Crime Prevention Through Environmental Design (CPTED) Planning Scheme Policy

Contents

1 Introduction

The creation of safe built environments is a key principle on which City Plan is based. References to the creation of safe, healthy and accessible environments are included in the Strategic Plan, Desired Environmental Outcomes for Areas, Local Plans and in a number of Codes.

As stated in City Plan, a planning scheme policy is intended to provide guidance in the submission of development proposals. This policy provides additional material to support the Codes contained in City Plan. This policy provides further detailed guidance on crime prevention and associated design issues.

It is acknowledged that the principles in this policy will conflict with the achievement of other outcomes set out in the City Plan. In such cases, it will be necessary to make an informal judgment as to the most beneficial outcome.

2 Crime prevention through environmental design (CPTED)

The application of CPTED in the built environment can reduce opportunity for and the likelihood of crime. The development and redevelopment of sites allows the opportunity to incorporate CPTED principles into both the design of development and operational aspects.

It is not the purpose of this policy to specify CPTED measures that will suit all development types and situations. However, it should be acknowledged that adherence to basic CPTED elements can guide development projects to reduce crime, enhance community safety and improve liveability.

While the CPTED elements outlined in this policy can be applied to all forms of development, this policy is particularly aimed at development that includes publicly accessible areas and high activity generators, such as:

- centres
- mixed use residential/commercial development
- medium and high density residential development
- subdivisions involving newly developing areas
- parks and open space or publicly accessible areas
- community uses
- sport, recreation and entertainment areas
- other high uses areas where crime may be an issue.

It is also recognised that the implementation of CPTED elements must be balanced against other design objectives and consequently this policy focuses on matters that can be readily implemented in development design and operational works. It is expected that these matters will be taken into account, where appropriate, for the target development types identified above.

3 Policy objectives

The objectives of this policy are:

- to ensure that issues of community safety and crime prevention are adequately considered in land use, development and redevelopment activities
- to aid the integration of safety and security concerns throughout the development assessment process for all private and public projects.

4 Generic elements of CPTED

There are a number of generic elements that apply to CPTED. These are outlined below and should be taken into account in development design and the development assessment process. Elements detailed below include:

- casual surveillance opportunities and sightlines
- land use mix and activity generators
- definition of use and ownership
- exterior building design
- lighting

- way finding
- predictable routes and entrapment locations.

These elements are interdependent and not mutually exclusive.

4.1 Casual surveillance and sightlines

Casual surveillance involves the location and design of facilities to maximise visibility of the site. Maximising casual surveillance increases a sense of safety and can deter criminal activity.

Clear sight lines, or the ability to see what is ahead along a route, or in a space, provides opportunity for casual surveillance. A clear sight distance provides an individual with both a perception of safety and adequate space to react to possible threats.

The following design principles (illustrated in Figures a to e) should be taken into account in development design to promote casual surveillance and provide adequate sightlines:

- locate development to overlook open space and/or adjacent development
- create building frontages that include a sense of activity
- establish clear sightlines through the sensitive location of buildings and other site features
- design pathways, underpasses and other spaces to minimise sudden changes of grade and blind corners, in order to maximise clear sightlines
- maximise the visibility of high risk areas such as car parks (public and employee), stairwells and underpasses
- design site layout so that pedestrian corridors and destination points are easily identifiable, and have generous sightlines.

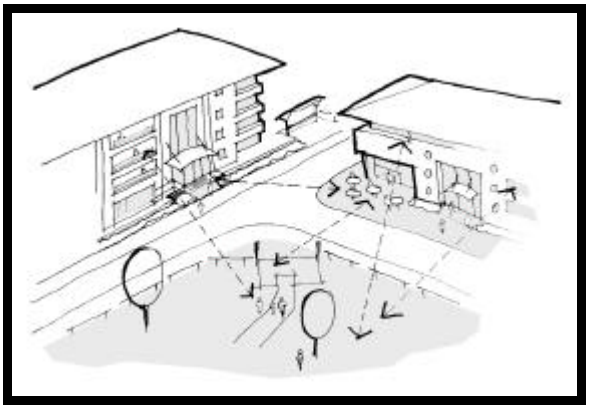

Figure a Location of buildings and open space allows for casual surveillance and clear sightlines

