



Crime Prevention through Environmental Design

Guidelines for Queensland



Part A: Essential features of safer places



Queensland
Government



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<http://www.police.qld.gov.au/programs/crimeprevention/>

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The purpose of these guidelines

The *CPTED Guidelines for Queensland* seek to promote the incorporation of Crime Prevention Through Environmental Design (CPTED) principles into the planning, design and management of development in Queensland.

They aim to:

- guide and encourage public and private developers to design with CPTED in mind
- guide and encourage local councils to incorporate the principles of CPTED in the preparation, review and implementation of planning schemes and policies
- inform and encourage the community to participate in creating and maintaining safe environments.

The Guidelines are presented in two parts.

Part A: Essential features of safer places outlines the idea of CPTED, introduces important concepts, identifies principles and introduces actions to implement the principles. It is offered to all in the community with an interest in and responsibility for the environments we create.

Part B: Implementation Guide is particularly offered to local councils. It aims to encourage and assist them to incorporate the principles of CPTED in their communities.

Who should be involved in CPTED?

The *CPTED Guidelines for Queensland* are intended for:

- planners and designers working for local councils and state agencies
- police and others involved in crime prevention activity
- architects, urban designers, engineers, landscape architects, community development managers, social planners, building managers and others involved in planning, designing and managing our built environment and especially publicly accessible places
- members of the community who seek to support a socially sustainable environment.

The CPTED principles outlined in these guidelines cannot be rules or universal solutions for every situation. Instead they focus attention on key issues to consider in relation to the needs of each local setting.

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Foreword

The Queensland Government, together with local councils, business and the community, is committed to preventing crime and creating safe, healthy and connected communities. To meet this commitment it is important that communities have the tools to develop strategies, relevant to their diverse needs, to prevent crime, reduce fear of crime and create safe public spaces.

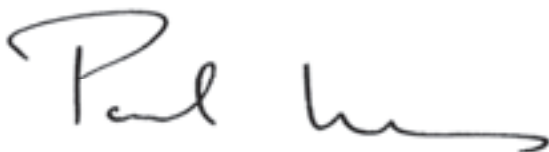
Crime Prevention Through Environmental Design (CPTED) is a well researched crime prevention method which has been shown to reduce opportunities for crime and incivility. It provides positive community safety benefits by improving planning and design decisions in ways that provide organisations, communities and businesses with practical crime prevention tools.

The *CPTED Guidelines for Queensland* were developed in consultation with a number of stakeholders across Queensland including local government, the planning and building industry, police and Queensland communities.

The Guidelines outline CPTED methodology in a user friendly way. They place CPTED in the context of the Queensland community and the contemporary work of the development industry. The Guidelines provide practical CPTED solutions which can be tailored to the unique needs of communities across the State.

We present them to local councils, urban planners and designers, businesses, police, community groups and others interested in the sustainability and prosperity of our towns and cities. Together we can take action to build safer communities. We can achieve better value for all concerned by working in collaboration and by harnessing the innovation and dynamism that makes Queensland such a great State. The Smart State is not just about technology – it is also about using the smartest urban design and planning techniques to make sure we have a Safe State as well.

We commend the Guidelines to you.



Paul Lucas MP
Deputy Premier
Minister for Infrastructure and Planning



Judy Spence MP
Minister for Police, Corrective Services and Sport



Lindy Nelson-Carr MP
Minister for Communities, Minister for Disability Services, Minister for Aboriginal and Torres Strait Islander Partnerships, Minister for Multicultural Affairs, Seniors and Youth



Warren Pitt MP
Minister for Main Roads and Local Government

Chapter One

WHAT IS THIS CPTED THING ALL ABOUT?

Crimes against people and against property occur within the urban environments of cities and towns.

The fundamental idea of **Crime Prevention Through Environmental Design (CPTED)** is that it is *possible* to use knowledge and creativity to design those built environments in ways that lessen or prevent the incidence of such crime.

That knowledge has been evolving over recent decades, based on experience and research.

It would be possible to reduce assaults on people and property by taking a “medieval fortress” approach, making buildings impregnable and locking everything and everyone away behind high walls. We might also support that with lots of security cameras and lots of guards. However this approach still does not set out to ensure the safety of the public realm, in particular that network of streets, paths and places that connect these “fortresses”.

Or we could put great numbers of guards into the public realm, inevitably diverting resources from other things.

While there might be times and situations where we might do one of these things, surely neither strategy is acceptable as the first basic approach in our Queensland of the 21st century?

Our built environment should encourage our treasured (especially outdoor) lifestyle and assist us in our pursuit of greater social, economic and physical sustainability. It should provide us with safe, secure, vital and attractive places in which to live, work, meet, celebrate, reflect, shop, play, educate and more, and it should set out to do so without resorting to fortresses, technological hardware or guards.

So how?

There are three main concepts behind the theory of CPTED.



Street cafes: seeing and being seen

Perhaps the most important is that **crimes against people and property are less likely to occur if other people are around.**

The presence of other people, for example, provides them with an opportunity to:

- prevent a crime
- intervene in a crime that has started and limit its extent
- help apprehend the criminal
- summon help from others, and
- report the crime and act as a subsequent witness.



Community events in public places

Whether people choose on the moment to do any of these things is another significant matter.

We do know however that the direct or *indirect* presence of other people, especially lots of other people, both discourages the offender and increases people’s sense of security which in turn encourages more people to use the space.

Not only is it good to have other people around, it is also **important that people in adjoining buildings and spaces are able to see what is happening.** Even if they are too far away to intervene directly, they at least are in a position to respond with other help.

These two concepts — of having lots of people around (“direct presence”) and others who are able to see as well (“indirect presence”) — combine in the idea of “passive surveillance”. This is not the “active surveillance” provided by guards and monitored surveillance cameras but “casual surveillance” by members of the community as they go about their daily lives.

The third concept, relating specifically to personal safety is that, where possible, it is **important to give people safe choices about where to be and how to anticipate and respond to problems** (for example, can they change routes if one seems unsafe?).

These concepts then should *influence* the design of our towns and cities.

How indeed do we design and manage our built environments:

- to encourage the legitimate use by lots of people of the public parts of them
- to allow others outside those public places to see what is happening in those places and near other buildings
- to avoid “hidden” places, and
- to encourage those “seeing something happening” to care and to act?

Chapter Two briefly introduces the historical roots of CPTED and some broad complementary ideas which provide context to the principles that follow in Chapters Three and Six. There is no single correct solution to the question of how to design and manage our built environments. The CPTED design process must consider each place in its special context. The process therefore must be adaptable and creative against an understanding of CPTED principles.



Riverside dining by the promenade: people seeing and being seen

Chapter Three therefore explores a number of key principles:

- the goal of surveillance
- the goal of legibility
- the role of territoriality
- the goal of personal and community “ownership” of the outcomes
- the issue of management, and
- the idea of vulnerability.



Street side dining

Since making our environments safer involves people, it is important to understand who we are, for that will influence how we implement CPTED principles. Chapter Four therefore looks briefly at the changing nature of the Queensland community in relation to CPTED.

Since CPTED is about the design of built environments, Chapter Five looks at changes in the way we have been designing parts of our towns and cities and identifies some questions and problem areas for delivering safe environments.

Chapter Six applies the six principles (introduced in Chapter Three) to the design of different urban settings:

- neighbourhoods and precincts
- buildings
- public places
- centres
- pedestrian or cyclist access networks, and
- other domains.

Chapter Seven provides some more detailed examples of CPTED approaches.

Chapter Eight briefly identifies some Queensland built environments that illustrate various parts of CPTED thinking.

Chapter Two

CPTED IS NOT A NEW IDEA AND HOW TO APPROACH IT

THE PAST

The idea that the design of built environments and the incidence of crime are in some way related began to appear in research and policy work as early as 1961 when Jane Jacobs published her book *The Death and Life of Great American Cities*. Jacobs argued that a mix of land uses, consistent building setbacks, short block lengths and other characteristics resulted in twenty-four hour activity and “eyes on the street” which contributed to safer environments.

C Ray Jeffrey’s *Crime Prevention Through Environmental Design* in 1971 introduced a new era in criminological thought centred on the environment surrounding a crime rather than the criminal. It is he who is credited with first using the term “CPTED”.

Jeffrey, a criminologist, was supported by architect Oscar Newman in 1972 with his *Defensible Space: Crime Prevention Through Urban Design* in which he highlighted the physical design ingredients of territoriality and surveillance as contributing to a secure environment, both internally and externally.

In many cities, large housing estates, very different in their form from the places Jacobs talked about but nevertheless conceived and developed in the 1950s and 1960s by designers and policy-makers as “best practice” in city-making, proved to be significantly troubled. They became the location of social distress, crime and community unrest and the focus of evolving CPTED research (and the subject of film and television dramas). Increasingly the role of design was accepted as significant and, in some cities, award-winning and relatively new estates were subsequently largely redeveloped or demolished outright.

Many researchers, practitioners and designers have therefore contributed to the CPTED discussion in recent decades, among them Ronald Clark, Paul and Patricia Brantingham and Marcus Felson. Timothy D Crowe’s *Crime Prevention Through Environmental Design* in 1990, for example, is considered to have been influential.

In Australia, housing authorities in recent times have often been at the forefront in their new and renewal activities, and local governments have increasingly been introducing these ideas into their stewardship of communities.

CPTED is thus an evolving body of knowledge, both informing its practice on the ground and, in turn, learning from it.

THE FUTURE

The aim of these Guidelines is to influence and inform decisions about designing and managing the built environment, so that our communities, towns and cities are safer, more secure and therefore more sustainable.

Designing and managing for security is about many, sometimes competing, goals or responses. These Guidelines try mostly to avoid repeating the same ideas in the many different sections. No one single detailed CPTED strategy or principle should therefore be followed in isolation from the others. The best approach will be based upon an **understanding and application of the whole body of CPTED ideas**.

For the same reasons, there are frequently a **variety of solutions** to a built environment design challenge. Queensland is a vast state with a wide range of human settlements and physical climates. As the social, physical and economic contexts change from one place to another and over time, the best solutions will also change. All the conditions and factors of each unique place must be taken into account. What is called for is creativity, adaptability and a knowledge of practical CPTED.

In addition to the principles set out in these Guidelines, there are a number of **agreed standards and regulatory requirements** relating, for example, to the design of the physical accessibility, lighting and signage of built environments. Recognising that there are competing priorities, developers and others participating in thoughtful dialogue about the design of the built environment must integrate CPTED principles with other formal requirements.

For example, the focus of CPTED is about preventing crimes against people and property. In these Guidelines, the word **“safety”** will be used in the sense of “safety from criminal assault by others” or security. This of course does not lessen the importance of designing our built environments to seek to provide safety from accidental injury.

The successful implementation of CPTED principles in development requires **designing at different scales**, from the overall broad design through to the documentation of finer detail.



Designing for pride and legibility at the micro level

Urban environments are usually collections of separate developments by many different people over time, linked together by a public realm of streets, plazas and parks. Thoughtful **“CPTED master-planning”** should be considered at the beginning of a development and this is easier in instances where one developer undertakes most of the development. Where many developers are involved and as cities grow and change, it usually becomes the responsibility of state and local governments and/or community management to ensure CPTED principles are in the management of the development, just as they must introduce them to existing suburbs, towns and cities. It is also critical that landowners support CPTED over time by appropriate amendments or retrofitting their existing property.

The making of our towns and cities relies upon the knowledge of the many different development and **design-related professional disciplines**. The achievement of good CPTED outcomes will only be possible when the contributions to community safety

of architects, urban designers, landscape architects, engineers, urban planners, financiers, asset managers, social planners and others are integrated in the design/development process.

Designing and building a good piece of a town, whether a building or a public space or street, is just the start. It is equally important to manage it in an ongoing way that delivers effective CPTED outcomes. This requires **the coordination of the activities** of various community agencies and private groups.

Integration and coordination require thoughtful dealing with competing priorities to find the best outcome for the individual and the community. What is constantly called for in the pursuit of CPTED is **“balance”** between competing ideas, or between private, corporate or community interests.

One such balance is between privacy and security; between the desire of a household for visual and acoustic privacy and the ability of others to see and perhaps prevent crime from occurring. In addition, the household’s desire for privacy needs to be balanced with the community’s reasonable expectation that the household will contribute passive surveillance to the passing public realm, for the good of their neighbours and the community. Residential streets lined with high fences or blank walls, for example, are not desirable CPTED solutions.

Another version of that privacy/security balance is between good surveillance in public parks, squares and places and the legitimate community need for a range of secluded places for quiet contemplation, connection with nature and more. Such places are valuable community assets if the right privacy/security balance is achieved.



Different professionals and the community planning for CPTED at the macro level

CPTED is one part of the pursuit of a sustainable Queensland through “smart” urban environments. Research suggests that the benefits of CPTED considerably outweigh the costs in the long term. CPTED is a sound investment. Safe towns and cities support good communities and deliver long term social and economic benefits.

Chapter Three will therefore consider the underpinning principles for practical CPTED and Chapters Six and Seven will apply them in detail to particular urban settings.



Balancing park amenity and visibility

Chapter Three

IMPORTANT PRINCIPLES AND GUIDING IDEAS

In Chapter One the question was asked: how do we design and manage our built environments to be safer?

Three concepts were suggested:

- crimes against people and property are less likely to occur if other people are around
- it is also important that other people are able to see what is happening, and
- it is important to give people options and safe choices, particularly in their responses to what is happening.

Before examining the prevention of crime through the design of different types of urban settings, consider first six key principles which will inform the approach to the different built environments.

1 SURVEILLANCE

The idea of passive or “natural” surveillance is central to CPTED.

How then to create and manage our urban environments to “put eyes on the street or place”?

Clearly this must involve a *combination* of:

- the design of the public realm itself, whether neighbourhood, street, plaza or park
- the legitimate activities in that public realm
- the design of the buildings that define or adjoin that public realm and hence the physical possibility of overlooking it, and
- the land uses and activities in those buildings and hence the potential they create to have lots of people “available” to see into the public realm.

