

ENVIRONMENTAL DESIGN FOR SAFER COMMUNITIES

Preventing Crime in South Africa's Cities and Towns

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The report is the first in a two-volume series (published in full by the CSIR) which outlines the role of environmental design in preventing crime. It provides detailed recommendations for the design of safer cities and towns in South Africa.

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INTRODUCTION

Preventing crime has become a key challenge to the government in post-apartheid South Africa. Government's core policy document on crime prevention, the National Crime Prevention Strategy (NCPS), places environmental design on the agenda. A review conducted for the NCPS of the extent to which environmental design is being implemented, suggests that there is little experience of environmental design in South Africa to draw from.¹

Environmental design as it is currently practised in the country, is often indistinguishable from target hardening: that is, building higher walls and securing property and suburbs to prevent crime. The purpose of this study is to show how the concept of environmental design can be applied beyond this. The analysis which follows, sheds light on the linkages between the environment and crime, and mechanisms for preventing crime through design interventions.

While crime prevention through environmental design appears feasible at a conceptual level, it requires detailed case studies and analyses of crime patterns in particular localities. Thus, this study examines crime trends in South Africa's major cities - Johannesburg, Durban and Cape Town - to inform the conceptual debate around environmental design and possible interventions in this regard.

More specifically, what is required, is to place the issue of environmental design on the agenda of local government and planners. To achieve this, guidelines and principles for environmental design have been developed.² These are based on the framework laid out here which establishes the links between crime and the physical environment in which it occurs.

Central to the understanding of how environmental design as a factor in crime prevention can reduce crime, is a review of victimisation patterns across the diversity of built environments in the South African city. In particular, this entails focusing on high crime localities and considering environmental factors in these areas which make them conducive to criminality. More specifically, the analysis seeks to isolate those issues which can be directly correlated with an increased risk of victimisation.

Such an analysis suggests that those areas with the highest levels of crime in South Africa - townships and informal settlements - could benefit from focused environmental design interventions as part of broader development projects and local crime prevention strategies.

Many townships have been poorly planned from the outset, with little or no attention given to issues of community safety (as distinguished from control). In the case of informal settlements, professional design is often absent. In some of these settlements, it should be noted, planning by residents themselves has led to safer environments than those planned by outside professionals. Both formal and informal settlements present a diversity of urban management and planning challenges, of which security is only one. State interventions in the built environment must therefore prioritise those areas where planning has been lacking, or where existing design features are conducive to criminal victimisation.

In South Africa, high crime areas are also those least likely to be adequately serviced by the public police. In addition, they are occupied by those who can least afford to protect themselves and their homes and, most importantly, are less able to bear the costs of crime once victimised. Design interventions are critical in such areas given these vulnerabilities. But at the same time, design measures will be difficult to implement here as a result of weak policing, poorly developed local government structures and a lack of resources.

In contrast, areas like city centres - often considered to be the natural targets of design interventions -

have comparatively lower levels of crime. But the crimes that are prevalent in these public places, for example mugging and robbery, are particularly likely to raise citizens' fear of crime. This impacts on the way the city is used, and by implication its growth and development. Thus, design interventions in these contexts are important for reducing the fear of crime and reversing negative perceptions of the inner city. For these and related reasons, it is important to confront fear of crime - quite apart from the realities of victimisation - in areas where such fears are high, even though crime levels may be relatively low compared to other parts of the city.

This report begins by defining crime prevention and the potential role of environmental design within this framework. This is followed by an analysis of crime patterns and trends based on victimisation surveys carried out by the Institute for Security Studies among representative samples of the population across the metropolitan areas of Johannesburg, Durban and Cape Town in 1997 and early 1998. These findings have been supplemented with police statistics, as well as in-depth interviews with police and local government officials in the cities concerned.

An examination of varying crime levels and victimisation patterns in townships and informal settlements, suburbs, and the inner city/city centre, suggests that in particular areas, specific environmental factors increase the risk of victimisation (and the fear of crime). By focusing on these factors, priorities for environmental design interventions can be determined.

DEFINING CRIME PREVENTION

Crime prevention refers to those activities that are intended to reduce or prevent the occurrence of specific types of crime (or the fear thereof), either by altering the environment in which they occur, or by intervening more broadly to change the social or other conditions which are thought to have causal significance.

Most criminal events have many possible causes. Some are remote or 'distal' (for example, abuse in childhood producing violent assaults in adulthood), or structural changes (for example, the introduction of electronic banking) which create new opportunities for crime. Importantly, some causes are 'proximal': the presence of a motivated offender in a suitable crime situation immediately before the occurrence of the event. It is at the point of these proximal circumstances that the diverse structural, social and psychological causes of the criminal event converge.³ And it is here that crime prevention interventions, in the short to medium term, are likely to be most effective, and indeed most measurable.

The diagram⁴ illustrates the causal chain of a criminal event. The 'programmed potential' of the individual refers to past life circumstances which may impact on the likelihood of committing an offence. 'Current state' refers to the position of the potential offender at the time, such as being under the influence of alcohol or being in (or outside of) the company of particular people. 'Modulators' encompass a range of distinctive factors, such as the possibility of intervention while the offence is being committed, the degree to which the offender believes there will be a follow-up after the crime, and circumstances, for example, leaving a car door unlocked, which may make the offence easier to commit.



In sum, the commission of a crime reflects the conjunction of:

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

The 'environment' describes all those factors relating to the physical context in which the event occurs. These generally make it easier for an offence to be committed - such as a lack of visibility or surveillance. Where analyses of crime patterns find 'favourable environments' for criminality, opportunities for crime prevention through design interventions arise.

If the above model is accepted, preventive interventions would include a range of actions which aim to influence the chain of events at any one (or all) of these levels. Indeed, comparative research over the past decade suggests that single measures are rarely sufficient to reduce crime, criminality and fear of crime in high crime areas.⁵

Crime prevention initiatives which rely on a general response to a general problem have been shown elsewhere to make little difference to levels of criminality. The most viable crime prevention strategies are those which aim at a particular crime (or particular group of crimes) and aim to put in place a customised, comprehensive programme of preventive measures.

Crime prevention strategies therefore require a range of multifaceted programmes which aim to combat and prevent a single offence or category of offences. Environmental design should be one part of such multifaceted programmes given that the environment in which crime occurs, is only one factor among several which cause crime.

Thus, crime prevention through environmental design includes measures aimed at reducing the causes of - and the opportunities for - criminal events, and at addressing the fear of crime, through the application of sound design and management principles to built environments. Specifically, environmental design strategies must aim to target particular components of the built environment which are conducive to crime or to the fear of it.

A CRIME AND A PLACE

Implementing crime prevention through environmental design in South Africa cannot ignore past planning practices and the structure of the South African city. These are the result of policies of separate development which aimed to divide the population and control the movements and lifestyles of most South Africans.

These policies achieved disproportionate levels of safety in some areas while fostering insecurity in others. They also left distinctive living environments that differ substantially for each race group. This suggests that very different design interventions are necessary in each case.

Broadly, apartheid planning has led to cities which are characterised by:

- low density sprawl;
- fragmentation, with development occurring in discreet pockets or cells rather than being spatially continuous;
- separation in terms of land use, income group, and race; and
- a centrally located core where most employment opportunities are located, and a distant periphery where dormitory residential areas are situated.6

Historically, these characteristics served to control the population of the city. This ensured an accessible pool of cheap labour for industry and an increased regulation of people's movements for purposes of state control rather than for increasing the safety of the residents. The typical city structures which emerged during the years of colonial and then apartheid hegemony, were also designed to protect the primary beneficiaries of the system (the white population).

This is evident in the partitioning of the apartheid city into a central business core surrounded by several residential zones. These zones were divided along racial lines with the African migrant labour force living on the periphery in underdeveloped townships, while white people were situated close to the centre in suburbs characterised by sophisticated infrastructure and facilities. The location of the coloured and Asian communities formed a buffer between white and African communities. Specifically designated buffer zones, either set aside for industry or left unused, further separated these residential areas.7

Another feature of the apartheid city is its inadequate and costly transport system. The multi-lane highways form physical barriers and discourage entry into residential areas by outsiders. Because public transport was designed to move the labour force into and out of the city as directly as possible, there has been little integrated use of the facilities across communities. This has had two effects. Firstly, the targeting of public transport primarily for the use of African, coloured and Asian people, has meant that the supporting facilities and infrastructure are poorly developed. Secondly, achieving economies of scale has been difficult. The minibus taxi industry has flourished in the face of these inadequacies, bringing problems of its own: the shortage of dedicated stops and taxi ranks at nodal interchanges have contributed to overcrowding and congestion. More seriously, the unregulated nature of the industry, coupled with competition over routes and passengers, has resulted in violent conflicts between rival taxi organisations.8

Despite a change in government and new legislation, most aspects of the form and structure of the city persist. There are departures from this, such as exceptional cases in which low cost housing is well

located for access to urban opportunities and properly designed for the safety, security and well being of its residents. However, in many ways, the unequal city structure is being replicated further.

The apartheid city structure has several implications for crime levels and efforts to prevent crime through environmental design:²

- The city structure reinforces inequalities, with the poorest having to travel furthest to access employment and other opportunities. This heightens the vulnerability of such commuters to victimisation, since transport facilities, as well as the nodal interchanges where these converge, offer many opportunities for crime.
- The dormitory status of most residential localities means that these areas are virtually deserted during the day, increasing the vulnerability of both property and residents remaining there, particularly women, children and the elderly.
- Conversely, and as a consequence of mono-use zoning regulations, most inner city areas are deserted after business hours (a pattern which characterises many countries in which such planning principles have been applied).
- One effect of the separation of land uses (in other words, areas zoned as purely residential or purely commercial) is that people using inner city areas become more susceptible to crime, and businesses depart. This has an impact on the whole of the inner city. Even where there are central residential areas (such as Hillbrow in Johannesburg and Albert Park in Durban) they then suffer decay, which in turn leads to depressed rentals and degraded living environments.
- Urban sprawl is also a cause of an unsafe city and results from the fragmented, suburban form in which open land separates pockets of development (formerly as a way of enforcing Group Areas legislation). This increases the vulnerability of people crossing such open spaces and also presents opportunities for criminal activity and subsequent escape. Low density settlement patterns and suburban planning principles (such as the ubiquitous one-house one-plot pattern) also cause urban sprawl. In these layouts, there is no clear ownership of common spaces, and spaces between buildings are often left without surveillance, offering easy escape routes for offenders. Without clear ownership and demarcation of semi-public and public areas, it is less likely that residents will intervene to stop crime.

A careful analysis of available crime statistics and the results of recent victimisation surveys, point to links between these characteristics of the city structure and crime patterns in South Africa. The data as outlined above suggest that specific types of crime are more prevalent in some areas than in others. In South Africa, race - and its overlay with class - are key determining factors of who is affected by crime. While race is critical to understanding victimisation patterns, this is only because these divisions match wealth and property ownership which generally determine lifestyle patterns, as well as the place and type of residence.

As a result, victimisation patterns are closely related to particular parts of the South African city. Notably, crime patterns and trends differ between poorer township areas and informal settlements, suburbs and city centres/inner cities.

Recent research suggests that people who live in informal settlements and, more particularly, in townships are the most likely to be victimised by violent crime. Levels of property crime are also high in these areas, of which the inhabitants are likely to be the poorest in the city.

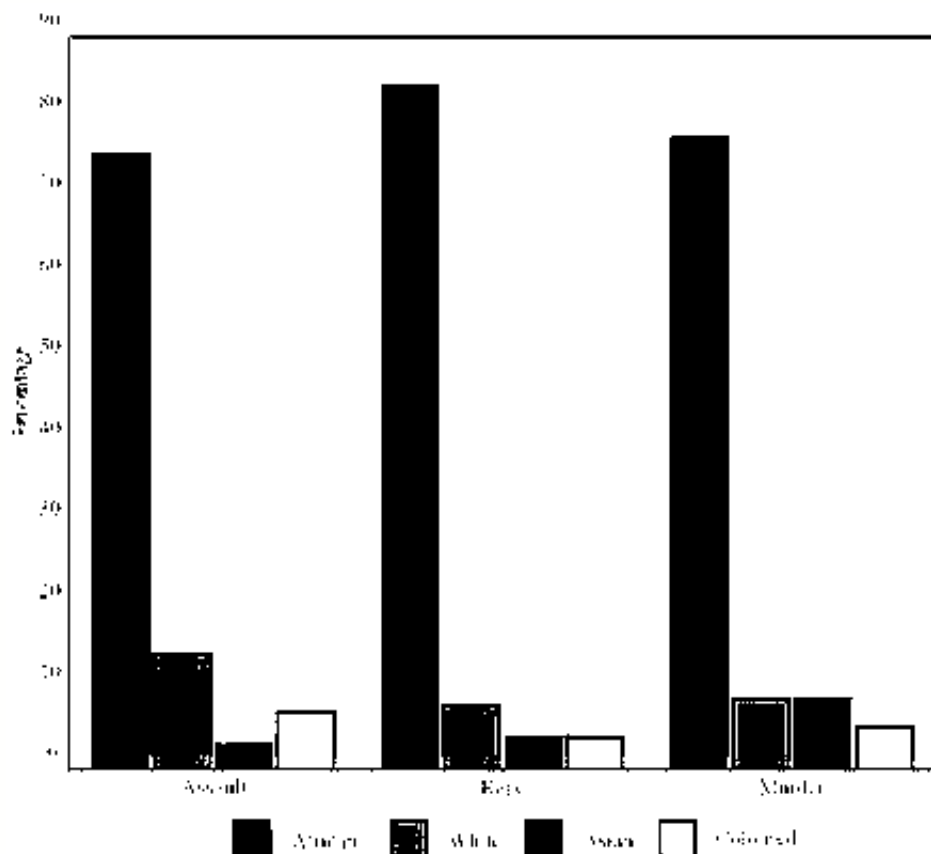
A countrywide survey of perceptions of crime, conducted in 1995 by the Human Sciences Research Council (HSRC) and analysed according to per capita income, reinforces these conclusions: a much higher proportion of those in the lowest income quartile reported being victims of violent crimes than those in higher income brackets.¹⁰

The HSRC survey reported that half of the 'very poor' category of respondents (with a per capita income of less than R116 a month) reported assault as being the 'most important crime' committed against them or a member of their household, as opposed to only one in ten of the highest category (with a per capita income of R713). After assault, the most commonly reported crime by the 'very poor' was child abuse and rape, accounting for 17 per cent of victimisation. None of the respondents in the remaining income categories listed this crime.

