Urban design guidelines

for Victoria

VICTORIA State Government | Environment, Land, Water and Planning

Preface

The urban design guidelines history and context

An earlier suite of three stand-alone guideline documents, were developed between 2004 and 2005. Their purpose was to assist in delivering functional, attractive and sustainable activity centres, higher density residential development and safer public spaces, and to contribute to better place making.

The Victoria Planning Provisions were amended to require consideration of these guidelines where applicable in the design and assessment of new development proposals. The earlier documents were:

Guidelines for Higher Density Residential Development, 2004

Set out objectives and provided suggestions for designing and assessing higher density residential development. They were developed to promote well-designed higher density housing in activity centres and other strategic development sites located close to public transport.

Activity Centre Design Guidelines, 2005

Set out objectives and provided suggestions for designing activity centres to create exciting places where people want to live, work, shop and play. They were developed to support councils and developers in creating well-designed activity centres.

Safer Design Guidelines for Victoria, 2005

Set out principles, objectives and provided suggestions for designing safer urban environments. They were developed to facilitate the planning of safer urban environments for all Victorian communities. They provided practical design suggestions for achieving development that is safer and feels safer for the community using it.

The Urban Design Guidelines for Victoria that follow have condensed the original suite of three guideline documents into a single compendium with a highly accessible structure. The new guidelines have improved usability and they feature a flexible format that can be added to over time. The new guidelines replace the earlier guidelines as reference documents in the Victoria Planning Provisions.

Table of contents

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Part 1 of 8 parts

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Introduction

0.1 What are the Urban Design Guidelines for Victoria?

The Victorian State Government developed the Urban Design Guidelines for Victoria to support state agencies, local government and the urban development sector to deliver, functional and enjoyable places for people to live, work, and spend leisure time. The guidelines aim to create neighbourhoods that foster community interaction and make it easy for people of all ages and abilities to live healthy lifestyles and engage in regular physical activity. These places may be urban areas in metropolitan Melbourne and in regional cities and towns.

0.2 What do the guidelines aim to achieve?

The Urban Design Guidelines for Victoria assist in creating places that are:

- accessible, safe, diverse and provide choice
- enjoyable, engaging and comfortable to be in and move around
- conducive to people being more physically active
- accommodating of people of all abilities, ages and cultures
- distinctive and celebrate their social, cultural and natural heritage.

0.3 Why we need urban design guidelines

High quality places support the social, cultural, economic and environmental wellbeing of our communities, and are critical to the development of competitive and efficient cities and towns. New development and changes in land uses should respond to their context and enhance places of value to the community. Good urban design delivers places that are safe, healthy, functional and enjoyable.

0.4 What is urban design?

In these guidelines, urban design focuses on the design of the public realm, its public spaces, streets, parks and paths. Urban design informs the design of infrastructure and buildings in as far as they affect the function and amenity of the public realm.

0.5 What is the scope and statutory role of the Urban Design Guidelines for Victoria?

The Urban Design Guidelines for Victoria are policy guidelines within the State Planning Policy Framework of the Victoria Planning Provisions. The guidelines must be considered when assessing the design and built form of new development where relevant.

The guidelines use best practice knowledge and advice underpinned by sound evidence.

0.6 When to use the guidelines

Decisions affecting the public realm

The guidelines assist decision making and are intended for use by those initiating urban development and public realm works, by those assessing or reviewing development proposals for planning in so far as they affect the public realm, and by members of the public who have an interest in urban development and public realm design.

Investing in the public realm

The guidelines may be used to inform strategic investment in community infrastructure and public realm assets. The guidelines may also be used to develop area specific urban design policies and frameworks.

Applying the guidelines in context

In applying the guidelines, designers and decision-makers need to determine the relevance of the specific guideline in the context of the proposed development.

However, there may be ways to achieve the objectives other than through the responses described in these guidelines.

Where designers believe that a guideline should not apply, they should be able to express clear reasons why this is so and put forward an alternative way to meet the objective.

0.7 How the guidelines are arranged

The guidelines are presented in a compendium.

The flexible format will enable future additions and updates.

The guidelines are ordered within urban elements:

1. **Urban structure – the overall topography and land division pattern**
2. **The movement network – the roads, streets, and paths**
3. **Public spaces – areas for public recreation**
4. **Public transport environs – the spaces and buildings around stations, bus and tram interchanges**
5. **Buildings – and their contribution to their setting**
6. **Objects in the public realm – facilities located in streets and public spaces.**

Guideline example	Explanation
Element 1 Urban structure	An element is a major component of the urban fabric
1.1 **Urban structure principles**	The element's name
Objective 1.1.1 To provide a permeable and functional urban structure of blocks and streets	The objective states outcomes to be achieved for the elements: • form and function • detailed design • interfaces and integration with context • management and maintenance. A group of specific guidelines follow each objective.
Permeability refers to the extent to which the urban structure permits the movement of people or vehicles through an area.	In some instances, an explanatory note provides information relating to an objective
1.1.1a Create an interconnected street layout with regular block sizes.	The guideline describes an action to achieve the objective for that element
→ **TIP** An interconnected street layout provides a choice of routes, allowing people to move about and goods be transported with ease and efficiency.	A tip provides useful information relating to the guideline

0.8 How to access the guidelines

The guidelines are available in:

Web based interactive format

- On the Department of Environment, Land, Water and Planning website **www.delwp.vic.gov.au/planning/urban-design-and-development** and follow the link to Urban Design Guidelines for Victoria.

Print-formatted compendium

- As a PDF and Word document suitable for creating a customised loose leaf folder
- Download from the website as the full guidelines or a guideline section. **www.delwp.vic.gov.au/planning/urban-design-and-development** and follow the link to Urban Design Guidelines for Victoria.

The guidelines can be accessed and used in three ways:

Elements list

Sets out the guidelines, which are grouped within urban elements and their element parts, ordered from the broad urban structure and arrangement to the detailed level of urban furniture type and placement. See the table of contents for a full list of elements and element parts.

Use this when you are browsing and getting familiar with the scope and content of the guidelines.

Topic search

The index or the keyword search function allows guideline users to search and select a specific topic. For example, search 'car parking' to deliver information on this specific subject. The index can be found the end of the print version. The web format uses a keyword search function.

Use this search function when you have an inquiry for a specific topic.

Preselect groups

Provides a number of preselected groups of guidelines relevant to specific urban conditions. The selected guideline groups correspond to topics in the former suite of guidelines, with the addition of some new guideline groups related to other urban conditions.

Use this function when you have an urban context related inquiry.

See Section 0.9 **Preselect groups** below.

Urban design toolbox

To support the guidelines, an urban design toolbox will be developed which contains a collection of useful information on common urban design processes as well as technical specifications and terminology.

