

Crime Prevention Through Environmental Design (CPTED) Policy

Record ID	Enter record ID		
Policy owner	Planning Strategy and Urban Design		
Adopted by	Council		
Adoption date	20/06/2022	Scheduled review date:	31/07/2024
Publication	Internal only - RMC		
Revision/version number	Version 1.0		

1 Purpose – what does this policy apply to?

The purpose of this policy is to improve safety and reduce crime by applying the principles of Crime Prevention Through Environmental Design (CPTED), to new developments, redevelopments, and the maintenance and management of public spaces and facilities within Council ownership.

2 Policy statement – what does this policy recognise and set out to achieve?

Council recognises that both crime and fear of crime have a serious impact upon the quality of life of residents, employees, and visitors to the area. This policy is intended to ensure the design and management of spaces can improve safety and reduce crime by applying the principles of Crime Prevention Through Environmental Design. It isn't intended to be prescriptive or act as a checklist but instead highlight a set of objectives and design choices to enable staff to make a considered decision within the scope of their own roles and responsibilities.

Crime Prevention Through Environmental Design provides the process for analysing and assessing crime and security risks to guide development, urban design, site management and the use of the built environment in order to prevent and reduce crime and the fear of crime, and to promote and improve public health, quality of life and sustainability.

3 Scope

This policy applies to Cardinia shire employees and officials, and any other persons undertaking planning, design, capital works or maintenance on behalf of Council. This Policy can be read in conjunction with the Cardinia Shire CPTED Policy scope background paper.

For funding and delivery, CPTED Principles and safety improvements is subject to council's endorsed budget and work program and advocacy may be required for new initiatives.

4 Who is responsible for implementing this policy?

There are a range of tasks completed on behalf of council which actively contribute towards compliance with CPTED principles. Council's design, planning, management and use of public space and community facilities incorporate CPTED in service delivery and asset management programs. The responsibility of this policy sits across all departments within Council and can be applied to everyday activities for significant community benefit.

Figure 1. Table of Responsibilities

Business unit	Responsibility
Liveable Communities	Responsible for implementing a standard for both public and private landowners with consideration to CPTED principles. Day to day tasks include (and are not limited to) the assessment of planning applications, consideration of key strategies, and facilitating CPTED assessments and audits.
Infrastructure & Environment	Responsible for ensuring Council's facilities are managed, developed, and maintained. Day to day tasks can include activities such as and are not limited to graffiti and waste removal, landscape and lighting management.
Governance Facilities & Economy	Responsible for designing, developing, and managing projects in a manner considerate of CPTED principles.
Customer, People and Performance	Responsible for ensuring the appropriate onboarding of staff and training is prompted with consideration to CPTED principles.
Contractors	Responsible for considering CPTED principles in the design, planning and maintenance of public assets.

5 Background

Cardinia Shire Council works closely with Victoria Police and other agencies to create a safe community, contribute resources and deliver responses to crime where appropriate. How public spaces are designed have a serious impact on perceptions of safety as well as actual opportunities for crime. When spaces are designed with consideration to user safety, it can reduce the likelihood of crimes being committed and promote social inclusion.

Cardinia's Council Plan 2021-25 recognises the role Council's public spaces have in enabling positive interactions and connections with community. This policy is aligned to the *Urban Design Guidelines for Victoria, 2017* and *Cardinia's Planning Scheme* referenced at Clause 15.01-1S. The Policy is also informed by the *Cardinia Safer Communities Strategy 2017* (as updated from time to time).

6 Principles

The principles of CPTED are designed to inform the approach to different built environments to reduce or remove the incidents of crime. Consideration should be applied on how best to design spaces to suit the function, needs and use of the community and apply CPTED principles to increase safety.

CPTED is based on the following principles:

1. Surveillance
2. Access control
3. Target hardening
4. Territorial reinforcement
5. Management & Maintenance

The *Urban Design Guidelines for Victoria* set out the principles for designing safer public spaces and highlights the need to balance safety interventions with the functionality and accessibility of community spaces. CPTED principles must be balanced against other design objectives. This policy

focuses on principles that can be readily implemented as part of planning, design, management, and maintenance of assets in the council area. Interventions should be considered in terms of risk, cost effectiveness and community benefit.

7 Toolkit - Objectives and Design Choices

The following presents a series of objectives paired with example design choices to consider when creating, auditing, or assessing Council's urban environments.

Decision makers need to determine the relevance of the objective and corresponding design choices in context to public open space and facilities. However, there may be alternative design solutions other than the design choices listed to ensure a wholistic response in relation to the site's environment.

