoccupied buildings, can contribute to decay, as do litter and the breakdown of services.

The image of spaces can be improved by ensuring a human scale in design, using attractive colours or materials, providing adequate lighting, and designing for high levels of activity.

- **Target hardening**

Target hardening reduces the attractiveness or vulnerability of potential targets by, for instance, the physical strengthening of building facades or boundary walls.

Walls around houses and burglar bars on windows are the most common examples of this principle. Target hardening is often the first solution that occurs to residents and designers because it can physically reduce opportunities for crime. However, a common mistake is that, in the process, other principles are compromised. If target hardening of buildings obstructs lines of sight or provides havens that cannot be surveyed, the hardening is unlikely to be an effective crime prevention tool.

Employing these principles in combination can increase the possibility of reducing crime. Each principle should not be viewed in isolatian and the context within which it is to be applied should be taken into account. When applying any one of the principles the implications it has for any of the others must always be considered.

For instance, when building a high wall around a property (target hardening), the consequences of violating the principle of surveillance and visibility must be considered.

chapter 8

Planning recommendations

At a strategic level, a number of planning approaches could be adopted to deal with some of the spatial problems that characterise South African cities and towns. The recommendations contained in this chapter aim to address some of these problems and are intended to be applied at a macro scale.

P1	Vacant land
P2	24-hour land use
P3	Pedestrian use of infrastructure
P4	Equitable provision of facilities
P5	Urban renewal

Vacant land

Problem

Tracts of open land such as buffer strips, undeveloped land, transport reserves, etc, separate different parts of the city or town from each other. This contributes to a fragmented urban landscape. These vacant pieces of land usually have no specified use and no one takes responsibility for them, with the result that they are often neglected.

The lack of ownership (territoriality) and reduced opportunities for surveillance in many cases lead to these areas becoming unsafe. Pedestrians having to cross such pieces of vacant land are vulnerable to attack and properties in the vicinity often experience high levels of crime, such as housebreaking. Vacant land provides convenient access and escape routes for criminals, as well as hiding place for stolen goods.

Response

A comprehensive strategy is required to ensure that vacant land is utilised in ways that will reduce the opportunities for crime. Planners and local government officials should proactively implement measures aimed at reducing vacant land within a city or town. New developments should not be designed so that vacant, unutilised pieces of land are created (eg 'space left over after planning'). Existing vacant land should be reduced by ensuring that it is used and/or maintained.

To allow for creative ways of reducing vacant land, local governments may have to reconsider conventional planning policies and practices. Instead of rigid master planning, a more flexible and integrated planning method should be adopted. Such an approach should be able to accommodate changes in priorities and needs over time, so as to allow land to be utilised for purposes other than originally intended. For instance, if it is clear that a school will not be built on a piece of land originally set aside for this purpose, planning policies should not prevent the land from being utilised for other purposes.

Transport reserves are often not maintained and could be unsafe for pedestrians.

When designating land for specific purposes, the potential of shared facilities should be investigated in order to reduce the size of sites that are made available. For instance, certain facilities provided at a school may also be utilised by the rest of the community, making it unnecessary to allocate land for, say, a community hall, a library ar additional sparts grounds.

Similarly, zoning regulations should be such that they enable development rather than inhibit it. Zoning requirements are often restrictive and prevent land from being used in alternative ways. They should not prevent buffer strips, transport reserves and land that clearly will not be developed according to original plans from being utilised.

To assist with deciding on possible ways to reduce vacant land, it is useful to compile a comprehensive database of existing vacant land. Information regarding location, ownership, constraints, development potential, etc, should be recorded. Criteria for determining the development potential of vacant land should be identified, taking into account natural constraints such as watercourses and topographical features, cultural/historical features, proximity to existing infrastructure, etc. This information should be mapped (utilising GIS, if possible) and analysed to help the authorities manoge vacant land more effectively.

This analysis will assist in deciding on the most appropriate way of dealing with specific pieces of vacant land. Possible actions include the following:

- **Develop vacant land.** Pieces of vacant land such as transport reserves could be made available for developments that could include infill housing, retail facilities, etc.

- **Institute penalties.** The owners of properties could be penalised for not developing land within a specified period, or for not maintaining vacant sites.

- **Incorporate vacant plots into adjacent, developed sites.** This would make someone responsible for the vacant land and increase the chances of it being utilised and maintained.

- **Provide incentives for development.** Owners could be offered incentives if they developed sites within a specified time frame.

- **Allow alternative land use options.** Innovative ways of utilising land could be introduced, such as urban agriculture and informal trading markets.

Vacant land (cont)

A major responsibility for maintaining or developing vacant land lies with the owners of the land. In many cases, however, the land is owned by government (national, provincial or local) or a parastatal institution, which could make it difficult to implement some of the above measures.

Related recommendations

P3 Pedestrian use of infrastructure
D1 Vacant land
D2 Parks, playgrounds, etc

Problem

Rigid separation of land uses can cause different parts of cities and towns to be occupied or used for limited periods of the day or night. This results in such areas being left unattended and vulnerable at certain times. For instance, city and town centres are usually deserted during the night, as these areas mostly cater for daytime activities such as business and retail trade. Similarly, most people leave townships and other residential suburbs during the day to go to their places of employment. Opportunities for passive surveillance are reduced in these areas and the fear of crime, as well as the potential for criminal activity, is increased.

Buildings and spaces that are unattended for certain periods are soft targets for burglars and vandals. The few people who remain in such semi-deserted areas - especially the elderly, women and children - are especially vulnerable.

Response

Mixed land use should be encouraged in order to extend the periods during which buildings and spaces are occupied or used. A diverse range of users over as much of the 24-hour period as possible should be encouraged. In many cases, this will require the adoption of a more flexible approach to land use zoning that allows for mixed use wherever appropriate.

New developments could be designed to allow for a variety of uses. For instance, residential accommodation could be provided above retail and commercial facilities.

Public squares and streets could also be designed with flexibility in mind, to provide for a range of activities that will attract users for extended periods.