This information can be found on the website:
www.delwp.vic.gov.au/planning/urban-design-and-development

0.9 Preselect groups

Activity areas design

1.1 Urban structure principles
1.2 Activity centre structure
1.3 Large development site structure
1.4 Higher density residential precinct structure
1.5 Public realm structure
2.2 Pedestrian priority streets
2.3 Pedestrian and bicycle paths
2.4 Pedestrian and bicycle crossings
2.6 Public transport on roads
2.7 On-street car parking
2.8 Car parking lots
3.1 Public spaces principles
3.2 Street spaces and plazas
3.3 Local parks
4.1 Public transport environs principles
4.2 Rail station precincts
4.3 Public transport interchanges
4.4 Rail corridor environs
5.1 Buildings in activity centres
5.2 Higher density residential buildings
5.3 Large format retail premises
5.4 Car parking structures
6.1 Principles for objects in the public realm
6.2 Street furniture
6.3 Trees and planting
6.4 Barriers and fences
6.5 Lighting
6.6 Signs and way-finding
6.7 Small public buildings and structures

Higher density residential development

1.2 Activity centre structure
1.3 Large development site structure
1.4 Higher density residential precinct structure
1.5 Public realm structure
2.2 Pedestrian priority streets
2.3 Pedestrian and bicycle paths
2.4 Pedestrian and bicycle crossings
2.5 Major roads
2.7 On-street car parking
3.1 Public spaces principles
3.2 Street spaces and plazas
3.3 Local parks
5.1 Buildings in activity centres
5.2 Higher density residential buildings
5.4 Car parking structures
6.1 Principles for objects in the public realm
6.3 Trees and planting
6.4 Barriers and fencing
6.5 Lighting
6.6 Signs and way-finding

Large format retail premises

1.1 Urban structure principles
1.2 Activity centres structure
1.3 Large development site structure
1.5 Public realm structure
2.1 Movement network principles
2.2 Pedestrian priority streets
2.3 Pedestrian and bicycle paths
2.4 Pedestrian and bicycle crossings
2.5 Major roads
2.8 Car parking lots
3.1 Public spaces principles
3.2 Street spaces and plazas
5.1 Buildings in activity centres
5.3 Large format retail premises
5.4 Car parking structures
6.1 Principles for objects in the public realm
6.2 Street furniture
6.3 Trees and planting
6.4 Barriers and fences
6.5 Lighting
6.6 Signs and way-finding

Introduction

Urban development design

1.1 Urban structure principles
1.2 Activity centre structure
1.3 Large development site structure
1.4 Higher density residential precinct structure
1.5 Public realm structure
2.1 Movement network principles
2.2 Pedestrian priority streets
2.3 Pedestrian and bicycle paths
2.4 Pedestrian and bicycle crossings
2.6 Public transport on roads
2.7 On-street car parking
2.8 Car parking lots
3.1 Public spaces principles
3.2 Street spaces and plazas
3.3 Local parks
4.1 Public transport environs principles
5.1 Buildings in activity centres
5.2 Higher density residential buildings
5.3 Large format retail premises
5.4 Car parking structures
6.1 Principles for objects in the public realm

Physical activity design

Introduction

Public spaces design

0.10 Legislation, policies and other guidance

The Urban Design Guidelines for Victoria support and complement the objectives set out in relevant Victorian legislation, provisions and advisory documents including:

- *Planning and Environment Act 1987* – to secure a pleasant, efficient and safe working, living and recreational environment for all Victorians and visitors to Victoria
- *Local Government Act 1989* – sets out objectives for councils to improve the overall quality of life of people in the local community and to ensure that services and facilities provided by the Council are accessible and equitable
- *Subdivision Act 1988* – sets out objectives for provision of public open space during the land subdivision process
- *Victoria Planning Provisions* – to create urban environments that are safe, functional and provide good quality environments with a sense of place and cultural identity
- *Urban Design Charter for Victoria 2009* – provides overarching principles for urban design to apply to cities and towns in Victoria to make places that are valued and significant for those who use them.

Related planning guidance

Victoria Planning Provisions: Practice Notes and Advisory Notes.

Other departments and agencies guidance

The Victorian Planning Authority, VicRoads, Victorian Public Transport Development Authority (PTV), VicTrack and Community Crime Prevention Victoria provide guidance documents that are relevant to certain urban design decisions.

A full list of, and links to, these design guidance documents is located in Guideline sources and references.

Element 1
Urban structure

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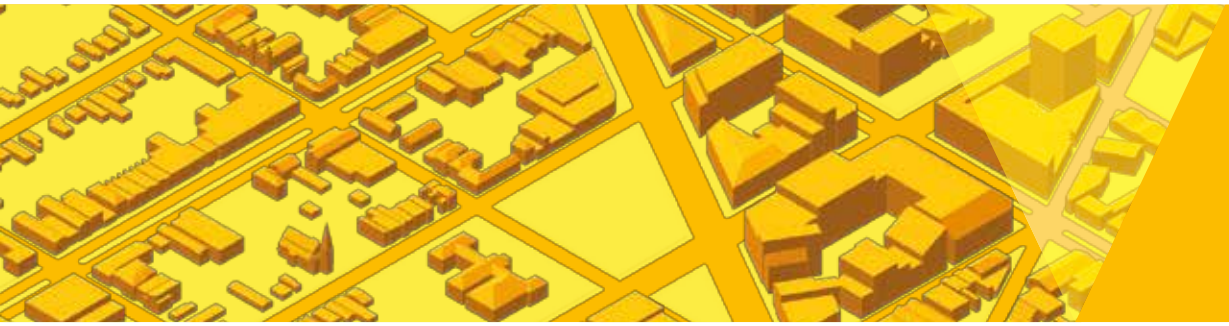

1

Element 1 Urban structure

This element covers

1.1 Urban structure principles

General principles for the arrangement of streets, paths, blocks and lots, public open spaces, activity centres, public transport nodes and corridors and residential neighbourhoods.

1.2 Activity centre structure

The layout of areas that are the focus for enterprise and social interaction, incorporating services and facilities, shopping, employment and residences.

1.3 Large development site structure

The layout of large parcels of land within cities and towns that have become available for development and their integration into the existing urban area.

1.4 Higher density residential precinct structure

The layout of an area's blocks, lots, streets and public spaces to accommodate people living in apartments or residential mixed-use buildings. The precinct often will have larger lot sizes and be within or near an activity centre or a large development site.

1.5 Public realm structure

The layout and detail design of the public and street spaces that comprise the public realm.