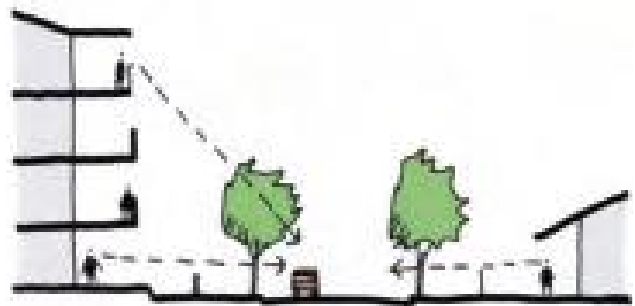


Traditional designs encouraging surveillance of the public realm

Some of these issues are dealt with in greater detail in sections of Chapter Six such as 1) The Design of Neighbourhoods; 2) The Design of Buildings; and 3) The Design of Public Places.

Principle

- 1A The public realm and buildings must be designed and managed to maximise, consistent with other legitimate goals, the potential for passive surveillance.



Seeing what is going on in the public realm

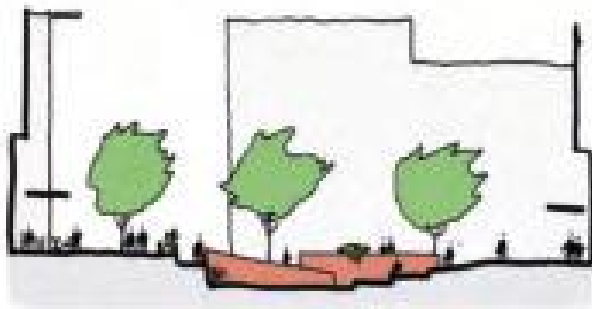
Actions

- 1.1 Design with surveillance in mind.
- 1.2 Manage with surveillance in mind.
- 1.3 Require a compatible mix of uses in buildings and spaces (for example, restaurants, offices, shops, community or recreation facilities and urban housing) that:
 - attract lots of people from the community, and/or
 - deliver people for long hours night and day, and/or
 - encourage pedestrian movement between uses.



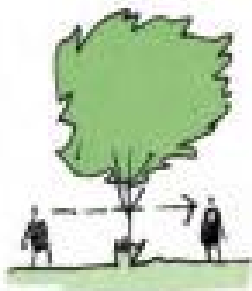
Active street environments enhancing safety

- 1.4 Put particular emphasis on the building design and uses at the level of the public realm (for example, the shop fronts or entry levels to buildings).
- 1.5 Locate active public and private uses thoughtfully within the precinct (for example, at corners or overlooking squares and parks or along important pedestrian routes) to maximise the contribution they can make to the surveillance of important places.
- 1.6 Locate potentially “difficult” uses (for example, some bars or night clubs) with other less challenging activities to ensure there is a range of people in the area.



Active public spaces with amenity and good visibility

- 1.7 Design public spaces to facilitate and encourage legitimate community and individual activities.
- 1.8 Design with unimpeded sightlines to key places in mind and then manage to maintain those sightlines (for example, maintaining view corridors over low bushes or walls and under the canopy of trees or shade structures).
- 1.9 Design to avoid “blind spots” where there is a reduced opportunity to see and be seen (as discussed further in Principle 6: Vulnerability).



Design and management of landscaping for surveillance

- 1.10 Design and manage in ways that acknowledge differences in night and day usage, attitudes, accessibility and capacities for surveillance.
- 1.11 Design lighting to ensure appropriate surveillance and avoid shadows and glare which might put people at risk (as discussed further in Principle 6: Vulnerability and in Chapter Seven).

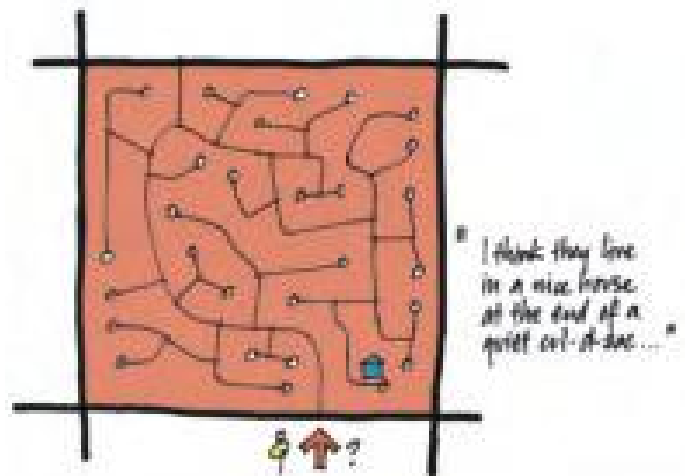


Lighting of public events at night

2 LEGIBILITY

The concept of “legibility” is increasingly important in urban design and CPTED.

An urban environment is said to be legible if it is designed in ways that allow people in it easily to know where they are and how to get to where they are going. It is not confusing and does not easily get people lost. In the way a legible book or letter can be read and understood, so also can a legible environment “be read and understood”.



Neighbourhood design for legible way-finding...or not?

Legibility is therefore about “way-finding” and about confidence. While this is important for those travelling in vehicles, it is a particularly important CPTED quality for pedestrians and cyclists in that:

- people can see which are the important or appropriate routes to take
- they can tell which are the desirable or likely places for the services they seek or most likely to be frequented by others

- they are less likely to become lost and wander into out-of-the-way places less likely to be overlooked
- they are therefore likely to be more confident and assured and less stressed, and
- they are therefore more likely to be observant of what is happening around them than if preoccupied with their being lost or stressed.

The aim is to put the individual “in control”. It is also about helping others (such as emergency services) to find the individual when needed.

It is not about making every built environment the same but about designing in ways that both celebrate differences while making enough things visible and clear enough to give out the right messages. At the same time there may be differences with which various cultural groups read environmental “cues”.

Many messages come from the broad structure and form of the area. Others come from applied detail like useful signage.

The idea of legibility applies to all urban environments and is therefore discussed in the sections of Chapter Six.

Principles

- 2A Built environments must be designed, detailed and managed to make them legible for users, especially pedestrians and cyclists, without losing the capacity for variety and interest.
- 2B Legibility must be promoted in both the overall structure and form of the environments and in appropriate detail within them.



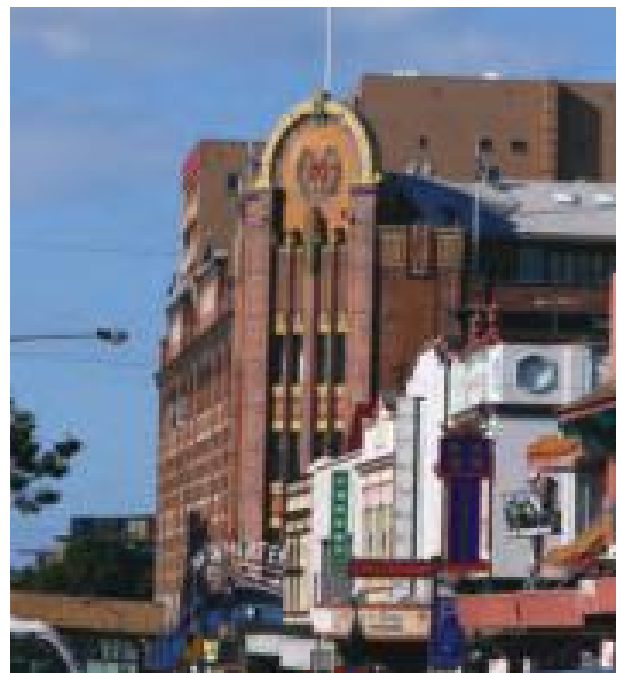
The tropical sea visible from the city centre



Street design to allow landmarks to be seen

Actions

- 2.1 Design neighbourhoods, centres and other urban environments to make them easy to understand and navigate within.
- 2.2 Locate important service places like bus or taxi stops in places that are both visible and logical.
- 2.3 Design neighbourhoods and places to take advantage of existing (or set out to create new) man-made or natural features (like rivers, hills, sea-fronts, public squares, important civic buildings or public art) both to create landmarks to aid legibility and to make environments of special quality.
- 2.4 Encourage appropriate variety within the architectural and landscape design of buildings and spaces that create more legible urban environments.



Landmark buildings in the city

- 2.5 Support way-finding with sufficient signage and maps identifying such elements as streets, places, directions to services or help and building names and numbers.
- 2.6 Use integrated signage as an aid to legibility but in a skilful, creative and balanced way that is not so excessive and overly obtrusive that it undermines the very qualities that would desirably attract people to this place in the first instance.
- 2.7 Thoughtfully locate signage in logical places (for example, near building entries, at transport stops and at street intersections and other points of decision).
- 2.8 Ensure signage is itself legible (*including* well lit, of appropriate materials, using strong contrasts and colours, sufficiently large or reflective to be read at an appropriate distance at different times of the day and by people with some visual impairment or other disability). Signage should recognise cultural differences by using internationally recognised symbols and the languages of culturally prominent groups in the area.



Signage for legibility in the public realm

3 TERRITORIALITY

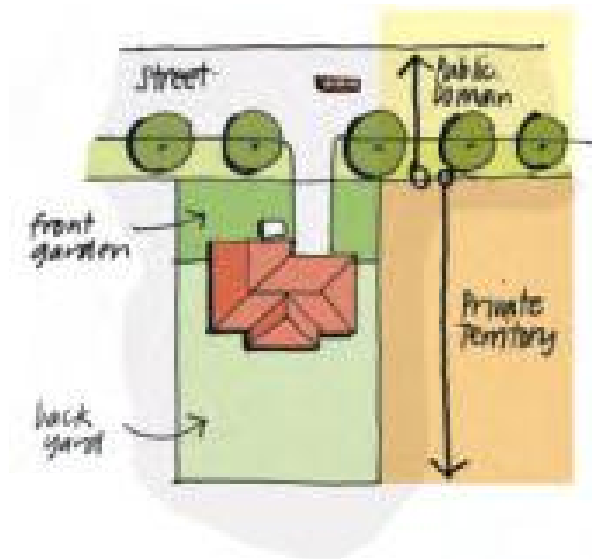
The importance of “territoriality” in human environments is now better understood.

Research suggests that it is significant for people’s sense of control that others not transgress or trespass on “their territory” without invitation. Equally, most people would prefer to avoid embarrassment or incident by being aware of other’s territory and not trespassing *by accident*.

Both groups are helped by a sense of clarity — that is, a lack of ambiguity — in the line between public and private ground or territory. It helps determine how spaces will be used and what represents appropriate behaviour within them.

At the same time, such agreed clarity removes from any would-be criminal the “defence” of misunderstanding and hence can enhance the security or defensibility of the property.

There may be different senses of “territory” in different communities. One widely agreed defining line of “territory” in Australia would appear to be found in the front fence that marks the street edge of the traditional detached family home’s front garden. It is clear what is public domain and what is private territory.



Understanding and reading territories

As housing forms have become more varied and complex, the human need to define territoriality has not diminished but requires more deliberate effort to aid CPTED outcomes. For example, more complex forms of “ownership” have developed which require thoughtful territorial expression.

At the same time, there may be a difference between territoriality and visual privacy, as the difference between the typical defined-but-visible front garden and the defined-and-visually-private backyard suggests.

Delivering privacy may well deliver territoriality but the reverse is not necessarily so. Indeed delivering territoriality should desirably not reduce appropriate surveillance of, and from, the public realm.



Territorially strong but no surveillance of the street

Principles

- 3A Security must be supported by designing and managing spaces and buildings to define clearly legitimate boundaries between private, semi-private, community-group and public space.
- 3B Territoriality must be delivered without significant loss of surveillance.

Actions

- 3.1 Design and manage buildings and spaces to define and convey information about proper boundaries without, in the first instance, resorting to formal devices like high fences, walls, “keep out” signs, locks and guards.
- 3.2 Creatively use built and landscaping features like planting, changes of material and texture, pedestrian shelter, changes of level, artwork, signage, low walls, seating and the like to define desired movement areas and delineate borders.
- 3.3 Acknowledge the importance of direct connection with and surveillance from buildings and those external areas that are physically accessible from adjacent public space. In these external areas, design thoughtfully to establish “territory”.
- 3.4 Ensure the design of territorial features is balanced with the need for surveillance, into and out of private or shared spaces.
- 3.5 Avoid creating too many ways to approach or enter buildings or private areas (such as housing) if the effect would create ambiguity or confusion or deny appropriate privacy or security.

4 OWNERSHIP OF THE OUTCOMES

Passive surveillance is an important CPTED strategy. It is most powerful, however, when the people who are around and able to see what is happening go on to respond in ways that will enhance their safety and the safety of others.

The sense of “ownership” of the public realm and other parts of the built environment, by the community, is therefore crucial to the success of CPTED and the sustainability of that community.

It is therefore important that individual members of the community care about their urban place, about how they are and what happens in them. If they do, they may be much more likely to use those places (which in itself are good for their safety) and in turn much more likely to intervene to maintain the security of other users.

Community development programs and other initiatives that facilitate community spirit (such as involvement in the planning or renewal of places) can encourage people to feel safe and to be out and about in *their* environment.



The community using and caring about its shared places

Principle

- 4A A feeling of individual and community ownership of the public realm and associated built environments must be promoted to encourage a level of shared responsibility for their security.

Actions

- 4.1 Actively “place manage” to encourage or deliver a wide array of legitimate activities and uses into the community’s places.
- 4.2 Design and manage to promote a sense of pride in the community’s public assets.
- 4.3 Design and manage to create opportunities for social contact and, through that, the building of social capital.
- 4.4 Build coalitions and alliances between agencies and key stakeholders with responsibilities for the public realm or particular precincts (for example, the main shopping street or recreational area) that develop and manage, on an inter-disciplinary and shared basis, community ownership and safety strategies.



Festivals to recognise and engage with different parts of the community

- 4.5 Recognise the needs and aspirations of as many groups within the community as possible in both the design and the management of the built environment, such as older people, women, ethnic or cultural groups, youth, those with disabilities and others.