A combination of retail facilities, office accommodation and entertainment facilities such as restaurants contribute to this area being used for extended hours of the day.

24-hour land use (cont)

Community facilities like schools, libraries and community halls can be designed to accommodate more than one function at different times of the day. For instance, a school can serve as a venue for after-hours activities such as an adult education centre, a meeting place for community and religious groups, a weekly clinic or the local public library.

The diverse use of facilities allows a greater range of people in a community to feel responsible for such facilities. If the community feels that such a facility belongs to them, they might become more involved in its 'policing'.

Related recommendations

P5 Urban renewal

D4 Taxi ranks, train stations and other transport interchanges

Retail facilities on ground level with residential accommodation above increase the hours of use in this area.

Problem

Despite the fact that a large proportion of the population does not have access to private transport, many parts of South African cities and towns do not accommodate the needs of pedestrians. Most areas have been designed with motor vehicles in mind, which often make for environments that are very unfriendly towards pedestrians. Typically there is a lack of pedestrian walkways and lighting, while major roads separate neighbourhoods. Pedestrians are therefore vulnerable and exposed to environments that make them feel unsafe.

Response

To ensure that pedestrians are accommodated, local authorities must commit their support at a strategic level. If a policy decision is made that a city or town is pedestrian-friendly, a framework should be provided within which proposed new developments can be evaluated.

Analyse the existing urban area and identify areas where improvements are needed to make them more pedestrian-friendly.

Related recommendations

D5 Pedestrian-friendly environments

The divisive nature of certain roads, the lack of lighting and poor sidewalks make for pedestrian-unfriendly environments in areas where the majority of people have to travel vast distances by foot.

P4

Equitable provision of facilities

Problem

There is an inequitable distribution of facilities between the different parts of many towns and cities in South Africa. Many of the poorer areas, especially townships, suffer from a lack of recreational facilities such as community halls and sports facilities. These communities often have to rely on informal taverns (shebeens) and nightclubs for entertainment. Often the youth become involved in criminal activity, partly due to a lack of alternative opportunities.

These areas also often do not have adequate infrastructure such as roads, street lighting and telecommunications. This contributes to certain areas being unsafe and also makes access for police vehicles difficult.

Response

A directed effort on the part of government and city authorities is needed if a network of new recreation facilities is to be created. Their appeal to the youth is essential if the benefits of healthy recreation are to be maximised. Besides the physical infrastructure, support programmes such as training for sports development, etc, must be in place for such facilities to be sustained and optimised.

Such facilities would need to be designed and managed with safety in mind, if these places are not to become settings for crime.

Roads need to be maintained and upgraded, so that all areas are accessible to SAPS and emergency vehicles.

Street lighting needs to be provided in places where a lack of visibility at night constitutes a problem. Attention also needs to be paid to pedestrian routes.

Due to a lack of other entertainment facilities informal liquor outlets such as these are often found in informal settlements.

Equitable provision of facilities (cont)

The development of recreational facilities will allow greater choice to be exercised over where and how to conduct social interaction. Currently, shebeens provide and locate the majority of leisure activities in many African and coloured township areas.

Related recommendations

D9 Liquor outlets

Urban renewal

Problem

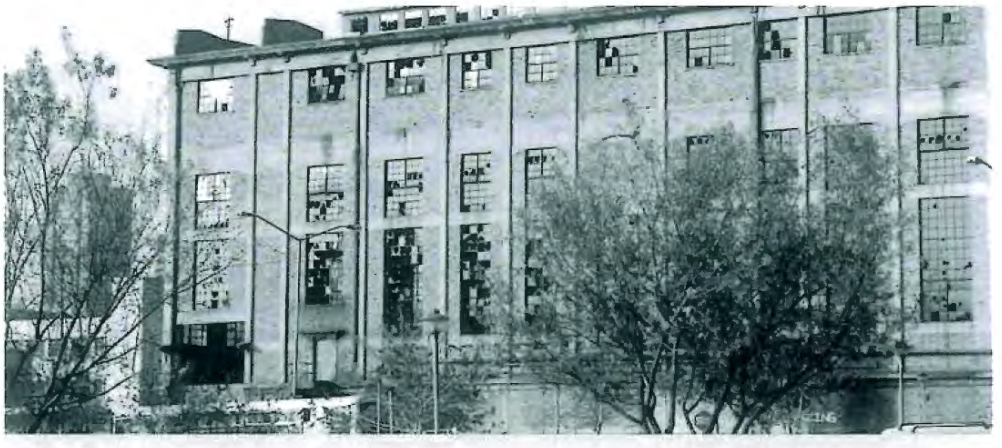
There are parts of most cities and towns that have become run down, with derelict buildings and public spaces. This urban decay occurs not only in the inner city but also in certain suburbs and township areas. Many people don't feel safe in these areas, often with good reason. Abandoned buildings sometimes harbour criminals and streets and public spaces that are not maintained add to feelings of unsafety.

Response

It is essential that local authorities develop a coordinated strategy aimed at actively addressing urban decay. Urban renewal is an ongoing process, requiring sustained interventian. Responding haphazardly to problems is not an effective approach.

Urban renewal projects should be identified to regenerate rundown areas and attract people back to wark - or live - there. If not addressed, urban decay can spread to surrounding areas or it might reach a stage where it will be almost impossible to rectify.

Measures should also be put in place to prevent areas from deteriorating and stop people from leaving certain areas. The 'broken-window' model suggests that areas that are beginning to show signs of deterioration often degenerate into unsafe slum areas if active measures are not put in place timeously to prevent this. Often, if a window is broken in a building and not repaired promptly, more will follow, signalling that no one is taking responsibility for the building, leading to further vandalism. It is therefore important to regularly carry out maintenance, clear out rubbish bins, remove graffiti, and generally keep an area clean and tidy. In certain cases it may be necessary to implement additional measures to prevent an area from degenerating. This may include addressing incivilities such as littering, graffiti and loitering and implementing strict policing of petty crimes ('zero tolerance').



This derelict building has a negative impact on the surrounding area.