The predisposition of the poor living in townships and informal settlements to violent crime is reinforced by survey material on whether injuries were sustained as a result of most commonly reported crimes. According to the HSRC survey, the proportion of crimes in which no injuries occurred increased with income: 36 per cent of the first (poorest) income quartile reported no injuries, followed by 43 per cent of the second quartile, 66 per cent of the third, and 77 per cent of the highest income group. More crimes committed against the poorest group therefore involved violence.

These findings have been supported by recent victimisation surveys in Johannesburg and Durban which confirm that Africans living in townships or informal settlements are not only more exposed to violence in the course of property crimes, but also to interpersonal crimes such as assault, murder and rape. More than three quarters of the victims of these crimes in Johannesburg were African (Figure 1) and in the case of murder and rape, the vast majority of victims lived in townships.¹¹

Figure 1: Victims of violent crime 1993 - 1997 Johannesburg victim survey



In addition, the use of violence in the course of property crimes is more of a threat for African victims than for other groups. Violence was used in 20 per cent of all burglaries reported to the Johannesburg victim survey. One quarter of African burglary victims experienced violence, compared to only 9 per cent of white burglary victims in the city. Similarly, between a quarter and a third of victims living in townships and informal settlements reported the use of violence, while this was the case for only 14 per cent of victims living in the suburbs.

A comparable victimisation survey, conducted in December 1997 in Durban, showed remarkably similar patterns. Generally, African people - the vast majority of whom live in townships and informal settlements - were far more likely to be victims of violent crime than those people (largely white) living in the suburbs (Figures 2 and 3). Obtaining accurate police statistics to corroborate this for large townships, such as KwaMashu north of Durban is difficult. Available police data and qualitative interviews, however, confirm the general findings of the victim surveys. Murder and serious assault were regarded as high priority crimes by the police in KwaMashu. High levels of rape are also a feature of the area. Investigations in Inanda, a large area encompassing 39 informal settlements near Durban, again confirm the findings of the Durban victim survey. Police statistics for these areas suggest that there are high levels of assault, murder, rape and residential burglary (Figure 4).

Figure 2: Crimes experienced by African people 1993 - 1997
Victim survey data

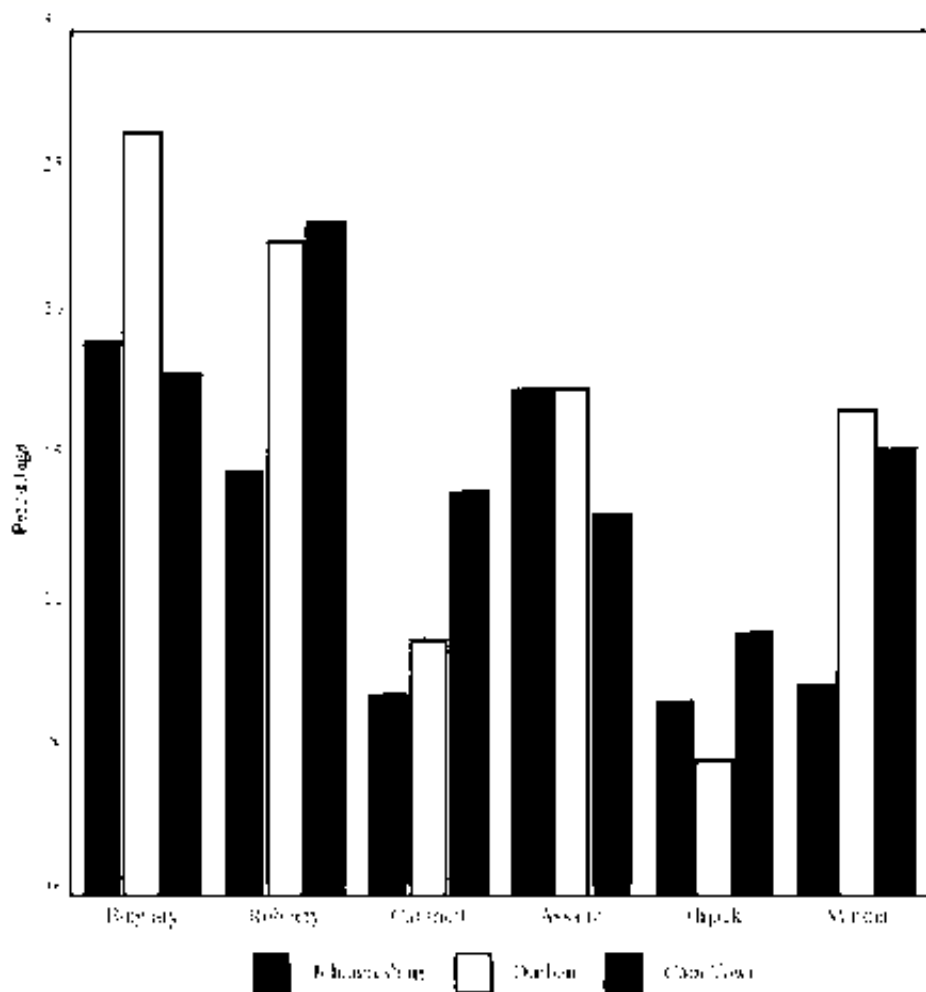


Figure 3: Crimes experienced by white people 1993 - 1997

Victim survey data

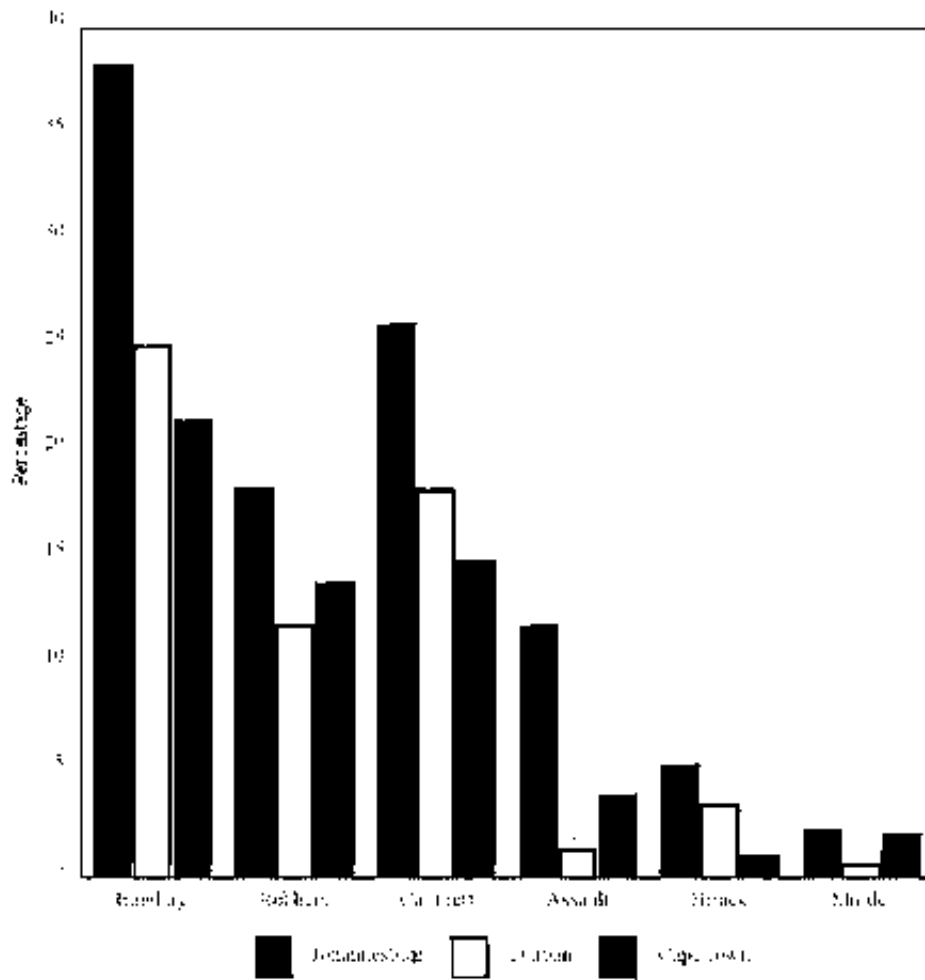
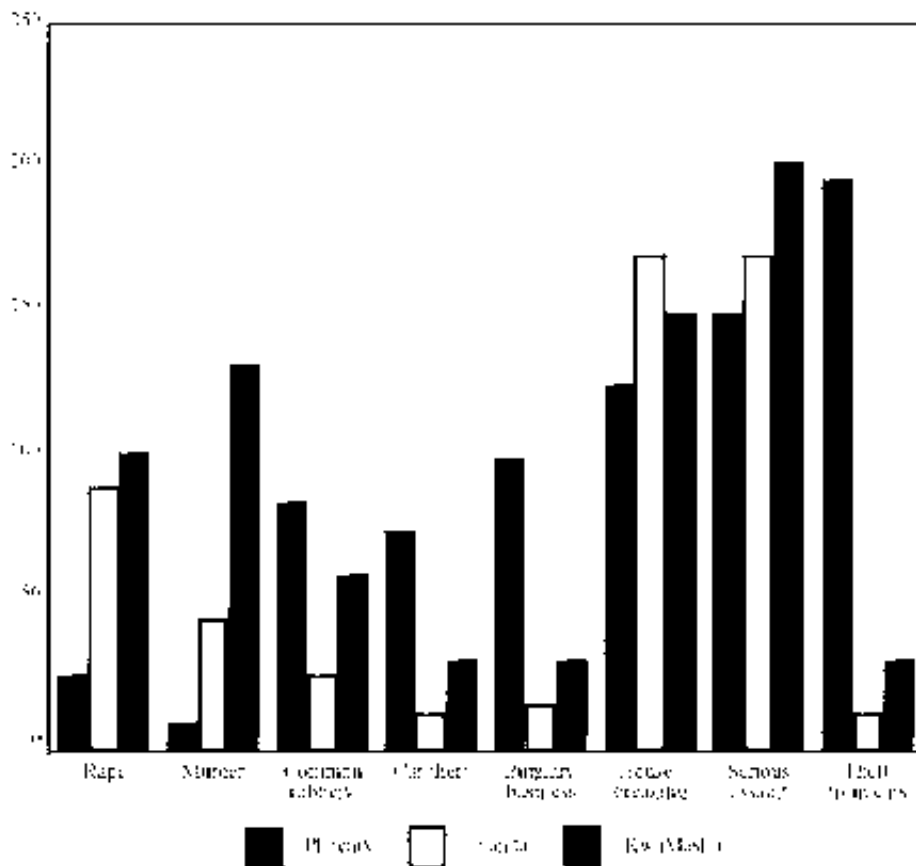


Figure 4: Crime reported to the police in townships outside Durban in 1997



The Johannesburg and Durban victimisation patterns are closely mirrored in Cape Town. A victimisation survey carried out in the latter city in February 1998 shows that coloured and African people bear the brunt of the city's violent crime (Figures 2, 3 and 5). A closer analysis of Nyanga and Mitchell's Plain (African and coloured townships) supports this. These areas are the most violent in metropolitan Cape Town: levels of assault, rape and murder are high (Figure 6). In addition to high levels of violent crime, levels of property crime like housebreaking are also high, particularly in Mitchell's Plain. Although crime is pervasive throughout the two areas, police point to mass housing projects as having higher crime rates than the informal settlements or self-help housing schemes.

