

LIVING IN AN ENCLAVED SOCIETY: PRACTICAL IMPLICATIONS OF ENVIRONMENTAL DESIGN

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INTRODUCTION

This paper focuses on the growing tendency amongst certain communities in South Africa to barricade themselves in as a response to crime and the fear thereof. It starts off by introducing the concept of crime prevention through environmental design (CPTED). It then proceeds to discuss the manifestation and implications of security villages and road closures in South Africa as an extreme form of target hardening in the built environment. Following on from this discussion, the paper then concludes with an argument for a more holistic and integrated approach to crime prevention at a local level.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

The relationship between crime and the physical environment

The notion that the physical environment can either increase or reduce the 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 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.

In order to understand the role of the environment in crime prevention, it is necessary to be aware of the elements of a criminal event. At the most basic level, the following are required in order for a criminal event to occur:

- a ready, willing and able *offender*;
- a vulnerable, attractive or provocative *target/victim*,
- a favourable *environment*; and

The person committing 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 the opportunities for 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.

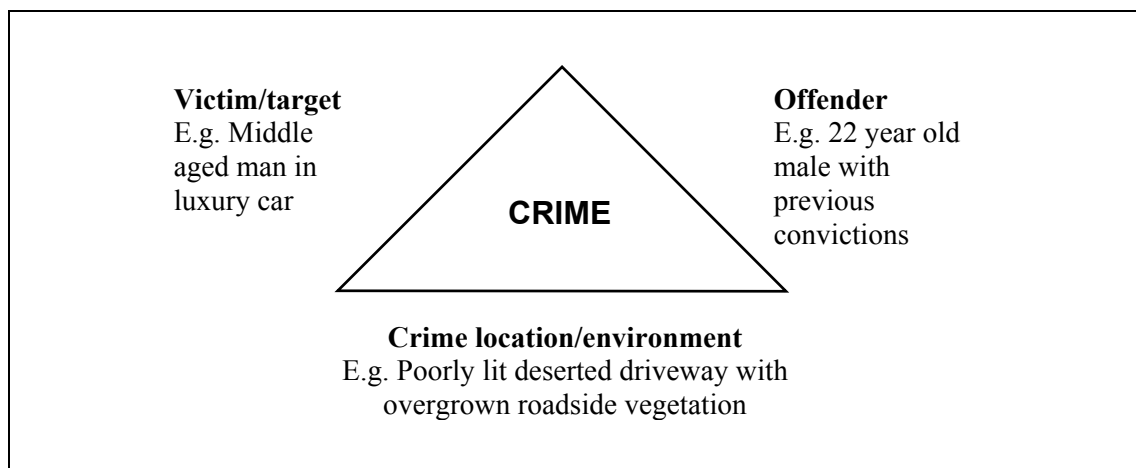


Figure. 1: *The basic elements of a crime*

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.

Crime prevention could involve a number of actions that respond to a specific crime problem by using different approaches. Indeed, the more successful crime prevention strategies are those that focus on specific crime types (or a particular group of crimes) and then aim to address them through a combination of targeted interventions.

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 environment should be considered as part of any crime prevention initiative.

What is crime prevention through environmental design?

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 1960's. Some of the more familiar approaches include Crime Prevention through Environmental Design (CPTED, pronounced sep-ted), situational crime prevention and place-specific crime prevention. The CSIR bases their work on a South African interpretation of international approaches as well as research conducted locally, and has defined the concept follows:

Crime prevention through environmental design (CPTED) aims to reduce the causes of, and opportunities for, criminal events and 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:

- physical **planning** and the planning approaches used at the strategic level;
- the detailed **design** of the different elements - for example, the movement system and the roads, the public open space system, individual buildings on their separate sites, etc., and
- the **management** of either the entire urban system or the different elements and precincts that make up the urban area.

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 that occurs, as well as where and when it occurs, it is necessary that planning and design principles work together with other crime preventive approaches. It is also essential to have a clear understanding of the possible causes of the different types of crime that are being addressed.