All attempts should be made to reduce building vacancies and upgrade derelict buildings. Local authorities can play a role in becoming more lenient with regard to the use of a building and changing zoning regulations. Interim uses such as offices for charities and venues for adult education should be considered, to keep buildings occupied. Where buildings do stand empty, the owners should be forced to maintain them and restrict access.

Incentives such as a reduction in municipal rates could be provided to encourage people to live or work in a particular area.

In some cases it may be feasible to regenerate an area by turning it into a city or business improvement district (CID or BID).

Often the key to a successful urban renewal project lies in the level and quality of the collaboration between the public and private sector. Effective partnerships could make the difference between success and failure.

Related recommendations

P2 24-hour land use
D12 Building facades
D13 Spaces around buildings

An example of urban renewal where a street has been pedestrianised, old buildings upgraded and new urban spaces created.

chapter 9

Design recommendations

This chapter contains practical recommendations aimed at assisting with the design of different public spaces. Recommendations C1 to C3 deal with cross-cutting issues that need to be considered in almost all instances. They support design recommendations D1 - D19 to varying degrees.

Cross-cutting issues

C1 Lighting
C2 Landscaping
C3 Signage

Design recommendations

Soft open spaces (green system)
D1 Vacant land
D2 Parks, playgrounds, etc

Movement networks
D3 Transport intersections
D4 Taxi ranks, train stations and other transport interchanges

Hard open spaces
D5 Pedestrian-friendly environments
D6 Pedestrian subways
D7 Open parking lots
D8 Informal trading

Public facilities
D9 Liquor outlets
D10 Emergency contact points
D11 Communal areas in building complexes

Site layout and building design
D12 Building facades
D13 Spaces around buildings
D14 Service entrances, alleys, etc
D15 Property enclosures
D16 Parking garages
D17 Public toilets in buildings
D18 External public toilets
D19 Shopping centres

C1

Lighting

Sufficient and appropriate lighting is often critical in creating safer environments. What is considered to be sufficient and appropriate will vary according to specific conditions. The levels of lighting (lux), the type of light source (globe), their positioning (high-level masts, task lighting, etc) and other requirements will depend on a number of factors. These factors could include the intended use of the space, whether the light source is environmentolly friendly, whether CCTV needs to be accommodated, etc.

Generally speaking, lighting in open public spaces such as porks, squares and sidewalks, should be such that there is a continuous band of light along pedestrian routes. The pools of light should therefore overlap in order to ensure that there are no dark areas along these routes. The height of lighting should be such that glare does not prohibit pedestrians from observing the surroundings and from anticipating possible danger.

Lighting could also be used to discourage pedestrians from using certain areas that may be unsafe, even if illuminated. By deliberately not providing lighting along a specific route, pedestrians could be directed away from potentiolly dangerous routes along safer, illuminated routes.

Facilities such as bus or taxi stops and public telephones should be well illuminated, or should coincide with the position of streetlights. It is also important that vegetation that obscures lighting is maintained and regularly trimmed back.

The design and type of light fittings to be used should be dictated by the nature of the environment in which they will be used. Where the likelihood of vandalism is high, robustness should be of higher importance than aesthetic appearance, in order to prevent lights from continuously being out of order. Regular maintenance is essential and burnt-out light bulbs should be replaced promptly. Under certain conditions it may be advisable to provide lights with a self-contained energy source.

Effective pedestrian lighting in a park.

Trees, shrubs and other vegetation - as well as rocks, walling and other landscaping elements – are often considered from an oesthetic point of view only. However, the impact landscaping can have on the safety of an environment should also be taken into account. Landscaping can obstruct clear lines of sight, thereby limiting visibility and opportunities for surveillance, and it can provide hiding places for potential offenders.

Whether it be a pedestrian route, a public square, a park or a private garden, the landscaping should be of such a nature that it provides as little opportunity for crime as possible. Ideally, trees should start branching out at a level high enough not to obscure visibility. Lower levels of planting, such as shrubs, should similarly not be so high as to obstruct sight lines. Clustering too many shrubs and other vegetation may provide hiding place for potential offenders. The use of prickly types of vegetation may assist in discouraging its becoming a hiding place.

When deciding on the types of vegetation for an area, it must be remembered that the opportunities these could create for crime will change over time as the trees and other plants grow. It is therefore important thot vegetation is well maintained and not allowed to become overgrown.

Vegetation in this park does not interfere with sightlines.

C3

Signage

People may be more vulnerable to crime if they feel disoriented and uncertain about their surroundings. Feelings of unsafety often increase when people are unfamiliar with an area or building and cannot find their way by reading the landscape. This relates to the so-called 'legibility' of a space or area.

The strategic provision of visible and consistent signs that provide relevant information can play an important role in increasing a sense of safety and in reducing opportunities for crime. Signage assists users to orientate themselves and find their way, thus reducing levels of vulnerability.

Using signs to indicate certain routes discourages people from using less safe routes and possibly wandering into unsafe areas. Directing people along certain routes increases activity - and therefore possibilities for passive surveillance while active policing can be carried out more effectively.

Other forms of signage that are also important relate to street names and house numbers. A lack of these makes it exceptionally difficult for the SAPS and other agencies to respond to calls for assistance. In areas where it is difficult to provide information such as street names, informal dwellings could be used as 'signboards' to provide information such as street or block names.

Lighting should be considered carefully when designing signage, so as to ensure that information is legible day and night.

Signage assists people in orientating themselves.

Vacant land

Problem

In many cases there is a correlation between the location of certain types of crime and the presence of open spaces such as parks, vacant land and large open recreational facilities (golf courses, sports fields, etc). These spaces often provide easy access and escape routes for criminals and may be of such a nature that adequate visibility and surveillance are not possible (due to the size and shape of the space, overgrown vegetation, etc). For instance, properties adjacent to unmaintained, undeveloped land are often targets for housebreaking.

Response

It may not always be possible to completely eliminate the potential for criminal activity offered by open spaces, but certain measures could reduce them. Open spaces in new developments should not merely be spaces left over after planning. They should have a specific function and should be located, designed and developed to fulfil this function. Existing vacant land should be provided with a useful function. It could be developed into a park, playground, informal sports facility, etc.