Figure 5: Crimes experienced by coloured people 1993 - 1997
Victim survey data

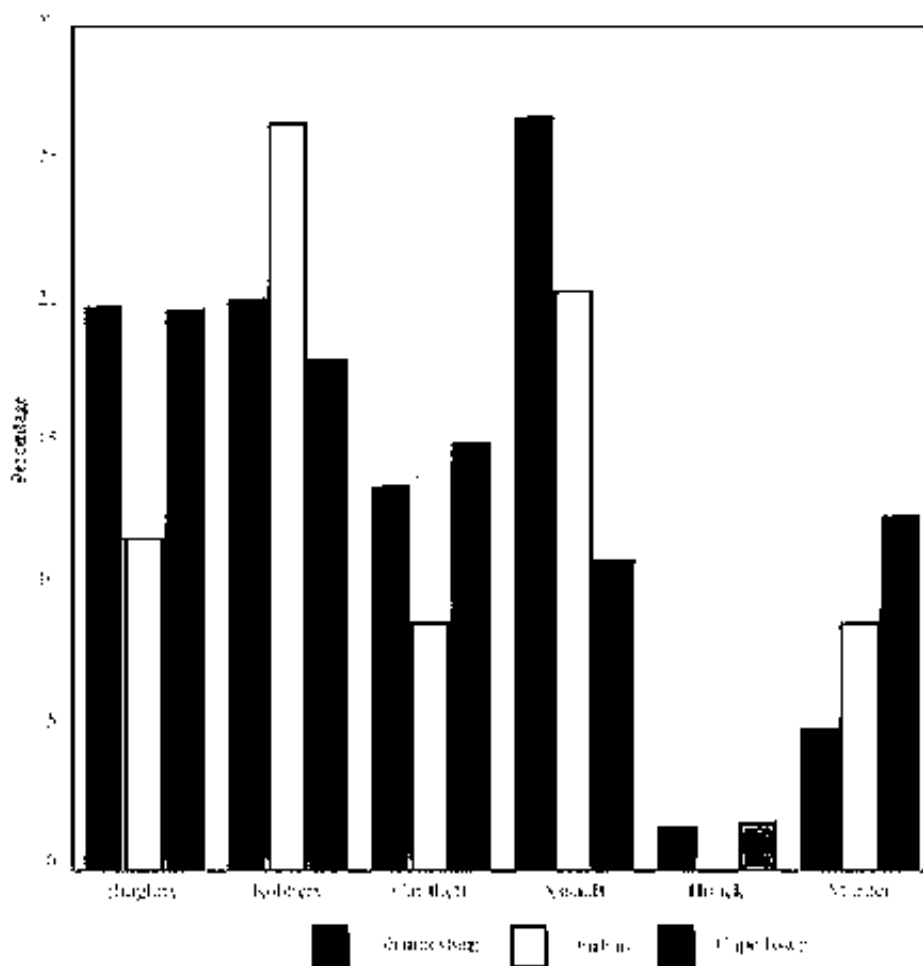
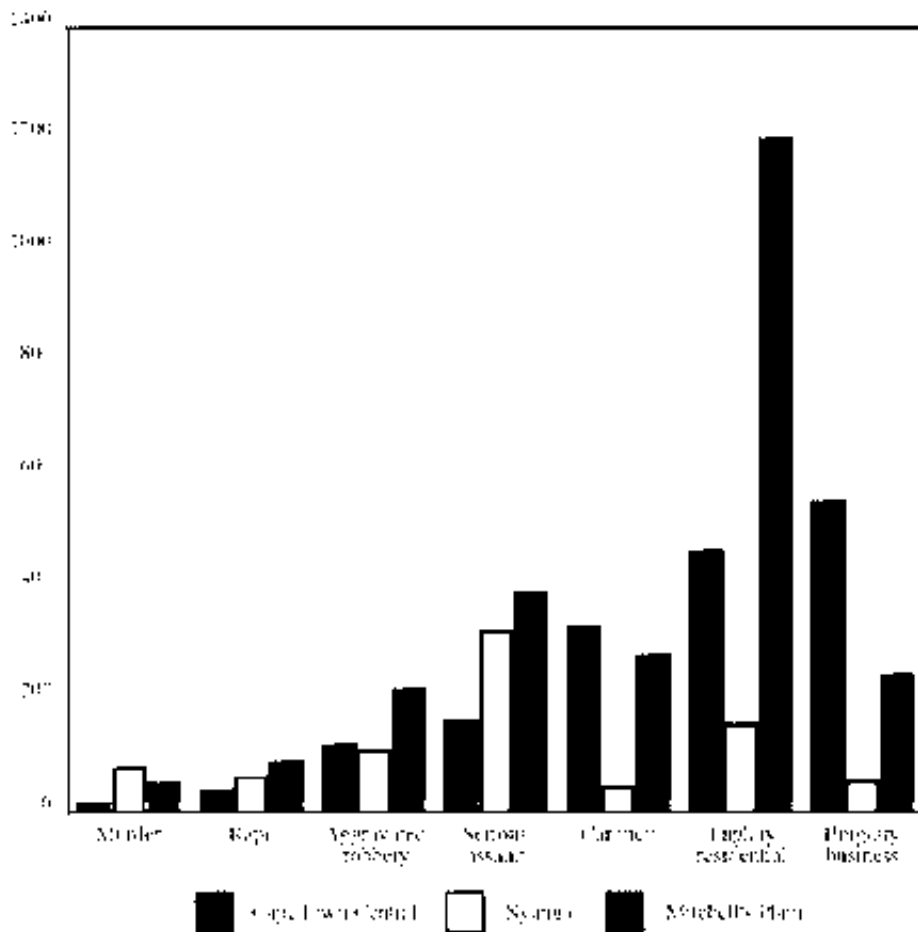
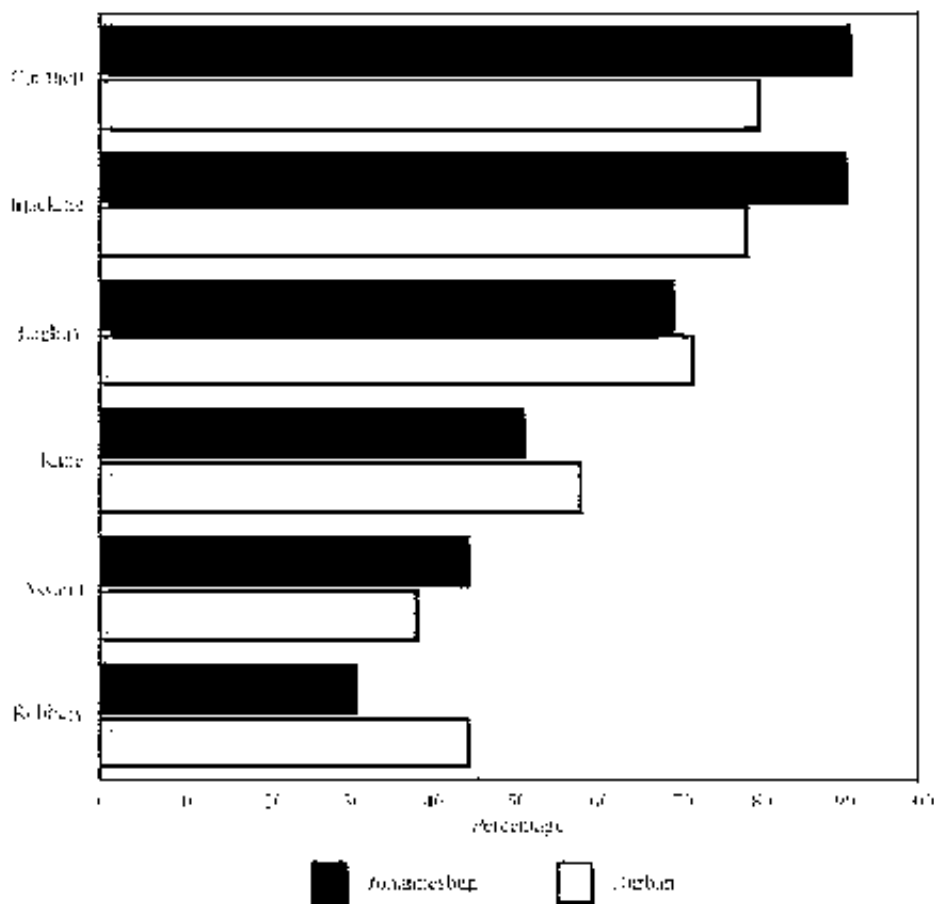


Figure 6: Crime reported to selected police stations in Cape Town January - June 1997



As is the case in many other townships and informal areas in the country, however, crime statistics do not necessarily reflect actual levels of crime. The victim surveys in all three cities suggest that reporting rates among Africans living in townships and informal settlements are lower than elsewhere. In addition, victim surveys generally show lower levels of reporting for violent crimes such as assault and rape (more prevalent in these areas), as opposed to property crimes such as vehicle theft (Figure 7).

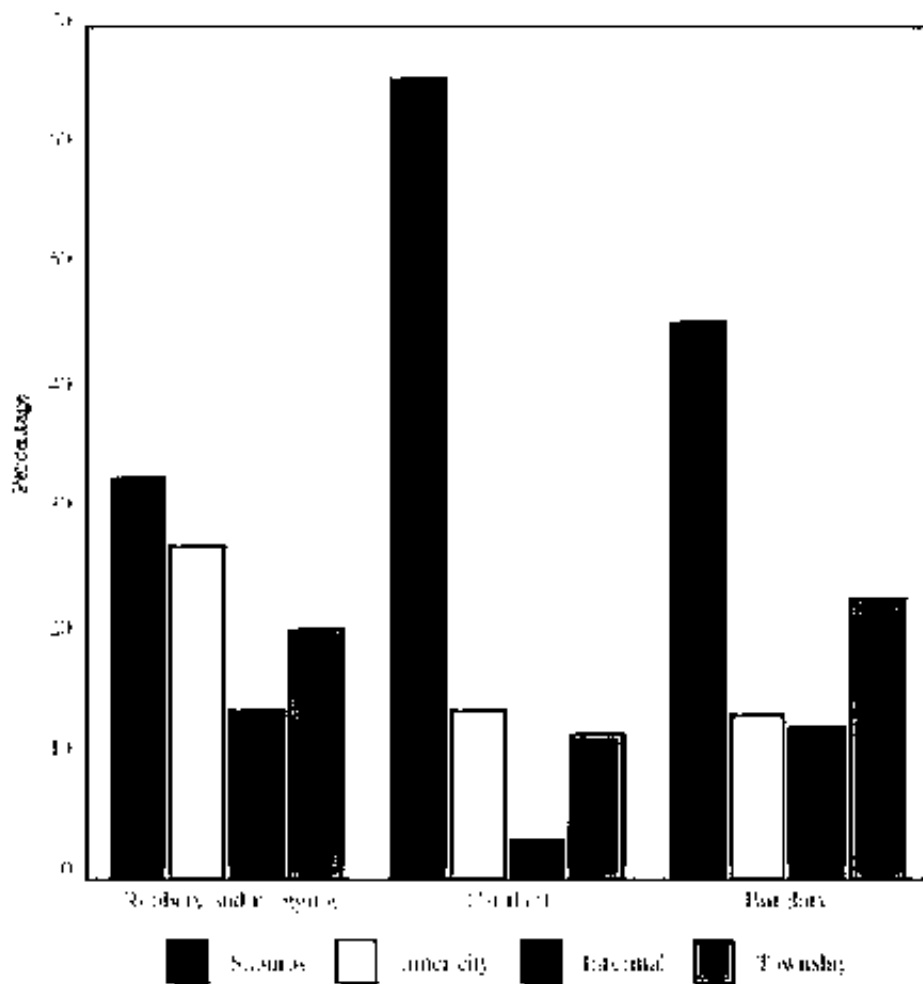
Figure 7: Proportion of crimes reported to the police
Victim survey data



In contrast to informal settlements and townships, suburbs in all three of South Africa's major cities show very different crime patterns. Generally, suburban residents are more likely to be victimised by property crime (such as burglary and car theft), and much less likely to be victims of violent crimes (such as assault, rape and murder).

