Chapter 13

Crime Prevention through Environmental Design

13   Crime Prevention through Environmental Design

Crime is a major social problem in our society affecting thousands of people's lives each year. Abundant media attention surrounding crime, especially serious crimes against the person and property, generates considerable fear within the community. Crimes like break and enter, rape, murder and home invasion are depicted as daily threats to the safety of the community. Fear of crime in itself can restrict people's freedom of movement and can prevent them from fully participating in the community. Some groups of people are particularly vulnerable to crime and the fear of crime, including older people, women, parents, teenagers, etc.

Many different strategies are needed to combat the complex issues of crime and fear of crime. There is widespread acknowledgement that planners, architects and developers can play an important role in enhancing the safety of our communities. This Plan is designed to assist in the achievement of this goal. It is, however, only one tool in amongst a myriad of others. Ordinary homeowners can also make their residents safer by following some of the ideas put forward in the Plan.

It is important also to acknowledge that a commitment to longer term strategies that address the root cause of crime, such as underlying social issues like poverty and need for family support is essential in crime prevention.

In order to create a safe and defensible environment, Council will have particular regard to design aspects of all forms of development when assessing applications. It should be noted that major Development Applications will require the submission of a CPTED review and/or comments by the Crime Prevention Development Officer prior to the determination of the application.

A whole of community response to crime prevention through environmental design is imperative in order to make a difference. This Plan proposes one way in which the community can work together in creating a safer environment and can be active in practical crime prevention.

13.1   Rationale

Criminals assess their target sites and make decisions based on factors such as risk, effort and likely rewards. CPTED is an attempt to design, manage and manipulate the environment in ways that reduce the opportunities for crimes to be committed.

Generally speaking, the following principles apply to people looking to commit crimes:

- The greater the risk of being seen challenged or caught, the less likely they are to commit a crime.
- The greater the effort required, the less likely they are to commit a crime.
- The lesser the actual or perceived reward, the less likely they are to commit a crime.

It follows that the built environment can and should be designed, managed and manipulated to ensure that:

- There is more chance of being seen, challenged, caught or reported to authorities.
- Greater effort to gain entry and exit is required.
- The rewards, actual or perceived, are less.

13.2   Guidelines for Development Assessment

Many factors must be considered when planning and designing a new development or redeveloping an existing one. This Plan is to ensure that crime prevention is a key consideration in urban design. To this end, the aims of the Plan are to establish guidelines which:

- *Enhance the safety of developments for all users; and*

- *Minimise the opportunities for crime to be committed.*

The following is a set of criteria against which an application will be assessed. This policy does not necessarily take precedence over other Council policies, such as those relating to heritage or environmental considerations. It is one important planning consideration among many.

13.3   Surveillance

Siting and Design of Buildings

Buildings should be sited in a manner that encourages opportunities for surveillance. Surveillance can be natural (or casual), technical (such as close circuit television cameras) as well as formal (such as Neighbourhood Watch groups). There are a number of ways in which this can be achieved, including the siting of windows and balconies onto public areas to monitor pedestrian and vehicle movements. Strategic design of landscaping and lighting will also increase areas of surveillance and sight lines.

Additionally, a neighbourhood will benefit from mixed-use development whereby 24-hour surveillance can be encouraged. That is, office and retail uses are the predominant activity during working hours when many of the residential premises are vacated and vice versa. Cafes and kiosks located within parks is another example of mixed-use development and will also offer increased casual surveillance for both areas.

Subdivision Design

Subdivisions should be designed in such a manner that allows for natural surveillance from private areas into public and recreational spaces (e.g. parks and playgrounds). Location of outdoor equipment, such as barbeques or clotheslines, nearby play equipment in multi-unit housing, will also increase casual surveillance opportunities.

Public thoroughfares/pathways should be visible from dwellings and roadways throughout the subdivision to promote natural surveillance.

Landscaping

Applicants should pay special attention to their selection of plant species so that factors such as shape, height, foliage and canopy spread do not interfere with the natural monitoring of public spaces.

Lighting

Lighting plays an important role in creating a safe night-time environment for pedestrians and vehicles.

Lighting should be easily maintained, vandal resistant and have particular regard to the specific environment in which it serves.

Special attention should be given to building entries, common areas and locations likely to attract night use by pedestrians (e.g., pathways, vehicle parking areas, public phones).

There are a number of types of illuminations that vary in their purpose and application. The correct lighting type should be matched with its intended use.