This summary is informed by the *Urban Design Guidelines for Victoria, 2017* and is not intended to be an exhaustive list. It does not cover infrastructure and conservation reserves that primarily exist to cater for natural ecosystems, habitats and water management.

Lighting

Lighting performs a pivotal role in how an urban environment functions and supports the complimentary programming of signage and wayfinding treatments, movement of users and the identity of buildings and landmarks. In performing all these functions lighting provides an urban environment which is safe and inviting.

Objective: To ensure lighting (its luminance, location and fitting) deter crime prevention and support social inclusion and connectivity.

Design choices:

1. Areas intended for use after daylight should be lit to allow appropriate levels of visibility for users.
2. Refer to Australian Standard of AS1158 to guide minimum lighting standard for pathways, streets and laneways in outdoor public areas.
3. Seek compliance with AS4282 – 'Control of the obtrusive effects of outdoor lighting' for lighting design.
4. Distance between lighting should be consistent and provide a lit connection from one illuminated area to another to guide users through spaces.
5. Faces of users along pathways should be clearly illuminated from a distance of 10-15 metres.
6. Placement of streetlights should be positioned to illuminate pedestrian pathways, roads, and potential entrapment spaces.
7. Lighting should consider the placement, size, and spread of surrounding vegetation to ensure areas used by pedestrians aren't shadowed or create opportunity for entrapment.
8. The design of lighting should be vandal resistant and made difficult to break.
9. Proximity of surrounding element (walls, balconies, verandas etc) should be setback from streetlighting to deter climbing and potential vandalism.
10. Consider the use of motion sensors where appropriate to switch lighting on or off.
11. Avoid light spill onto adjacent residential properties. This can lead to annoyance and effect opportunity for natural surveillance with residents often seeking measures to block light out.

12. A program for maintenance and reporting of lighting fixtures should be implemented to ensure all lighting is maintained and well-kept with quick replacement of fixtures as required.
13. Use low energy consumption lights, fittings, and switches to lower reliance on maintenance procedures.
14. Allow appropriate distances between light poles and adjacent vegetation to provide unobstructed illumination of pathways.



Barriers and fencing

A considered fence design will maximise natural surveillance between private and public realms to limit opportunities for intruders to hide whilst also providing visual and physical barriers between spaces and users.

Objective: To ensure barriers and fences deter crime prevention and support social inclusion and connectivity.

Design choices:

1. Use highly visible and permeable boundary materials for consideration to both day and night activity as appropriate.
2. Position and space bollards to allow pedestrian movement and limit vehicle access.
3. Boundary fencing along a street frontage should be no higher than 1200mm and partially transparent.
4. If noise is a concern along a building's frontage, installing double-glazing is preferred rather than a solid fence.

Landscaping

Objective: To ensure trees and planting are well maintained and designed to encourage a feeling of safety and amenity of public space.

Design choices:

1. Tree species selected with consideration to the height of branches and foliage. Trunks should be clear up to 2500mm in height from ground level.
2. Maintaining landscaped areas to ensure sightlines are provided between 600mm to 2500mm from ground level.
3. Position vegetation to direct sightlines and highlight desired lines of travel.
4. Consider the placement of vegetation in relation to light poles, CCTV and overhead wiring to avoid unnecessary shadowing.
5. Maintenance of existing trees with dense growth foliage between the heights of 600-2500mm should be crown raised to improve sightlines.
6. Consider the screening of blank walls with wall hugging vegetation (vertical gardens or green screens).
7. Specify vegetation that is proportionate to the size of the area and considers neighbouring land uses and ownership.
8. Avoid vegetation:
 - a. With top to bottom foliage. Shrubs, creepers and hedges should grow up to a maximum height of 600mm if located within a communal area or positioned along its boundary.
 - b. Which obscures building entrances.
 - c. That intrudes on the effectiveness of lighting.



Wayfinding

Signage and effective wayfinding measures can be facilitated through the use of materials, lighting, fixtures, colours and/or textural elements to guide users and signal transitions between ownership, allowing users to 'know' their surroundings and emphasise a feeling of safety.

Objective: To ensure wayfinding installations are well designed and positioned to encourage a feeling of safety.