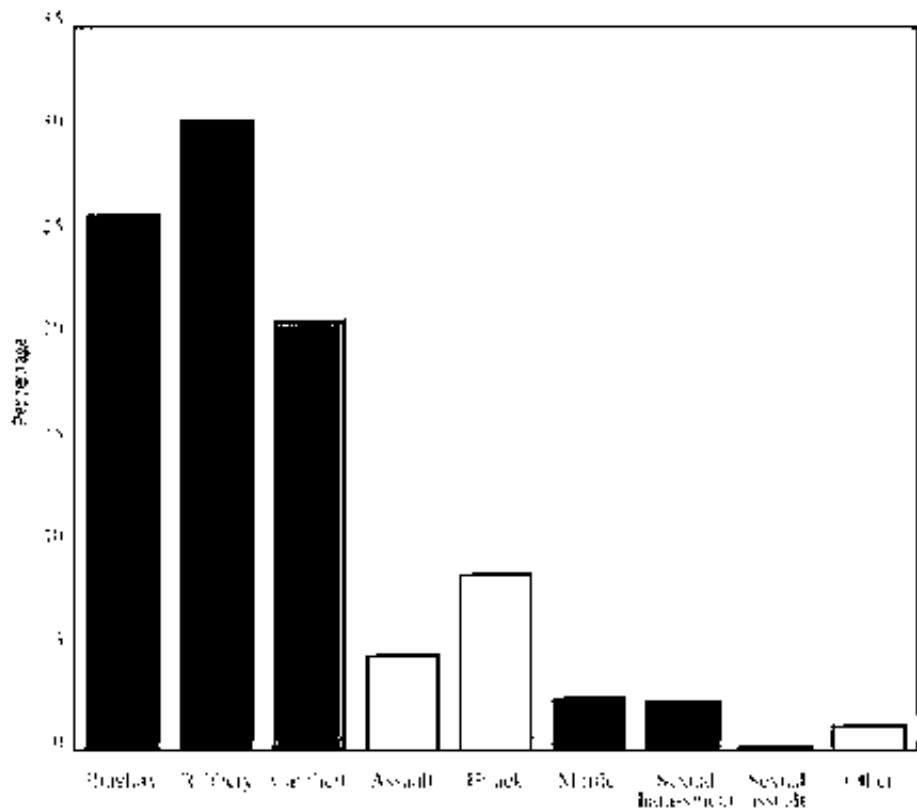
The Johannesburg victim survey data illustrate this well. Crimes which are aimed at property affect those people and those parts of Johannesburg which present the greatest opportunities for theft. The victim survey data show that white and Asian communities who live in the suburbs are most at risk. In the case of burglary and car theft, white and Asian people in the city are disproportionately victimised compared to the proportion of the population they represent. Just over half of car theft victims reported that crimes happened near their homes, the vast majority of which occurred in the suburbs (Figure 8).

Figure 8: Victims' place of residence
Johannesburg victim survey



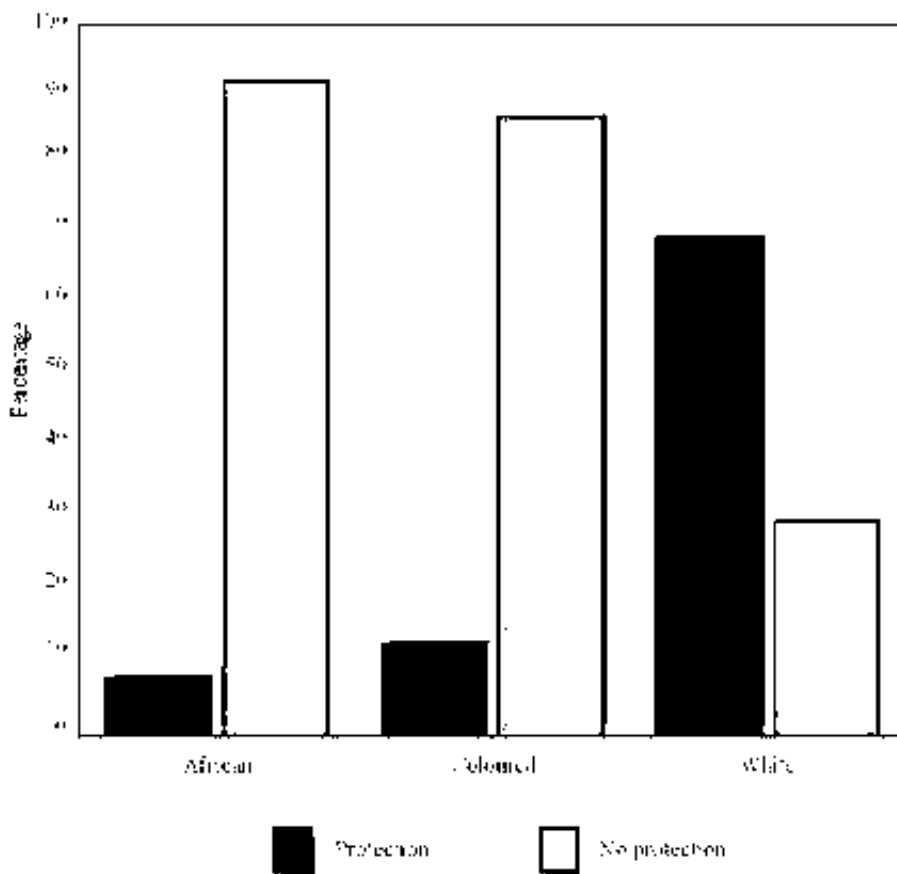
In Durban, the victimisation profiles of those most likely to live in wealthier suburban areas (Asians and whites) are even more pronounced. Thus, a quarter of white and Asian residents were victimised by burglary and nearly 20 per cent by car theft. Less than 5 per cent of these people experienced violent crimes such as assault and murder (Figures 2,3,9).

Figure 9: Crimes experienced by Asian people 1993 - 1997
Durban victim survey



While wealthier areas are affected the most by property crime, this does not suggest that poorer areas are immune from such crimes. The victimisation survey data for all three cities illustrate this, with the risk of burglary being high across all race groups (Figures 2, 3, 5, 9). Opportunity for theft in such places may not lie in the availability of property to steal, but in the failure of people to protect their properties from crime. This is borne out by further survey results which show that the vast majority of African (and coloured victims in the case of Cape Town), have no means of protecting their homes against crime. The opposite trend applies for white people in the cities surveyed (Figure 10).

**Figure 10: Whether protection was used to make homes safer
Cape Town victim survey**



A combination of factors which heighten the opportunities for property crime means that wealthier township areas often have higher patterns of property victimisation than formerly white suburbs. This is particularly the case when these townships border on poorer areas. For example, Hazeldene - a comparatively higher income suburb of Nyanga township in Cape Town - has more housebreaking than Nyanga itself. The same applies to Durban's Phoenix suburb which borders on the informal settlements of Amaoti and Bambayi.

As in the case of the suburbs, victimisation patterns in the city centres of Johannesburg, Durban and Cape Town reflect the opportunities that exist for crime in these areas. In most cases, this means high levels of some violent crimes such as robbery and mugging, and comparatively lower levels of other crimes such as rape and assault. Crimes against property such as the theft of and theft from motor vehicles predominate. In all three cities, crimes against business such as burglary, often affect smaller enterprises located in the city centres or in the bands of industrial development on their periphery. These businesses are often less able to relocate or afford the required security.

In Johannesburg, while public and media perceptions often suggest that the inner city and city centre areas have high crime levels, evidence from the victim survey indicates that chances of victimisation here are largely confined to specific crimes. In particular, mugging, robbery and theft from motor vehicles are prevalent. These conclusions suggest that high levels of fear of crime in the city centre of Johannesburg, Durban and to a lesser extent in Cape Town, may not reflect the realities of victimisation.

While inner city and city centre crime is lower in Durban than in Johannesburg, the Durban victim survey, corroborated by police statistics, suggests a similar distribution of crime types. Property crimes and, in particular, theft of and from motor vehicles are common, with certain parts of the city (such as the beachfront area) affected by mugging. Cape Town shows a similar pattern, with vehicle-related thefts and burglary of business premises, as well as pickpocketing and mugging being reflected by police

statistics as the most prevalent crimes (Figure 6).

Given the large numbers of people that travel to each of the city centres to work and shop, much of the crime that does occur, is concentrated around public transport facilities such as taxi ranks and bus and train stations. In Johannesburg, for example, a number of rapes reported to the police occurred in the public toilets at Park Station. At the Wynberg transport interchange in Cape Town, problems of mugging and other thefts at the railway station and taxi rank have resulted in the placing of a permanent police presence in the area. In the city centre, the Cape Town station is regarded by the police as a crime 'hot spot', especially during peak hours when almost 50 000 people move through it. Most crime occurs on the platforms and a satellite police station is to open inside the station.¹²

These trends in Cape Town are supported by victim survey evidence in the city which suggests that a large proportion of robbery and mugging is associated with transport facilities (Figure 11). Comparable survey data for Durban show that transport facilities are safer in terms of mugging and robbery, but less so in relation to assault (Figures 11 and 12). In Cape Town, assaults are more likely to occur in the domestic environment or between people who know one another: most of these crimes are committed in homes or in the streets of residential areas. While this is also a common area for assault in Durban, more assaults occur here in public places, such as places of entertainment and transport facilities, than they do in Cape Town.

**Figure 11: Where crime occurred
Cape Town victim survey**

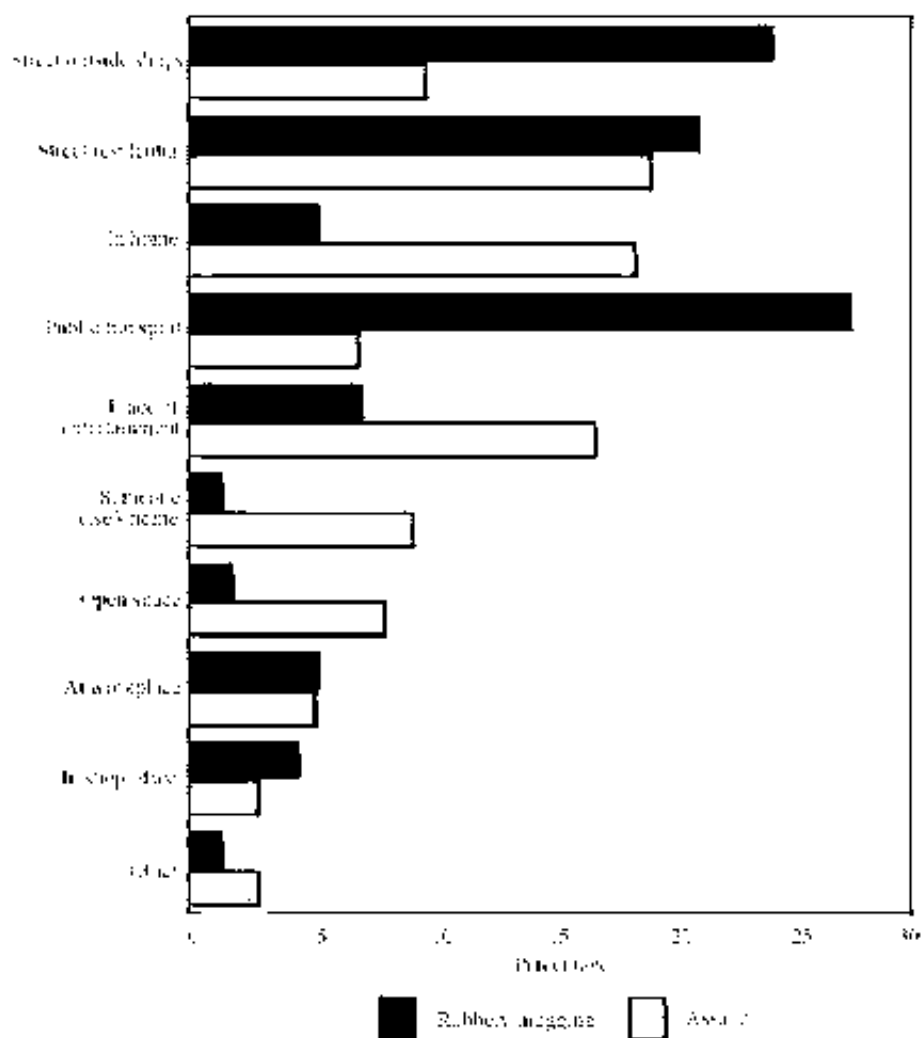
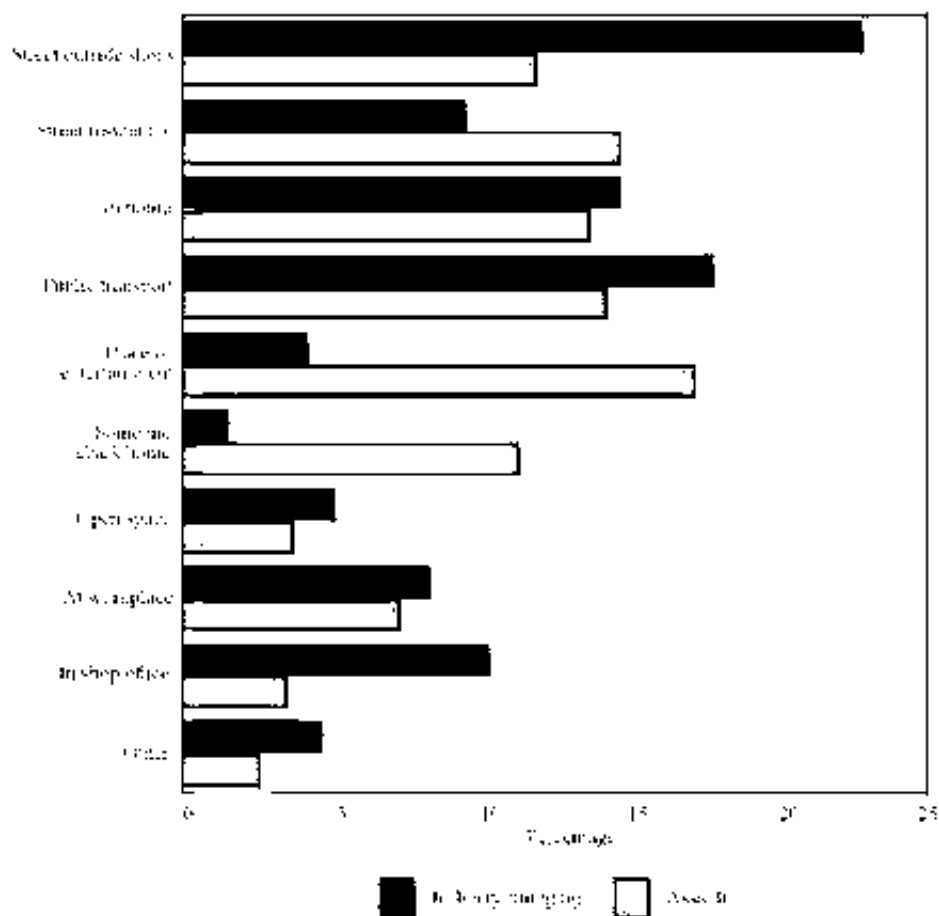


Figure 12: Where crime occurred
Durban victim survey



Apart from the main city centre, South Africa's three major cities have satellite business areas. This applies in particular to Johannesburg, where, given high levels of crime in the city centre, business has shifted elsewhere. However, there has been some displacement of crime to these areas: they generally show similar crime types to the main city centre, although crime levels are lower and less violent.