Festivals to connect past and present

- 4.6 Develop safety strategies that celebrate and build on (and do not alienate) the cultural and heritage strengths and icons of the community.
- 4.7 Involve the community in enhancements (including new public art) and changes to their urban environments, particularly those in which a great deal of pride and use is present.
- 4.8 Take care not to alienate (by use or design) the neighbourhoods that surround key community places to avoid their withdrawing their engagement or support.
- 4.9 Engage media agencies in dialogue to encourage reporting that promotes community activities and spirit and, where appropriate, negotiate on reporting that might negatively influence the appropriate use and safety of public places.



Murals on public infrastructure as a source of community pride

5 MANAGEMENT

Just as the “place management” of legitimate activities within the built environment is important in matters of pride and safety, so also is the more basic maintenance and management of the physical assets.

Public places that are broken down, dirty, vandalised, full of rubbish and generally “looking unloved” are less likely to encourage active legitimate use by most groups, let alone a sense of pride and ownership by the community.

Places that are well looked after send out messages to would-be offenders that the community cares.

Even where places are looked after, continuing care needs to be taken routinely to maintain some of the important CPTED qualities of places, such as ensuring vistas and signage are not obscured by the growth of vegetation.

Not only must maintenance strategies for the environment be considered at the initial brief and design stages, but integrated systems of both routine and emergency maintenance must be instituted early and continue to operate during the life of the place.

Principles

- 5A Places must be designed and detailed to minimise damage and the need for undue maintenance, without undermining the aesthetic and functional qualities that make the places attractive to the community.
- 5B Systems of both regular and reactive maintenance and repair must be implemented to maintain the quality of the places.
- 5C A regular auditing system of CPTED issues in the built environment must be implemented.

Actions

- 5.1 Design places with sturdy materials and fittings that are not flimsy, fragile or inappropriately removable, but without resorting to harsh materials, “industrial strength” fittings or “prison-like security” that might undermine the attractiveness of the place.
- 5.2 Implement a system for the regular removal of rubbish and the maintenance of lighting, signage, landscaping, equipment and other elements of the public realm.
- 5.3 Implement a system to encourage the quick reporting of safety risks or anti-social behaviour in, or damage to, the public realm (for example, by having signage indicating up-to-date contact details).
- 5.4 Implement a system for the prompt cleaning, repair or replacement of infrastructure that is damaged.
- 5.5 Limit vandalism and graffiti by using resistant finishes, systems of quick cleaning, repair or replacement, and by appropriately limiting access. Where possible, engage likely groups in dialogue regarding alternative outlets for their creativity.
- 5.6 Engage community, business and professional groups (for example, the traders in the main street) in alliances for cooperative action to maintain the quality of the built environment.
- 5.7 Require the owners/occupiers of significant buildings (particularly those which provide landmarks, provide surveillance or define major public spaces) to maintain their buildings appropriately.
- 5.8 Regularly review the circumstances of crime to identify changing or new CPTED problems, and the effectiveness of management systems in operation and opportunities for improvements.

6 VULNERABILITY

Some situations and some places make people and property more vulnerable to harm than others.

For example, earlier sections have strongly suggested that having lots of people in the immediate vicinity makes for greater safety. Conversely, it is generally the case that isolated places make people and property more vulnerable. Further, hidden places provide opportunities for unforeseen crime or, in the case of personal safety, lessen the ability to avoid or otherwise respond.

The degree of risk may vary of course from day to night or from weekday to weekend.



Reducing vulnerability with lighting

At the same time, some people in our community may be more vulnerable than others, while some places may be more vulnerable because they promise greater possible rewards for the criminal (for example, at ATMs).

The design and management of the built environment should therefore respond thoughtfully to these greater degrees of vulnerability or risk.

Principles

- 6A The built environment must be designed and managed to reduce or limit risk from assault by providing well-lit, active and overlooked places and pedestrian and cyclist systems and routes to important places.
- 6B The design and management of places must avoid creating or maintaining hidden spaces close to pedestrian/cyclist travel routes in the public realm, in ways that remain consistent with the purpose of the place.
- 6C The design and management of places should provide a variety of routes and other ways to avoid potential or actual problems.
- 6D The pursuit of safety should be delivered in ways consistent with the purpose of the place.



Balancing magnificent views and vulnerability

Actions

- 6.1 Pay particular attention to reducing the risks associated with potentially vulnerable places such as ATMs, 24-hour shops and service stations, bus stops and post boxes or phone boxes at night, institutions where shifts end predictably (especially early in the morning), large carparks (both open and multi-level), the service parts of night-time entertainment areas, large park settings or separate pedestrian/cyclist networks.



Public lifts with glass walls in visible places

- 6.2 Pay particular attention to isolated or poorly-lit places, particularly where the activities and movements of people are easily predicted.
- 6.3 Design landscaping, walls, fences, buildings, passages, bridges, tunnels and street furniture (and maybe public art) to avoid hidden places close to paths or hidden corners, blind spots or bends that create places of concealment which prevent surveillance and limit choices.
- 6.4 Ensure lighting is adequate to permit surveillance and designed not to create strong shadows producing dark places (without setting out to “turn night into day” or being so excessive as to interfere with the appropriate amenity of neighbours).



Underpasses create seriously vulnerable places

- 6.5 Avoid where possible pedestrian/cyclist tunnels, bridges or other movement predictors (especially closed ones) which limit surveillance and response options.
- 6.6 Where vulnerable places cannot be designed, activated or actively guarded to make them sufficiently safe, be prepared to limit or preclude access to them (for example, locking up botanical gardens or some shopping arcades after hours).
- 6.7 In particularly vulnerable places, be prepared to support CPTED principles with mechanical and organised professional surveillance.



Limiting access when and where necessary

Chapter Seven contains several examples of more detailed CPTED approaches to vulnerable places.

As Chapter Two noted, the six Principles must be seen as constituting complementary parts of the CPTED body of knowledge. While sometimes there are competing priorities, as much as possible in any particular situation, individual Actions should not be taken in isolation. A balance should always be sought, both between parts within the CPTED body of knowledge and between that CPTED body of knowledge and other needs.

Chapter Four

CPTED AND THE CHANGING QUEENSLAND

People are central to CPTED.

The practice of CPTED in Queensland must therefore reflect the nature and culture of our society. Who we are, how and where we live, and with whom and in what we live, all shape the way we think of our communities.

The successful practice of CPTED needs to consider the changes that are going on in our community.

In the last decade or so, we have seen significant trends in our society that have implications for our towns and cities as safe and sustainable places.

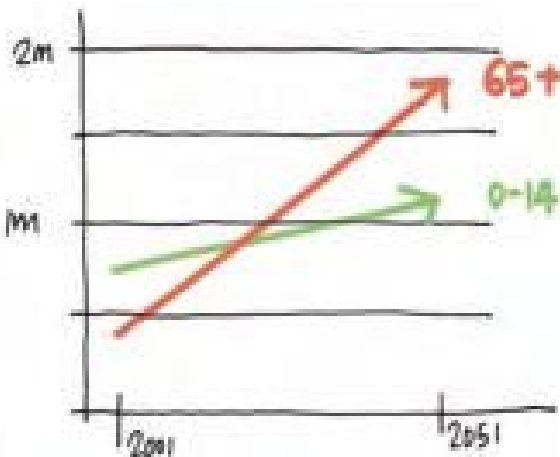
They affect:

- who is home during different times of the day
- who is travelling
- who is in the streets and centres
- who is working and where.

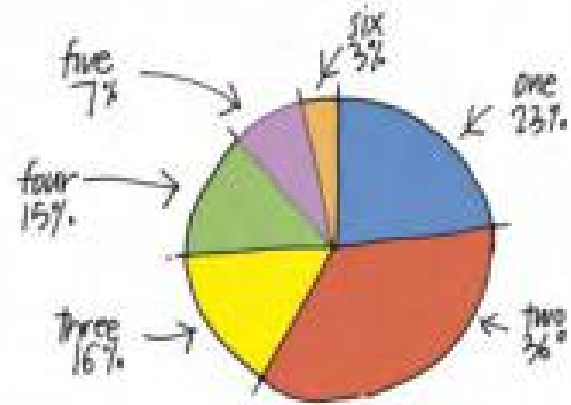
Changes in the nature of our society include:

The continuing ageing of the population

We have more older people (in numbers and their proportion of the community) and therefore *relatively* fewer children. We are expected to continue towards the point where there will be as many Queenslanders aged 65 and over as there are children up to 14 years old. It is likely (certainly desirable) that a high proportion of the elderly will seek actively to participate in the life of our communities. They may represent a more significant group “on the streets and in the town” and they may have widely varying



Expected numbers in Queensland

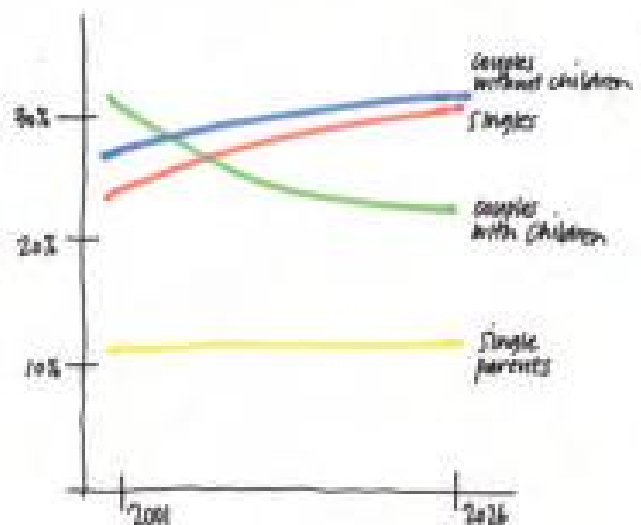


Proportion of 1-6 person households in Queensland

abilities. Equally, with relatively fewer children, the relationship of home to school may be different. More widely spaced schools would mean fewer children walking to them and more reliance on public transport.

The changing nature of households

Queensland has changed significantly since the post-war years. Influenced by people living longer, having fewer children and being more geographically mobile, the average size Queensland household has fewer people in it. In 2006, the number of couple without children households exceeded the couple with children households in Queensland. By 2026 more than 60 per cent of households will be singles



Expected number of people in households in Queensland

or childless couples. So the local community in many places, available to provide surveillance from home or in the public realm, is very different from the mum, dad and kids suburbia of the 1950s, 1960s and 1970s.



Traditional family housing in the suburbs

The changing form of housing

Partly in response to a changing community and changing lifestyles and partly because housing choices have grown significantly, many more Queenslanders now live in medium or high-density housing, rather than the traditional family-oriented detached house with a front garden and a back yard. Further, many of the more recent medium and high-rise residential developments (in Inner Brisbane for example) are occupied by affluent people and such housing is usually managed rather like gated communities. With the South East Queensland Regional Plan proposing to focus greater densities in strategic places, the design of such developments in relation to CPTED principles of surveillance is important. Equally the different households and different housing may well suggest a changed way and extent of using community and commercial facilities, rather than facilities at home, with more people “out in the neighbourhood”.



Expensive apartments in high-rise towers



Affordable apartments in the suburbs

The changing institutional provision of housing

Partly in response to changing lifestyle preferences, a review of organisational roles and practices, and perhaps the ambitions of the marketplace, some major institutions like hospitals and universities have greatly reduced or abandoned a traditional role of providing closely located and safely accessed specialist housing for some workers or students. The different movement of such people, especially after hours, has implications for CPTED.

The changing nature of the workforce and jobs

Queensland continues to see several trends in employment and work which have implications for CPTED. An increasingly high proportion of jobs are compatible with a residential environment by their nature and, connected by the new communications technology, might be located in residential neighbourhoods as work-home places or as separate and quiet neighbours. Secondly, more jobs are part-time which changes conventional travel patterns and the times of use of both public spaces and private domains. Thirdly, increasingly both adults in a traditional family household are formally in the workforce, changing again the nature of “who is home during the day”. All three factors change the nature of residential neighbourhoods (and therefore who is there to provide surveillance), who is out and about at various times and the social context for some children.

The changing nature of communications and lifestyles

There has been a phenomenal growth in the use of new communications technology which has powerful implications for economic and social interactions. Computer-based technology has meant that how we do business with shops, what role a post office plays, how one business sends information to another, how we use cinemas, how we get paid for work, how we access cash, how we access information and more, has already and will continue to change with implications for public space and crime. Equally the escalating use of mobile phones has changed the way many interact and this may effect the way we use public space, for example the calling for taxis or if in danger, for help.



Traditional families with children: important but no longer the most common household

The changing sense of community

Many urban parts of Queensland continue to experience population growth. This urban expansion, plus the changes mentioned above, is seen by some as challenging the traditional notion of “our community”. Certainly for many the “community” is no longer related to the residential neighbourhood, but instead to more geographically scattered people with whom we work or play or worship or learn or other things. We may be less likely to know people we see in local public places or even our street, and certainly less likely to know those we see at sporting events or do business with in big shopping centres. This may have implications for the sense of ownership we feel for what happens in our local community and therefore for its safety.

How then can we relate these changes and the six key principles of CPTED to the design of our neighbourhoods, buildings, spaces and centres?

Chapter Five

CPTED IN URBAN ENVIRONMENTS: EVOLVING DESIGN IDEAS

Queensland cities are changing.

The way many now think about designing neighbourhoods, precincts, city centres, public places and buildings has been changing:

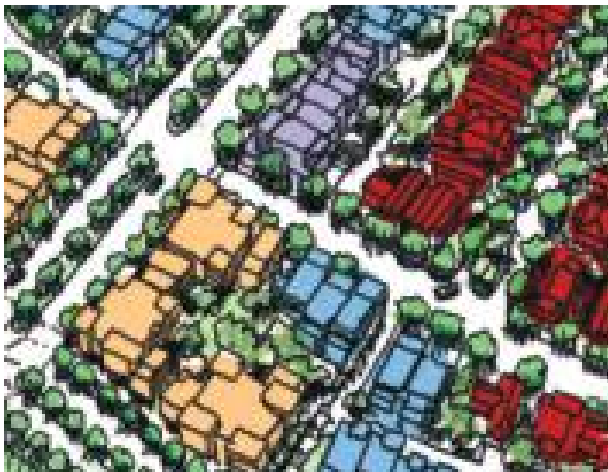
- partly in response to the changes in who we are
- partly in response to the continuing search for what works best (including what works best for CPTED), and
- partly in response to changing and future needs.