13.4   Access Control and Target Hardening

Access
Strategic design and management can restrict access to designated areas. It is important to offer the right cues to users of the space, both legitimate and otherwise. These cues affect people's conscious and unconscious decisions about entering into the space.

Spaces should be clearly defined as private, semi-private or public by the use of fencing, bollards, vegetation, landscaping, changes in ground level, traffic calming, paving type and signage.

Target Hardening
Target hardening literally refers to making a premise or piece of property harder to target for non-legitimate purposes. It should be considered when the choice of construction material is being decided upon.

Target hardening can be achieved by the use of security hardware such as locks, chains, alarms and human measures (security guards, etc).

13.5   Territorial Reinforcement

Reinforcing Territory
It is important to establish ownership and the sense of ownership in the communal areas surrounding private areas. These are the transitional spaces from public to semi-private to private areas.

Designing environments in ways that reinforce ownership of the space will lead to greater levels of influence and power as well as surveillance.
Space management, where formal care and supervision arrangements are in place, is another way to enhance community safety. Processes such as safety audits and CPTED assessments can be used. Community Safety Officers, located at each Police Local Area Command can assist in these projects.

13.6   Defensive Space
Visible signs of care and order, in any environment, are signals that the environment is maintained and 'defended' and that the community is protecting itself. The environment therefore gives the impression that greater effort is required to commit a crime and that there is greater chance of detection.

A well-maintained environment can also reduce fear of crime. Areas that display signs of decay, graffiti and vandalism are usually more intimidating to the general public than those that appear to be well cared for and regularly maintained.

CPTED - GUIDELINES FOR DEVELOPMENT ASSESSMENT

Single Dwellings and Dual Occupancies

Site and Building Layout	Landscaping	Security	Front Fencing	Lighting	Address
• To maximise casual surveillance, orientate buildings towards the street	To avoid planting which can provide an entrapment spot: • Do not use dense, medium height planting in front of the dwelling	To restrict access to the side and rear of the site: • Provide locking gates on all side and rear access ways • Avoid rear access where possible	To maximise opportunities for casual surveillance of the dwelling from the street frontage and of the dwelling: • Front fences should not exceed 1m in height • Install double glazing at the front of the dwelling rather than using solid fences greater than 1m if noise insulation is required	To ensure lighting does not produce areas of light and shadow or patches of glare: • External lighting should gradually increase in brightness from the edge of the site to the entrance of the dwelling	To prevent unintended access street numbers should be clearly visible from the street. This is achieved by: • Making street numbers minimum of 7 cm high • Positioning street numbers 0.6m-1.5m above ground level on front site boundary • Making street numbers from durable, reflective material • Keeping street numbers clear
To ensure dwelling entry is clearly visible from the street by day and night: • Entrances should be no more than 10m from the street frontage • Dwelling entry should be well lit	To avoid planting vegetation which could enable intruders to gain access to the dwelling or neighbouring dwellings: • Plant medium shrubs close to the dwelling if sight lines will not be obscured • Use low level shrubs where visibility is required Do not use large trees which can give access to upper levels	To design and construct dwellings to reduce opportunities for illegal access: • Install locks on all windows and doors and chains on front doors • Install viewers on front doors • Install security grills which are sympathetic to the architectural style of the building and allows observation of the street	To minimise front fencing as opportunities for concealment: • They should be predominately open in design to allow sight through the fence, eg: picket, wrought iron. • If solid fence over 1 metre is required the upper section should contain open elements to allow visibility	To avoid light spillage onto neighbouring properties (to maximise casual surveillance): • Use movement triggered sensor lights aimed within the property • Use auto-timers for entry to ensure consistency of lighting whether dwelling is occupied or not.	

Site and Building Layout	Landscaping	Security	Front Fencing	Lighting	Address
To ensure access between the dwelling entry and street frontage is direct: • Entry should be well lit at night • Avoid recessed doorways which restrict opportunities for casual surveillance					
Where balconies form part of the layout, surveillance should be casual but unobtrusive to neighbouring properties, by: • Avoiding direct overlooking by using screening material such as lattice or other material which offers both privacy and vision					
Casual surveillance of the street should be achieved through the internal layout of the dwelling, by: • Positioning a habitable room to enable casual observation of the street • Ensuring that on site parking does not prevent opportunities for casual surveillance					

CPTED - GUIDELINES FOR DEVELOPMENT ASSESSMENT
Multi-Unit Housing – Town House Complexes, Blocks of Units, Flats