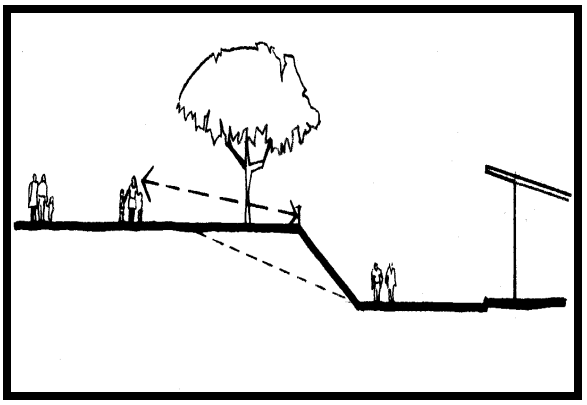

Figure b Avoid sharp changes of grade that minimise sightlines

Figure c The redevelopment of the Queen Street Mall in 1999-2000 specifically provided for long and clear sightlines

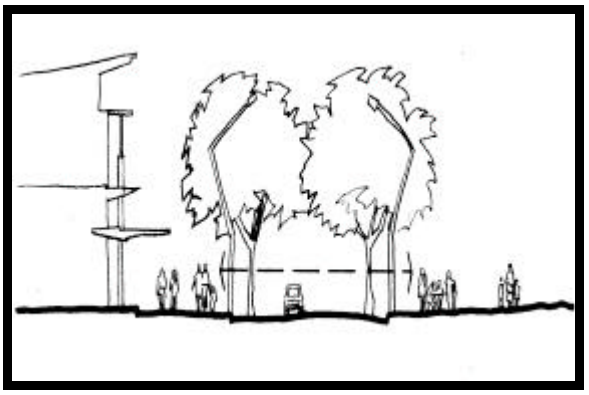

Figure d Landscaping is designed to minimise interference with sightlines

Figure e Casual surveillance of this stairwell is facilitated through location, design and selection of materials.

4.2 Land use mix and activity generators

A balanced land-use mix is important in terms of safety and the perception of safety. A primary means of creating actual and perceived safety is through a mix of land uses, which increases and sustains legitimate use.

Activity generators are facilities that attract people, create 'normal' activities, and increase casual surveillance within a space. This reduces opportunities for criminal activities and increases perception of safety (Figure f).

The following principles should be taken into account in development design to promote appropriate land use mix:

- avoid strict separation of compatible land uses that may result in the isolation of some buildings or spaces
- locate activity generators or seating around 'active edges' or fringes of a space to create casual surveillance of a space within
- encourage pedestrian passage through or activity in areas, at grade level, to promote casual surveillance.

Figure f In the above example, a cafe has been introduced in a commercial/ light industrial area. This has the benefit of providing a variety of activity into this space, and casual surveillance opportunities.

4.3 Definition of use and ownership

Design needs to define ownership and the intended use of a space. When the purpose of use of a space is clear, illegitimate use is obvious and therefore less likely.

The following principles (illustrated in Figures g and h) should be taken into account in development design to promote definition of use and ownership:

- use signage and cues to define intended use and ownership
- use physical barriers (e.g. fences) and symbolic barriers (eg vegetation) to define use and ownership
- use environmental cues, such as changes in footpath material, change in grade or elevation, or level of lighting.

Figure g This building exterior provides excellent casual surveillance opportunity to and from the street, and also defines private from public space.

Figure h The use of different footpath patterns and colours is used in this example to highlight change of environment for cyclists and pedestrians.

4.4 Basic exterior building design

The exterior design and treatment of buildings can directly support and reduce crime by reducing opportunities for entrapment, concealment and vandalism.

The following principles (illustrated in Figures i to k) should be taken into account in development design to improve basic exterior design:

- ensure that entrances to buildings are oriented to face open or 'active' spaces
- minimise blank walls overlooking parks, car parks and other areas
- design entrances and other features to limit opportunities for concealment
- clearly distinguish the area around the entrance from public walkways
- minimise features or structures (such as storage areas, staggered balconies and awnings) that can be used as 'natural ladders' to gain access to higher levels of the building, or windows and doors
- maximise the variety of building design and landscaping to create interesting built environments
- provide clear sight lines from within the building at the entry point so that occupants can see out into a space before exiting
- provide opportunities for users of the building to see inside the foyer/reception before they enter
- ensure that landscaping design will not provide concealment or entrapment areas.