If surveillance, territoriality, legibility, a feeling of ownership and an awareness of vulnerability are important for security, the question is how to do this in the built environment of Queensland?

Changes in recent times in how we think we should design our urban environments include:

The mixing of housing and household types in neighbourhoods

Instead of the post-war idea of allocating separate areas for different types of housing, particularly separating detached dwellings from most others, there is now substantial support for creating neighbourhoods with a wide range of different housing and therefore household types. This provides for a more complex social mix, which some argue is an essential element of a socially sustainable community, in part because it allows people to stay within a neighbourhood while their housing needs change over time. Such neighbourhoods could in



The mixing of housing in neighbourhoods

theory see a mixture of housing types that cater for families with children, young or old couples, empty-nesters, old or young singles and more. Those housing forms could include apartments, small-lot or conventional detached dwellings, groups of units, terrace houses in groups or on individual lots and more. Such mixtures are already to be found, for example, in many “desirable” inner urban traditional neighbourhoods.



The sharing of a street by different housing and household types

This has implications for:

- who lives in the neighbourhood and when they are there to provide potential surveillance
- what is their lifestyle and how much of that is carried out within the local area, local centres or much further afield, and
- what is the nature of local social interactions and hence the sense of local community and commitment to security.

In turn, do some particular environments make such mixes easier than others to accommodate and easier to create strong CPTED-friendly outcomes?

The mixing of land uses in precincts

Equally the post-war era idea of separating different land uses into different areas was an attempt to limit feared negative impacts from one use to another. However, there is now substantial support for the benefits to be gained from mixing a variety of land uses in the one area. Such mixes include denser forms of housing mixed with retail, office, transport, educational and entertainment uses. There are



The mixing of apartments and shops, offices and education in lively mixed-use precincts

examples throughout Queensland in both existing and new precincts. This follows both the changing nature of many jobs (noted earlier), the recognition of the low impact of many shops and workplaces on their neighbours and perhaps a desire for the local lifestyle and urbane environments such mixes foster.

This radical change from planning ideas of only a decade or so ago has strong implications for:

- who is the local community
- who is on the streets and in the public places and at what hours
- who is around to watch the streets and places and at what hours
- who is coming and going by public transport and at what hours
- how legible and territorially-defined are these places, and
- what are the issues of management and by whom.

Equally, are some urban design layouts better at this than others?

The importance of connectivity

One of the most significant changes in recent times has been the recognition of “connectivity” in the urban environment as a key strategy for many sustainable outcomes, including CPTED.

Connectivity is the extent to which different parts of the neighbourhood (and, in turn, different neighbourhoods) are “connected” so that movement — especially on foot, but also by bicycle, car, public transport and emergency vehicle — is easy, legible, reasonably direct and appropriately flexible. Highly connected places therefore encourage movement and thus potentially deliver better CPTED outcomes because more people are out and about in the neighbourhood and able to provide surveillance.

The approach to cars and people: mixing it

Up until perhaps the late 1980s, neighbourhood planning sought to limit traffic speeds and volumes “indirectly” by designing the neighbourhood to limit property numbers in each street or even to physically separate pedestrians from streets with vehicles. The goal was to make the pedestrian experience physically safer (from accidents with cars) and more pleasant. Influenced in no small part by emerging CPTED analyses in residential areas and a move towards the “outdoor café society” in centres, there is now strong support for the idea that pedestrians and slow moving vehicle traffic can be closely located (for example, wide beautiful footpaths beside urban streets).

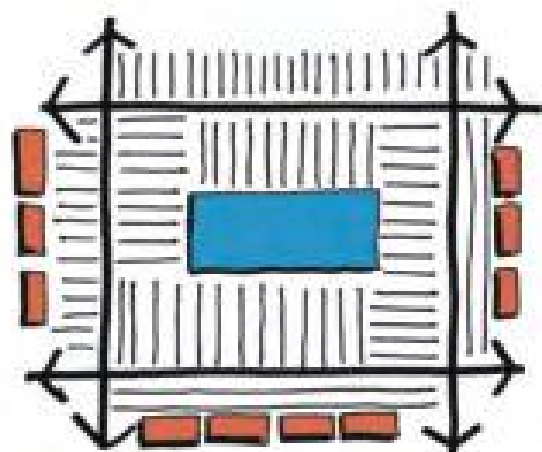
This approach to the design of streets seeks to integrate landscaping, streetscaping and micro traffic control devices to create pedestrian and residential or urban amenity while “managing” traffic behaviour “directly” at this detailed level, rather than “indirectly” through the overall layout.

Many important social benefits, including better CPTED outcomes, result from this approach including the potential surveillance by people in cars and greater legibility, territoriality and ownership.

Equally there has been a lessening of support for converting streets to pedestrian malls, except in the most economically active of contexts. This may have implications for some of the earlier streets-turned-malls which may be difficult spaces after hours with little activity, mainly closed commercial frontages and no passing traffic.

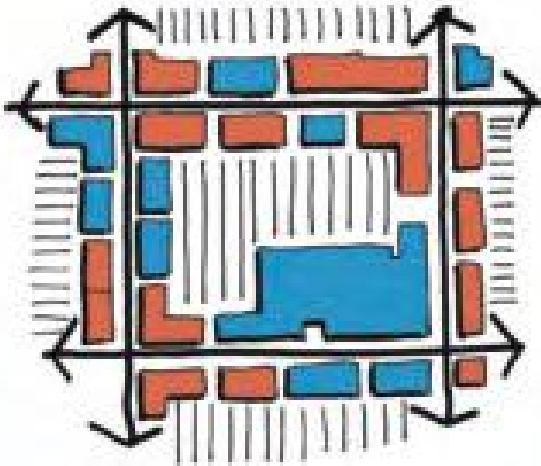
The urban design of centres and major places

Pedestrian malls were in the 1970s a response to the marketing challenge posed by the new big private centres. From the 1960s, the development of such large car-oriented enclosed shopping malls, surrounded by



large areas of carparking and separated from other areas, has been the dominant approach.

In recent years, however, partly in response to the changing ideas about land use mix, connectivity, pedestrian/vehicle spaces and CPTED understandings, there has been a swing back in urban design thinking towards the traditional mainstreet-based centres that most 19th century and many 20th century Queensland towns and cities display. This urban design thinking encourages a pattern of interconnected streets with footpaths creating a range of sites for a variety of buildings, uses and civic places.



Such centres are very different from the big boxes which often have blank inactive outside walls and large troubled carparking areas, especially after hours. The more connected “grid” street-based centres are said to offer many long-term advantages, including an ability, under some circumstances, to integrate the controlled private environment of the “big box” into the activated street network.

The shift in thinking has in no small part been influenced by the CPTED-relevant learnings about surveillance, legibility, territoriality, management, vulnerability, connectivity and sense of ownership by the community.



Traditional mainstreets with mix, character, activity and surveillance

The importance of the public realm

All the changed emphasis on pedestrian movements in residential and mixed-use neighbourhoods and centres has placed greater focus on the quality of the community’s public realm of streets, footpaths, parks, civic plazas, foreshores and the like. Indeed, there is a growing community expectation for a high quality public realm that is attractive, safe, accessible, varied, sufficient in size and extent, interconnected and equipped. There is a growing consensus that achieving this type of public realm is an essential part of making successful and sustainable towns and cities for Queensland.



Main streets with active edges and good visibility from buildings, people and vehicles

This change has great CPTED impact for it sets out, by greater landscape quality, to promote greater enjoyment and use of public places especially by pedestrians and cyclists.



High class public realm with good visibility

The importance of public transport

After decades of continuous promotion of the private use of motor vehicles and constantly declining public transport patronage, there is now greater urgency and community commitment to enhancing or expanding public transport systems in significant areas. Perhaps driven by rising fuel costs, unavoidably increasing congestion and demand for parking, by changing work and lifestyles and by growing concern for global environmental issues, patronage is increasing again in various places and greater increases are forecast. The South East Queensland Regional Plan, for example, in the pursuit of regional sustainability, places great emphasis on strategies to coordinate and link transport nodes with surrounding land uses likely to support increased patronage.



Visibility in public transport nodes

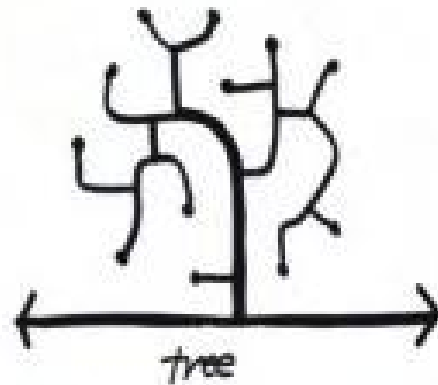
The greater use of public transport has implications for such CPTED questions as:

- who is travelling and at what times?
- how safe are the routes between home and transport and between transport and destination, and therefore what are the supportive land use and public realm arrangements?
- how closely can transport be provided safely to neighbourhoods or major places and should any new ones be allowed without safe connection to transport?
- what is the sense of community of those who regularly use such transport?
- how secure is the transport itself?

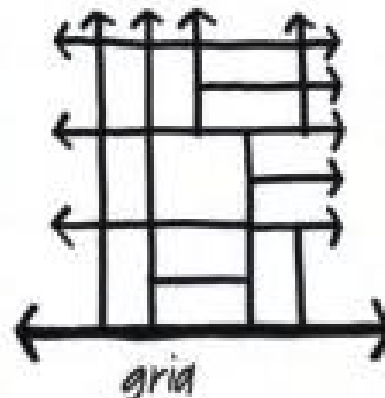
The application of CPTED practices to transport services is an integral part of promoting their use and hence a sustainable Queensland.

The urban design of neighbourhoods: grids and trees

Partly in response to changing ideas about connectivity, cars, people and mixes of land uses and partly from observation of more traditional Queensland precincts, ideas about how best to design neighbourhoods, especially with a significant residential component, have changed. In the 1970s and 1980s, the most significant design fashion (in the pursuit of safer, less trafficked and therefore more pleasant residential streets) was for “tree systems” with many separated and poorly or circuitously connected cul-de-sac ends, and with one tree usually not connected to the next, except by the main road.



Many now argue for a return to more traditional interconnected “grid” neighbourhoods with streets connecting many times with other streets which are often (but not always) in relatively “simple” lattice layouts. The essential feature is high street connectivity. Such neighbourhoods are to be found in many areas of Queensland and Australian cities and towns dating from the early days through into the second half of the last century, and represent some of the most desirable, high-amenity and affluent localities.



This change has been supported by experience and research that suggests well connected neighbourhoods (as distinct from more separate “tree” system neighbourhoods):

- provide choices and flexibility of route (you don’t have to go out and come back the same way, especially if the garbage truck is working, or there’s a street party, or one route is steeper than another);
- encourage walking and cycling;
- provide for a desirable range of local street environments, providing opportunities for different characters, uses and functions;
- allow traffic to be managed at the detailed level;
- permit or facilitate public transport access;
- facilitate the inclusion of a range of housing types and land uses;
- are likely to be more legible; and
- are better able to accommodate desirable change over time.

Such radical changes to previous industry “best practice” have significant implications for CPTED.

Public transport, for example, usually can’t operate doubling in and out of a series of unconnected tree systems of culs-de-sac one after another. Instead, it will stay out on the main road decreasing the likelihood of it being used, making the walk to it longer and less safe, and perhaps delivering more lonely bus stops. Having a connected lattice enables a route through a sequence of adjoining neighbourhoods to be chosen, perhaps going past local shops and facilities, overseen by housing, and so delivering a better CPTED outcome.

Encouraging walking and cycling (and where motorists can see them), promoting walking to and from public transport, and having a variety of uses and therefore people in and around the neighbourhood, are all good ways of increasing safety.



Having highly legible layouts might itself encourage use of the public realm and facilitate a sense of ownership.

Such experience is therefore consistent with the learnings about CPTED, and evolving CPTED practice has been influential in this in-principle shift in Australia from “trees” back to “grids”.

Separate systems or “Radburn” estates

In line with this move to grid systems, urban design thinking has moved away from ideas of strongly separated pedestrian and traffic systems such as that “invented” in the Radburn project in the United States of America in the late 1920s and subsequently practised decades later in various Australian estates.

These projects typically ran pedestrian lanes broadly parallel to the streets but on the other side of the houses, thus inviting each house to have two separate directions of entry and access.

Their designers were seemingly responding to a fear that cars, especially moving quickly, would dominate residential environments and make streets and neighbourhoods physically unsafe.

At one level this is a reasonable concern, especially if streets are designed to facilitate fast car movements, but the solution created other problems of a social CPTED kind.

Such estates have been found to create:

- territorial ambiguity (which is the front door and which the back, or are there two front doors?),
- illegibility (including for emergency services: have they driven into the wrong tree and must go back to the beginning?),
- reduced privacy and reduced security in the otherwise more defined and controlled backyard, and
- if, in response to this reduced privacy and security, the backyard becomes fenced, significant security issues with the now “back-of-fence” narrow often largely-hidden pedestrian lanes.

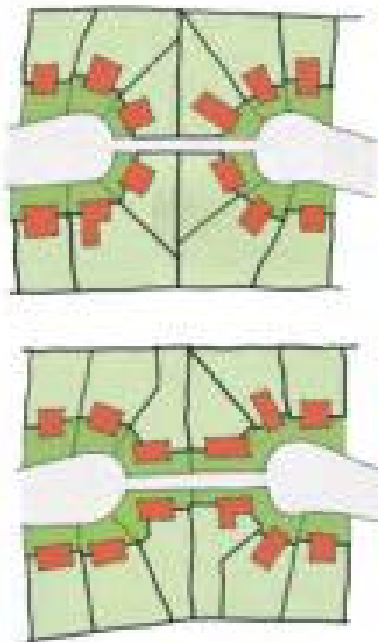
Such estates have been found to make it difficult to deliver a safe residential environment. In various Australian neighbourhoods, programs have in recent decades even set out to physically and legally close the back lanes.