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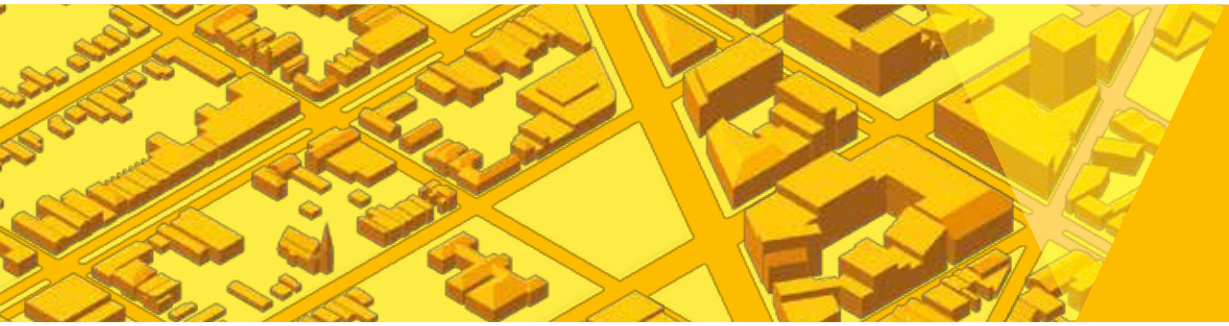


1.1

1.1 Urban structure principles

Urban structure comprises the overall topography and land division pattern of an urban area. It is the pattern and scale of blocks, lots and public spaces, and the arrangement and scale of the movement network's streets, roads and paths. Whether at the scale of a city, town, neighbourhood, precinct or large development site, it is the interrelationship between all of the elements of urban structure, rather than their individual characteristics, that together make a place. Urban structure includes the location and types of activity centres, public transport nodes and corridors, public spaces, community facilities, and urban infrastructure.

The basic unit of a city's urban structure is a block. Bounded by streets, blocks contain lots or parcels of land that provide space for buildings and other land uses. While street and block patterns generally remain stable over time, lot patterns and land use can change. Lots may be subdivided or amalgamated for different types of buildings and land uses.

Why is it important?

The urban structure determines how serviceable and flexible an urban area will be, and how well it will integrate with its surroundings. The urban structure contributes to both the function and feel of an area and creates a sense of place. A well-functioning urban structure has connected neighbourhoods, where activity centres are within a convenient walking distance. Urban structure design can enhance personal safety and property security by allowing for informal surveillance opportunities and a choice of routes.

The layout of blocks and lots can support or limit flexibility, diversity and opportunity in a city or neighbourhood, and influence the types of buildings and land uses that can be accommodated. Large blocks might permit a wider variety of development options, but can pose a barrier to movement, while smaller blocks allow greater ease and choice of movement around a neighbourhood.

These **urban structure principles** apply to the design of activity centres, large development sites, higher density residential precincts, and the public realm. The urban structure principles should be used in conjunction with accepted civil design standards for motor vehicle movement, and water management.

Related guidance

Element 2 **Movement network**

Element 3 **Public spaces**

Objective 1.1.1 To provide a permeable and functional urban structure of blocks and streets

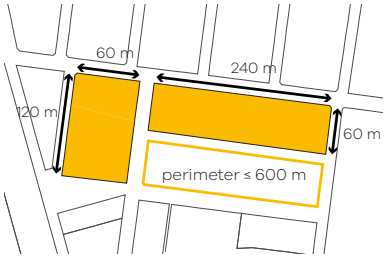
Permeability refers to the extent to which the urban structure permits, or restricts, the movement of people or vehicles through an area, and the capacity of the area network to carry people or vehicles.

1.1.1a Create an interconnected street layout with regular block sizes.

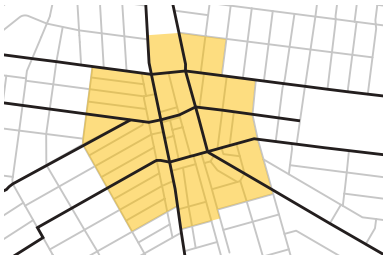
→ **TIP** An interconnected street layout provides a choice of routes, allowing people to move about and goods to be transported with ease and efficiency.

1.1.1b Create a permeable block layout with block dimensions ranging from 120m to 240m long and 60m to 120m wide.

→ **TIP** A block perimeter of around 600m provides for good pedestrian and vehicular access and an efficient subdivision pattern of the block. Smaller blocks may be appropriate in more intense urban areas.



1.1.1c Extend streets, pedestrian and bicycle paths from existing areas into new areas with direct roads, streets and paths.



1.1.1d Align pedestrian connections along desire-lines with short, straight travel paths.

→ **TIP** People generally choose the shortest practical path to their destination. Curving street alignments can increase pedestrian and cycling distances, and reduce sightlines. However, in sloping topography, curving streets may be more appropriate to enable flatter travel paths.

Objective 1.1.2 To provide a legible urban structure of blocks and streets

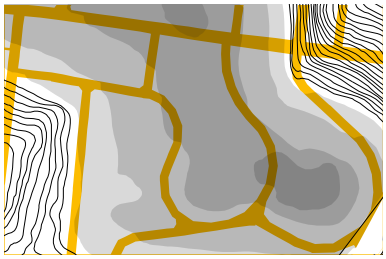
The legibility of an area refers to the ease with which a person is able to find their way around and navigate through the area.

1.1.2 a Lay out street and block patterns with direct, straight or near straight streets.

→ **TIP** Areas with straight streets and clear sightlines are easier to navigate and safer for pedestrians. Tight curving streets can reduce neighbourhood legibility and be more difficult to develop and service.

1.1.2 b Use the area's topography, slope and contours to achieve an accessible movement network.

→ **TIP** Curving street alignments may increase pedestrian and cycling distances, and reduce sightlines. However in sloping topography, curving streets may be more appropriate to enable flatter travel paths.

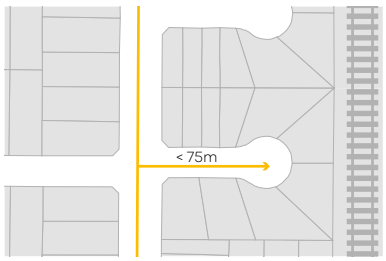


1.1.2 c Lay out street and block patterns to create view lines to key landmarks.

→ **TIP** Highly visible landmarks and landscape features aid navigation and way-finding as well as contributing to a sense of place.

1.1.2 d Where a cul-de-sac is necessary, limit the length to less than 75m, with a straight alignment or clear sightlines to the end.

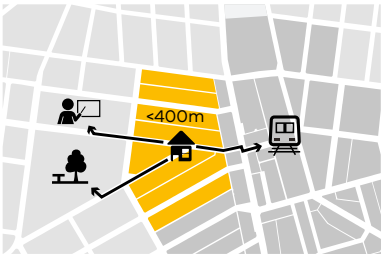
→ **TIP** A short cul-de-sac allows views from the adjoining street to the cul-de-sac end.



Objective 1.1.3 To ensure the urban structure supports accessibility from neighbourhoods to activity centres and public transport

1.1.3 a Lay out streets and blocks to provide reasonable walking distances from dwellings to an activity centre and public transport services.