Site and Building Layout	Lighting	Landscaping and Fencing	Security	Building Identification	Building Materials and Maintenance
To maximise casual surveillance, orientate buildings towards the street	To ensure that all entrance and exit points and service areas, such as garbage and loading bays, are clearly identifiable after dark, by: • Designing adequate lighting around entrance and exit points and service areas • Making all lighting vandal resistant	To avoid planting which can provide an entrapment or concealment spot: • Do not use dense, medium height planting in front of the building • Low ground cover or high canopied trees, clean trunked to a height of 2m should be planted around high use facilities such as children's play areas, pedestrian routes and car parks	To restrict access to the side and rear of the site: • Provide locking gates on all side and rear access ways • Avoid rear access where possible	To prevent unintended access street numbers should be clearly visible from the street. This is achieved by: • Making street numbers minimum of 7 cm high • Positioning street numbers 0.6m-1.5m above ground level on front site boundary • Making street numbers from durable, reflective material • Keeping street numbers free from obstruction	To ensure that materials minimise opportunities for vandalism, by: • Not using flat or porous finishes in areas where graffiti is likely to be a problem. Favour use of non-porous material such as glazed ceramic or treated masonry products. • Installing street furniture made from hardwearing vandal resistant materials and secured by sturdy anchor points
To design dwelling to overlook communal areas, such as play areas, gardens, swimming pools etc: • Ensure that dwellings adjacent to communal areas have at least one habitable room window overlooking the area	To ensure that all pathways in, around and to the site are well lit, by: • Designing pedestrian routes which are sufficiently lit to be able to identify a face from 15m away • Making all lighting vandal resistant • Ensuring the correct type of lighting is used	To avoid planting vegetation which could enable intruders to gain access to the dwelling or neighbouring dwellings: • Plant medium shrubs close to the dwelling if sight lines will not be obscured • Use low level shrubs where visibility is required • Do not use large trees which can give access to upper levels	To design and construct dwellings to reduce opportunities for illegal access: • Install locks on all windows and doors and chains on front doors • Install viewers on front doors • Install security grills which are sympathetic to the architectural style of the building and allows observation of the street.	Individual dwellings and facilities should be made clearly identifiable by: • Marking with a number or signage • Marking each level with unit numbers and entry exit points on that level, eg lifts, stairs.	To ensure that regular maintenance of materials and swift removal of graffiti are carried out, by: • Using green screens, the planting of suitable vegetation in front to large blank walls or using vegetation to cover the wall • Use of vandal resistant paint or artwork to reduce opportunities for graffiti.

Site and Building Layout	Lighting	Landscaping and Fencing	Security	Building Identification	Building Materials and Maintenance
To design dwellings and communal areas to give a sense of territorial ownership, by: • Making individual sections distinguishable from others through design features • Separating public and private areas, using features such as street furniture, pavers, fencing, landscaping, etc. • Ensuring that adequate signage is provided for all units and facilities. Consider use of location maps for larger sites.	To ensure that all lighting on the site be designed so it does not produce areas of glare and shadow, by: • Using lights with a wide beam of illumination which reaches to the beam of the nest light or to the perimeter of the site	To ensure that sight lines between entry and street frontage remain unobscured; • Avoid medium level vegetation. Low ground cover or high canopied foliage should be favoured	To ensure that an appropriate level of security is achieved in communal areas: • Restrict access to buildings at all times. Install entry phones to enable controlled access. • Install self-closing doors and signs for residents not to leave doors wedged open • Consider the employment of a resident caretaker • Install security devices such as grilles on door and window openings. Such devices should be visually permeable (do not use solid shutters).		
Design pathways with good visibility for the user by: • Making them direct and without blind corners or opportunities for concealment • Ensuring that barriers are see through, including vegetation		To minimise front fencing as opportunities for concealment: • They should be predominately open in design to allow sight through the fence, eg: picket, wrought iron. • If solid fence over 1m is required the upper section to contain open, visually permeable spaces			

Site and Building Layout	Lighting	Landscaping and Fencing	Security	Building Identification	Building Materials and Maintenance
Avoid blind corners in stairways, halls, etc, by: • Installing mirrors which allow users to see ahead of them around corners • Installing glass panels at the end of stairwells to enhance casual surveillance					
To maximize casual surveillance and recognition of residents: • Ensure that communal areas and facilities are easily accessible to residents • Ensure that a minimum numbers of dwellings share an entry point • Locate facilities such as laundries in visible areas to increase users' sense of safety • Ensure that landscaping does not conceal entry points • Incorporate activities such as cafes, shops, at street level to encourage pedestrian activity and casual surveillance		To maximise opportunities for casual surveillance of the dwelling from the street frontage and of the dwelling: • Front fences should not exceed 1m in height • Install double glazing at the front of the dwelling rather than using solid fences greater than 1m if noise insulation is required			