Culs-de-sac and narrow paths

In some tree-system neighbourhoods, the reduced pedestrian connectivity (for example, between one tree and another, or from the tree to an adjacent road with public transport) has led to the development of pedestrian pathways at the cul-de-sac head, typically running past the side fences defining the (two or four) backyards of adjacent house properties.

Sometimes such narrow connecting walkways have been used even when culs-de-sac are not.

Such pathways have become challenged for they also can reduce the security, privacy and amenity of adjoining properties and, unless the adjoining housing is specially designed to face and overlook the side walkway (usually at some cost to its layout and private garden area), they also provide hidden spaces, even when well-lit at night (which again can reduce the amenity of the housing).



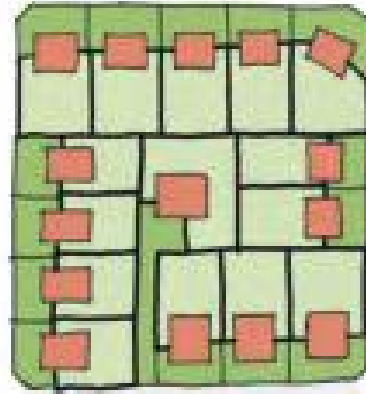
Turning houses to provide surveillance of paths

The view increasingly is that such design devices are at best stop-gap and questionable and do not overcome what many increasingly see as the inherent difficulties of tree systems.

Battleaxe or hammerhead lots: “embedded”

The same issue occurs in part with development that tries to be cost “efficient” by minimising expenditure on roads through using “battleaxe lots” (named after the plan shape).

The up side is that the house lots might seem to some as “hidden away from trouble” and desirably provide a different house type to add to the local range.



Battleaxe blocks creating questions?

The down side is that such lots:

- contribute little if anything to passive surveillance of the street
- potentially create “side lane” problems of loss of privacy, amenity and maybe security for the backyards of the other house lots, and
- potentially create problems of legibility (“where is number 14?”) and resident and visitor parking and manoeuvring.

Friction between neighbours, caused or enhanced by the design of the built environment, may have implications for the shared sense of ownership of safety outcomes.

Some would argue that it is better to do such lots in pairs (with a shared driveway and, taken further, the shared lane might become a public laneway?) while others suggest they are best delivered only with large lot sizes (which raises questions for sustainable urban development).

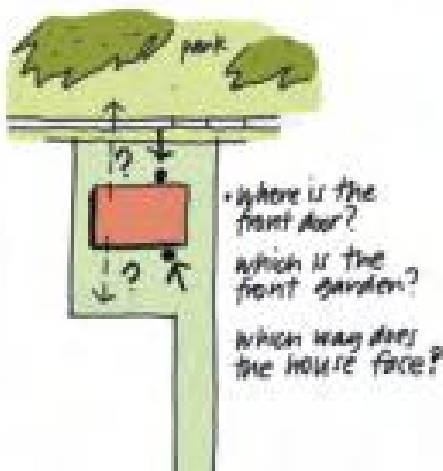
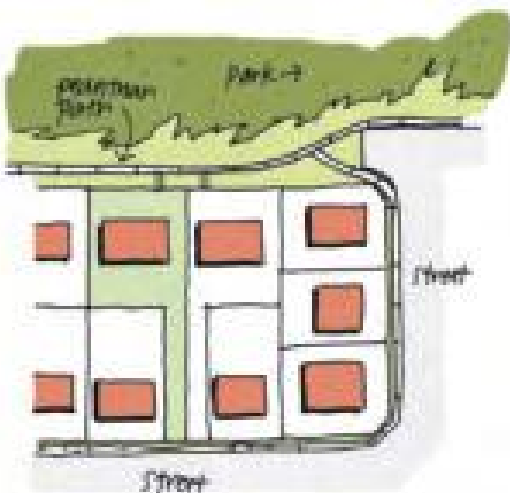
Battleaxe blocks with a view

Sometimes however, the hammerhead blocks have a view: onto a park, waterway, beach, fairway or other desirable community or group asset.

That might, on balance, be a reasonable outcome if (besides the normal battleaxe issues) it nevertheless delivers strong surveillance from those houses to the park or other community asset.

But the design of the housing is not always easy, for where is the front door? Does it face the hammerhead driveway or the adjoining asset? How and where do visitors arrive? Do the residents arrive by a different route? How does the housing give itself private outdoor space without cutting off its ability to overlook (and provide surveillance to) the beach?

One response has been to put a pedestrian path along the edge of the waterway or park for visitors and others in the area and to treat the driveway as nothing more than a service entry for the residents.



Rear access blocks raising questions?

So the CPTED issues then include:

- the safety of pedestrian visitors walking from their car parked further away
- the distance and terrain they have to walk and whether all are physically able to do so, and
- the security of the now service driveway — is it gated at the rear street?

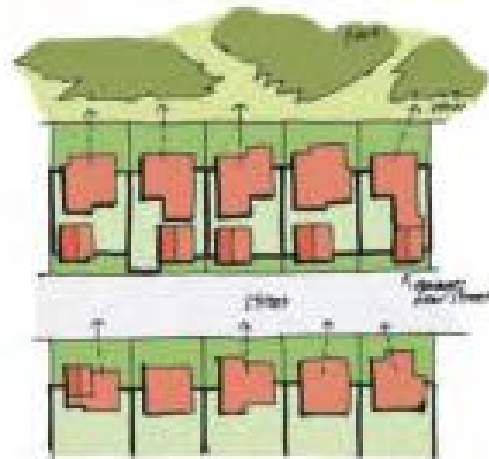
Battleaxe layouts might sometimes be good, but the detail is critical.

Conventional house lots with views

Frequently developments have taken advantage of the beautiful views with “conventional” lots (not battleaxe ones).

It has been common practice in golf course and canal estates to line the green/blue asset with “desirable” house lots with direct water/green space access. Canal lots almost always have no public pedestrian boardwalk interrupting their access although the golf course lots might see some community pedestrian link along the side of the fairway.

These solutions deliver potentially good surveillance and “ownership” of the beautiful landscape. If that “ownership” however were to be so strongly felt that residents tried to discourage others from legitimately enjoying the area, this interaction would not be a good CPTED outcome.



Streets where some win and some lose?

A worse CPTED outcome arises if the houses enjoying the view are designed in ways that “turn their backs” towards the supporting street. If they strongly face the view with most of their living spaces and present only garage doors, service areas and entries towards the street, they:

- fail in their community duty of surveillance of that public street

- in doing so, arguably send a symbolic message to their neighbours opposite about where their “community ownership” is directed with properties opposite
- symbolically divorce those neighbours opposite from much sense of connection with the beautiful community asset (“who can tell if it’s in their neighbourhood?”), and
- frequently visually divorce the landscape feature from the rest of the neighbourhood so that it no longer contributes to the legibility of the area.



Canal estates: ultimate examples of turning the back on the street?

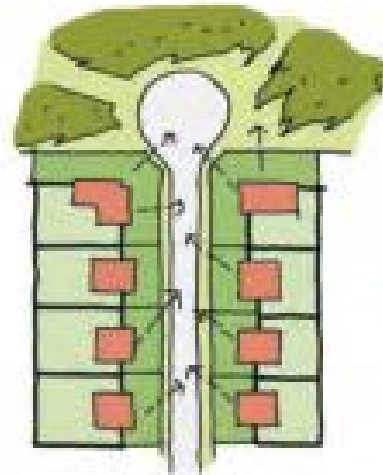
Presumably, those developing such estates consider the private profit to be made from the houses with the exclusive views more than compensates for the lower return on the other houses with none. However, the CPTED implications for the whole community should be a part of this calculation.

Houses with views and many others sharing the asset

With respect to enjoying the park, seafront or other landscape feature, increasingly some argue that it is practical to have a win-win outcome where many others are able to share the community asset.

Such approaches arguably:

- still deliver houses fronting the view but ones that now do not turn their backs on the others
- allow the remaining houses to feel connected to, and a sense of ownership of, the landscape feature
- encourage access to and use of the landscape asset, enhancing its safety
- increase the desirability and market value of the other housing, and in the process
- enhance the legibility and territorial definition of the area.

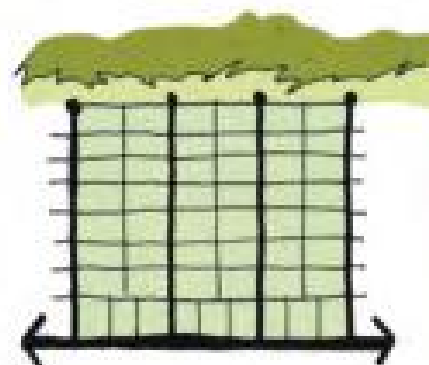
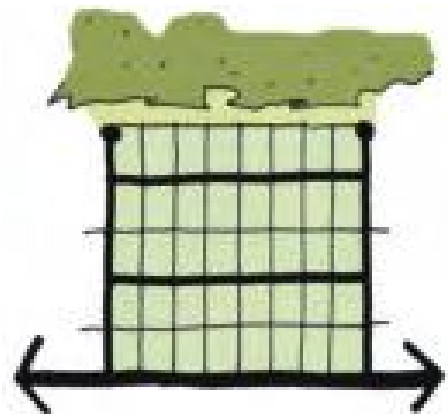


Streets where everyone wins?

Such approaches have, of course, been practised historically in many Queensland towns and cities, and contemporary urban designers are suggesting them again as practical and marketable responses consistent with CPTED principles.

Esplanade approaches: facing it

These ideas of designing for all to participate in the safe enjoyment of parks, seafronts and the like are complementary to the growing acceptance, indeed promotion (as discussed in section 4 of this chapter), of carefully mixing slow-moving cars and cyclists with pedestrians in shared street and civic places.



Together they are changing the way neighbourhoods and centres are being designed with respect to such community open spaces and civic assets.

Contemporary thinking is moving away from allowing these assets either to be edged directly by private development or merely to insert a pedestrian walkway between that private development and the community asset of park, river and such.

So confident is the belief in the surveillance and accessibility outcomes of public streets with cars and with people on footpaths that increasingly civic spaces and assets are being edged by urbane streets.

There has been a seemingly logical CPTED-oriented progression from the private canal-front to the public street edge.

Such designing is, of course, not new and is to be found in the great seaside and river esplanades of many Queensland towns.



An historic esplanade

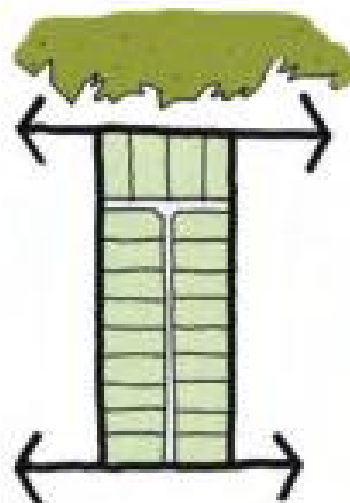


Rear lanes in support?

The facing of development onto streets and public spaces is important for their quality and security. That strength of surveillance and the quality of the pedestrian realm (in turn encouraging use) might be enhanced if the frontage were not broken by many driveway access points. However the problems for the next street “behind”, if the development “backs” onto it, have been noted.

One response has been to introduce rear lanes that provide vehicle and service access without setting out to give access to front doors or wanting to attract pedestrian use.

This is not a new idea for many older Australian neighbourhoods have the traditional nightcart lanes, sometimes associated with detached bungalows and sometimes with rows of 19th century terrace houses.



City and tropical playground connected by an urbane environment

The problem is the potential of these vehicle lanes themselves to become hidden out-of-the-way places. They are inevitably wider than narrow pedestrian paths but are:

- usually longer
- usually lined by high fences
- sometimes with hidden corners created by the neighbourhood layout
- frequently with concealed spaces at the level of the lane created by the detailed design of car access points
- usually technically “efficient” and without landscaping
- not expected to provide an attractive outlook and therefore offer little surveillance (if at all)
- perhaps poorly-lit, and
- inactive out-of-hours.

Does one then abandon them to their utilitarian vehicle/service use (hoping everyone stays in their cars until safely inside buildings) or require that development be designed or inserted to provide surveillance? Should they, like the “mews” of London, be made attractive and desirable (albeit narrow) streets and frontages?

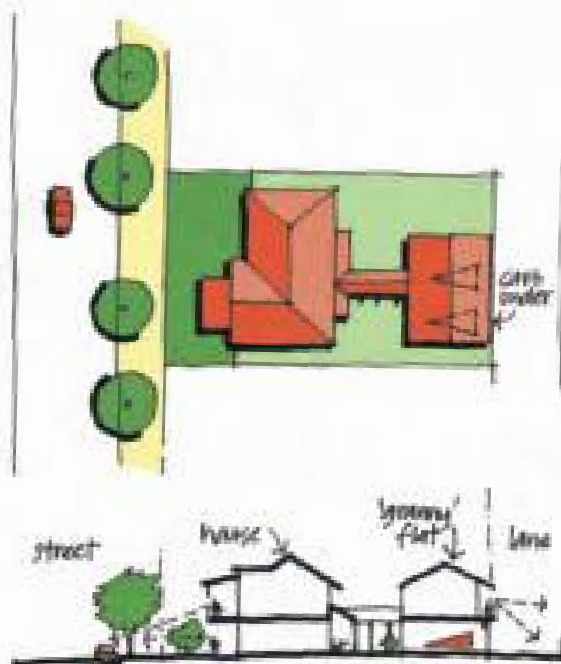
Does the answer therefore lie in never (or rarely) having rear lanes or instead in proactive detailing the design and mix of land uses to make them safe?

Granny flats to the rescue?

In areas of low to medium density housing, for example, with backyards and garages lining such rear lanes, some argue that further housing (for example, studios or “granny flats”) should be placed on top of garages (without planning penalty), precisely to provide some surveillance of the laneways (and also adding to the diversity of housing types in the area).

In some older neighbourhoods, where property dimensions are generous enough (and the needs of the existing dwellings fronting the larger streets can be met while still leaving reasonable land and frontage), the areas abutting such lanes have provided opportunities for significant infill housing with the laneways becoming “address streets” themselves.