FEAR OF CRIME

As the areas outlined above display different patterns of victimisation, so people who reside in them experience varying levels of fear of crime. Generally, however, all South Africans appear to display high levels of fear of victimisation. Surprisingly, levels of fear among both victims and non-victims are equally high. Both the Durban and Cape Town surveys, for example, show that respondents fear the consequences of crime, regardless of whether they have been victimised or not (Figures 13 and 14).

Figure 13: Fear of crime during the day
Durban victim survey

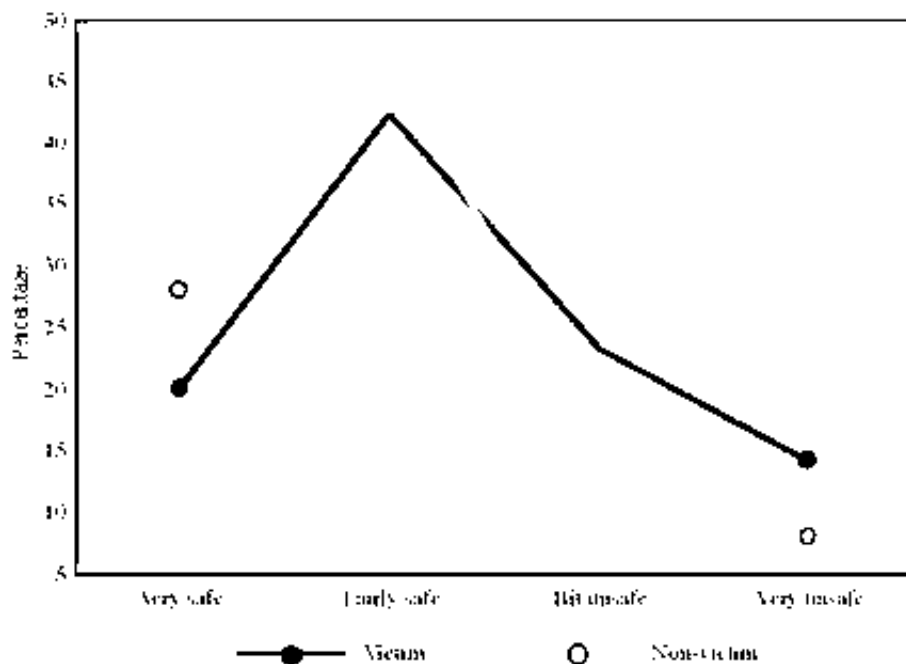
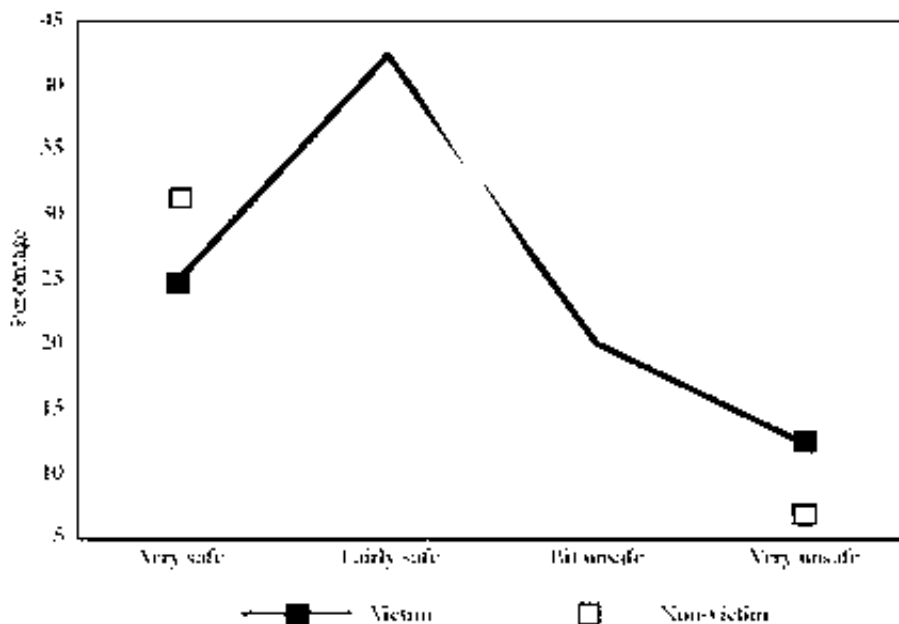


Figure 14: Fear of crime during the day
Cape Town victim survey



Given that comparative data suggest that non-victims are less likely to fear crime - since they have not experienced it, and are more confident that they will not become victims - this finding emphasises the extent to which the fear of crime has permeated South African society.

Feelings of insecurity and high levels of fear have several sources, not least of which is the experience of actual victimisation and the perception that effective assistance will be unlikely. The links between fear of crime and actual experiences are evidenced in the victim survey findings on which parts of the city were regarded by residents as the most unsafe.

In Johannesburg, Durban and Cape Town, residents generally identify parts of the city that they are

familiar with as being unsafe. White and Asian people, for example, did not regard the townships and informal settlements - which they probably seldom visit - as most unsafe. Instead, the inner city or CBD areas were clearly regarded as the most unsafe by a large majority in Durban and Johannesburg. Cape Town's CBD, by contrast, is regarded as much safer than that of the other two cities (Figures 15, 16 and 17).

Figure 15: Parts of Durban regarded as most unsafe
Victim survey data

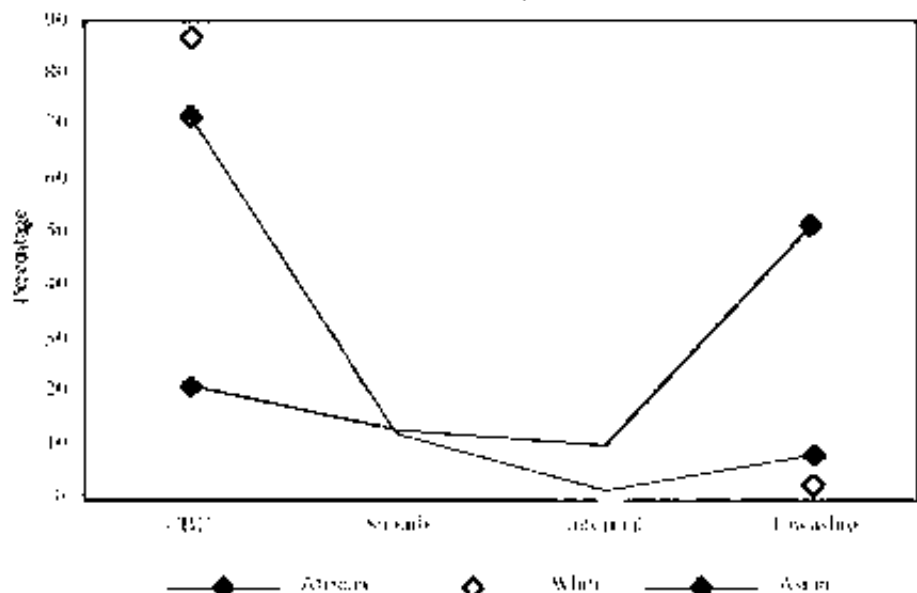


Figure 16: Parts of Johannesburg regarded as most unsafe
Victim survey data

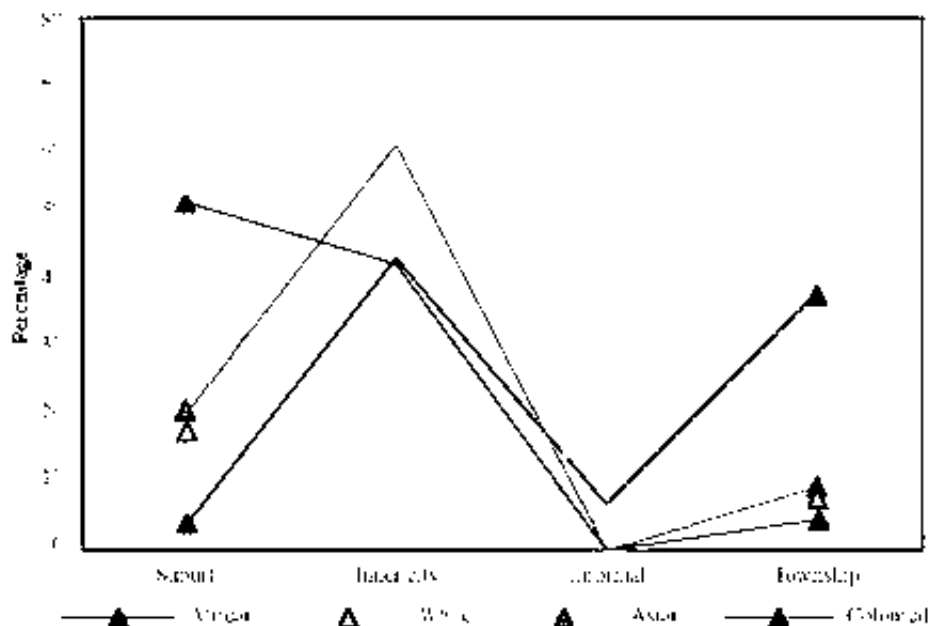
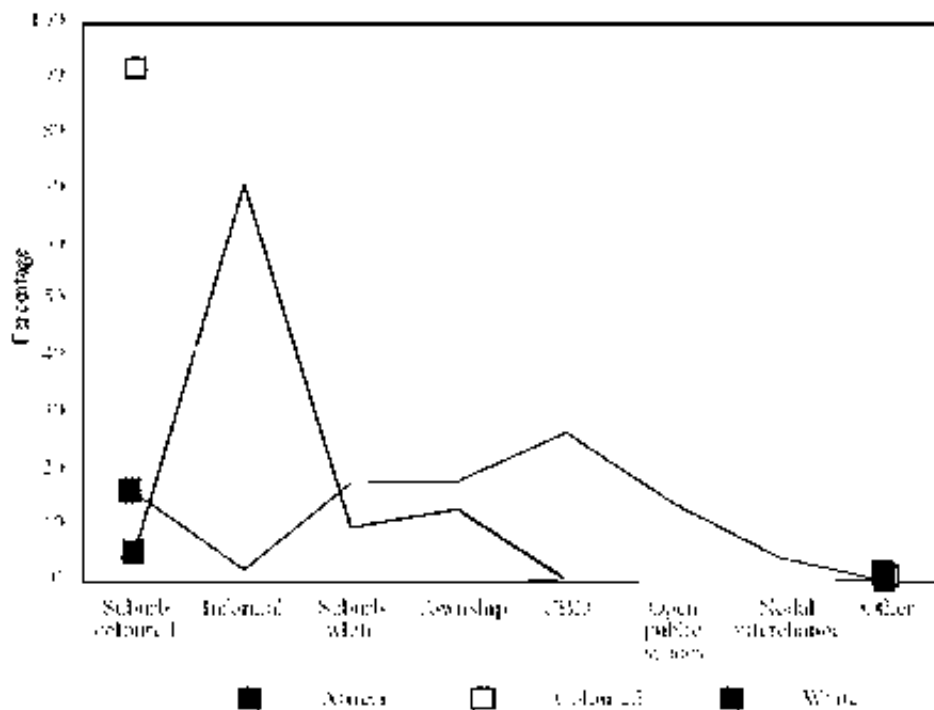