Vacant land should be properly maintained. Overgrown vegetation should be cut down, the dumping of refuse prohibited and possible hiding places for criminals removed. Owners of vacant land could be compelled to maintain their properties through a system of penalties and/or incentives.

Related recommendations

P1 Vacant land
D2 Parks, playgrounds, etc
D5 Pedestrian-friendly environments

Properties flanked by vacant land are often the targets of repeat burglaries.

Parks, playgrounds, etc

Problem

Certain parks, playgrounds and similar green spaces provide ideal settings for criminal activity because of their layout, the nature of the vegetation, etc. Womon and children are particularly ot risk in such spaces and the risk of crime often increases substantially from dusk to dawn.

Response

Green open spaces, such as parks, should be designed to optimise passive surveillance. Where possible, a network of smaller open spaces, such as neighbourhood parks, should be developed rather than a few larger but unmanageable ones. It is usually easier for residents to take respansibility far smaller open spaces.

Where larger parks and similar spaces do exist, they should ideally accommodate a variety of activities that cater for a range of age groups, to optimise passive surveillance. These can include restaurants or tea gardens, informal markets, playgraunds and picnic areas. These activities should be juxtaposed so that oppartunities far passive surveillance are exploited to the full. For instance, the playground could be positioned to be clearly visible from the tea garden.

Green open spaces should ideally be overlaaked by hauses or other facilities that allow for passive surveillance. Buildings across the way fram parks or similar open spaces should therefore be designed and positioned to face those spaces, instead of being turned away fram them. Slow-moving streets that adjoin open spaces also increase opportunities for passive surveillance. Parks, playgrounds, etc, should not be located next to undevelaped vacant land, since this will increase potential for criminal activity.

Trees, shrubs and other vegetation should be so placed that sightlines are kept clear as far as possible. Sufficient and appropriate lighting should also be pravided.

This playground is overlooked by a residential building and is designed to allow surveillance.

The fencing-off of parks and similar open spaces is usually inadvisable. Barriers may deter legitimate users from entering, and reduce movement through these spaces, and thereby hamper passive surveillance. They may also provide a false since of security since fences do not always prevent those with criminal intent from entering. It may often be sufficient to demarcate a specific area through the use of low, transparent fences, for instance to define a playground for children.

Related recommendations

P1 Vacant land
D1 Vacant land
D18 External public toilets

The landscaping, street furniture, lighting and fencing of this park allow for good surveillance.

Transport intersections

Problem

Intersections often provide ideal opportunities for crimes such as hijacking or robbery from vehicles. In many cases, overgrown vegetation and poor lighting make it easy for criminals to hide alongside the road in order to commit a crime, and then to escape.

Response

Roadside vegetation at intersections should be cut and trimmed to prevent it from becoming overgrown. Other possible obstructions, such as advertisement boards, should not be placed near intersections. Where conditions dictate, vehicles should be prevented from parking on the kerb near intersections through the use of bollards, a fence or similar deterrent.

Sufficient lighting should be provided at intersections.

The railway bridge and roadside vegetation contribute to making this intersection a hijacking hot spot.

Problem

Where people gather to make use of transport facilities such as trains, buses and taxis, opportunities are created for those with criminal intent. Commuters often fall victim to crimes such as robbery, pickpocketing and mugging. Contributing factors include congestion during peak hours and a lack of passive surveillance during the off-peak hours.

Response

Transport interchanges should be planned to accommodate the number of commuters making use of them and should be designed so that traffic and commuter flow are managed effectively. The intention is to minimise congestion, limit opportunities for conflict and reduce confusion among users, while decreasing waiting time - all factors which contribute to commuter's vulnerability.

Different ranks should be provided for different modes of transport (taxi, bus). Separated and well-defined areas for pick-up and drop-off should be provided, and destinations should be clearly signposted. Pedestrian routes to exits and entrances should be clearly marked to prevent commuters from wandering into unsafe areas. Logical and clearly marked pedestrian routes also improve flow and reduce areas of congestion, limiting opportunities for crimes such as pickpocketing. Physical elements, such as kerbs, bollards and barriers can be used to channel pedestrians and vehicles in a structured manner.

Ideally, there should be activity at traffic interchanges for as long as possible in order to ensure continued passive surveillance and reduce the vulnerability of commuters during off-peak hours. Most transport interchanges lend themselves to a variety of additional functions such as informal trading, food sales, 24-hour convenience shops, emergency pharmacies, satellite police stations and even entertainment such as cinemas and

This taxi rank has been designed to improve vehicular and pedestrian circulation in order to reduce congestion.

Taxi ranks, train stations and other transport interchanges (cont)

restaurants. However, liquor outlets should be avoided. Designated areas for hawkers should be provided to reduce congestion.

Buildings and other structures should be designed to ensure maximum opportunities for surveillance. Windows should be placed so that surveillance of vulnerable areas is possible. Waiting shelters should have transparent sides, to ensure that those using them can be seen and that they themselves can observe their surroundings. This limits the possibility of shelters becoming hiding places for potential offenders. Adequate lighting should be provided throughout the entire transport interchange.

Related recommendations

P2 24-hour land use
D8 Informal trading

Problem

Pedestrians often feel unsafe due to unfriendly surroundings and the nature of the environment. Most areas are designed to accommodate motor cars and little consideration is given to the needs of pedestrians. For instance, often provision is not made for pedestrian traffic in the form of walkways, pedestrian bridges, adequate lighting, etc. Certain areas that do not lend themselves to pedestrian use could be dangerous or increase levels of fear. This is often the case if sidewalks become overgrown due to a lack of maintenance, or are flanked by high blank walls.

Response

Provision should be made to reduce the opportunities for pedestrians to be victimised and to increase their feelings of safety. Wherever possible, people should be guided along specific routes so as to encourage pedestrian traffic along those routes. This will increase opportunities for passive surveillance. The design of the environment could support pedestrian use in a number of ways. The following could be considered:

- **Road layout.** Pedestrians require shorter, more direct routes than vehicular traffic. An open road network based on a grid system has a better change of ochieving this than loops, cul-de-sacs and a circular system.