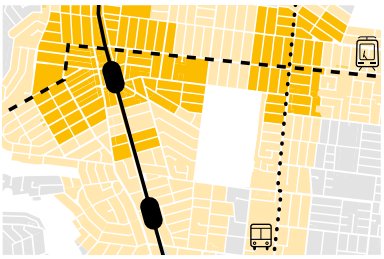
→ **TIP** A 400m (or 5 minute) street walking distance to an activity centre provides good accessibility for lots intended for medium and higher density residential uses.



1.1.3 b Create a street and block layout where 95 per cent of dwellings are located no more than:

- 400m street walking distance from the nearest existing or proposed bus stop, or
- 600m street walking distance from the nearest existing or proposed tram stop, or
- 800m street walking distance from the nearest existing or proposed railway station.

→ **TIP** 400m is about a 5 minute walk; 600m is about a 7 minute walk; 800m is about a 10 minute walk.



1.1.3 c Provide continuous, direct pedestrian and bicycle access routes from the surrounding neighbourhood to railway stations and public transport stops and interchanges and activity centres.

→ **TIP** Pedestrian and bicycle access routes to a public transport node or activity centre should accommodate both public transport users and others moving around the neighbourhood. More people using the paths will create a safer environment.

Objective 1.1.4 To ensure that the urban structure provides good amenity and safe interfaces between infrastructure corridors and adjacent land uses

1.1.4 a Locate major infrastructure corridors and installations to minimise their potential to be a barrier to cross movement.

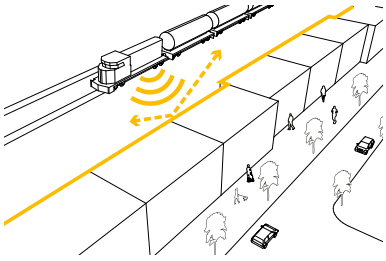
→ **TIP** Infrastructure corridors such as railway lines, motorways and pipe tracks can be barriers to crossing but may provide opportunities for parallel linear parks and paths.

1.1.4 b Provide conveniently located grade separated pedestrian and bicycle crossings across rail corridors, motorways and other natural barriers, to connect neighbourhoods and key destinations.

→ **TIP** In urban areas, the crossing location and frequency should be informed by local circumstances and need.

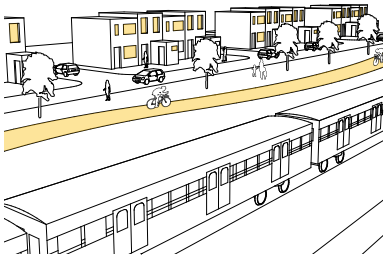
1.1.4 c Where a freight railway or motorway corridor interfaces with lots for residential or other sensitive uses, locate the rear boundary of lots toward the corridor.

→ **TIP** Locating the rear boundaries of lots toward a freight railway or motorway corridor interface provides better opportunities for noise mitigation where relevant.



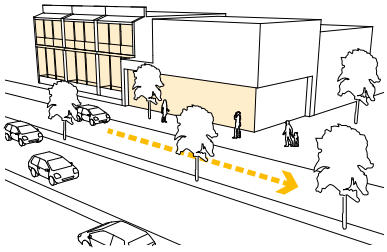
1.1.4 d Where a railway operating corridor serves only metropolitan passenger services, provide a street between the railway operating corridor and the surrounding area, to provide an active frontage.

→ **TIP** A street is not an effective noise buffer, but metropolitan services are generally of lesser noise impact than diesel freight trains.

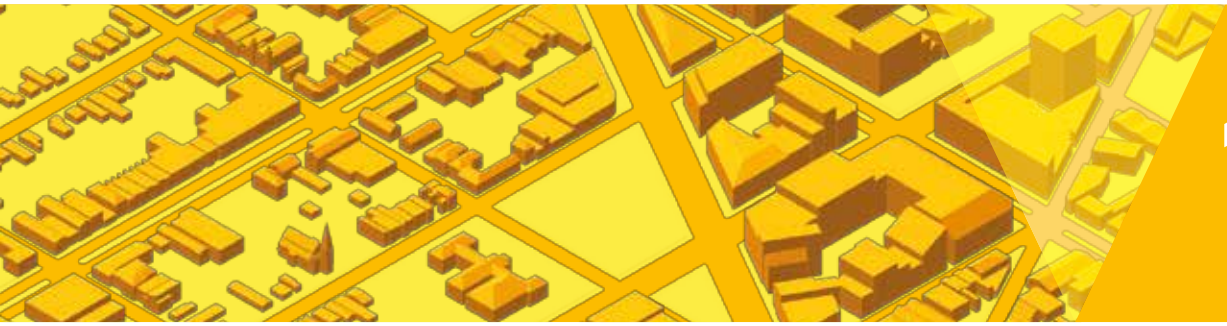


1.1.4 e Where lots adjoin high volume or high speed major roads, provide a service road and front lots on to the service road.

→ **TIP** Avoid block layouts where lots back onto arterial or major roads. This results in poor pedestrian safety and landscape amenity along the road.



1.1 Urban structure principles



1.2

1.2 Activity centre structure

Activity centres, although of different sizes and types, are a focus for enterprise and social interaction, incorporating community facilities and services, shopping, employment and residences. Activity centres are the focus of public transport nodes where services converge. Activity centres include metropolitan centres, regional cities and town centres in rural areas.

An activity centre generally has an intense central core with smaller street blocks and a higher density of streets and lots. The structure of activity centres should allow for more intensive development, street frontage exposure for display, safe public spaces and pedestrian access to facilities.

Why is it important?

Activity centres provide residents, visitors and workers with easy access to a range of services and facilities as well as opportunities for establishing businesses, or simply being sociable and meeting others. By providing a variety of lot sizes and shapes in a connected movement network, an activity centre can accommodate a wide variety and scale of uses and buildings and respond to the changing needs of residents, businesses and visitors.

Some specialised and single-focus activity centres may have extended periods of inactivity with poor safety out-of-hours. Activity centres with a diverse mix of activities and uses adds to their vibrancy and economic viability as well as improving perceptions of safety and reducing opportunities for crime..

Related guidance

Element 1.1 **Urban structure principles**

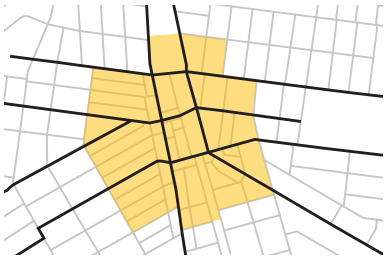
Element 2 **Movement network**

Element 4 **Public transport environs**

1.2 Activity centre structure

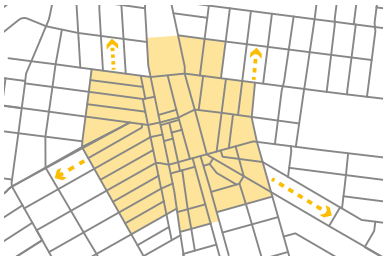
Objective 1.2.1 To ensure accessible and functional activity centres

1.2.1a Locate the activity centre where the main streets and public transport routes converge.