Some examples of crime prevention through environmental design initiatives

- Reducing the opportunities for crime through well-planned pedestrian routes, appropriately designed informal trading areas, mixed-use and extended hours of use of facilities.
- Limiting the potential danger posed by reducing and managing open spaces and vacant land.
- Providing appropriate lighting in parks, along streets and pedestrian routes etc.
- Providing adequate infrastructure and facilities such as roads and telecommunication so as to improve interaction between communities and the police.
- Managing the built environment efficiently, eg replacing light bulbs timeously, trimming trees and vegetation when and where required, collecting refuse regularly etc.

The principles of crime prevention through environmental 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 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.

These principles are:

- surveillance and visibility;
 - territoriality;
 - access and escape routes;
 - image and aesthetics; and
 - target hardening.
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- ***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 as well as the extent, degree and type of use that the space is 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 residents’ and visitors’ fear of crime. 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 environments as well as the users visible to others using the environment.

- **Territoriality**

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

A sense of ownership and responsibility for a particular environment improves the likelihood 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 them and feel responsible 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 etcetera.

- **Access and Escape Routes**

Certain types of criminal events and sites are often deliberately chosen for their ease of access to escape routes by the offender prior to perpetrating the crime. Similarly, the availability of access and escape routes also add 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.



Figure 2: *Vacant, overgrown land provides hiding place and easy access and escape routes for offenders*

- **Image and Aesthetics**

The image projected by a building or a public area in the city 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 its resultant degradation make people using these areas feel unsafe. Often this reduces the number of users, which could exacerbate the crime problem. The 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 both contribute to decay as do litter and the breakdown of services. The image of spaces can be improved by ensuring human scale in design, using attractive colours or materials, providing adequate lighting, and designing for high levels of activity.

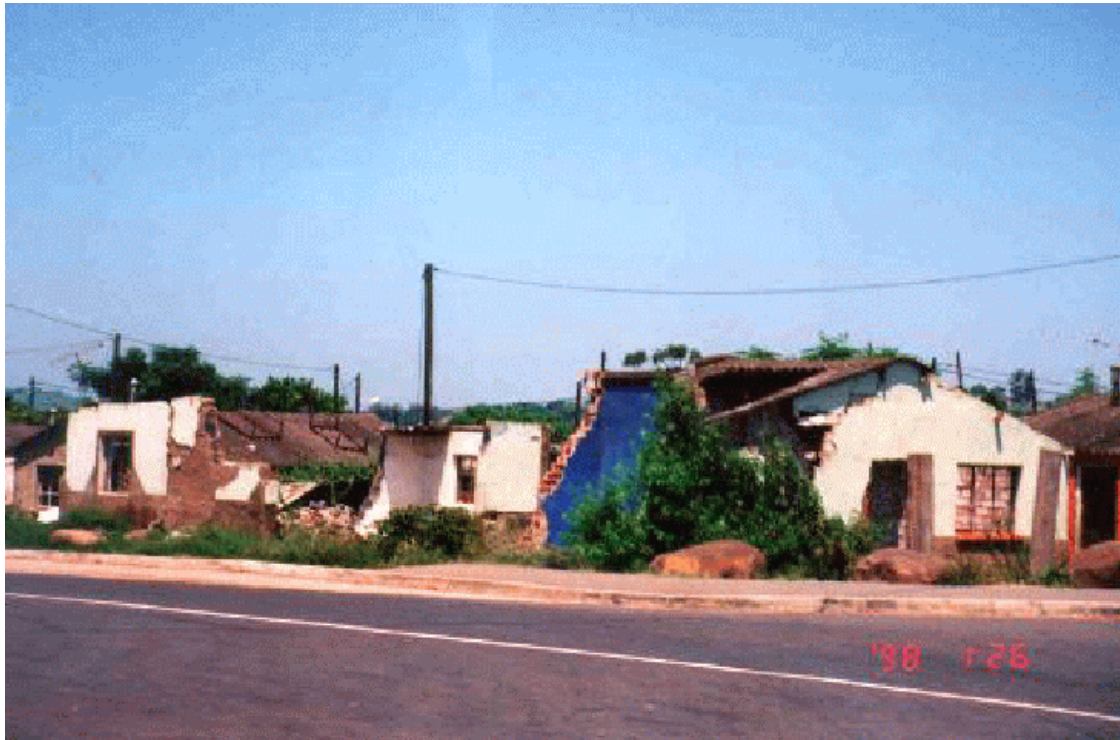


Figure 3: *Derelict buildings impact negatively on the neighbourhood and can increase the fear of crime*

- **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 often physically reduces opportunities for crime. However, the common mistake is that in so doing, other principles are violated. 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. Another form of target hardening that is becoming more prevalent in South Africa is the closing off of streets and neighbourhoods. However, this form of control has many adverse consequences that need to be considered and weighed up against possible benefits.