- **Pedestrian networks.** Pedestrians use certain routes which they have identified as the most appropriate. These often include paths through open spaces and parks. Where possible, such networks could be formalised (eg by providing lighting and paving certain paths). If particular paths are unsafe, pedestrians should be discouraged to use them and alternatives provided. This could be done by guiding people along certain routes through the use of signage, by not providing lighting in areas that people should avoid, and by the physical closing off of areas, etc.

By defining the space through the use of bollards, surface material, etc, recognisable and safer pedestrian routes are created.

Pedestrian-friendly environments (cont)

- **Human scale.** Certain elements can assist in establishing a pedestrian-friendly environment at a scale that pedestrians can relate to. These can include the provision of pedestrian walkways or some other defined space dedicated for pedestrian use, intersections at regular and comfortable distances, lower level lighting and trees that define certain areas and provide shade. The treatment of building facades and other architectural features could also contribute to creating a human scale. Blank walls facing pedestrian routes should be discouraged.

  Street furniture can also be very effective in creating a human scale. Well-designed benches, light fittings, bus shelters, rubbish bins, etc, could improve the image of an area and increase feelings of safety. Care should be taken to ensure that street furniture does not interrupt sightlines or provide hiding place for criminals. It should also be designed to be vandalism-free and benches, bus stops, etc, should not promote vagrancy.

- **Lighting and vegetation.** Vegetation could assist in providing a more attractive environment but it should be maintained to prevent it from providing hiding place for criminals. Lighting could be used to guide people along certain routes and away from unsafe areas.

Related recommendations

P3 Pedestrian use of infrastructure
D1 Vacant land
D6 Pedestrian subways
D8 Informal trading
D12 Building facades
D18 External public toilets
D19 Shopping centres

An example of street furniture that is robust yet attractive.

Problem

Pedestrians often feel unsafe when entering subways, especially if they are dark, their exits invisible from the entrance or they are particularly narrow. Unmaintained surroundings (litter, graffiti, etc) enhance the fear of crime. Subways are often deserted during off-peak hours, which increases the risks. During peak hours, narrow subways are often congested, which makes users vulnerable to mugging.

Response

Subways should be as short and as wide as possible. Ideally, they should not have any bends or alcoves and the exits should be visible from the entrance. They should be well lit and allow as much natural light in as possible. Care should also be taken to ensure that stairs leading down into subways do not provide hiding place for criminals.

Where possible, locate subways near to other buildings or facilities that will ensure the presence of more people in the vicinity and increase the possibility of passive surveillance. If possible, buildings should face the entrance or exit of a subway. Subways could also be designed to accommodate activities such as informal trading, to ensure extended hours of use.

Related recommendations

D5 Pedestrian-friendly environments

This pedestrian subway does not feel safe because it is narrow, dork, and the exit is not visible from the entrance.

Open parking lots

Problem

Crimes such as thefts of and from vehicles, muggings and robberies often occur in open parking lots. Lack of visibility and surveillance at many such parking facilities contribute to the prevalence of criminal activity.

Response

Safety at parking lots can be improved if opportunities for surveillance are optimised. Good visibility from the surrounding areas and good lighting is essential. Ideally, buildings should border on a parking lot with their windows facing it. Vegetation or other obstacles should not hamper visibility from surrounding areas. Solid perimeter walls that prevent passers-by from providing passive surveillance should be avoided. Where it is necessary to enclose a parking lot, transparent fencing should be used.

In some cases dedicated active surveillance may be required. This could mean that a manned boom be provided to control the entrance/exit. Watchtowers could also be introduced. However, these should be appropriately designed in order not to increase users' fear of crime.

Surveillance from the street on to the parking lot is limited.

Problem

Informal traders (hawkers) increasingly make use of public spaces such as sidewalks and walkways to sell their goods, especially at transport interchanges and in town centres. If allowed to develop spontaneously, these activities can lead to congestion, which increases opportunities for pickpockets. It also increases the vulnerability of the traders to theft of their goods. In certain instances, conditions created as a result of uncontrolled informal trading increase feelings of unsafety.

Response

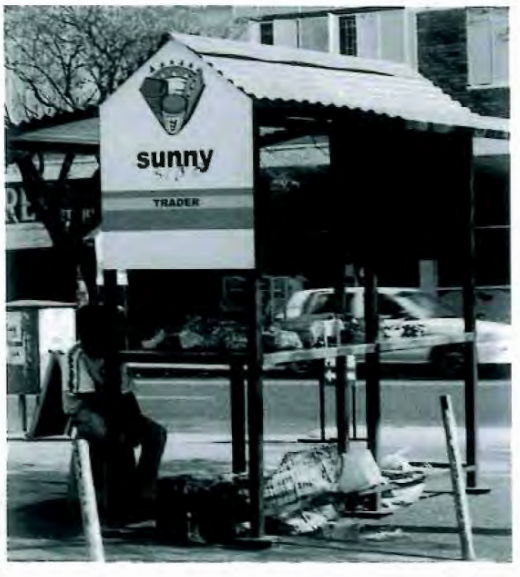
Where possible, informal trading should be accommodated in a structured way to reduce its negative impact on the surroundings. Specific areas could be demarcated for trading, and permanent or semi-permanent structures could be provided. However, it is essential to take pedestrian patterns into account when locating informal trading areas. Unless located appropriately along such routes, informal trading in undemarcated areas will continue.

Should structures be provided for informal traders, their design and positioning should be such that they allow maximum opportunity for surveillance and visibility and do not create hiding places. The area should be well lit. Lockable storage space could be provided, if required.

Key to the success of any attempt to structure informal trading activities is the extent to which all stakeholders are included in the process. The local authority, hawkers associations, local business and the SAPS should all be active participants in such an initiative.

Related recommendations

D4 Taxi ranks, train stations and other transport interchanges
D5 Pedestrian-friendly environments



Shelters/stalls assist to control informal trading on the pavements.