1.2.1b Locate lots for medium and higher density residential and retirement housing within a five minute walk (400m) of an activity centre.

1.2.1c Shape and orient blocks on the perimeter of the activity centre to support direct access to the activity centre core, from the surrounding neighbourhood.

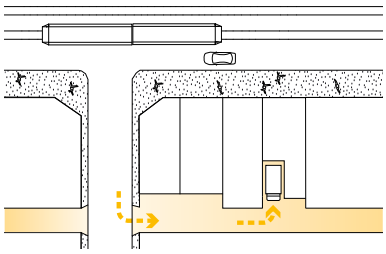


1.2.1d In activity centres, provide a closely spaced and interconnected network of street and lanes.

→ **TIP** Having more streets allows people a choice of routes, and can disperse the volume of pedestrian and vehicle traffic across a number of routes. In areas of intense activity, more streets can also provide increased frontage length.

1.2.1e Provide rear or side lane vehicle access to lots within activity centres.

→ **TIP** By providing rear or side lane access for vehicle, service and delivery functions, street frontages can remain safe and active, uninterrupted by vehicle crossovers.



1.2.1f Create a range of lot sizes for intense uses at the activity centre core.

→ **TIP** The core of the activity centre is the best connected location; the functional centre may not be the geographical centre point. The core is often where the main streets connect.

Objective 1.2.2 To ensure activity centre structure supports public transport access

1.2.2a Provide for train stations and public transport interchanges within the core of activity centre.

→ **TIP** While frequent bus movements on pedestrian priority streets are not desired, an interchange crossing the main street at one end may be a convenient, accessible option.

1.2.2b On streets within activity centres that accommodate public transport services, minimise intersections and vehicle access points to lots.

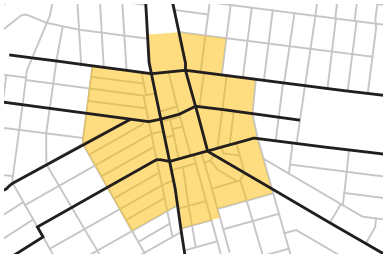
→ **TIP** Private vehicles entering or turning out of a street that accommodates on-road public transport, can cause service delays. See Guideline sources and references for link to Public Transport Guidelines.

1.2.2c Provide for priority or separated lanes for public transport on roads where multiple public transport routes converge within activity centres.

Objective 1.2.3 To ensure the activity centre structure supports safety and amenity

1.2.3 a Locate lots intended for retail and commercial uses on well-connected main streets in activity centres.

→ **TIP** Intense and diverse commercial activities on smaller lots with narrower frontages, or mixed uses with multiple tenancies, contribute to an active and interesting public realm.



1.2.3 b Locate lots for active uses and uses with long operating hours on pedestrian priority streets.

→ **TIP** Personal safety is best achieved by having people present on the street during the day and at night, and by providing opportunities for informal surveillance of public spaces.

1.2.3 c Provide lots for shops on streets that allow zero street setbacks and continuous built frontages.

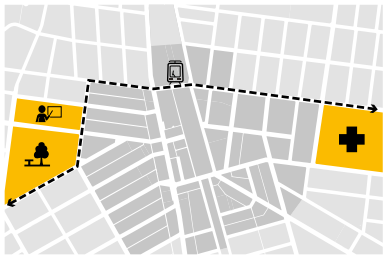
→ **TIP** Retail activities in buildings function best when they have direct access abutting the footpath and when supported by similar neighbours.

1.2.3 d Surround the activity centre core with lots that are large enough to accommodate higher density residential uses and workplaces.

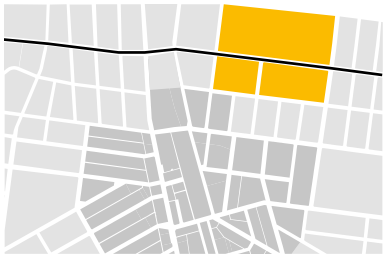
→ **TIP** Small, narrow lots are difficult to develop at higher densities.

1.2.3 e Locate large public facilities, such as hospitals, schools, and major recreation facilities on public transport routes and at the edge of activity centres.

→ **TIP** Facilities that occupy large land areas can create a barrier to movement through an activity centre. Out of operating hours, the facilities may present an inactive edge to streets and paths.



1.2.3 f Locate lots for large format uses that generate high vehicle traffic volumes on wider streets at the edge of activity centres, and with easy access to major roads.

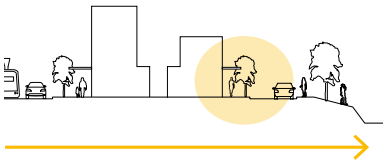


Objective 1.2.4 To activate the activity centre's interface with its barrier edges

Typical barriers or edges to an activity centre are railway or motorway corridors, a water body or a natural feature.

1.2.4 a Where an activity centre has a barrier or edge, provide an active public space or a street between the edge and the adjacent buildings.

→ **TIP** Where a barrier or edge has few passing pedestrians or little activity in the adjacent buildings (e.g. has a rear boundary toward the edge), public spaces in these areas may attract fewer visitors and be a security risk.



Objective 1.2.5 To respond to change within an activity centre.

As an activity centre evolves and changes, its structure may need review to provide new connections, changes in land use patterns or the re-allocation of public space for different activities. Structure planning can assist in managing this change.

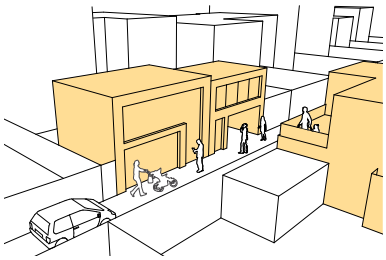
1.2.5 a Create a regular block and lot pattern within the activity centre that enables future lot subdivision or consolidation.

→ **TIP** Irregular shaped lots can limit future lot subdivision or consolidation.

1.2.5 b Where activity centres experience increased residential densities or an expanding worker population, maintain or increase the capacity of the pedestrian movement network by adding new mid-block links and public spaces.

→ **TIP** Periodic reviews of the functionality and safety of the public realm in an activity centre, may indicate need for adjustment to its structure.