Figure 17: Parts of Cape Town regarded as most unsafe
Victim survey data



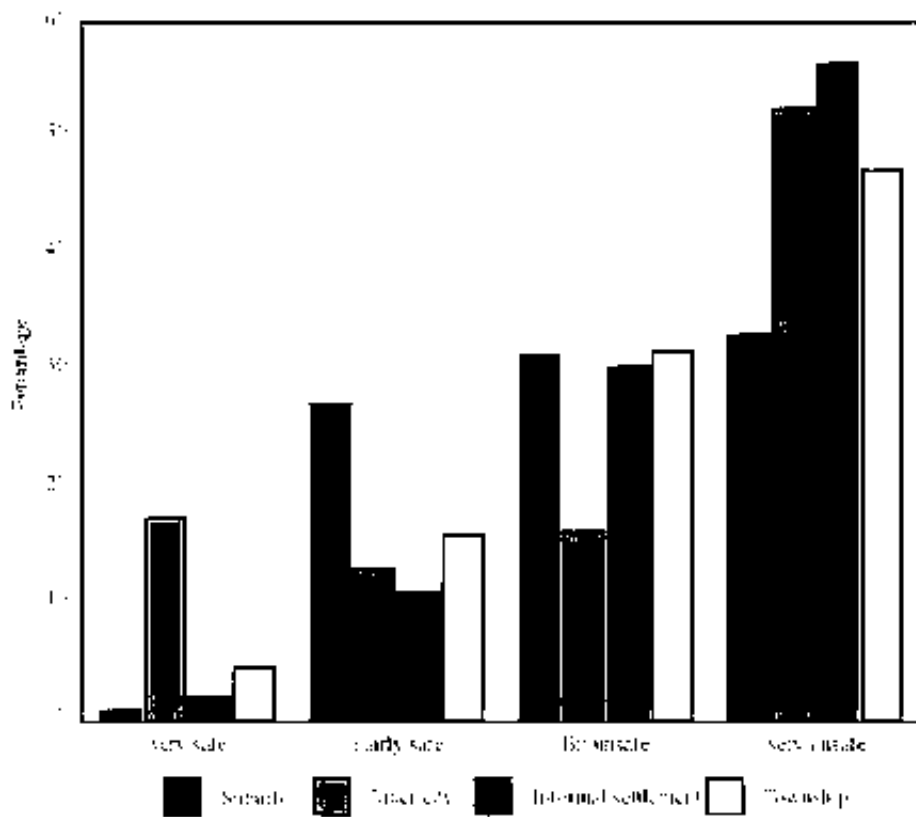
Since there is evidence that the suburbs (where most white and Asian people live) are comparatively safer than other parts of the city, the fact that more than two-thirds of whites and Asians thought the inner city was the most unsafe part of Durban and Johannesburg, could reflect actual experiences of crime in the inner city relative to the suburbs. However, these fears are more likely to be based on impressions of the inner city formed through the media, as well as through environmental factors which characterises many of these areas, such as overcrowding, litter and street hawking. Thus, fear of crime in the inner city is the result of a package of experiences, not all of which relate to crime.

In contrast, African and coloured people believe the townships, informal settlements (and suburbs in the case of coloureds in Cape Town), are the most unsafe. This applies across all three cities (Figures 15, 16 and 17). In Durban and Johannesburg, for example, 50 per cent and 38 per cent of Africans respectively fear crime most in townships. In Cape Town, informal areas were singled out by 70 per cent of Africans as most dangerous, with more than 90 per cent of coloureds saying they felt particularly vulnerable in the city's coloured townships. The only exception to this trend is in Johannesburg, where the proportion of Africans identifying the inner city as most unsafe equalled those with similar views of the townships.

Given that crime levels are high in townships and coloured suburbs in Cape Town, as discussed above, fear of victimisation for these people is more likely to be based on actual experiences of crime and heightened vulnerability in township and informal settlements, than is the case among those who believe the inner city is most dangerous. *This suggests that reducing the fear of crime (as opposed to actual crime levels) through environmental design interventions will probably be more successful in CBDs than in townships. In the latter, feelings of insecurity are more likely to be based on real victimisation and the lack of policing and other physical security measures, which are unaffordable for the majority of South Africans.*

The survey data illustrate that policing can have an impact on the fear of crime. Feelings of safety at night in Durban appear to match perceptions of police effectiveness. In areas where policing is regarded as generally effective, feelings of insecurity were comparatively low. Where policing was considered by residents to be ineffective, feelings of insecurity were high. Thus, residents of the inner city, informal settlements and townships experienced high levels of insecurity (Figure 18).

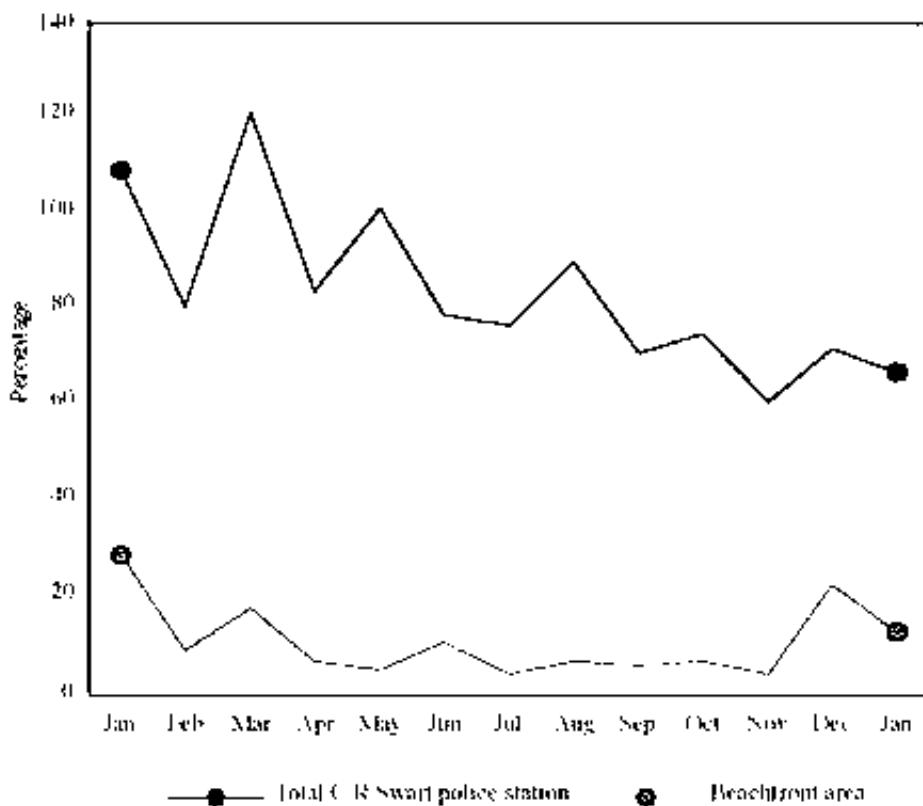
Figure 18: Feelings of safety at night
Durban victim survey



Such high levels of fear of crime, however, are not always indicators of high crime levels. For example, a recent survey of people's perceptions in relation to the beachfront in Durban suggested that the first concern of visitors was security.¹³ This perception applied across all racial categories (in fact, Africans were more likely to respond in this way than whites) and suggested that most people felt that the beachfront was unsafe.

Despite these fears, the beachfront is a comparatively safe part of the city. Crimes along the beachfront are mostly vehicle-related with some muggings also occurring, but in smaller proportions than in other parts of Durban (Figure 19). To some extent, given that it is a prime tourist venue, a 'moral panic' has been created around crime on the beachfront. In all likelihood, crime levels are higher in parts of Durban where many local visitors actually reside.

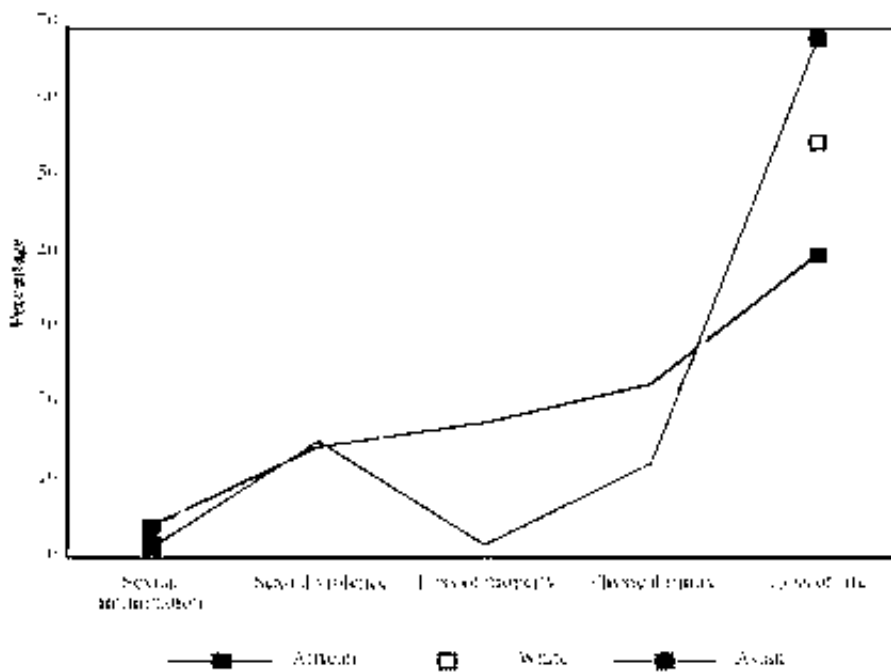
Figure 19: Number of robberies reported to the police in Durban
January 1996 - January 1997



If fear of crime does not always reflect actual crime levels, the same applies when varying risks of victimisation are matched with feelings of vulnerability. *In short, those who fear crime the most are not generally those who have the greatest chance of being victimised.* These conclusions have important consequences for issues of crime prevention in general, and environmental design interventions in particular. They suggest that some interventions should be made to directly counter fear of crime as opposed to crime itself.

The Johannesburg, Durban and Cape Town victim surveys reinforce these hypotheses. Thus, the surveys found that those who live in townships and informal settlements fear violent crime and 'loss of life' the least, although they are victimised the most by these crimes. In Durban, whites and Asians are particularly concerned about violent crime and yet are victimised comparatively less. Over half of all white victims, for example, fear loss of life and only 3 per cent fear losing their property, despite the fact that whites are predominantly the victims of property crimes (Figure 20).

**Figure 20: What people fear most about crime
Durban victim survey**



Thus, fears of crime do not necessarily match patterns of victimisation, nor can they be associated with places where levels of victimisation are comparatively low. Indeed, many citizens perceive themselves to be threatened by the chance of becoming victimised, whether or not they have been a victim of crime in the past.

ENVIRONMENTS CONDUCTIVE TO VICTIMISATION AND FEAR

In line with the earlier definition of crime prevention through environmental design, crime and the fear of it are caused by a range of factors which can occur in a variety of environments in the city. While the built environment in which crime occurs - and which generates fear of crime - constitutes only one of a range of causal factors, targeted interventions here could reduce both opportunities for crime and could enhance feelings of safety.

Thus, it has been argued that an analysis of crime patterns suggests that some parts of the South African city are more conducive to crime than others. This may be associated with particular environmental factors in these places. The crime problem is greatest in townships and informal settlements - parts of the city and environs where infrastructure is either absent or poorly maintained and urban planning (if any) is inappropriate or informal. In some of these areas, the built environment is less likely to facilitate personal crime prevention through, for example, better surveillance.

Infrastructure is largely absent in informal settlements and has fallen into disrepair in many townships. This exposes people (and particularly women) living in these areas to greater risk (and fear of crime),¹⁴ given that accessing alternative sources of fuel and water for example, requires having to walk long distances through areas which are often deserted and unsafe.¹⁵ This lack of infrastructure - and danger that residents are exposed to - is starkly illustrated by the fact that only 34 per cent of people living in the Cape metropolitan region have access to water through either standpipes or private taps.¹⁶

The absence of street lighting and electricity, more generally in some townships, but mostly in informal settlements, exacerbates the potential dangers associated with open spaces in these areas. These include patches of unused ground between houses, poorly developed and badly located recreational open spaces such as township 'parks' and sports fields, as well as areas of open veld or bush which fringe settlements.

Open spaces - given that they are not owned or controlled by the community - increase chances and fears of victimisation through greater exposure (particularly if lighting and surveillance are poor), as well as by providing means of escape for offenders.

The danger of victimisation associated with open spaces is dramatically illustrated by a self-report-survey of 635 rape victims in the Johannesburg metropolitan area: one quarter of all victims said the attack had occurred in areas of open space.¹⁷ Given that open spaces are often situated adjacent to transport nodes such as railway stations or taxi ranks in Johannesburg townships, commuters are particularly at risk because these areas must be traversed to reach their destinations. In Johannesburg, statistics for 1992 suggest that many women were raped when traveling to and from work. More recent data from the same study on when rapes occur in the city, confirm that several attacks were associated with commuting patterns.¹⁸

Township planning has not always considered issues of safety for those who have to walk long distances to reach a range of public facilities. In KwaMashu (Durban), residents fear crime for these reasons: women were considered to be vulnerable to attack and rape when using routes from a particular station to their houses, as well as in areas around public facilities such as the local clinic and shops.