Liquor outlets

Problem

The correlation between alcohol abuse and crime, especially violent crime, is widely acknowledged. Where liquor outlets such as bars and shebeens are located close to schools, crèches and playgrounds, etc, the vulnerability of woman and children, in particular, is increased substantially.

Response

Pubs and shebeens should be disallowed near facilities such as schools and crèches. Vacant land in the vicinity of liquor outlets should also be reduced, as far as possible.

Related recommendations

P4 Equitable provision of facilities

The tavern on the left-hand side of the photograph is directly opposite a crèche (right-hand side).

Emergency contact points

Problem

Many communities, especially those in poorer areas such as townships and informal settlements, lack an adequate communication technology infrastructure. Poor access to public or private telephones has definite implications with respect to the safety and security of these communities. The most serious is the fact that the police cannot be summonsed timeously in an emergency. Crimes are often also not reported because of the effort required to contact the police. The fact that it is not possible to contact the police when needed contributes to the residents feelings of vulnerability and disempowerment.

Response

Ideally, public telephones should be available within a reasonable distance of all residents in communities where people do not readily have access to private telephones. These could either be stand-alone landlines or cellphones, or kiosks operated by private entrepreneurs. The contact points should be clearly marked and well lit for safety, and repairs should be carried out promptly. A dedicated network of emergency-only telephones could also be installed. This network could be linked to a 24-hour response room that can provide assistance in a variety of emergencies.

If it is not possible to implement such a formal system, a more informal community based network could be considered. Certain responsible persons, such as street-committee members, could be identified throughout the community and provided with telephones or cellphones. These people then act as dedicated contact points to which other members of the community can go when they need police assistance. The local community police forum, business, and the local authority can provide valuable assistance in establishing such a network.

A local entrepreneur provides access to telephones for members of the community.

Communal areas in building complexes

Problem

Among the more dangerous areas in building complexes, such as group housing complexes, are the communal circulation spaces and open spaces around and between buildings. Circulation spaces such as staircases and corridors are often so designed that they allow few opportunities for passive surveillance, increasing people's vulnerability. A lack of clearly identified ownership also adds to the problem. The communal external open spaces are usually either developed as garden space or left undeveloped. If these areas are not maintained they easily become derelict, which increases people's feelings of being unsafe.

Response

Communal areas should be designed so that residents are encouraged to take responsibility for as much of them as possible. For instance, if ground-floor units have control of the areas directly outside them, that will increase the likelihood of someone accepting responsibility for maintaining them. These spaces will also usually be utilised better, and strangers discouraged from making use of them.

Instead of positioning a large block of flats in the middle of a site with open space around it, it might be better to have smaller blocks arranged around the perimeter, opening up to and surrounding a communal open space. This space can then be used by all residents as a recreational area or it could even be used for urban agriculture. Likewise, the ground-floor flats can become responsible for the transitional zone directly outside them.

Opportunities for passive surveillance should be maximised. Communal open spaces, such as courtyards, should have units facing them wherever possible. Corridors and staircases (including fire escapes) should allow for clear visibility out of and into these spaces and should be well lit. The responsibility for maintaining communal areas should

The buildings as well as the street space are treated as one entity. This increases residents' taking responcibility for the communal areas.

Communal areas in building complexes (cont)

be clearly established. Resident committees could be formed to either take responsibility for maintenance or ensure that it is carried out.

In cases where units share a staircase or entranceway, it is advisable to limit the number of units, so that the occupants become acquainted with each other and the regular visitors.

Related recommendations

D12 Building facades

Group housing communal space. Inappropriate size, blank walls and general decay make for an unfriendly and potentially dangerous space.

Building facades

Problem

The design of building facades and the types of building material and finishes used can influence opportunities for criminal activity and the feelings of safety of people making use of the spaces around buildings. For instance, building facades with recesses, alcoves, or large columns could provide hiding place for criminals and add to making certain spaces unsafe. Certain building materials such as concrete and steel could create an aggressive image, making for an environment where people don't feel safe. Finishes that are not durable and not regularly maintained often also add to a building appearing run down, which could increase people's fear of crime.

Response

The impact of a building façade on the space around it should be carefully considered when designing a new development. Particular attention should be given to the following:

- **Building materials.** Materials and finishes should be appropriate to the particular conditions. Wherever possible they should assist in creating a space that feels safe, therefore colder material such as concrete, granite, steel and darkened glass walls should be used with care. In cases where durability and ease of maintenance is a priority, an effort should be made to use materials and colours that do not create a hostile environment.

- **Use of windows.** Blank walls should be avoided as far as possible. Windows (not display windows ar glass walls that do nat allow discernible two-way interaction) should be provided wherever possible to allow passive surveillance.

- **Facade articulation.** In certain cases, it may be wise to avoid designing facades with recesses, alcoves, or large columns that could provide hiding place for those with ill intent.

Example of building material that could create an aggressive image.

Building facades (cont)

Related recommendations

P5 Urban renewal
D5 Pedestrian-friendly environments
D11 Communal areas in building complexes
D13 Spaces around buildings
D14 Service entrances, alleys, etc
D16 Parking garages

This blank wall does not allow for surveillance onto the street and the recesses provide hiding places

Spaces around buildings

Problem

Certain spaces around buildings provide ideal settings for criminal activity or they increase feelings of unsafety. Often the reasons for this include inadequate passive surveillance and a lack of maintenance.

Response

Buildings and the spaces around them should be designed in an integrated way to ensure that crime prevention principles are not violated. Leftover dead space between buildings should be minimised - all spaces must have a designated purpose. These spaces should also have good surveillance and should not provide hiding place for criminals.

Ideally, buildings should be positioned on the site in a way that allows surveillance of all the spaces around it. The occupants of buildings should be encouraged to take ownership of the spaces directly adjacent to the building. If people feel responsible for the spaces outside their building, it is more likely that potential intruders will be scared off.

Spaces should not be allowed to become derelict since this can increase feelings of unsafety and provide hiding place for criminals.