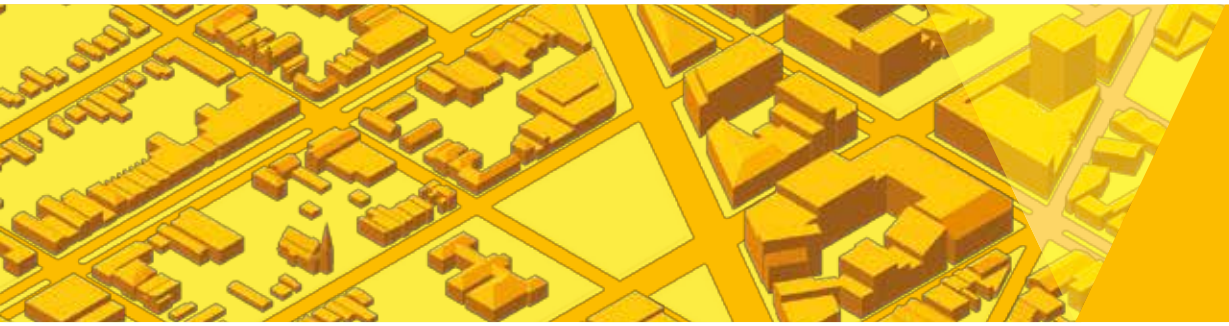
1.2.5 c As an activity centre evolves and intensifies, allow future development to front laneways.



1.2.5 d When consolidating or subdividing lots, maintain a fine-grained street frontage.

→ **TIP** Fine-grained street frontages have multiple shopfronts with doorways and windows.

1.2 Activity centre structure



1.3

1.3 Large development site structure

Large parcels of land within cities and towns sometimes become available for development and new uses. Often in prime locations, these sites can be publicly owned (such as railway corridors, surplus government land or dockyards) or they can be former commercial, industrial or institutional sites that are no longer needed for their original purpose. They may be located in activity centres or are accessible to transport connections, services and jobs.

Large development sites need to integrate with the existing urban structure of a city or neighbourhood. This often involves creating new residential or commercial areas and movement networks, as well as infrastructure, public spaces and community facilities.

Why is it important?

Large development sites that become available contribute to the growth and evolution of cities and towns. The way a parcel of redeveloped land is connected to the surrounding area and divided into blocks, lots and streets will influence the area's accessibility and potential future use patterns.

Large development sites can provide an opportunity to repair and enhance the existing urban infrastructure in the area, and there may be too few dwellings to sustain local business activity, insufficient public space or recreation opportunities. The development of the site may also enable new connections to be made between adjacent established areas.

Related guidance

Element 1.1 **Urban structure principles**

Element 1.5 **Public realm structure**

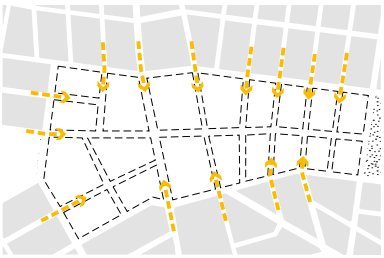
Element 2 **Movement network**

1.3 Large development site structure

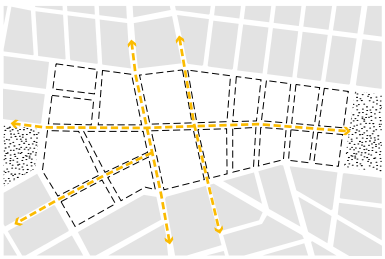
Objective 1.3.1 To integrate a large development site into its surrounding area

1.3.1a Connect the development site's movement network to the movement network of the surrounding area.

→ **TIP** The movement network includes pedestrian and bicycle paths, public transport services, streets and roads.

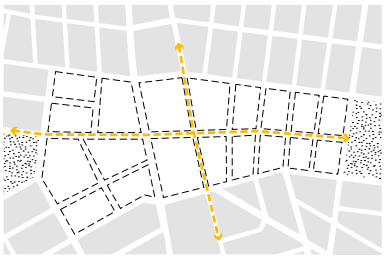


1.3.1b Create new links across the development site to connect the new neighbourhood with the surrounding area.



1.3.1c Provide at least two 'through' streets across a new neighbourhood in a development site, linking 'centre to edge'.

→ **TIP** Very large development sites may require additional through routes.



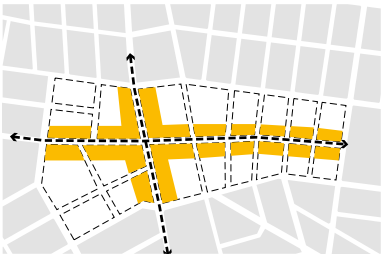
1.3 Large development site structure

Objective 1.3.2 To ensure large development site structure provides a high level of amenity and functionality for residents

1.3.2a Where possible, include uses and facilities in the development site that are lacking or insufficient in the surrounding neighbourhood.

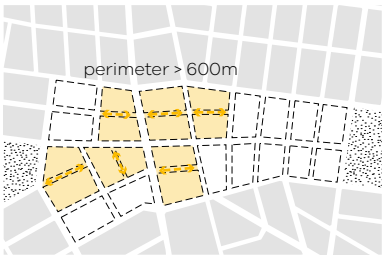
1.3.2b Locate higher intensity activities on well-connected streets within a development site.

→ **TIP** Higher intensity activity examples are shops, community services, cafes and cinemas.



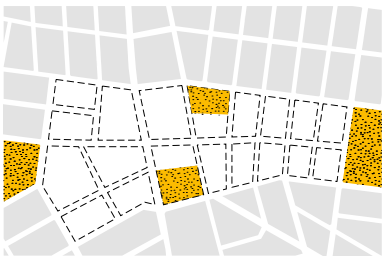
1.3.2c Where the street block perimeter is greater than 600 metres, create cross-block pedestrian links.

→ **TIP** Studies of pedestrian behaviour suggest street block perimeters greater than 600m are more likely to discourage walking. Creating pedestrian permeability across a block encourages walking.



1.3.2d Provide the size and types of public open spaces for informal and active recreation to serve the intensity and type of development.

→ **TIP** Higher densities of residents or workers in an area require access to a higher quantity and diversity of public open spaces.

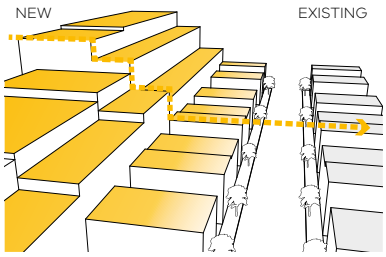


1.3 Large development site structure

Objective 1.3.3 To large development sites maintain the amenity of adjacent residential uses

1.3.3 a Create a transition from large development sites to adjacent residential neighbourhoods using scale, built form and uses.