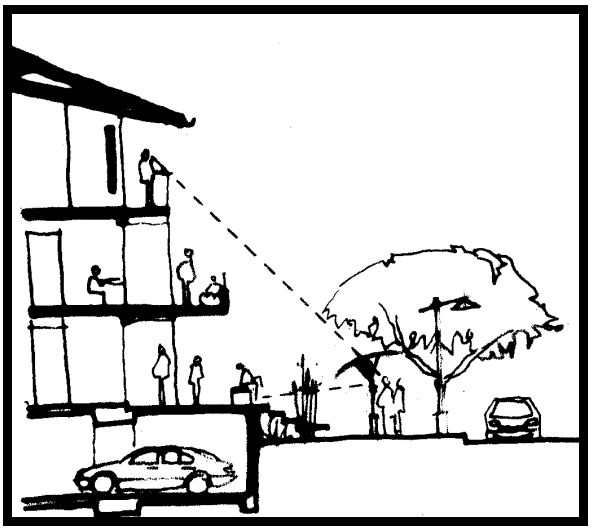

Figure i Building design provides for overlooking of areas and minimises concealment points

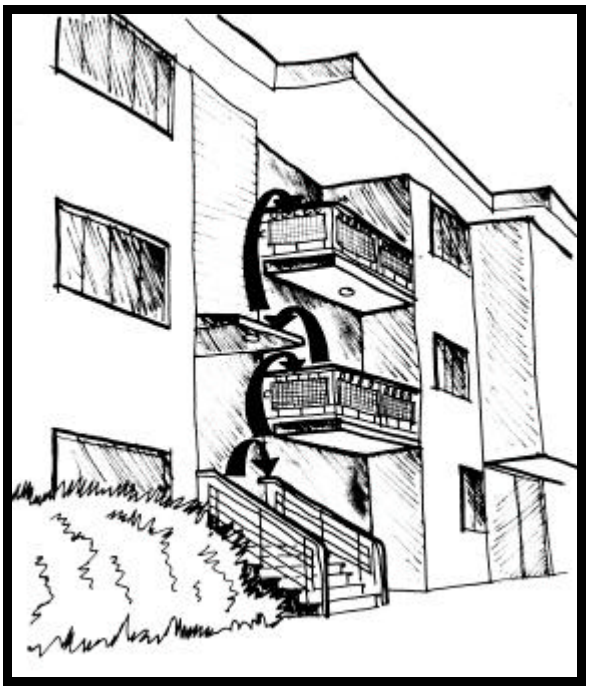

Figure j Building design should minimise features which create natural ladders

Figure k Retaining walls and vegetation obscure the entrance, providing a concealment point and a possible entrapment location.

4.5 Lighting

Lighting can increase the perception of safety and deter crime.

The following principles (illustrated in Figures l to o) should be taken into account in development design to promote suitable lighting:

- maximise the opportunities for penetration of natural light into spaces
- use of multiple lights rather than single fittings to provide consistent lighting levels and to reduce contrast between shadow and light
- ensure all inset spaces, access and egress routes and signage are well lit
- avoid lighting areas not intended for night time use
- ensure that lighting illuminates pathways and potential entrapment spaces rather than windows and roads
- place lighting in a position that will not be blocked by mature vegetation
- identify and light 'safe routes'
- avoid placement of 'unshielded' lighting at eye level
- install lighting fixtures which are high mounted, vandal resistant and deflect light downwards.

Figure l Lighting should illuminate footpaths, building entrances and possible entrapment locations

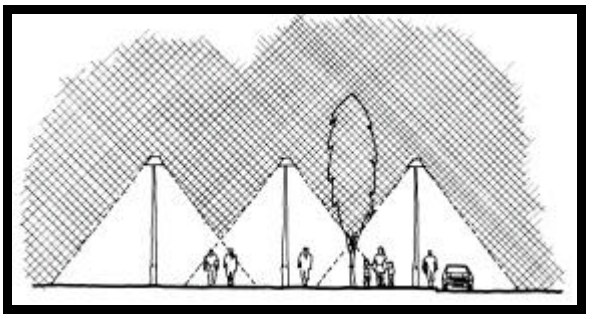

Figure m Lighting is provided to adequately illuminate footpaths and roadway areas