Related recommendations

P5 Urban renewal
D5 Pedestrian-friendly environments
D11 Communal areas in building complexes
D12 Building facades
D14 Service entrances, alleys, etc
D16 Parking garages

The walls facing this street do not allow any surveillance from the buildings.

Problem

Many service entrances and yards are located at the end of alleyways or at the sides or backs of buildings. These areas are often unsafe and could provide hiding places for criminals.

Response

Service entrances and yards should be designed to allow for maximum visibility and surveillance. The need to hide these often unsightly areas from the public eye should be balanced with the need for passive surveillance.

Avoid locating service entrances in dead-end alleys. Provide upper-storey windows that overlook the area where possible. Service areas should be well lit and designed in such a way that they do not provide hiding places. Refuse bins should be placed in an area where they do not interfere with sightlines.

Related recommendations

D12 Building facades
D13 Spaces around buildings
D19 Shopping centres

This service entrance is situated at the end of a narrow alley and has a lack of natural surveillance.

Property enclosures

Problem

The nature of property enclosures, particularly those of residential properties, sometimes increases opportunities for crimes such as housebreaking or hijacking. High, solid garden walls, for instance, often do not keep intruders out but rather hamper passive surveillance by neighbours and passers-by. Setbacks and recesses in garden walls, as well as shrubs and bushes, could provide ideal hidings places for hijackers.

Response

Property enclosures should allow for passive surveillance, not only from the street, but also onto the street. They should be designed to have a measure of transparency (eg a combination of brickwork and steel fencing, rather than a solid brick or prefabricated concrete wall). This could be combined with thorny vegetation that acts as a further barrier.

Overgrown vegetation around driveway entrances provide possible hiding place for hijackers.

This fence allows for observation from the street onto the house and vice versa. The entrance recess does not provide a hiding place.

Care should be taken, however, to ensure that this vegetation does not hinder visibility or provide hiding places.

If possible, driveways and areas around entrance gates should be well lit, both inside and outside the property. Care should also be taken to ensure that recesses, setbacks and the vegetation do not provide hiding places.

The blank wall prohibits surveillance both from the house onto the street and vice versa.

Parking garages

Problem

Large, covered parking garages are often uninviting spaces that seem unsafe and provide opportunities for crimes such as mugging, car theft and theft out of vehicles.

Response

Opportunities for passive surveillance, both from outside the parking garage as well as within it, should be optimised. Where possible, external walls should be permeable to allow visibility from surrounding areas, such as the street. Inside the parking garage, recesses and service ducts should, as far as possible, be designed not to create dark corners, or provide hiding places and obstruct lines of sight. All areas should be well lit, and the maximum amount of natural light should be allowed to enter.

Stairwells, lifts and lobbies should be designed such that as much visibility as possible is provided and hiding places reduced. Glass-walled lobbies that allow the inside to be observed from the parking area reduce the risk to users and increase their sense of safety. Entrance and exit routes should be clearly marked.

Related recommendations

D12 Building facades
D13 Spaces around buildings
D19 Shopping centres

The design of this parking garage in Pretoria enables surveillance from the street into the parking area and vice versa.

The blank walls of this parking garage, together with the shrubs on the sidewalk, could increase feelings of unsafety and opportunities for crime.

The glass-walled lobby of this parking garage allows high levels of visibility. CCTV provides additional observation.

Public toilets in buildings

Problem

For practical reasons, toilet facilities in buildings such as shopping complexes are often located in secluded areas at the end of long corridors. This increases opportunities for crime and the public does not feel safe making use of these facilities.

Response

If possible, toilet facilities should be accessed from high-activity areas by means of short, wide corridors. Additional hubs of activity, such as small shops and telephone booths, could be introduced at the entrances to such corridors, to increase the opportunity for surveillance. The corridors should always be well lit.

If it is not possible to avoid a bend in the corridor, consider placing a mirror diagonally in the corner to allow people to be aware of what is happening around the corner.

Related recommendations

D19 Shopping centres

Problem

Toilet facilities in parks and other open spaces are often designed as purely utilitarian structures and hidden away in secluded areas. An attempt is also usually made to shield the facility by means of walls, hedges and other vegetation. These facilities are therefore ideal targets for criminals and, in many cases, the public does not want to make use of them because of the fear of crime.

Response

Public toilet facilities should be designed creatively, so that it is not necessary to hide them. They need to be placed close to high-activity areas such as entrances, tea gardens or restaurants. They should be well lit, and walls and vegetation should not provide hiding places for criminals. It is also necessary for toilet facilities to be well maintained.

Related recommendations

D2 Parks, playgrounds, etc
D5 Pedestrian-friendly environments

This ablution block is situated at the back of the park and is partly hidden by overgrown vegetation. The facility is not well maintained, and there are no clear signs indicating male and female entrances, which are situated at the back.

Shopping centres

Problem

Very often shopping centres are designed as introverted enclaves, with little interaction between the building and the immediate surroundings. The blank walls that face the areas surrounding these developments may lead to these areas becoming desolate, with an increase in opportunities for crime and in levels of fear.

These centres are alsa designed mainly to accommodate vehicular traffic, leaving pedestrians visiting them vulnerable.

Certain areas within such centres became deserted during the evening, raising the levels of fear of those that have to pass through these areas. For instance, once retail outlets have closed, people often have to pass through deserted areas to reach facilities such as public telephones, ATM machines and public toilets, making them feel vulnerable when they use these facilities.

Response

Wherever appropriate, shopping centres should be integrated into the existing fabric, rather than barricaded from it. Shopping centres should be designed to increase safety, not only for those inside the centre, but also for those in the immediate vicinity. Centres situated in the inner city, for instance, should not have blank walls facing the street but rather shops and well-frequented facilities, such as restaurants.

Similarly, if a neighbourhood shopping centre is designed so that high blank walls face directly onto a residential street, the possibility of this increasing the opportunities for crime and raising levels of fear should be taken into account. It may be more appropriate if certain shops face the street, thus raising levels of activity and increasing opportunities for passive surveillance.