Townships in Cape Town suffer from similar problems. Nyanga has not been planned for pedestrian traffic. Services and facilities are located far from residential areas and often become isolated from surrounding empty land earmarked for future development. In Mitchell's Plain, a sports field located on the edge of the township is isolated from the rest of the community. Because it has no link to transport routes, its use by residents is limited. This, along with the bush which surrounds the facility, limits passive surveillance and has heightened risks of victimisation and fear of crime in the area. Similarly, schools located on the edge of vacant spaces increase isolation and opportunities for vandalism and other crimes. School girls, especially, fear rape in these areas and, according to the police, the reported incidence of this crime is high.

Open spaces in townships have thus not been created with safety in mind. In KwaMashu, for example, houses surrounding such spaces often face away from them, inhibiting opportunities for passive surveillance. Also, the lack of a physical link between houses and open spaces reduces opportunities for residents to take responsibility for the maintenance of these areas. Given the undulating topography of the area, opportunities for surveillance are further reduced.¹⁹

In KwaMashu, surveillance at night in parks is diminished by a lack of lighting, and none is being planned in the near future. Interviews with local police, as well as discussions at community workshops, suggest that rape and assault occur regularly in such areas. Township open spaces are often located within the confines of built areas, rather than adjacent to busy public corridors used by all residents. Such places are more likely to be deserted with little pedestrian through-traffic, further exposing those who have to traverse them to crime.

As in KwaMashu, the police in nearby Phoenix point out that murder and assault occur particularly in areas such as small parks which lack lighting and surveillance. Ironically, the two and three storey housing which predominates in Phoenix presents the opportunity for passive surveillance. However, this has been forfeited by the original planners of the area, with houses being designed facing away from parks, thereby preventing any opportunity for surveillance by residents.

The lack of surveillance also increases vulnerability in open spaces like the soccer field in Phoenix, which is adjacent to a vacant buffer strip and isolated from major transport routes. Overgrown open spaces along water and river courses also present opportunities for crime and heighten the fear of victimisation, since they are not well used or maintained by residents.

Buffer strips - created by apartheid planning to separate areas occupied by different race groups - have increased the number of open spaces which expose residents to greater risks of crime. Phoenix, for example, is bounded by areas of deserted open space which border on the informal settlements of Amaoti, Ohlanga and Bambayi. This has increased the vulnerability of people moving between the informal settlement and Phoenix, and allows for easy escape once a crime has been committed.

In Phoenix, cul de sacs in several places present security risks. Where these are enclosed by houses and used exclusively by residents, they do not undermine safety. However, where they adjoin buffer strips and are not surrounded by houses, they become pedestrian routes between settlements, presenting numerous opportunities for crime. Residents are less able to control such streets, reducing safety levels for those living in the immediate environment and increasing fear of crime.

Buffer zones in townships also have the potential to become 'no-man's land', in some cases being used as sites for gang conflict. In Mitchell's Plain, unused space provides buffer zones between gang territories. Similarly, the buffer strip formed by a river course in KwaMashu has been a location for pitched battles for territory and control between conflicting youth gangs. In Johannesburg townships, open spaces separating hostels from adjacent housing have been contested by opposing political groups. Such explicit spatial conflict highlights the need for planning principles that integrate rather than separate communities.

The development of hostels to house migrant workers in townships has had similar implications. Hostels are often situated on the edge of townships within walking distance of railway stations. In some cases, an area of open ground also separates the hostel from the surrounding township areas. In the past, these have been the scene of violent conflict between hostel and township residents. Many hostels have poorly developed (or damaged) infrastructure and are generally overcrowded. The design and location of hostels have encouraged division between hostel residents and adjacent communities. The at times transient nature of their occupants, along with the lack of ownership of the space in which they reside, further accentuates differences between hostel and township.

Similar problems characterise council housing schemes in Mitchell's Plain, Nyanga and Phoenix. In areas where people have invested time, effort and finances in their environment, such an investment encourages a greater sense of ownership and the likelihood of taking responsibility for the surrounding environment is enhanced.

In Mitchell's Plain, violent crime is highest in the 'flatland' area which consists of double storey council housing. A lack of ownership and overcrowding precipitate this; in contrast, much less violent crime occurs in nearby Tafelsig where families have built their own houses with state assistance. In Nyanga, police believe that areas of the township with mass housing projects have a higher crime rate than the informal settlements or self-help housing schemes. In Phoenix, police identified domestic violence and conflicts between neighbours as a problem in lower income multi-unit blocks of houses. Many of these are council-owned and rented out. Overcrowding and a lack of privacy were identified by the police as key factors contributing to violent crime. Poor design of these blocks inhibits surveillance which, together with the absence of car parks, has led to high levels of vehicle-related crime.

Housing developments such as these are characterised by a number of design flaws which increase the risk of victimisation. These include the following:

- staircases in many blocks are enclosed and only have narrow openings, inhibiting surveillance of the surrounding land and of any activity on the staircase itself;

- entrances to blocks are in most cases open and cannot be controlled by residents; and
- the parking areas around the buildings are not visible by residents from their units.

Many of these design problems are exacerbated by the perception that the responsibility for maintaining and upgrading the housing and the surrounding open spaces rests with the council and not with the residents.

OPPORTUNITIES AND FEARS

Generally, the largely white suburbs - despite their greater potential for property crime - have been separated from other areas of the city. The result has been lower levels of crime which, combined with better policing, has ensured greater levels of overall safety. This does not necessarily apply to all suburbs, however: those located near informal areas or townships, such as Lombardy East and Marlboro in Johannesburg, have much higher levels of certain categories of crime, notably housebreaking and car theft. This pattern is also replicated in wealthier township areas which are situated adjacent to poorer communities. The Durban victim survey showed that Asians - who largely live in areas designed in the past to act as buffer zones between African townships and white suburbs - were victims of car theft, robbery and hijacking more than any other group in the city (Figures 3 and 9).

Suburbs, particularly in Johannesburg, are increasingly characterised by high walls and more sophisticated forms of access control. While having some effect in deterring criminals, Johannesburg police officers argue that high walls limit surveillance and visibility. This frustrates crime prevention. In addition, while they may prevent victimisation and reduce fear of crime, townhouse complexes restrict police access and patrolling.

These forms of physical protection, however, are in contrast to poorer communities which are less able to install physical security measures (such as burglar proofing, electronic alarms and private security) to protect their property and person. The Johannesburg victim survey confirms this, with 22 per cent of African victims and 70 per cent of victims living in informal settlements having no means of protecting their households against crime.

Opportunities for crime in the city centre are also numerous, although these areas show relatively different crime patterns to the suburbs. As already argued, people fear crime more in the inner city than elsewhere, although patterns of victimisation in these areas do not always warrant such feelings of insecurity.

In all three cities (although particularly in Johannesburg), many traditional department stores and large supermarkets have shifted their operations to suburban shopping malls. This, along with the changing profile of shoppers in the city centre - both the result of victimisation and fear - has resulted in a loss of earnings for and investment in the city centre. This shift results in increased inner city degradation and, while not necessarily increasing crime, (given that opportunities shift elsewhere), reinforces feelings of insecurity and fear of crime.

The growth (and lack of regulation) of informal trading on city pavements and in open spaces in all three cities has contributed perhaps most visibly to the changing nature of the inner city. The growth of informal traders has often (although unfairly) been connected to increasing levels of crime. While informal trading may prevent surveillance and limit visible police access, informal traders themselves are in many cases victimised given their often exposed position on sidewalks. Traders Against Crime in

Durban - a joint crime prevention initiative by informal traders and local shop owners - arose from both parties' concerns about street crime and shoplifting.

In this context, the key environmental factors in city centres relate to:

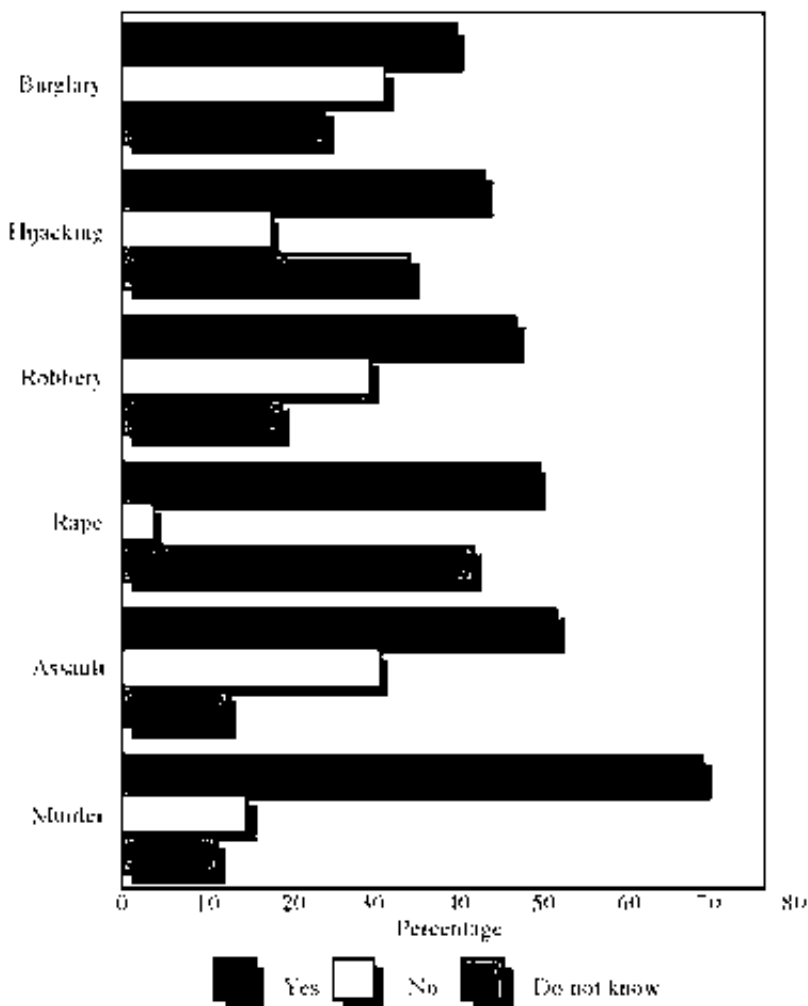
- poor design, which reduces surveillance of public open spaces from surrounding buildings;
- the presence of undeveloped and derelict open lots; and
- buildings designed with blind facades.

In Durban, The Workshop shopping centre is an internalised design with a limited number of secured entrances. The shops in the complex face into the internal court rather than outwards, thus reducing surveillance of nearby pavements, open spaces and public transport facilities. This lack of surveillance increases the exposure of pedestrians in the area to victimisation by mugging, robbery or car theft.²⁰

The Durban Exhibition Centre, an adapted building like The Workshop, also does not provide any surveillance, has blank facades and walls surrounding the complex. These conditions have led to muggings when pedestrians use this deserted area to get to and from the city centre. These dangers are compounded by vacant lots in the area which further reduce opportunities for surveillance.

In Durban, the Point Road area suffers from high levels of inner city decay and crime. Associated as it is with the harbour, the area has become characterised by vacant warehouses, wastelands and dereliction. Deteriorating rental housing stock adds to the decay. The environmental design of the area with its narrow side alleys, dead ends and densely populated high rise apartments - there are 154 blocks of flats in the 3,2km² area under the jurisdiction of the Point police station - has contributed to comparatively high levels of certain crimes such as robbery, common assault (associated with the many local entertainment venues), theft from motor vehicles and burglary (Figure 21).

**Figure 21: Number of crimes reported in central Durban
(January - June 1997)**



At particular times of the year, notably the holiday seasons, opportunities for crime increase as the residential and daily population grow. The development of The Wheel shopping centre was an attempt at upgrading the environment in this area. The problems facing this shopping centre are similar to those facing others in the city centre - few external windows, blank side facades and consequently no surveillance. The dead end streets surrounding the building mean that pedestrians have little choice but to risk walking through potentially unsafe areas. This emphasises the need - in cities where pedestrians are in a majority - to take the safety requirements of pedestrians into account and not only those of car users, as has been the tendency in the design of shopping malls.

Problems similar to those outlined for Durban are also present in the city centre of Cape Town. Access to the Golden Acre shopping centre from the entrance, linking it to the bus station and main post office is characterised by a narrow alley faced by blind facades and with minimal pavement space, allowing little passive surveillance. During peak hours, the area becomes congested as it serves as an access point to the nearby bus station and taxi rank.

Problem areas on the periphery of the main city centre are located at places such as the Foreshore, where areas of unused (and unmanaged) open space are interspersed under the freeway bridges, encouraging squatting. This zone buffers the V&A Waterfront and exposes pedestrians walking between the CBD and the Waterfront to victimisation.

The Johannesburg city centre is confronted with many of the problems outlined above. In particular, inner city decay in the 'flatlands' of Hillbrow is characterised by high levels of overcrowding and a

breakdown in service delivery in many buildings. These problems have been exacerbated by an absence of bylaws in the post-transition period and generally by their weak enforcement by the local authority. Pavements are crowded with informal traders, and the area also shows many of the design problems of Durban and Cape Town. As a result of both these factors and ineffective policing, crime is high: car theft, robbery, assault, drug-related crime and murder here are among the most prevalent in Johannesburg.