Site and Building Layout	Lighting	Landscaping and Fencing	Security	Building Identification	Building Materials and Maintenance
To ensure all dwelling entrances are clearly visible from the street by day and night: • Entrances should be no more than 10m from the street frontage • Dwelling entries should be well lit • People should be able to seen into entry lobbies before entering • Entry points should be unobstructed					

CPTED - GUIDELINES FOR DEVELOPMENT ASSESSMENT

Commercial

Site and Building Layout	Facilities	Services	Security & Building Identification		
To maximise casual surveillance, by: • Ensuring that ground floor use is 'activity generating' where possible, eg cafes, retail etc. • Not using blank walls on street frontages • Designing first floor sites to overlook street frontage • Encourage residential use above commercial use	To ensure that facilities are planned to maximise opportunities for casual surveillance, by: • Locating facilities in the most convenient and accessible place possible • Where possible, locating facilities close to a regularly staffed area such as a receptionist desk or help desk	To ensure safety at public telephones, they should be located in areas of high use and where casual surveillance opportunities are maximised, by: • Locating telephones in a highly visible, well lit area • Avoid locating telephones near possible entrapment spots • Telephones should be well maintained and vandal resistant	Ensure that security devices do not give a fortress like appearance and that they contribute to the streetscape, by: • Avoiding the use of solid roller shutters on shop fronts • Using open grille security devices, sympathetic to the character of the building, on shop fronts where necessary • Using toughened glass and alarms on doors and windows		
To ensure that entrance and exit points are clearly visible from the street and easily identifiable to prospective users, by: • Locating main entrance and exit points at the front of the site and in view of the street • Designing all entrances to provide users with the opportunity to see in before they enter • Designing entries for clear sight lines	To ensure that access to facilities is direct, by: • Avoiding long and blind corridors • Making corridors well lit • Installing mirrors which allow users to see up ahead	To ensure that public seating is located in areas which discourage loitering but enhance casual surveillance, by: • Placing seating in high traffic areas with clear sight lines in a number of directions • Making seating areas well lit if accessible after dark	To restrict access to the side and rear of sites, by: • Fitting locks and alarms on opening doors and windows		

Site and Building Layout	Facilities	Services	Security & Building Identification		
To ensure that entrance and exit points are safe and amenable, by: • Avoiding recessed doorways as they can provide opportunities for entrapment and concealment • Clearly identify entrance and exit points to reduce confusion and restrict use by illegitimate users • Use of adequate and appropriate lighting to avoid shadows • Staff entrances should be well lit with maximum use of casual surveillance strategies • Clear indications of closing times of building exits	To ensure that facilities are designed to encourage use, by: • A maintenance program which ensures facilities are clean • Use of vandal resistant fittings and lights • Use of clear signage with large legible letters and simple graphics • Provision of information in facilities advising where to go for help and how to report maintenance or vandalism problems	To ensure safety at Automatic Teller Machines (ATMs) they should be located in areas of high use and where casual surveillance opportunities are maximised, by: • Locating ATMs in a highly visible, well lit location • Avoid locating ATMs in recesses • Avoid locating ATMs near possible entrapment spots • ATM design should incorporate reflective material to allow users to observe people approaching from behind	To ensure that the street number is clearly visible from the street, by: • Making street numbers minimum of 7.5 cm high • Positioning street numbers on the street alignment and maintaining them free from foliage and other obstructions • Making street numbers on awnings minimum of 15cm high • Ensuring that street numbers are made from a durable, reflective material		
To ensure that landscaping does not provide opportunities for concealment, eg along pathways or adjacent to service areas, by: • Use of low ground cover or high canopied trees, clear trunked to a height of 2m					

Site and Building Layout	Facilities	Services	Security & Building Identification		
To clearly delineate between public and private space, by; • Using landscaping, building features, street furniture, etc, to define boundaries					