This shopping centre has very little interaction with its surroundings and creates unfriendly spaces around it.

Shopping centres (cont)

Shopping centres built in suburban areas should also be designed to allow passive surveillance over the parking and other areas surrounding the buildings. They should also allow pedestrians and those making use of public transport safe access to the facilities. This may require that pedestrian routes from the surrounding areas be improved and special pedestrian access be provided. In certain cases, taxi and bus facilities may also be required, with designated areas where people can be dropped off or picked up in a safe environment.

Entertainment facilities such as cinemas and restaurants are usually busy until well after retail outlets have closed. In most cases it would make sense to cluster such facilities together close to entrances, to create a node or nodes of high activity that will reduce the need for people to walk through the deserted areas of a centre. Other facilities, such as public telephones, ATM machines and public toilets should also be located within these areas where there is improved passive surveillance. However, the juxtaposition of alcohol outlets, such as pubs and bars, and other facilities used by younger people, such as cinemas, should be avoided.

Related recommendations

D12 Building facades
D13 Spaces around buildings
D14 Service entrances, alleys, etc
D16 Parking garages

Management issues

Appropriate planning and design of the physical environment need to be complemented by effective management approaches. These include the management of an entire town or city as well as smaller areas, such as shopping and entertainment nodes. They also relate to the maintenance of the infrastructure and the built environment in general.

Issues that need to be considered include the institutional arrangements that will ensure effective management of an environmental planning and design strategy, support structures and vehicles for implementing crime prevention initiatives, as well as the maintenance of the environment to ensure the ongoing effectiveness of the interventions.

Institutional arrangements

In many cases, environmental planning and design initiatives are most effective when they form part of a holistic crime prevention strategy. Where appropriate, this strategy should be driven and coordinated through a representative structure. This structure could take the form of a Section 21 company or a Section 59 or 60 committee.

One aspect that can seriously jeopardise the success of crime prevention through planning and design strategies is a lack of coordination and communication between departments within a local authority, as well as between different stakeholders. To counter this, given the fact that crime prevention through planning and design is so multifaceted, it may be advisable to establish a representative task team to develop and manage the strategy and monitor projects. Such a task team could consist of representatives of a range of local government departments, such as those responsible for planning, architecture/engineering services, public safety and parks, etc, the SAPS, and local business and community groups. It is advisable for the task team to form part of a broader crime prevention strategy and coordinate its activities with others involved in local crime-fighting initiatives.

Another reason for such a task team is the fact that crime prevention through planning and design is a relatively new concept in South Africa and the role of local government is not always understood. The task team could therefore play an advocacy role and raise awareness of the potential of this crime prevention initiative amongst all stakeholders.

The task team could also be responsible for the development of guidelines and policy, for the gathering of information and best-practice material, and for the accessing and raising of funds.

An example is the Los Angeles CPTED Task Force (City of Los Angeles) which is chaired

by a council member and concerns itself with the safety of citizens in the built environment. The task force identifies CPTED projects and provides guideline documents and videos to assist architects, planners, etc, with the creation of safer living environments.

Implementation support

Improvement districts

The establishment of so-called city or business improvement districts (CIDs, BIDs) allows for the levying of additionol financial contributions from the businesses within a defined area for the provision of services by a private company in addition to those provided by the local authority.

This approach can provide a framework for introducing environmental interventions to assist in reducing crime. One of the benefits of establishing improvement districts is the fact that it combines a range of actions aimed at reducing crime ond improving the conditions within a defined area in general. These include waste management, the deployment of security personnel and measures to improve the image of an area and attract business.

CCTV

In certain situations the use of CCTV can greatly assist in reducing crime in specific areas. However, there are numerous issues to consider with respect to the design, specification, installation and operation of such systems. The financial implicotions of the installation, as well its future operation and maintenance, should be corefully analysed.

The environment plays an important role in the design of a CCTV system. Sightlines, possible obstructions such as trees (current and future), landscaping and lighting levels, etc, need to be taken into account when deciding on positions for cameras.

The installation of a CCTV system should not be regarded as a 'quick fix' or a foolproof crime prevention measure. The negative impact on other areas as a result of crime displacement must be considered, as well as the legal aspects. Expert advice is essential. A number of SABS publications provide valuable assistance in selecting the most appropriate system.

By-laws

It may be possible to support certain aspects of crime prevention through planning and design by the enforcing of local by-laws. For instance, by-laws concerning street trading, littering, commercial use of premises and alcohol licensing, etc, are relevant. It may be necessary to revise certain outdated by-laws or to introduce new regulations to support local crime prevention initiatives.

Maintenance

A lack of maintenance could very well be the reason why certain crimes occur in specific areas or why people feel vulnerable in a particular area. For instance, if carefully designed lighting has been provided to increase the safety of a pedestrian route or park, the crime prevention initiative will be rendered useless if the lights are not maintained.

In many township areas and informal settlements certain roads have deteriorated to the extent that vehicles cannot gain access to some areas. This makes it impossible for the police to patrol these areas or to respond to calls for assistance. Residents' safety is also jeopardised when they are forced to walk through unsafe areas because taxis cannot drop commuters off closer to their homes. Roads should be maintained and upgraded where needed and adequate storm-water systems should be put in place to prevent damage to roads.

Grass and brush should be maintained, especially in areas such as parks, on sidewalks and close to traffic intersections.

A well-functioning refuse-collection system can prevent certain areas from becoming derelict. In some instances, community based refuse collection could be a viable option. Local authorities should ensure that they are prepared to respond promptly to maintenance problems that impact on public safety. It is important that there is good communication between the local authority and the police to ensure that maintenance is carried out in cases where the police believe that it can assist in preventing crimes from occurring in a particular setting.

A well-maintained environment can help people to develop a sense of pride in their neighbourhood and encourage them to take responsibility for it. This will support a key objective of crime prevention through planning and design - namely that law-abiding citizens again take ownership af their neighbourhoods and assist in creating safer living spaces.

A lack of maintenance can result in roads becoming difficult to negotiate, limiting access to certain areas.

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