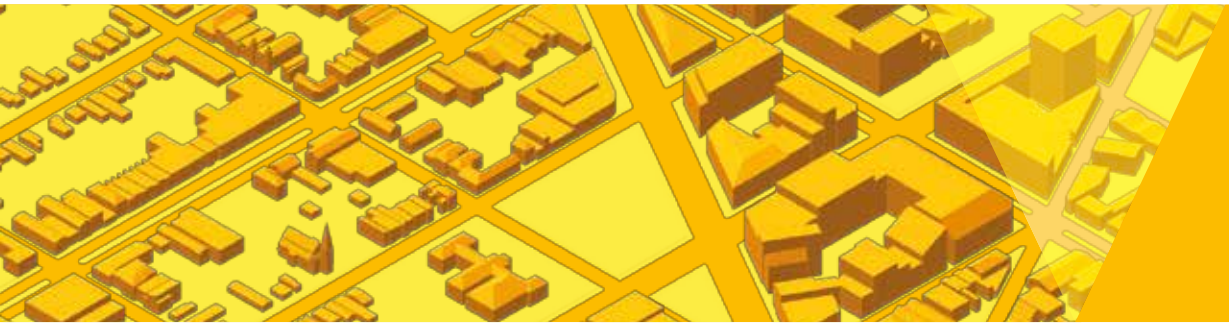
→ **TIP** A transition can be achieved through the arrangement and size of new blocks and lots at the development site edge and the future built form, location of activities and street design.



Objective 1.3.4 To ensure the public realm of large development sites is well-maintained and managed

1.3.4 a Develop public open spaces, civil infrastructure and streets to a standard acceptable for ongoing maintenance and management.

→ **TIP** The local council standards and materials should be met for adoption and for ongoing management of the public realm within large development sites.



1.4

1.4 Higher density residential precinct structure

A higher density residential precinct generally has larger lot sizes that are able to accommodate apartment and mixed-use developments. The precinct may be in or adjacent to an activity centre or within a large development site.

The streets and blocks in a higher density residential precinct provide for a high level of connectivity within and through the precinct. They also provide for an appropriate level of active street frontage and commercial uses at street level.

Why is it important?

With a larger population in a defined area it is crucial that the structure of a higher density residential precinct provides a high level of amenity in public spaces, access to facilities and services, protection of privacy and personal safety.

Related guidance

Element 1.1 Urban structure principles

Element 1.2 Activities area structure

Element 1.3 Large development site structure

Element 1.5 Public realm structure

Element 2.2 Pedestrian priority streets

Element 3.2 Street spaces and plazas

Element 3.4 Communal open space

Element 5.2 Higher density residential buildings

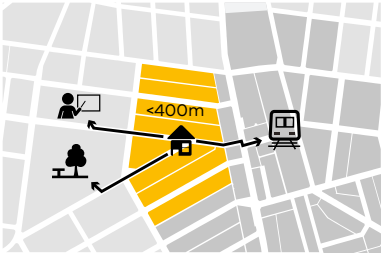
Element 6 Objects in the public realm

1.4 Higher density residential precinct structure

Objective 1.4.1 To ensure higher density residential precincts are accessible

1.4.1a Locate higher density residential precincts within, or on the edge of, an activity centre, or near a public transport node.

1.4.1b Arrange blocks and streets in higher density residential precincts to provide all lots with access to an activity centre, public transport and high quality public open space within a 400m walking distance.



Objective 1.4.2 To ensure higher density residential precincts provide a high level of amenity and functionality for residents

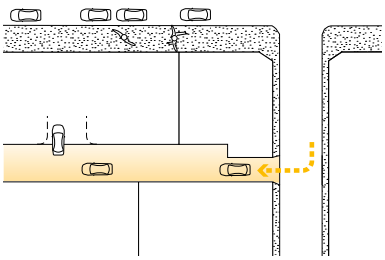
1.4.2a Make the streets of a higher density residential precinct, pedestrian priority streets.

→ **TIP** Higher density residential precincts generate larger numbers of pedestrians. See Element 2.2 Pedestrian priority streets.

1.4.2b Allow for lot sizes in a higher density residential precinct to accommodate communal open space with access to winter sun.

1.4.2c Arrange higher density residential lots with rear or side lane access for resident car parking and services.

→ **TIP** By providing rear lane access to car parking, pedestrian areas are safely separated from vehicle crossovers.



1.4.2d Locate visitor bicycle parking spaces nearby to higher density residential lots.

1.4 Higher density residential precinct structure

Objective 1.4.3 To ensure a well-maintained, high amenity residential precinct

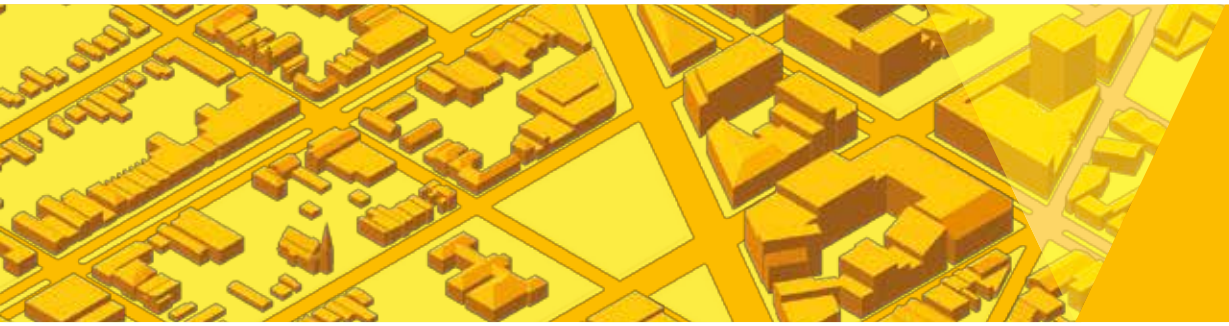
1.4.3 a Manage visitor and resident traffic and parking at the precinct scale.

→ **TIP** Higher density residential precincts may generate increased demand for on-street visitor parking.

1.4.3 b Integrate provision for household waste and recyclable collection in the precinct structure.

→ **TIP** Planning for future waste management systems at the subdivision and development stage can avoid waste bins lining a street or blocking paths.

1.4 Higher density residential precinct structure



1.5

1.5 Public realm structure

The public realm comprises spaces and places that are open and freely accessible to everyone, regardless of their economic or social conditions. These spaces can include streets, laneways and roads, parks, public plazas, waterways and foreshores.

Public realm structure delivers the location of and connection to destinations and activities. It includes layout and detailed design to support the function and amenity of streets, public spaces, public transport access and the interface between the public realm and private property. While the overall urban structure may be enduring, the purpose and detailed arrangement of public spaces may change over time.

Why is it important?

The public realm provides a space for people to be free to access, to move about and to enjoy recreation. It enables people to carry out their daily business, to engage in activities or meet with others or simply to be. The public realm must be attractive, inclusive and safe to be in. An inhabited and well maintained public realm feels safe and encourages people to use spaces.