Although potentially better designed than The Wheel in Durban, the Carlton Centre shopping complex also suffers the impact of inner city decay. The Smal Street Mall which links the Carlton Centre with Pritchard Street and the area around the Supreme Court, has become a haven for muggers and other petty criminals. The Johannesburg victim survey suggested that many people who frequented the city centre regarded Smal Street as unsafe. Despite a heavy private security presence, the area is crowded and characterised by blind corners where the Mall crosses the streets running perpendicular to it. In addition, the Mall is relatively narrow in parts resulting in congestion. Surveillance by security guards at each end is limited when the area is crowded at peak times.

Other problems in Johannesburg include poor lighting in parks and open spaces in and around the city centre. In addition, poorly designed and managed taxi ranks and bus stations cause congestion in surrounding streets, making commuters vulnerable to victimisation.

ENVIRONMENTAL DESIGN INTERVENTIONS

It has been emphasised that various areas of the city have particular environmental conditions which increase risks of victimisation and heighten the fear of crime. In particular, high levels of crime in some townships and informal settlements can be linked to specific spatial features. Some of these also occur in inner city areas. While different areas are characterised by different types of crime, fear of crime is the highest in the city centre. Fear of crime is also high in the suburbs, but this does not always reflect the reality of victimisation patterns. This is partly because suburbs have been better designed, are often privately policed and form pockets of comparative safety.

In some cities, the links between features of the environment and crime are recognised. Despite this, there is a poor understanding of the concept of crime prevention through environmental design at local authority level. Interventions thus far have been largely ad hoc and based on particular private sector projects, rather than part of a broader strategy for building safer environments. They have thus concentrated mainly on facilities in affluent sectors of the city which are not most affected by crime, but nevertheless attract disproportionate media attention.

A good example of such an approach is the V&A Waterfront development in Cape Town. A feature of the area is its relative safety: the victimisation that does occur, is restricted mainly to vehicle-related crimes and petty theft. The safety of the Waterfront is the result of a number of factors including isolation from the city centre, which limits pedestrian access. The development can only be reached at this stage through three functioning entrances and does not have multiple points of access like the Durban beachfront. Although there is no formal access control, the design facilitates the monitoring (or the impression that this occurs) of people who enter and leave the complex. Related to this is the fact that access to the Waterfront is designed to favour vehicular rather than pedestrian traffic.

Internally, the Waterfront is characterised by high levels of surveillance, both active and passive. The complex is policed privately by 150 security guards operating 24 hours a day. In addition, 115 hidden CCTV cameras - compared to three in the Cape Town city centre - are present throughout the Waterfront. Since these cameras are concealed, they aim less to prevent crime than to react to it. (In the

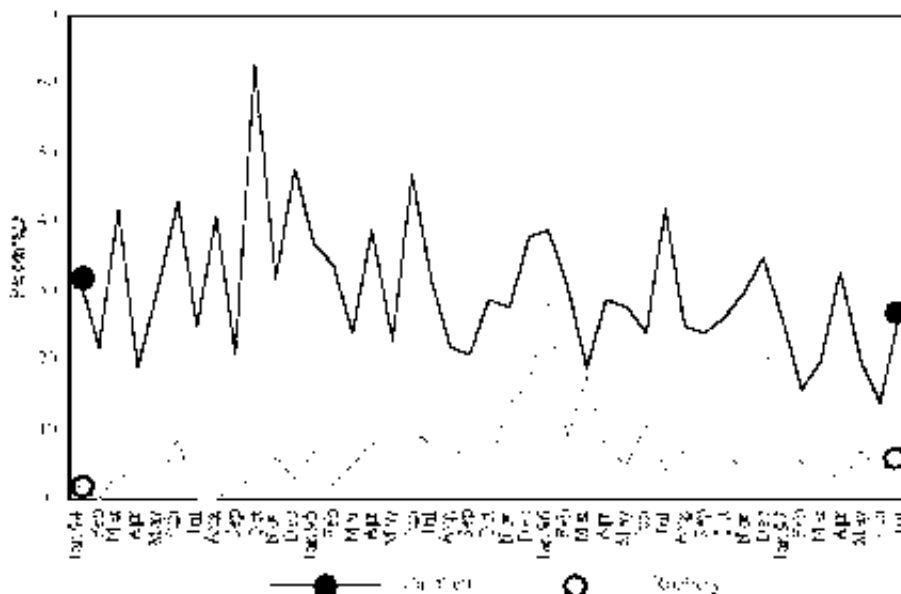
case of an upmarket development like the Waterfront, a visible presence of CCTV cameras may do more to heighten the fear of crime when the general perception is that crime is low.) The fact that the Waterfront is privately owned, facilitates the success of these measures, since guidelines to assist crime prevention are easier to enforce. Substantial resources have also been allocated to private security, enabling the deployment of three times the number of visible security officers at the Waterfront than South African Police Service (SAPS) officers tasked with visible policing in central Cape Town. Overall, issues of safety are integral to and not separate from the general management of the complex.

Thus, planners and consultants that are working on designing safer environments in South African cities tend to focus on wealthier clients who are often least affected by crime. This does not suggest, however, that environmental design interventions do not serve a purpose in parts of the city where crime levels are comparatively low. This applies particularly to busy urban centres prone to congestion and petty crime. The result is high levels of fear of crime in inner city areas such as central Johannesburg and the beachfront in Durban. Design interventions here are critical for reducing the levels of fear of crime, and as argued above, are likely to be more successful here than in other parts of the city.

In Johannesburg, for example, reducing fear of crime (and not necessarily crime itself) in the Smal Street Mall can be achieved by increased mechanisms of surveillance, such as prominently displayed CCTV cameras, and other visible interventions such as car guards and signs. Some of these measures have been adopted in Safer Cities: Greater Johannesburg, the city's crime prevention strategy.

In Durban, similar initiatives on the beachfront have been identified. A range of interventions have been made by the Durban Corporation in response to a public outcry on the issue. Over the last ten years, the area has been comprehensively redesigned, there is now a network of CCTV cameras, more visible policing by the Durban City Police and the SAPS, a car guard scheme, better lighting and access, and careful landscaping along the beachfront. Ironically, the survey evidence outlined above illustrates that, while these measures have reduced levels of crime (particularly since January 1996) (Figure 22), they have had little impact on the fear of crime. This may be related to overcrowding during peak holiday periods and media coverage of isolated incidents. Greater analysis of how specific interventions in particular contexts could begin to have some impact on high levels of public insecurity is required.

**Figure 22: Crime reported to the police on Durban's beachfront
January 1994 - July 1997**



Given that both crime and the fear of it are high in many townships and informal settlements, design interventions are required here. Ironically (although perhaps predictably), those areas which have had the fewest interventions to enhance safety in the urban environment, are also those which are the least likely to be adequately policed. Policing resources in the country have always disproportionately favoured the suburbs and city centres. Thus, police in townships - and to a lesser extent the inner city areas - tend to be under-resourced, generally unskilled (this is particularly the case in townships where the former municipal and homeland police have been incorporated in the SAPS) and have low morale.

Township policing is characterised by a lack of resources - both human and physical - and poor management of those that are available. In Inanda, for example, the police station staff complement is down to 68 from eighty after racial tensions resulted in the murder of a police captain. Subsequently - and as a temporary measure - a number of officers left the station fearing for their safety, without any immediate replacements. An inner city station at the Point in Durban has not fared any better: the thirty detectives at the station share a load of 2 400 dockets. According to the station commissioner, only 15 per cent of the detectives are competent to handle a case. The results are serious morale problems and high absenteeism.

In any event, current policing practices are inhibited by environmental factors in townships and informal settlements, in particular. Their layout and settlement densities combine with topography (particularly around Durban) to make police access difficult. Houses are often not numbered and in some cases can only be reached by particular types of vehicles or on foot. The scarcity of telephones also limits contact between residents and the police. The Durban victim survey suggests that part of the reason for high levels of non-reporting of crime in townships and informal settlements relates to a combination of these factors.

The Johannesburg, Durban and Cape Town victim surveys support the uneven policing hypotheses: African victims and those living in townships, informal settlements and to a lesser extent the inner city, were less likely to believe that the police were effective in their area. Reporting rates were also lower among this group and perceptions were that the police were not able to reduce crime significantly.

It must be emphasised, however, that many environmental design interventions rely on parallel crime prevention activities by the police. These generally take the form of visible policing or patrol interventions. The effectiveness of visible policing in reducing crime has been widely questioned in international policing literature. However, analysts generally agree that if properly conducted, this type of policing can successfully reduce fear of crime. But there is little tradition of visible policing in the SAPS and few resources to conduct it effectively. Even if visible policing was a key strategy, it would be difficult to implement in townships and informal settlements given the environmental factors outlined above.

In areas such as these where policing is weak, environmental design interventions can potentially play a critical role in reducing the chances of victimisation for some categories of crime. But poor policing will generally tend to inhibit the effectiveness of any environmental design intervention. In KwaMashu and Inanda, the limited police involvement in the few planning and development projects that have been implemented, has reduced the effectiveness of these for enhancing community safety.

More generally, the inequitable way in which the South African city has been administered, undermines attempts to govern, let alone offer greater security for communities: local government representatives in township areas (in Durban specifically) do not appear to prioritise crime prevention. The Local Development Objectives (LDO) process, aimed at developing these areas, has prioritised crime as the major issue for these communities. However, local planning agencies are not sure how to respond. This has not improved communities' confidence in the ability of their local council to prevent crime. There is

also little participation by the police in this and other planning processes, and planners, in turn, fail to consult the police on how to reduce crime through better design.

This does not mean, though, that environmental design for crime prevention should be de-prioritised in these areas in favour of other crime prevention measures or better policing. At a policy level, interventions based on sound design principles can best be made now. Environmental design principles are most cost effective if implemented during the planning stage rather than afterwards. And once crime levels begin to normalise (as they already have in some parts of the country), the improved physical setting will facilitate activities such as policing, and will support - rather than hinder - crime prevention more generally. While overcrowding and housing quality in some areas are basic qualities of the built environment that are unlikely to be changed overnight, unprecedented opportunities exist to replan parts of South Africa's cities to be safer places.

ENDNOTES

1. T Kruger, T Meyer, M Napier, E Pascolo, M Qobela, M Shaw, A Louw, S Oppler & L Niyabo, **Safer by Design: Towards Effective Crime Prevention through Environmental Design in South Africa**, ISS Monograph Series, 16, Institute for Security Studies, Halfway House, November 1997.
2. See forthcoming CSIR, Volume 2 of **Environmental Design for Safer Communities in South Africa**, a joint publication of the Division of Building Technology, CSIR and the Institute for Security Studies. CSIR, Pretoria, May 1998.
3. P Ekblom, *Towards a discipline of crime prevention: a systematic approach to its nature, range and concepts*, in T Bennett, **Preventing Crime and Disorder: Targeting Strategies and Responsibilities**, University of Cambridge, Institute of Criminology, Cambridge, 1996, pp. 47-49.
4. Adapted from Ekblom, *ibid.*, p. 50.
5. S Morris, *Policing problem housing estates*, **Crime Detection and Prevention Series**, Paper 74, Home Office Police Research Group, London, 1996.
6. D Dewar & R S Uytendogaardt, **South African Cities: A Manifesto for Change**, Urban Problems Research Unit, Cape Town, 1991.
7. CSIR, *op. cit.*
8. *Ibid.*
9. Kruger et. al., *op. cit.*
10. HSRC, **Omnibus Survey 1995**, Human Sciences Research Council, Pretoria, 1995.
11. A Louw, M Shaw, L Camerer & R Robertshaw, **Crime in Johannesburg: The Results of a City Victim Survey**, ISS Monograph Series, 18, Institute for Security Studies, Halfway House, February 1998.
12. S Liebermann, C du Plessis & S Oppler, *Crime prevention through environmental design: Cape Town case study*, CSIR working document, Pretoria, December 1997.

13. Survey conducted by DRA Development in Durban for the metropolitan council.
14. J May, *Experience and perceptions of poverty in South Africa*, Data Research Africa working paper, 1996; E D Breslin & P Delius, *A comparative analysis of poverty and malnutrition in South Africa*, Operation Hunger research report for the South African Participatory Poverty Assessment, February 1996.
15. Human Rights Watch/Africa, **Violence Against Women in South Africa: State Responses to Domestic Violence and Rape**, Human Rights Watch, New York, 1995; F Ross, *Assessment of the impact of fuel use on residents of an informal settlement*, report prepared for the Chief Directorate: Energy, Department of Mineral and Energy Affairs, Pretoria.
16. Liebermann et.al., op. cit.
17. UNISA, *Rape in Johannesburg: The results of an ongoing surveillance project*, press release compiled by the UNISA Health Psychology Unit and the Centre for Peace Action, Johannesburg, April 1997.
18. Human Rights Watch, op. cit.
19. M Napier & S Oppler, *The Durban residential report*, CSIR/ISS working document, Pretoria, January 1998.
20. S Liebermann & M Napier, *The Durban Report: Central Durban case study*, CSIR working document, Pretoria, December 1997.