Design choices:

1. Position signage away from vegetation and tree canopies.

2. Size of signs should accommodate a variety of users with a clear and legible use of imagery and text, vibrant colours, universal symbols, and intuitive graphics. Actions for help and assistance should be prominent.
3. Consideration to the time-of-day signage would be relied on.
4. Position signs to be located at entrances and at node points along pedestrian routes such as at the intersections of paths.
5. Provide clear and consistent signage at regular intervals along pedestrian routes.
6. Signs should provide information on reporting maintenance problems and concerns.
7. Operational hours and exit routes should be clearly visible upon entry into a site for both pedestrians and vehicles as appropriate.

Movement network

Movement networks - streets, roads, and paths - are the foundation of any urban structure and facilitate regular movement of people. The user's ability to feel safe in these environments pivots on the design and layout of these networks. By creating permeable street networks, people are encouraged to walk; consequentially activating these pedestrian spaces more often, however, these must also be attractive and well maintained to promote perceptions of safety. Movement networks acknowledge the importance of large-scale urban planning in ensuring our community feels safe and increases the opportunity to activate local pedestrian networks.

Objective: To ensure movement networks are strategically designed and maintained to encourage a feeling of safety to deter crime.

Design choices:

1. Subdivision layouts should consider block and street patterns with direct, straight or near straight streets providing users with clear sightlines.
2. Create continuous and direct pedestrian and bike paths to connect to our wider travel networks (bus terminals, train stations and other transport interchanges).
3. Position lots intended for uses with extended operating hours along pedestrian priority streets.
4. Clearly mark and direct connections for pedestrians transitioning between modes of travel.
5. Place bicycle, pedestrian and vehicle paths side by side to increase opportunity for surveillance.
6. Position doors and windows to face and overlook pedestrian pathways.
7. Design streets, roads, and laneways in consideration to maintenance mechanisms.
8. Set a minimum width of 3 metres where a thoroughfare is bordered by fencing with a straight or near straight alignment and encourage informal surveillance from adjacent properties.
9. Remove graffiti and replace worn or damaged street furniture to reinforce a perception of safety.
10. Pedestrian underpasses should be avoided as much as practicable in new developments.
11. Pedestrians should have clear sightlines along movement networks to ensure clear sight of what is around them.
12. Positioning of emergency telecommunications and CCTV should be considered in the design and layout of movement networks.
13. Entrapment spots should be avoided in any movement network.
14. Strategically install mirrors to allow users to see around sharp or visually obstructed corners. The installation of reflective or transparent materials (such as glass or stainless steel) could also be considered to assist in this regard.

15. Pedestrian routes adjacent a storage, bin or loading area should be avoided. If unavoidable they should be appropriately fitted with visual and lighting fixtures (e.g. convex mirrors and light poles) and locked after operating hours.



8 Implementing CPTED

CPTED can be considered across three areas of intervention: planning, design and management/maintenance. Each stage requires the consideration of context for intervention, risk, stakeholder responsibility, set up and ongoing cost and effectiveness of chosen strategies. The following table sets out examples of strategies by stage.

Figure 2. CPTED Strategies by stage

Stage	Strategies	Examples
Planning	Community assessment	Understand the socio-economic profile and crime trends of the area, regularly review the circumstances of crime to identify change, and the effectiveness of applied CPTED systems in operation and opportunities for improvements.
	Integrated and legible planning design	Design environments to make them easy to navigate. Take advantage of new or existing manufactured or natural features (e.g. rivers, hills, public squares, important civic buildings) both to create landmarks to aid legibility and to make environments of special quality and the focus of pride.
	Reduce vulnerability	Minimise/ avoid entrapment areas and blind spots. Issues in existing space may be addressed with alternative methods of observation for users (mirrors, lighting, maintenance). Design and management of places should provide a variety of routes to the destination and ways to avoid potential or actual problems.
	Urban greenery	Increase green spaces and public greenery. Well maintained greenery can increase activation and sense of safety.
	Lighting and CCTV	Strategic placement of CCTV and lighting
	Protecting crowded places	Mitigating risks of planned acts of harm at high risk locations through the design and implementation of security controls.
Design	Visibility	Buildings adjoining a public space should maximise the potential for passive surveillance into that public space. Consider, landscaping, building heights, lighting type, illumination of pathways and facilities, maximising natural surveillance, e.g. large glass windows