Laneways that assist buildings to support great streets and public places are desirable, but only if they do not become significant problems in themselves. As in all CPTED issues, it is a matter of balance.



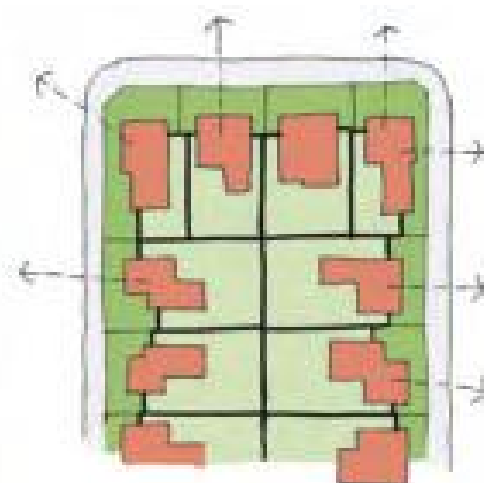
Can rear lanes and granny flats deliver a good outcome?

Fronts and backs

Many of the urban contexts and the design approaches adopted in them therefore raise two issues of what some term “fronts and backs”.

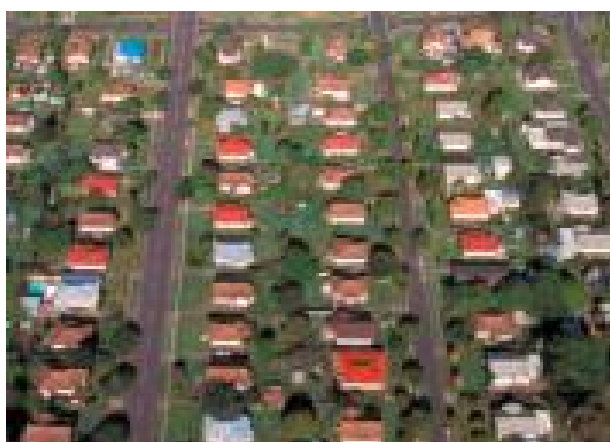
Firstly, which is the front of the development and which is the back (if any)? Does the design create ambiguity and a loss of legibility, and in so doing, create a security problem? Do peoples’ practical responses to the loss of privacy and security create further problems?

And secondly, does one development present its “back” to the front of another development or to the public realm and, in so doing, lessen surveillance or amenity and hence use and commitment to community security?



Such questions arise in Radburn estates, canal and golf course developments, battleaxe blocks, areas of mixed use and more. The best CPTED outcomes call for not only informed urban design of neighbourhoods (to maximise the chances of a good outcome), but also for detailed understanding at the architectural and landscape interface of buildings and public realm (to use flexible responses to design out problems).

For example, the detached house form, so common historically in Australian towns and cities, is usually very legible. It is clear which is the front and which is the back, which is the front garden and which is the backyard. There is enhanced security in both the legibility and in the cooperative control of access into backyards.



Backs to backs and streets with fronts

But corner sites have two fronts and need to assist the community by responding accordingly.

Equally, two storey houses provide good potential for increased overlooking of the street, but how to balance this with their increased potential to lessen the privacy of neighbouring properties? Designs need to consider where windows in upper storeys occur.

Australian houses are usually strongly connected to their front and back garden spaces. Other housing forms, however, such as multi-storey apartments, may place less emphasis on connecting privately-controlled garden area directly to adjacent ground-floor units and instead allow “group-managed” garden space to adjoin the bottom units. In such cases, care needs to be taken in delivering legible territoriality, privacy and security.

On the other hand, apartments on upper floors can provide passive surveillance in several directions (not constrained like single-storey houses with back fences or, by their nature, looking to provide multiple aspects for multiple tenancies). This advantage

should be a factor influencing how and where apartments are located. They can, for example, be important supports for community surveillance when placed at corners.

At the same time, the higher buildings go, the less



Podium carparks, even with active street edges, still putting the residential eyes too high for the street?

the sense of connection with the public realm at the ground level and therefore the less the potential sense of ownership of security outcomes. Research suggests the first four or five storeys are critical for delivering passive surveillance. Hence it is vitally important that these frontages are not blank or “dead” when overlooking important neighbourhood or town centre streets and community places.

In conclusion

Different urban design and planning approaches to residential neighbourhoods and centres thus have varying strengths and weaknesses when it comes to “designing out crime”.

Chapter Six offers design principles and detailed actions in relation to six types of development.



Podium carparks sleeved with active uses providing eyes on the street

Chapter Six

CPTED GUIDELINES FOR SPECIFIC URBAN ENVIRONMENTS

Chapter Three canvassed six key principles of CPTED.

So how then to apply an understanding of these principles to different urban settings?

1 THE DESIGN OF PRECINCTS AND NEIGHBOURHOODS

Principles

- 1A Neighbourhoods must be designed and developed to promote surveillance of the public realm and community ownership of the neighbourhood's security.
- 1B Neighbourhoods must be designed to facilitate walking, cycling and the use of public transport.
- 1C Neighbourhoods must be designed developed and managed in ways that promote their social, economic and environmental sustainability.

Actions

- 1.1 Require neighbourhoods to be designed with high levels of physical connectivity for pedestrians, cyclists and vehicles, both within the neighbourhood and to adjacent neighbourhoods (and use poorly-connected tree systems only in the most significant of topographically constrained locations).



Suburban streets with vehicles, cyclists and pedestrians

- 1.2 Co-locate pedestrians, cyclists and vehicles in streets and design the various street environments in detail to deliver appropriately high (but possibly varied) pedestrian amenity and safety (through, for example, micro traffic management devices and the relationship to buildings).
- 1.3 Ensure all public streets are strongly overlooked by appropriate buildings.
- 1.4 Ensure all streets with a strong pedestrian role are not backed onto by developments that severely limit the opportunity to overlook the street.
- 1.5 Provide a variety of gathering places within the neighbourhood for stopping, sitting, resting, looking and interacting to encourage community ownership and the creation of shared social capital.



Public parks overlooked by apartments

- 1.6 Ensure each community public space is strongly overlooked from all adjoining buildings and their compatible uses.
- 1.7 Ensure that community space is defined on at least half its sides by public streets (or esplanade edges to rivers, parks, foreshores and the like).
- 1.8 Promote, develop and locate a variety of housing types in the neighbourhood to accommodate a variety of household types to enhance passive surveillance at a wide range of times during the day and to encourage a more enduring sense of community.



Public park edged by an esplanade and overlooked by restaurants and apartments

- 1.9 Design neighbourhoods to promote a variety of compatible land uses within the neighbourhood to encourage local access and surveillance (for example, by including local shopping, office and community uses) and to facilitate sustainable change over time in line with evolving needs.
- 1.10 Require neighbourhood urban design which enhances legibility and way-finding (for example, by the easily-understood structure of its street layout and the way it creates vistas towards, or otherwise celebrates, important natural features and buildings).
- 1.11 Further promote legibility, amenity and territoriality through a deliberate variety of landscape and architectural design approaches to the pursuit of environmentally sustainable development.
- 1.12 Design to facilitate public transport services within and through the neighbourhood and provide transport stops and routes that are safe, legible and attractive for all users.
- 1.13 Avoid narrow pedestrian pathways between or behind development (for example, at cul-de-sac heads) and sound barriers and fencing which remove or reduce surveillance.
- 1.14 Use battleaxe blocks and/or rear service lanes only with significant attention to design detail on surveillance and other necessary CPTED issues.
- 1.15 Design to include and integrate institutions (such as retirement villages, churches or schools) which might otherwise seek more isolated “gated” locations.
- 1.16 Design to integrate neighbourhoods with centres rather than separating them into defined areas for housing, shopping and support pedestrian/cyclist movement to and from these areas.

- 1.17 Avoid creating any roads, other than perhaps the most heavily trafficked highways, with no potential for surveillance, particularly if there is likely or intended pedestrian use on their edges (for example, from night-time transport).

2 THE DESIGN OF BUILDINGS

Principles

- 2A Buildings and their sites must be designed to promote passive surveillance of adjoining public realm and community ownership of safety outcomes.
- 2B Buildings and their sites must be designed to enhance neighbourhood legibility, territoriality and community pride.
- 2C Buildings and their sites must be designed to be defensible without lessening their proper character and function or their supportive relationship to adjoining public realm.

Actions

- 2.1 Design buildings and their sites to maximise informal surveillance of the adjoining public realm.
- 2.2 Ensure activities on the ground floor promote surveillance and design, where possible, for inside/outside activities which enhance this (for example cafés and restaurants in centres or actively used garden spaces in housing).



New cafes into the street level of an existing carpark

- 2.3 Minimise the extent of “dead” elements (such as carpark entries, locked lobby spaces, rubbish enclosures and service lockers) at the ground floor on the main street frontages.

- 2.4 Design and landscape any site at the ground floor between building and the street or civic space in ways that do not interfere with surveillance (for example, front fences no more than 1.2 metres high or 1.8 metres if at least 50 per cent transparent).
- 2.5 Ensure the uses and design of those parts of the building's second to fifth storeys that are adjacent to the public realm of streets and civic places also strongly support surveillance.



Even in praised buildings, tall podium carparks fail to deliver eyes on the street

- 2.6 Avoid substantially blank facades (no more than one third to be blank) or uses (such as above ground podium carparking arrangements) which prevent overlooking of the public realm (if necessary by significantly “sleeving” them with active uses on the streetfront to provide the surveillance).
- 2.7 Locate and clearly define building entries on the main street frontage and design them to be:
 - visible from the street
 - well identified by legible signage (day and night, and from the street)
 - well-lit internally and externally
 - without physical or lighting concealment spots adjacent to the public realm, and
 - with lobbies visible from outside.
- 2.8 Locate and design staff entrances, if separate from public entrances, to be:
 - well-lit
 - preferably also on main street frontages
 - overlooked from within the building and if possible also from the public realm, and
 - with an overlooked, well-lit and thoughtfully-designed route to car parking or the general public realm.



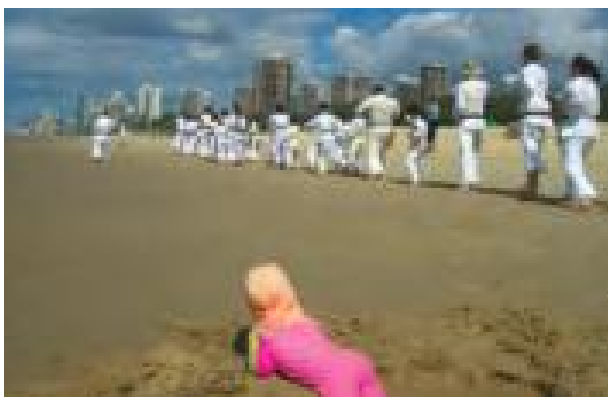
Legibility from a clearly defined entry

- 2.9 Thoughtfully manage the balance between physically “target hardening” the building at ground level with security details (such as grilles, solid shutters, locks and other “fortress-like” responses) and the need to contribute to the safety of the adjoining public realm.
- 2.10 Manage, reduce or prevent the extent to which a building looks so closed up that surveillance of the adjoining public realm is unlikely.
- 2.11 Ensure essential services (like public toilets and parking for the disabled) and confined circulation systems (such as ramps, lifts, escalators and stairs) are located and designed in secure accessible areas or protected by activity or surveillance.
- 2.12 Thoughtfully manage the balance between a building's functional need in some Queensland climates (for example, subtropical or tropical) to be physically open to encourage passive cross ventilation and its need for security.
- 2.13 Thoughtfully manage the balance between a building's physical need in some other Queensland climates to be “closed up”, or its social need in certain climates to provide privacy (for example, by screening with lattice work on a Queenslander's verandah), and its contribution to community overlooking.
- 2.14 Locate site areas or external parts of buildings with little or infrequent use (for example, loading docks, service bays or storage areas after hours) in non-critical places and, if unable to be given appropriate surveillance from within the building, protected from illegitimate access by securing/locking them away.

3 THE DESIGN OF THE PUBLIC REALM

Principles

- 3A The public realm of civic spaces, parks, plazas, footpaths, urban streets and other shared community spaces that connect the buildings of the community must be located, designed and managed in ways that encourage its legitimate use and hence its security.
- 3B The interface of the public realm with the buildings that define and adjoin it must be located, designed and managed to promote informal surveillance and use.



Seeing others using the public realm

Actions

- 3.1 Design, develop and manage a range of public spaces, either in separate and appropriate locations or as parts of a larger community asset, that cater for the different needs of different groups within the community, to promote community activity and ownership.
- 3.2 Design, develop in detail and maintain parts of the public realm in ways that both make obvious their range of legitimate community or individual uses and encourage their use.
- 3.3 Thoughtfully design and manage the natural landscaping and other urban landscape features of the spaces to provide an appropriate level of surveillance, both within the space and into it from outside.
- 3.4 Design and manage the public realm in ways that respond to different day/night or weekday/weekend contexts.



Balancing visibility and amenity in playgrounds

- 3.5 Design to ensure the pedestrian and cyclist (and managed slow-moving vehicle) movement *through* or along the edges (the esplanade approach) of parks, plazas and other community spaces, adds to surveillance and enjoyment in ways that do not interfere with the activities of others in specific parts of the area who have come to spend time there for that purpose.
- 3.6 Thoughtfully design those community places that provide opportunities for connecting with nature, seeking privacy and quiet contemplation, or other legitimate more secluded uses in a way that balances this with the security advantages of surveillance by others.



Balancing visibility and amenity in parks

- 3.7 Design and manage spaces (including public artwork, other landmarks, signage, views within and out of the area, in addition to the basic structure of spaces and their movement systems) to enhance legibility.

- 3.8 Engage with community groups in the design and management process to acknowledge heritage and other cultural issues, and build community ownership of the outcomes (see Principle 4: Ownership of the Outcomes in Chapter Three).
- 3.9 Ensure buildings that define the edges of public spaces or overlook them are supportive in their design and use (see section 2: The Design of Buildings of this Chapter).
- 3.10 Carefully consider, when placing active uses (such as cafés) in relation to park or plaza spaces, the relative and contrasting advantages of putting them deep within the place or at its edge.
- 3.11 Recognise the importance in design and management of attention to detail (refer to Chapter 8 for specific case examples).
- 3.12 Recognise the importance of accurate, appropriate and well located signage.