CPTED - GUIDELINES FOR DEVELOPMENT ASSESSMENT

Car Parking – both public and private

Multi Storey Car Park: Layout	Lighting	Security	Ground Level Car Park: Layout	Landscaping	Lighting
To allow quick and easy access to pedestrian entry and exit points, by: • Making access to lifts, stairs and doors clearly visible from each car parking space • Making location signs for pedestrians large and legible with strong colours, standard symbols and simple graphics • Restricting unauthorised pedestrian traffic	To promote user safety in car parks, by: • Avoiding lighting which produces areas of glare and shadow • Use of wide beam lighting which reaches to the next light or perimeter of the site • Grading lighting intensity from brightest at the entrance to allow for gradual adjustment of vision • Installing vandal resistant lighting	To design and manage car parks to reduce the opportunity and incentive for theft and vandalism, by: • Locating a help or information point on each level • Use of convex mirrors where there are blind corners • Where appropriate, use of security guards or Close Circuit TV • Routine patrols by security staff of public car parks	To design car parks to promote safety of all users, by: • Avoiding large expanses of car parking. Large car parks should be divided into sections, each visually distinguishable by use of different materials such as paving, landscaping, etc. • Sections of car parks should be able to be separately locked and opened • Effective surveillance should be used	To provide unobscured sight lines throughout the parking areas, by: • Ensuring that vegetation is pruned and maintained • Avoiding vegetation with concentrated top to bottom foliage. Low ground cover or high canopied vegetation is preferred	To promote user safety in car parks, by: • Avoiding lighting which produces areas of glare and shadow • Use of wide beam lighting which reaches to the next light or perimeter of the site • Grading lighting intensity from brightest at the entrance to allow for gradual adjustment of vision • Installing vandal resistant lighting
To allow people easy identification of their vehicles, by: • Dividing non-residential car parks into sections/groups distinguishable by codes, eg colour, themes	To ensure lighting is of adequate brightness, by: • Making lighting sufficiently bright to enable a car park user, standing, to see into the rear seat of a parked car	To provide a safe environment for users, by: • Provision of an escort service to assist customers to their cars at night • Install roller security grilles to individual spaces in residential developments	To enhance user safety through signage, by: • Placing signs at the car park entrance advising users to lock their cars and informing them of the security systems in place • Ensuring information about closing times is conveyed at the car park entrance		To ensure lighting is of adequate brightness, by: • Making lighting sufficiently bright to enable a car park user, standing, to see into the rear seat of a parked car • Ensuring that links between car park and development it will serve are visible by day and night

Multi Storey Car Park: Layout	Lighting	Security	Ground Level Car Park: Layout	Landscaping	Lighting
To ensure that entrance and exit points are safe and amenable, by: • Avoiding recessed doorways as the can provide opportunities for entrapment and concealment • Clearly identify entrance and exit points to reduce confusion and restrict use by illegitimate users • Staff entrances should be well lit with maximum use of casual surveillance strategies • Clear indications of closing times of car park	To adequately light access ways and facilities, by: • Ensuring pedestrian access ways to, from and around the car park are well lit • Ensuring facilities such as toilets, telephones, lifts, etc are well lit	To enhance user safety through signage, by: • Placing signs at the car park entrance advising users to lock their cars and informing them of the security systems in place • Ensuring information about closing times is conveyed at the entrance to the car park	To ensure that entrances and exits for cars and pedestrians are clearly signposted, by: • Making all signs clearly visible from all parking spaces by day and night • Providing identification signs to enable drivers to easily locate their cars by day or night		
To design car parks with the minimum number of entry and exit points, by: • Locating maximum number of entry and exit points at ground level to increase opportunities for casual surveillance • Controlling exit points by supervised mechanical boom gates	To ensure that materials used enhance the lighting of the car park, by: • Use of light colour paints and finishes on walls and ceilings of car parks and associated routes	To reduce impact of damage and vandalism as a deterrent to further damage, by: • Speedy repair or cleaning of damaged or vandalised property	To clearly delineate between public and private space, by: • Use of landscaping, change of materials, street furniture etc to distinguish between areas		

Multi Storey Car Park: Layout	Lighting	Security	Ground Level Car Park: Layout	Landscaping	Lighting
To design car parks for maximum levels of casual surveillance, by: • Locating facilities such as telephones and bicycle storage in the most prominent and visible areas possible • Locating spaces for vulnerable groups (such as people with disabilities, parents with prams) in highly visible locations • Installing seating in highly visible locations to discourage loitering • Incorporating other uses within the car park which allow for casual surveillance, such as car washes			To design car parks for maximum levels of casual surveillance, by: • Where possible, locating car parks where they can be overlooked by windows from adjacent users, eg houses, shops • Locating facilities such as telephones and bicycle storage in the most prominent and visible areas possible • Locating spaces for vulnerable groups in highly visible locations • Installing seating in highly visible locations to discourage loitering • Incorporating other uses within the car park which allow for casual surveillance, such as car washes		