	Access Control & Target hardening	Entry barriers, walls, fences, gates, consideration of mailbox placement, vehicle access and mitigation, locks and use of security.
	Territoriality	Clearly distinguish access from public space into private space, Creatively use built and landscaping features like plants, changes of surface material and texture, changes of level, artwork, signage, low walls, seating and the like to define movement areas and delineate borders.
	Aesthetic Design	Public art, decorative lighting, and other elements to create a positive area image.
	Inclusive design	Co designing spaces with women, people with disabilities, Aboriginal and Torres Strait Islander communities and other underrepresented groups to create welcoming and functional spaces.
	Effective Materials & Technology	Design places with attractive, user-friendly sturdy materials and fittings that are not removable. Integrate smart devices e.g. pedestrian counters, air quality monitors, public emergency systems, two way communication devices and smart lighting,
Management and Maintenance	Upkeep and maintenance	Timely repairs, regular cleaning of streets & parks, greenery upkeep and rubbish & graffiti removal.
	Public space management	Management of outdoor alcohol restrictions, timed access to facilities, CCTV monitoring, consistent public messaging and communications, and targeted ranger patrols.
	Social Programs	Support programs and links to services in place for vulnerable communities
	Space Activation & Ownership	Planned programs and events to increase use of public space and facilities. Promote a sense of pride in the community's public assets and encourage community participation and ownership over spaces where possible, e.g. community gardens.

9 Future planning

Following consultation with the CPTED working group made up of officers from across Council and analysis of Cardinia Shire perceptions of safety research and contemporary approaches to improving community safety the following are recommendations for future implementation:

1. Adoption of the CPTED policy and development of implementation guidelines for Cardinia staff including training for key staff in CPTED approaches.
2. Continue to improve community safety by evaluating CCTV and lighting and undertaking safety audits and site inspections and maintaining records of crime risks and incidents
3. Maintain the positive look and feel of public spaces through ongoing cleansing, graffiti removal, amenity patrols, maintenance and planned activations.
4. Use Crime prevention through environmental design principles to drive decision making and response.
5. Track crime trends and community perceptions of safety to identify priorities and emerging risks.
6. Continue to maintain a high standard of amenity, ensure compliance with planning requirements and local laws, and support public health and safety through partnership and continuous service improvement.
7. Review this policy in line with updates to the *Urban Design Guidelines for Victoria, 2017* or changes to relevant legislation.

10 Related documents

Type of document	Title and/or RMC link
International Standard	BS ISO 22341:2021 - Security and resilience. Protective security. Guidelines for crime prevention through environmental design.

Commonwealth/Victorian legislation	Planning and Environment Act 1987 Local Government Act 2020
Strategic directions paper	<i>Under development</i>
Policies	Cardinia Pedestrian Bicycle and Pedestrian Strategy 2017 Buildings and Facilities Maintenance Policy 2018 Sport Facilities Standards Policy
Strategies	Cardinia Shire, Council Plan 2021-2025 Cardinia Shire's Liveability Plan 2017-2029 Cardinia Safer Communities Strategy 2017 Australia's Strategy for Protecting Crowded Places from Terrorism 2017
Guidelines	Urban Design Guidelines for Victoria, 2017 https://www.planning.vic.gov.au/policy-and-strategy/urban-design/urban-design-guidelines
Procedures	CPTED Audits Project Management Framework

Glossary of terms

Access control

Access control limits the opportunity for crime by taking steps to clearly differentiate between public and private spaces. The location and materiality of exits, fencing, lighting, and landscaping can attract, direct, and restrict the movement of pedestrians reducing the opportunity for crime.

Crime prevention

Crime prevention refers to the range of strategies that are implemented by individuals, communities, businesses, non-government organisations and all levels of government to target the various social and environmental factors that increase the risk of crime, disorder and victimisation. Situational crime prevention aims to change contextual factors to reduce opportunities for offenders to engage in criminal behaviour

Crime Prevention Through Environmental Design, CPTED

The process for analysing and assessing crime and security risks to guide development, urban design, site management and the use of the built environment in order to prevent and reduce crime and the fear of crime, and to promote and improve public health, quality of life and sustainability.

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.

Surveillance

Surveillance in this context refers to creating opportunities for people in public spaces and adjoining buildings to see into the space and casually or actively observe activities. Observers are then able to respond to any unwanted or anti-social activities occurring.

Target hardening

Target Hardening is a long-established crime prevention technique that includes the installation of physical security to increase the effort and risk of committing a crime at a location. It includes the installation of fences, gates, locks, security personal and can be considered in the broader review of access control.

Territorial reinforcement

Territorial reinforcement aims to instil a feeling of ownership between users and the spaces occupied to encourage a sense of responsibility for their surroundings to positively contribute to crime prevention. Uncertainty of ownership can reduce responsibility and increase the likelihood of crime and antisocial behaviour going unchallenged.

Territoriality

Territoriality emphasises strategies to delineate the transition from public to private space. This can include fencing, signage and other design elements.