Community space overlooked from buildings

4 THE DESIGN OF CENTRES

Principles

- 4A District, town, city and other significant activity centres must be designed, developed and managed to promote surveillance of the public realm and shared ownership of community safety.
- 4B Centres must be designed, developed and managed to facilitate access to and movement within them by walking, cycling and public transport, supported by appropriate private vehicle usage.

- 4C Centres must be designed and promoted to accommodate a range of appropriate uses connected by a public realm of high quality.

Actions

- 4.1 Promote surveillance by requiring the urban design layout and structure of centres to provide high connectivity for pedestrians, cyclists, public transport services and slow-moving vehicles (for example, by adopting lattice/grid and main street approaches) to encourage pedestrian activity in particular.



A history of mainstreets

- 4.2 Provide a high quality public realm that is attractive and of appropriate human scale for pedestrians as the central part of that connected layout and in ways that provide continuous accessibility (without being broken frequently by crossing “dead” areas like carparks).
- 4.3 To promote accessibility, surveillance and legibility, deliver the pedestrian realm in ways that usually share places with cyclists and vehicles (for example, by traditional urban streets with generous footpaths).
- 4.4 Promote a wide range of uses and activities in centres to encourage pedestrian trips, to cater for a wide range of groups (including youth) within society and to expand the potential community available to provide informal surveillance and to have a shared sense of ownership of safety outcomes.
- 4.5 Thoughtfully balance the advantages and disadvantages of either a multiplicity of developers and owners or a single master developer/owner of a major centre of activity.

- 4.6 Both locate different uses and activities within the centre and, in turn, design them in ways that promote both long hours of legitimate use (perhaps by selective concentrations of night-time uses) and supportive and creative interactions (thus promoting the social and economic sustainability of the place and community) without losing sight of occasional potentially difficult impacts (for example, some forms of after-hours servicing versus residential amenity which might prove hard to resolve by good detailed design alone).
- 4.7 Promote the inclusion of well-designed and thoughtfully-located urban housing in centres to enhance surveillance, street activity and ownership of outcomes.
- 4.8 In the development (and renewal) of centres over time, stage and locate development with an emphasis on ensuring the centre “stays together” at all times so that its connected public realm “grows outwards” and does not have big gaps which might create surveillance holes and lessen the sense of “place” and safety.
- 4.9 Ensure that centres are also “connected” to their surrounding neighbourhoods, preferably by strong CPTED-consistent linking development (rather than more barren areas for future development) and by high quality pedestrian, cyclist and public transport routes.
- 4.10 Within the connected centre, locate and design key buildings and civic spaces in ways that use their landmark qualities to further enhance community legibility and pride.

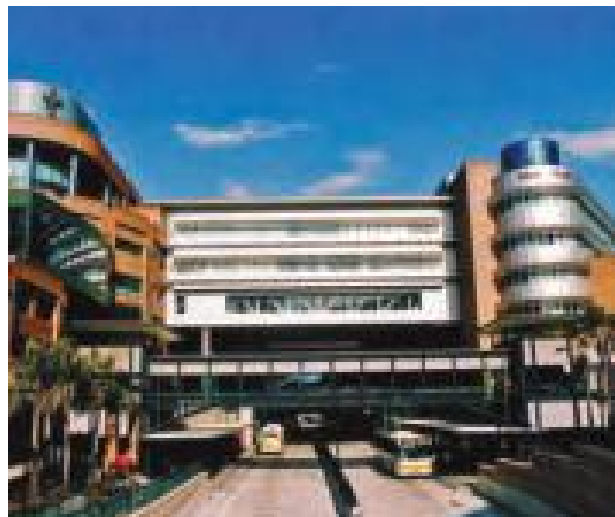


Landmark buildings as key parts of centres



New mainstreets offering active street edges and housing above

- 4.11 Require all civic spaces, especially major ones, to be faced and overlooked by supportive buildings or defined by appropriate urbane streets (see section 3: The Design of the Public Realm in this Chapter).
- 4.12 In particular, ensure largely continuous setback lines in buildings in main streets (to avoid concealment areas) and require active uses at street level (such as cafes, restaurants and other long-hour retail uses), especially those which can “spill out” onto the footpath areas.



Embedding transport nodes in active mixed-use or institutional developments

- 4.13 Facilitate the integration of major private and public institutions (such as universities, hospitals, schools, shopping malls, indoor recreation and cultural facilities) into mixed-use connected centres to promote pedestrian, cyclist and public transport activity over long hours.



Transport places and high quality civic space

- 4.14 Thoughtfully locate transport stops and nodes in places (such as on main streets, next to retail entries or close to important civic spaces, night-time uses or intersections) that are logical, legible, made safe by overlooking or activity and easily accessed and then design them to be comfortable (for example, well-lit and weather protected).
- 4.15 Thoughtfully locate and design car parking so as not to interfere with either the continuity of the centre's public realm or its sense of place, and provide safe access routes from the active areas of the centre to the car parking.
- 4.16 Design single or multi-level carparks recognising their potential for difficulty, especially after hours (see Principle 6: Vulnerability in Chapter Three).

5 THE DESIGN OF PEDESTRIAN AND CYCLIST SYSTEMS

Principles

- 5A In principle surveillance must be maximised by safely co-locating pedestrians, cyclists and vehicles.
- 5B Where separate pedestrian and cyclist systems are proposed (for example through parkland for recreational purposes), supportive CPTED features must be introduced in a way that balances the intended outcome while acknowledging the potential vulnerability of the independent system.



Good signage for way-finding

Actions

- 5.1 Adopt neighbourhood and centre urban design layouts which do not separate pedestrian/cyclist routes from the street network (see section nine: Separate Systems or Radburn Estates in Chapter Five).
- 5.2 Design, develop and manage footpaths and cyclist paths of sufficient width and quality to meet likely needs.



Streets with bike lanes providing visibility from traffic

- 5.3 Within the cyclist/pedestrian realm, and especially separated systems, avoid entrapment spots like, long tubes or corridors, blind corners, tight spaces, and underpasses where, for example, the whole route cannot be seen from within or before entering by the pedestrian or from without by the observer.



Safety in numbers

- 5.4 Manage intersections between pedestrians/cyclists and vehicle traffic at grade, without resorting to underpasses/overpasses except where supported by both the urban topography and active edges of adjoining/defining buildings and uses.
- 5.5 Acknowledge the detailed design requirements for physical safety (and therefore potentially security) that arise from the different design speeds of pedestrians and cyclists.
- 5.6 Design independent pedestrian/cyclist systems with as much connectivity and surveillance (both actual and perceived) as is consistent with the overall context (for example, avoiding hiding them behind high fences, sound barriers, major engineering structures, blank-façade buildings and the like) and introducing activity places and other points of urban contact along the route.



Bike paths with little surveillance from adjoining housing

- 5.7 Avoid creating narrow pedestrian/cyclist paths hidden from view behind side or rear fencing or buildings.
- 5.8 Use landscaping and built features, including signage and artwork, to enhance legibility.
- 5.9 Where the principles of CPTED cannot be sufficiently applied, be prepared to support separate pedestrian/cyclist systems with organised technological and human surveillance or special management regimes (for example, after hours).

6 THE DESIGN OF OTHER DOMAINS

Principles

- 6A Other urban environments must be designed and managed in ways informed by as many CPTED learnings as possible.
- 6B Consideration should be given to whether a radical re-invention of the way some CPTED-difficult activities are located or undertaken would be both practical and more CPTED-informed.

Actions

- 6.1 Facilitate the inclusion of typically “gated” institutions like private retirement villages into the “mainstream” life of the community to encourage greater ownership of security outcomes for their residents and their neighbours, both within the village and in the neighbourhood (and to facilitate greater flexibility and expansion of services, access to public transport and more).



Good visibility

- 6.2 Avoid allowing “gated” precincts (especially of significant land area) within the normal urban fabric where that would create “blank space” within the desirable connectivity and surveillance of the neighbourhood or centre, thus reducing their safety.
- 6.3 Where retirement villages and others seek a more isolated fringe “gated” outcome, design and develop “inside the gates” as much as possible in line with the principles and actions identified in other sections.
- 6.4 As an alternative to more isolated post-war campus-style planning, facilitate the inclusion and integration of dense urban high-population institutions (like hospitals, universities, business parks and the like) into the connected urban fabric, especially in existing centres or plan them as the beginnings of new transport-served, mixed-use urbane centres (see section 4: The Design of Centres in this Chapter).
- 6.5 Where some types of areas, such as general or heavy industrial estates, have traditionally been vehicle-dominated and unfriendly to public transport, pedestrian and cyclist movement, consider their layout and design in detail to incorporate as many CPTED understandings as possible. This could include locating office spaces to enhance surveillance of the public realm, including retail and other supportive functions, concentrating points of access to enhance the possibility of public transport services, and locating car parking and landscaping with surveillance in mind.
- 6.6 In relation to such traditionally CPTED-difficult areas, consider whether a radical and more CPTED-responsive re-invention of the way these land activities are located or undertaken is possible and practical.



Good visibility

Chapter Seven

SPECIFIC APPLICATIONS

Chapter Three discussed the reality that some places and uses are more vulnerable to criminal harm than others.

What makes them so is often a number of factors such as:

- a lack of surveillance created by the design of the built environment around them (such as “hidden round the corner”)
- a lack of surveillance created by the unsupportive uses in the area
- a lack of surveillance created by the hours of their operation, especially night times or weekends (such as 24 hour service stations or “accessible-but-not-open” shopping arcades)
- a vulnerability to physical harm from the design and detailing of their construction (for example, flimsy materials)
- “legitimate” social and/or easy physical access for the would-be offenders, and
- the opportunity for easily accessible rewards (such as ATMs or other 24 hour locations with money).

If it is not practical or desirable to lock these vulnerable places away, then there is a need to apply CPTED principles in detail to lessen their vulnerability.

For example, in relation to **AUTOMATIC TELLER MACHINES (ATMs)**

The principal risks are two-fold:

- (1) the offender will attempt to force open or steal the machine, or
- (2) the offender will attempt to steal money from someone who has just legitimately withdrawn it from the machine.

While there are CPTED issues in (1), the principal response is more with the design of the machine and the denial of unauthorised vehicle access to the machine.

In relation to (2), a CPTED-informed approach would consider:

- how to provide both the personal privacy most people desire while using the ATM and the supportive surveillance by others before and after the transaction;



ATMs in the mainstreet amidst cafes and shops and overlooked by housing

- how to ensure there are no potential concealment spaces in the area near the ATM;
- how to ensure the ATM area is overlooked by passing people, on foot and in vehicles;
- how to ensure the ATM and the path to it are within direct view of surrounding activities and paths and not so far away from them as to lessen the immediacy or effectiveness of surveillance;
- how to provide good lighting (without inappropriate shadow or glare) and clear sightlines;
- how to ensure the path from the ATM to the rest of the public realm is not a *confined* space or route;
- how to locate the ATM in a locality in which the other uses are supportive (perhaps restaurants and cafés) and not in areas that might be troublesome (such as adjacent to bars or taverns);
- how to ensure facilities which promote legitimate loitering (such as public telephones, bus stops and public seating) are not placed directly in front of ATMs and/or close to them lest they “legitimise” the presence of would-be offenders;
- how to ensure the design and management of the host structure and the public realm of the area provide appropriate amenity and comfort (for example, protection from rain) so that the attention and awareness of the person using or exiting the ATM is not distracted;

- how to ensure the design of the public realm is accessible and without potential trip or other accident-prone details;
- how to vary arrangements, where possible and practical, to reflect different degrees of vulnerability from day to night or weekday to weekend; and
- how to support CPTED-based design with mechanical surveillance.

A similar *intensity* of design approach needs to be applied to other vulnerable equipment or “points” such as bus or taxi stops, public phones and post boxes, although the detailed design intent may vary.

Some vulnerable places however are more than “boxes in walls” or spots on the street and represent significant land uses in their own right.

SERVICE STATIONS

Much of the analysis about sightlines also applies, but also consider:

- how to provide maximum surveillance within the building and from within the building to the pump and other areas;
- how to provide surveillance from adjoining streets to the pump and building areas; and
- how to remove hidden spots such as “around the corner”.

Equally, making the place busier helps and so expanding the range of services and hence reasons for visiting helps. In principle (although there have sometimes been concerns about “out-of-town” service stations undermining the vitality of mainstreets) the larger complexes, with restaurants, shops and other components start in a better situation in CPTED terms.

Furthermore, locating 24 hour service stations in the first place in areas where there is other 24 hour activity, such as close to transport nodes or nightlife areas, is also an important strategy (although the “non-urban” nature and design of such vehicle-oriented facilities and the traffic they attract might be seen as undermining the quality of more pedestrian-based localities). Again there is a need for balance.

NIGHT-TIME ENTERTAINMENT AREAS

Consider the following:

- how to ensure patrons have safe access to and from night-time activities with public transport to serve users after dark;

- how to ensure public entrances and exits of licensed premises are legible, overseen and monitored by mechanical surveillance cameras (CCTV); and
- how to overcome the inherent problem of complex building shapes which create hiding places, reduce natural surveillance and limit the effectiveness of CCTV.

PUBLIC TELEPHONES

Consider the following:

- how to ensure public telephones are located in high traffic areas and away from isolated areas where they are not clearly visible;
- how to ensure that the landscaping surrounding the public telephone is integrated and does not impede sightlines; and
- how to ensure that public telephones are clearly visible from pedestrian and other movement routes and close to other compatible activities.

PUBLIC TOILETS

Consider the following:

- where the setting is likely to expose users to risk (for example during hours of darkness), whether to “target harden” the facility and/or use organised surveillance (such as regular security patrols);



Public toilets with good visibility and legibility

- how to discourage loitering by not placing seating or public telephones in close proximity to toilet entrances;
- how to ensure entrances to public toilets are clearly visible from the street and other public areas; and
- how to ensure entrances to public toilets in or near playgrounds are clearly visible from the playground.