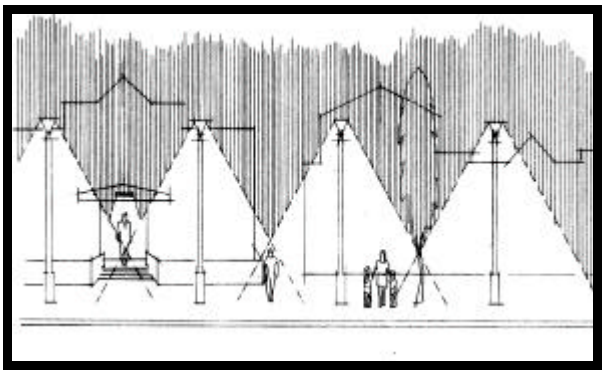

Figure n Multiple lights provide for consistent levels of lighting

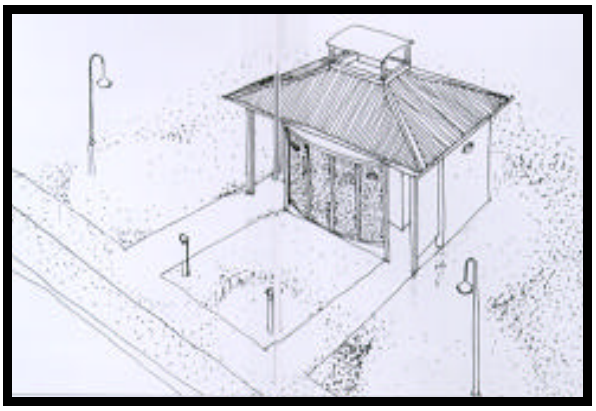

Figure o Toilets and other public facilities should be provided with adequate lighting

4.6 Way-finding

Way-finding is the use of symbols, cues and signage to help navigate through areas. Symbols, cues and signage guide appropriate use of this space, and make inappropriate use obvious to others.

Public use of an area can be readily guided by symbolic and literal means. Barriers (such as fences and lines of vegetation) can clearly identify boundaries. Passive measures, such as a change in surface textures and colours can indicate a change in ownership or conditions.

The following principles (illustrated in Figures p and q) should be taken into account in development design to improve way-finding and signage outcomes:

- signage should identify where assistance and key areas can be located e.g. telephones, toilets, taxi ranks and bus stops
- signage should be visible, concise and easily maintained (i.e. be identifiable from 20 metres as a general rule).

Figure p Signage should be simple and legible

Figure q Signage should be visible and may include a combination of text and cues

4.7 Predictable routes and entrapment locations

Predictable routes are a safety concern as they enable potential attackers to easily identify the route taken by users. These include pedestrian paths, stairwells, underpasses and corridors. This is particularly problematic where the route ends up close to an entrapment spot.

Entrapment spots are small confined spaces close or adjacent to publicly accessible places. They are usually shielded on 3 sides by barriers such as walls or vegetation, and provide for easy concealment.

The following principles (illustrated in Figures r and s) should be taken into account in development design to minimise predictable routes and entrapment locations:

- eliminate predictable routes and potential entrapment locations from design wherever possible
- provide adequate sightlines and lighting where there is no alternative to predictable routes
- provide adequate distance between any potential concealment or entrapment locations to allow users adequate reaction time
- ensure that predictable routes have good casual surveillance and provide for alternative access arrangements
- identify alternative routes by effective signage, which are preferably well lit, and frequently used pathways.

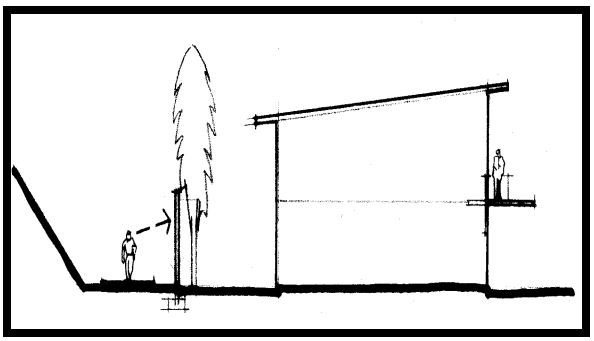

Figure r Location of pathways should not be in areas which have poor surveillance and predictable routes

Figure s Risks associated with predictable routes such as underpasses can be alleviated with generous path width, use of surveillance technology, and the presentation of excellent levels of lighting, light coloured walls and signage

5 Further information

There are numerous documents that provide guidance on the implementation of CPTED principles, which should be consulted, for further detail:

- Public Toilet Design Guidelines, BCC (2000)
- Brisbane City Council Centres Detail Design Manual (2000)
- City of Melbourne Car Park design Manual (1999)
- Timothy D Crowe, Crime Prevention Through Environmental Design (1991)
- www.cpted.com.au - General CPTED website with useful links
- www.cpted.net - International CPTED Association website
- www.ncpc.org/2add4dc.htm- Basics of CPTED