Employing these principles in combination can increase the possibility of reducing crime. Each principle should not be viewed in isolation 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 on 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.



Figure 4: *High walls are a typical form of target hardening in South Africa. However, the principle of surveillance and visibility is violated.*



Figure 5: *A transparent fence allows for surveillance onto and from the street.*

THE ENCLAVED SOCIETY

Gated communities are a global phenomenon. They are found in various forms in many countries over the world, including the USA, Canada, Brazil, Argentine, the U.K., Portugal, Spain, Malaysia, the Philippines, Indonesia, Australia, India, Saudi Arabia, Israel, etc. While there are many similarities, there are also a number of differences that distinguish gated communities in developed countries (for example the USA and Canada) from those in developing countries (for example South Africa and Brazil).

CSIR Building and Construction Technology (Boutek) has been conducting research on security villages and enclosed neighbourhoods (gated communities) in South Africa since 1999. The aim of this ongoing research is to provide relevant and accurate information to assist decision-making on gated communities in the country. Previous research focussed on gated communities internationally (2000) and enclosed neighbourhoods in South Africa, including some of the challenges this presented to local councils (2000). Other CSIR research included comparative studies between gated communities in South Africa and Brazil (2001), to investigate the impact of

political transition and crime on spatial transformation and more specifically on the occurrence of gated communities in cities in these two countries. In 2002 the CSIR Boutek embarked on extensive in-depth research on gated communities in South Africa. This project was divided into two phases. The first phase focussed on a national survey of gated communities in the country to determine the extent and location thereof. The second phase comprised detail case studies of large security estates and enclosed neighbourhoods in Johannesburg and Pretoria.

Security villages and road closures

Gated communities is a generic term that includes enclosed neighbourhoods that have controlled access through gates or booms across existing roads, and security villages and complexes, including lifestyle communities which provide their enclosed residents with a range of non-residential amenities such as schools, offices, shops and golf courses.

Security Villages refer to private developments where the entire area is developed by a private developer. These areas/buildings are physically walled or fenced off and usually have a security gate or controlled access point with/without a security guard. The roads in these developments are private, and in most of the cases, the management and maintenance is carried out by a private management body. Security villages do not only include residential areas (such as townhouse complexes, high-rise apartment blocks), but also controlled access villages for business purposes (office blocks) and mixed-use developments such as large security estates. Although many of these are predominantly residential, a growing percentage of other land uses are found within these developments, included commercial (golf shops, post offices or boxes, estates agents, etc) and/or recreational (golf courses, squash courts, tennis courts, equestrian routes, etc.) uses.



Figure 6: Entrance to large secure townhouse complex in Pretoria



Figure 7: Entrance gates to large security estate on urban periphery in Pretoria

Most of the luxury security estates occupy only between 10 and 50 hectares, while a few more ambitious estates occupy larger areas, namely Heritage Park in the City of Cape Town (200 ha), Woodhill Golf Estate in Pretoria (212 ha) and Dainfern in the City of Johannesburg (350 ha). A recent survey conducted by CSIR Building and Construction Technology (conducted in 2002) indicated that security estates in South Africa tend to be located in either metropolitan areas (around large cities such as Johannesburg, Pretoria, Cape Town, etc.) or in coastal towns (such as Plettenberg Bay, Knysna, Mossel Bay, Port Elizabeth, Margate, Richards Bay, etc.). Other areas with a larger numbers included recreational sites or alternative living places close to natural amenities such as Hartebeespoort Dam north west of Pretoria (Landman 2003).