Not so good public toilets...

INSTITUTIONAL CAMPUS-STYLE SETTINGS (HOSPITALS, UNIVERSITIES, SCHOOLS)

While there are trends to integrate institutions into the structure and life of centres, many institutions still exist in a more isolated campus style. In relation to them, consider the following:

- how to provide clearly identified, overlooked, and well-used routes to gain access to essential buildings and services, including residences, lecture halls, cafeterias, sports complexes, car parks and public transport facilities;
- how to ensure emergency telephones connected directly to a security monitoring service with rapid response are placed at strategic locations along key routes used after-hours;
- whether to provide a shuttle bus or other escort service, linking key destinations within the site with key destinations beyond the site (for example car parks, public transport and residential facilities); and
- how to provide surveillance through:
 - organised and mechanical surveillance in addition to informal surveillance in and around buildings and along key routes,
 - the clustering of after-hours activities within the same area, and
 - controlling and monitoring after-hours access to buildings and facilities.



Public transport and a hospital

- how to introduce other activities (of the institution or complementary to it) along important routes to augment activity and surveillance.

SKATE PARK FACILITIES

Consider the following:

- how to locate the skate park close to other appropriate and complementary community infrastructure and ensure it is clearly visible from well-trafficked roads and public spaces, thereby providing an opportunity for unobtrusive surveillance;
- how to ensure that vegetation and topography do not provide concealment of illegitimate activity;
- how to locate the skate park adjacent to or near regular and reliable public transport and bicycle routes; and
- how to avoid the use of heavy walls for sound-proofing that restrict sightlines and may attract graffiti.



Skate parks with good surveillance

CAR PARKS

Consider the following:

- how to locate car parking in areas of activity that encourages the sharing of the facility by staff and clients of adjoining premises;
- how to ensure after-hours staff and client parking is well-lit and in close proximity to building access points;
- how to ensure informal surveillance from adjoining uses by the placement of windows and/or retail premises, kiosks or other uses that generate activity;
- for multiple level car parks, how to ensure a minimum standard of vandal proof and consistent lighting and white exit corridors, stairwells, walls and ceilings that reflect light;

- how to provide good clear signage so that users can locate their cars quickly;
- how to monitor car parks by mechanical and/or organised surveillance; and
- how to achieve a network of designated, well-lit and signposted pedestrian routes throughout car parks linking users to the main entrances of the development.
- how to balance the desire to locate the “potentially dead” car parking facility where it can be seen by others with the need to ensure this “dead” facility does not in turn reduce the extent of active frontage to the public realm.

PUBLIC TRANSPORT SETTINGS

Consider the following:

- how to locate bus stops and taxi ranks so that:
 - they are in areas of activity,
 - passers-by and passing vehicles are able to identify faces of people waiting,
 - the walls of bus shelters are transparent and not obstructed by advertisements or graffiti,
 - passenger information signs giving transport routes and times are easily visible after-hours, and
 - there is good informal surveillance of waiting areas from surrounding activities;



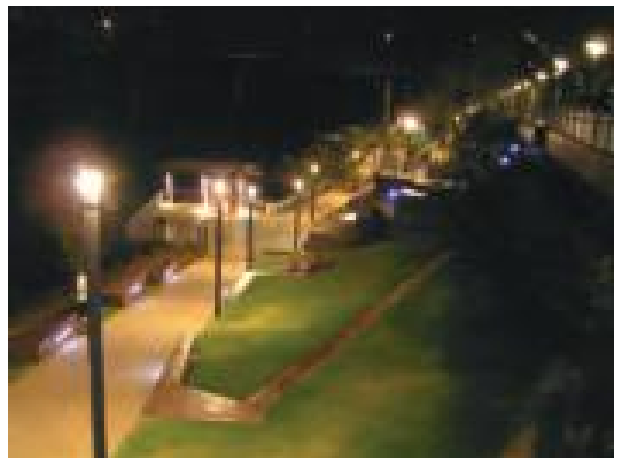
Embedding transport nodes in the busy public realm

- how to create safe and well used movement routes between public transport stops and major destinations that are clear and well-lit with bold signage and emergency call points;
- how to provide good lighting, seating and shade at bus interchanges and stops;
- how to provide adequate lighting and surveillance equipment to better control transport and transport hub environments; and

- how to provide appropriate safety and information guides on and around transport and transport hubs.

LIGHTING DESIGN

The discussion in Chapter Two refers to the need to integrate CPTED strategies with the existing range of technical standards and requirements that relate to specific aspects of making the built environment. The Principles and Actions in Chapters Three and Six identify techniques such as lighting and signage, but make no attempt to define detailed technical requirements for it is assumed the designer or approver will be familiar with their responsibilities.



Careful lighting design of the public realm

Just as the discussion above suggested a more detailed analysis relating to specific applications such as ATMs, so equally a detailed consideration of lighting design would consider:

- how to locate on plan and in height lighting fixtures of particular kinds to ensure appropriate illumination of parts of the public realm or buildings to facilitate surveillance;
- how to ensure the detail of the lighting design responds to and influences the detail of the built environment design;
- how to respond to the colour and reflectiveness of materials in the design of buildings and the public realm;
- how to use lighting to assist legibility and choices about safe areas and routes, including, in some places, *not lighting* areas not intended for night-time use;
- how to ensure appropriate levels of lighting in heavily used or vulnerable places such as car parking areas, public toilets, entries to buildings and the like?

- how to support general street lighting in specific places with further fittings;
- how to avoid inappropriate shadowing and inappropriate glare;
- how to meet the requirements of relevant Australian or Australian/New Zealand Standards for lighting roads and public spaces;
- how to avoid light pollution;
- how to ensure vandal resistant light fittings are included as part of a detailed maintenance strategy;
- how to take advantage of opportunities to integrate lighting of the public realm with the design of buildings;
- how to make lighting outcomes as environmentally sustainable as possible (for example, using low-energy fittings, photovoltaic cells to generate power and photoelectric cells rather than time-based switches);
- how to integrate lighting design with landscaping and management processes to ensure vegetation does not inhibit the effectiveness of the lighting;
- how to ensure street names and building identifications are clear at night (for example, by using reflective materials, numbers at kerb level, signage on letter boxes or other structures) and at a scale able to be read from vehicles, particularly emergency vehicles; and

- how to illuminate signage intended to be read at night, including signage that must be accessible to all in the community (and therefore must meet the requirements of Australian Standards for access and mobility).

A similar intensity of detailed design will be needed in relation to other areas such as **SIGNAGE** and **ACCESSIBLE ACCESS** and comprehensive fine-grained plans produced. In each, designers must integrate the body of CPTED principles into the requirements of specific detailed regulatory or advisory documents.

As Chapter Two urged, the CPTED Principles and Actions identified in Chapter Three and applied further in Chapter Six must be integrated in the approach to any particular location or challenge, and not taken in isolation of each other.



Legibility and way-finding helped by signage... and public art

Chapter Eight

SOME QUEENSLAND EXAMPLES

There are many fine places in Queensland that demonstrate some or many CPTED principles.

Some have grown over many decades, changing along the way, and giving us now examples of what works (and sometimes what does not). They have contributed local understandings to the evolving body of CPTED knowledge.

Others have been designed and developed in recent times with a knowledge of CPTED principles.

The practice of CPTED includes observation of situations and informed analysis. It requires learning from the built environment and being willing to respond and adapt, creating new responses or reverting to previous successful ones.

Various Queensland places are illustrated in the preceding Guidelines and more information about them and others might usefully be accessed from the following short list.



South Bank

Look at the **Grey Street precinct at South Bank** in Brisbane's inner south:

- its connected grid, within itself and linking to adjoining areas,
- its urbane streets with footpaths, providing for cars and carparking but with a strong emphasis on the pedestrian realm,
- its mix of uses and active frontages, especially in the Grey Street area,

- its Little Stanley Street esplanade to the gardens,
 - its access to public transport,
- and also note
- the blank facades or relatively inactive frontages of some of the nearby cultural buildings,
 - the separate and not always strongly overlooked riverside promenade,
 - the Goodwill Bridge.

More general information is available at:
<http://www.visitsouthbank.com.au>



Cairns

Look at the **foreshore of Cairns City Centre**:

- its powerful esplanade,
- its urbane streets providing for cars but giving an emphasis to pedestrians,
- its walkable grid connecting the city centre with the pedestrian-strong foreshore parklands,
- the mix of uses and active frontages.

More general information is available at:
<http://www.cairnsesplanade.com/project.html>



Kelvin Grove Urban Village

Look at the **Kelvin Grove Urban Village** in Brisbane's inner west:

- its connected grid, within itself and linking to existing neighbourhood streets,
- its urbane streets providing for cars but with a leaning towards pedestrian use,
- its mix of uses, including its integration of university and other institutions into the neighbourhood,
- its active frontages and overlooking of the public realm from adjoining buildings,
- its integration of shopping forms into a new main street,

and also note

- the less active frontages so far in parts of the emerging main street.

More general information is available at:

<http://www.kgurbanvillage.com.au>

For further examples of public space areas in Queensland designed and completed with CPTED principles, refer to the 'References and Further Resources' section of this document.

Definitions

Activity Generators

These are places which include land uses that encourage the use of the public realm. Such uses include outdoor cafés and restaurants, outdoor sporting areas located within open space, clusters of shops, etc.

Concealment Spaces

These are places that by their concealed nature are not easily visible and provide the opportunity for the concealment of potential offenders and their victims as well as illegitimate uses, anti-social activity and crimes.

CPTED

This acronym stands for Crime Prevention Through Environmental Design. It is a crime prevention philosophy based on good design and effective use of the built environment leading to a reduction both in the fear and incidence of crime, as well as an improvement in the quality of life. The use of CPTED is intended to reduce crime and fear by reducing criminal opportunity and fostering positive social interaction among legitimate users of space. The emphasis is on prevention rather than apprehension and punishment.

Entrapment Areas

These are small physically confining spaces, shielded on three sides by barriers such as walls or landscaping, which offenders can use to physically or psychologically surround and entrap people. Entrapment spots include loading zones, leftover spaces between buildings, clearings within landscaping and recessed entrances. Entrapment areas are particularly dangerous when located close to well-travelled routes and movement predictors.

Legibility

This term refers to the ability of people who are unfamiliar with an area to be able to find their way. Legibility instils a sense of confidence in users of public space and can be achieved through the identification of designated pedestrian routes through the use of signage, lighting and suitable landscaping.

Legitimate Use

The lawful and appropriate use of a building, facility or public space.

Illegitimate Use

Use of space by those who may have criminal intent; that is, they have no legitimate reason to be in an area.

Movement Predictors

These are predictable or unchangeable thoroughfares that provide limited opportunities from which to exit. Examples of movement predictors are pedestrian underpasses, narrow passageways, stairwells and pedestrian bridges. Movement predictors are of particular concern when located near entrapment spots or isolated areas.

Observers

People who are legitimately in a space and are exercising natural surveillance.

Public Spaces

This term refers to both:

- a) spaces that are publicly owned and which are intended for use by the public, and
- b) spaces that are privately owned and which are intended for use by the public.

Surveillance

This term is used in three ways:

- a) informal surveillance (e.g. by casual observers),
- b) organised surveillance (by trained security guards, attendants and other trained personnel), and
- c) mechanical surveillance (e.g. security cameras). The guidelines are aimed especially at enhancing opportunities for informal surveillance so that anti-social behaviour or crime related incidences might be discouraged, detected and prevented.

Target Hardening

This term refers to the use of physical barriers, locks, safes, screens or reinforced materials to reduce the opportunity for illegal access or vandalism to a property.

Urban Design

Urban Design takes a design-based approach to shaping urban environments and complements other disciplines such as strategic planning, cultural planning, regional development and economics. Its focus is on optimising the performance and efficiency of suburbs, towns and cities.

Urban Design, through its integrated and multidisciplinary approach, can help maximise the benefits of infrastructure outcomes. It pays particular attention to the way urban spaces work, the interface between the public and private realms and the natural environments, and cultural values including built and social heritages. It is a process that integrates use, movement and form into positive coordinated outcomes for urban environments.

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- Department of Education and the Arts Art Built-in Policy and Guidelines at: http://www.arts.qld.gov.au/publicagency/paa_policy_guidelines.asp
- Department of Local Government, Planning, Sport and Recreation Security Improvement Program at: <http://www.lgp.qld.gov.au/?id=104>
- and the Integrated Planning Act at: <http://www.ipa.qld.gov.au/overview/ipaassociatedlegislation.asp>
- Department of Tourism, Fair Trading and Wine Industry Development Community Safety initiatives at: <http://www.liquor.qld.gov.au/Community/Community+safety>
- Queensland Rail Security and Safety http://www.citytrain.com.au/about_your_trip/security_safety/overview.asp
- Queensland Transport Safety <http://www.transport.qld.gov.au/Home/Safety/>
- Department of Housing Residential Design Manual, CPTED and Research House at: <http://www.housing.qld.gov.au/>
- Department of Public Works Sustainable Home and Smart Housing at: <http://www.publicworks.qld.gov.au/home/home.cfm>
<http://www.smarthousing.qld.gov.au/>
- Australian and International standards at: <http://www.saiglobal.com/shop/script/search.asp>
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- Pioneer Promenade, Mackay http://www.mackay.qld.gov.au/events_activities/projects/pioneer_promenade
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- Southbank, Brisbane <http://www.visitsouthbank.com.au/home>
- Kelvin Grove Urban Village, Brisbane <http://www.kgurbanvillage.com.au/>
- Riverbank Development, Rockhampton <http://www.rockyriverbank.com.au/home.asp>
- Cairns Esplanade <http://www.cairnsesplanade.com/project.html>
- The International CPTED Association <http://www.cpted.net/>
- The International Security Management and Crime Prevention Institute <http://www.cpted.com.au/home.html>
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Department of Public Works	Cairns City Council
Department of Tourism, Regional Development and Industry	Caloundra City Council
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Queensland Police Service	Dalby Town Council
Queensland Transport	Emerald Shire Council
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