Enclosed Neighbourhoods refer to existing neighbourhoods that have controlled access through gates or booms across public roads. Many are fenced or walled off, with a limited number of controlled entrances/exits and, in some cases, with security guards at these points. The roads within these neighbourhoods were previously, or still are public property, depending on the model used within different local authorities. The size of enclosed neighbourhoods varies from small cul-de sacs with fewer than 10 houses to large neighbourhoods with up to 1000 houses. Residents must apply for the right to restrict access to their local municipality and can only do so for security reasons.



Figure 8: Road closure through gates in Johannesburg



Figure 9: Road closure through a boom in Johannesburg

The CSIR survey indicated that the highest number of road closures is occurring in the metropolitan areas, including municipalities with large cities such as Johannesburg, Pretoria and Cape Town. The City of Johannesburg indicated that there were 49 legal neighbourhood closures and 37 that expired since approval. In addition, there were an estimated 188 illegal closures and 265 pending applications. The City of Tshwane had 75 formal applications from neighbourhoods to close-off their areas. In addition, 35 have been approved. This demonstrates a large demand and manifestation (Landman 2003). However, not all local municipalities in South Africa allow this kind of neighbourhood enclosure. Some Local Authorities refuse permission due to problems related to traffic control, urban management, accessibility, discrimination, etc.

The impact and implications of gated communities

Recent CSIR research (2003) has indicated that while it is not the only reason, safety and security is the main reason behind the proliferation of road closures and security villages. Consequently, the first question is always whether such responses reduce crime. There are mixed opinions about this, internationally and in South Africa. A national study by Blakely and Snyder in the USA found that some “security zones” (enclosed neighbourhoods) reported a reduction in crime after the streets have been closed. Others, however, report only temporary reductions, and some report no change at all (Blakely and Snyder 1997). In another study comparing four communities (two gated and two non-gated), Wilson-Doenges (2000) found no significant difference in

the perception of safety between the gated and non-gated communities. In addition, she found that there was also no significant difference in the actual crime rates per capita between the gated and non-gated communities in both the high-income and low-income communities.

In South Africa, almost all the security companies report a significant reduction in crime in enclosed neighbourhoods, while a number of large security estates experienced a few isolated cases of crime. The SAPS also generally agree that crime is reduced through physical target hardening on a neighbourhood scale. They do however acknowledge that it often displaces crime to surrounding neighbourhoods. One of the consequences is that these communities feel increasingly vulnerable and subsequently also apply for road closures or choose to move to a security estate/secure townhouse complex.

Others are however more sceptical about the effects on crime. Beaty Naude (professor in criminology at UNISA), warns that gated communities do not always reduce crime. She maintains that very few crimes are reduced by the closure of existing suburbs and public roads. According to her, it can at most reduce some opportunistic or impulsive crimes such as theft, burglary and street crimes (for example pick-pocketing and snatch-and-grab crimes) which are mostly committed by opportunistic criminals who simply use the opportunity to commit crime while in the area. In addition, a large number of occasional visitors must still be allowed into the area, for example family and friends of homeowners, gardeners and domestic workers, municipal workers, building and construction workers, Telkom staff, repair and garden services, delivery services and people looking for work with the result that there is still a high crime risk in the area (Naude 2003). Naude (2003) furthermore warns that crime statistics collected by members of the public in support of the closure of the suburb are often not reliable and can even be misleading.

What seems to be undisputable, however, is that living in a security village or enclosed neighbourhood reduces the fear of crime inside the protected area. Recent CSIR research indicated that in all four the case study areas, all the residents that were interviewed agreed that they feel much safer living behind fences and gates. It therefore contributes to an increased sense of safety for those living inside. In some

case, it did however, increase residents fear of crime in areas outside gates or in ‘unprotected’ spaces.

The impact and implications of security villages and enclosed neighbourhoods, however, stretch much further than just crime and the fear thereof. Some of the other impacts and implications relate to urban planning and management, a sense of community and cohesion, social exclusion, spatial fragmentation and segregation, the financial implications and the legal implications. Since each of these involve an extended discussion on their own, the paper will only focus on two aspects that closely relate to the CSIR work on crime prevention through environmental design. They are spatial fragmentation and segregation and urban planning and management.

Gated communities physically separate a specific area from its environment and create zones or pockets of restricted access within the urban fabric. This forces motorists and pedestrians to take alternative routes, which often take longer. It may also negatively influence police response times and police patrols to enhance visible policing (both from the SAPS and municipal police). Therefore, gated communities have an impact not only on the daily activity patterns of people, but also on the urban form and functioning. While one neighbourhood enclosure may not have a significant impact on traffic patterns and other urban functions, several may indeed have because of the ripple effect, as well as the fact that many of these are not suited to road closure because of their layout and position within the road network system. An example from Johannesburg illustrates the point. The map shows a large number of closed off areas in close proximity. The (green) dots indicate boom or manned gates (accessible entry/exit points), while the (red) crosses indicates locked gates and fences across the existing roads (inaccessible entry/exit points).



Figure 10: A number of enclosed neighbourhoods in northern Johannesburg

By closing off a large number of neighbourhoods, the existing urban form and road network are severely influenced and transformed. Large areas are now changed into isolated and inaccessible super blocks, with little reminisces of the original fine-grained urban form (see Figure 5). Through traffic are also limited to a few major arterials that often lead to increased congestion and travel times.



Figure 11: New urban form and road networked

In addition, it also exacerbates spatial fragmentation and separation, as is visible when one starts to consider enclosed neighbourhoods as closed spatial entities. Eventually this may lead to an ensemble of closed cells connected by high-speed arterials in a city where only the privileged and their workforce have access to these enclaves, since access is strictly controlled by private security guards. Spaces inside the enclaves then become 'privatised' common spaces for those who can gain access. What happens inside is determined by the Homeowners Association (a micro-government in its own right) and enforced by the private security.

The dilemma: short-term needs versus long term impact

Living in the enclaved society therefore creates a dilemma. On the one hand there is a desperate need for mechanisms to promote personal safety and a sense of security in South Africa. In many cases law enforcement initiatives are seen as unsuccessful to prevent crime or merely as not enough. Consequently residents respond in their own way, by applying for street closures or opting to move to security villages. This in turn stimulates the market demand for these types of developments.

On the other hand, there is a need to consider the medium and long term impacts and implications of these extreme responses to crime in the built environment, including urban fragmentation and segregation, the privatisation of public space through access control and the violation of constitutional / human rights when people are prohibited from entering what is technically still public space.

The question is therefore whether living in the enclaved society is likely to contribute to crime prevention in the city as a whole, or whether it will only reduce crime inside the enclaves and for how long? By hardening the target (neighbourhood) one may in fact violate other CPTED principles as relevant to the area outside the gates and fences. As such, one cannot only consider the safety of people living inside the enclaves, but need to look at crime prevention from a more holistic perspective.

TOWARDS AN INTEGRATED APPROACH TO LOCAL LEVEL CRIME PREVENTION

Given the need for communities to become involved in creating safer living environments, the question is whether the tendency to form enclaves is the most appropriate response. By closing off streets and erecting barricades around existing neighbourhoods, the CPTED principle of target hardening is applied at the cost of the other principles.

It is suggested that a more effective and sustainable way of dealing with crime at a local level is through the implementation of a comprehensive, integrated community-based crime prevention strategy. This will ensure that crime prevention measures are implemented in a coordinated way so as to minimise the possible impact that interventions implemented in one area could have on other sectors of the community.

Such a strategy should respond to local problems and the local context and should address crime problems holistically. The strategy should therefore be based on a detailed safety audit that involves a study of local crime problems and patterns, socio-economic conditions, local crime prevention capacity, the physical environment etc. The process outlined in the *Making South Africa Safe* manual provides a useful basis for the development of such a strategy. This is also the basis of the Crime Prevention Development Programme as implemented by the SAPS.

In order to ensure that local crime prevention initiatives are implemented in the most effective way, it is appropriate for local government to take the lead in developing the strategy. By taking up this responsibility, local government can ensure that the needs and fears of all citizens are considered and addressed. By including everyone in the development of a community-based crime prevention strategy, the need for people to enclave themselves will also be reduced.

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