Related guidance

1.1 Urban structure principles

1.2 Activity centre structure

1.3 Large development site structure

1.4 Higher density residential precinct structure

2 Movement network

3 Public spaces

4 Public transport environs

6 Objects in the public realm

1.5 Public realm structure

Objective 1.5.1 To ensure a public realm structure where the movement network and the land uses support each other

1.5.1a Locate local walking destinations and activities along main pedestrian streets and paths.

→ **TIP** Local walking destinations can include railway stations, bus and tram stops and interchanges, shops, schools parks, recreation and community facilities.

1.5.1b Provide for a level of active frontage and lot access appropriate to the street function and building use patterns.

→ **TIP** Level of active frontage is reduced where vehicle access to narrow lots is via its street frontage. Driveways and crossovers reduce street activation and compromise pedestrian safety. See Element 5 Buildings.

1.5.1c Co-locate public transport nodes with active uses and busy public spaces.

→ **TIP** Active uses and public spaces can attract other people to use the public transport node. This helps increase the numbers of people using the area and improves security, particularly at night.

1.5.1d Locate active, non-residential uses at ground level at the interface with major public transport nodes.

→ **TIP** Railway stations and major bus and tram interchanges generate many vehicle movements and operate from early morning to late night. Active commercial uses can benefit from the passing pedestrians and this contributes to safety in the area.

1.5.1e Where a railway station or a public transport interchange interfaces with a public space, provide active uses at ground level at the station or interchange interface with the public space.

Objective 1.5.2 To ensure the public realm structure provides for accessible, safe and conveniently located public spaces.

Public spaces provide opportunities for active and informal recreation. The location and context of public spaces within the urban structure is critical to a space's success. Public space that has poor access, or is located away from the community it serves, will not be well used.

1.5.2a Create public spaces where the local catchment has sufficient potential users to activate the space.

→ **TIP** A walkable catchment to a public space varies with the public space type and the user. A local park catchment distance is shorter for a child or older person than for other users. A plaza lunch place may need to be within five minutes' walk of a workplace to be attractive.

1.5.2b Provide for a variety of parks and public spaces, for informal and active recreation, located within a 400m walking distance from dwellings, workplaces, schools and shops.

→ **TIP** 400m is a five minute walk.

1.5.2c Locate public spaces where they can be connected to their surrounding area via pedestrian priority streets and paths.

→ **TIP** Public spaces are used if they are convenient and safe to access.

Objective 1.5.3 To ensure the public realm structure provides for suitably-sized, comfortable and purposeful public spaces

The size and dimensions of a public space affect its possible uses and safety in terms of informal surveillance from the surrounding area.

Large public spaces can feel uninhabited and lonely, even overwhelming and threatening. Conversely, a small space may feel comfortable for quiet uses but not be a functional size for some active uses.

1.5.3 a Provide the number and types of public spaces that meet local needs.

→ **TIP** A strategic planning process can identify and establish local needs and the appropriate type and size of public space to serve the community's needs.

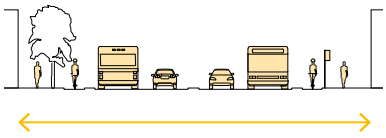
1.5.3 b Create public spaces of sufficient size to accommodate desired activities.

→ **TIP** Often the most popular and cared-for plazas and parks are compact and intimate.

Objective 1.5.4 To ensure a public realm structure where streets support the amenity and function of neighbourhoods

1.5.4 a Make the main streets sufficiently wide to serve their function in the movement network and as a public place, and to accommodate services infrastructure.

→ **TIP** A street may need to accommodate public transport lanes and stops, pedestrians, cyclists, vehicles as well as accessible utilities infrastructure and service verges.

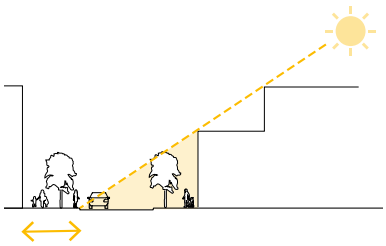


1.5.4 b Where a street functions as an activity centre main street, provide block lengths and street widths to accommodate on-road public transport vehicles and accessible public transport stops.

1.5.4 c Set the street width in relation to the future building height and setback distance so as to allow daylight and winter sun access to key public spaces within streets.

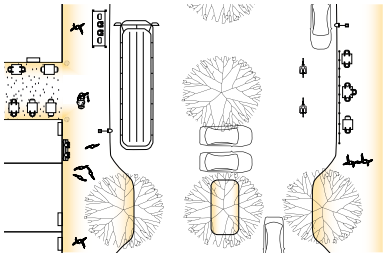
→ **TIP** In some situations, creating shaded streets may improve comfort levels in hot weather.

→ **TIP** A strategic planning process can identify and establish key public spaces.



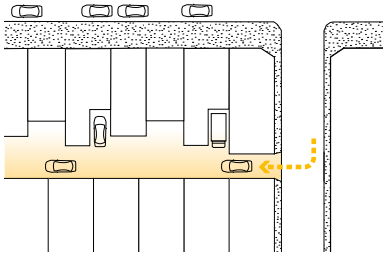
1.5.4 d Provide space within the street for trees, landscaping and to accommodate social activities and utility infrastructure.

→ **TIP** Streets can be used for informal socialising and recreation, outdoor dining, street vendors, public transport waiting facilities, infrastructure services and street furniture. See Element 6 Objects in the public realm.



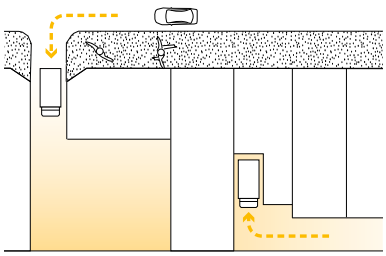
1.5.4 e Where lots front pedestrian priority streets or are 6m or less in lot width, provide rear vehicle access to off-street parking.

→ **TIP** Where narrow lots have vehicle access from the front, car parking access may dominate the street interface, while crossovers may reduce pedestrian safety.



1.5.4 f Provide commercial lots with service access lanes or service courts separated from pedestrian access.

→ **TIP** Providing service lanes and service courts in commercial premises ensures pedestrians are safely separated from vehicles.

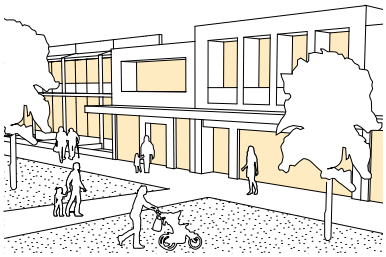


Objective 1.5.5 To ensure the public realm structure provides high amenity and safe interfaces between different uses

Interfaces occur between different land uses, or a new and an existing neighbourhood.

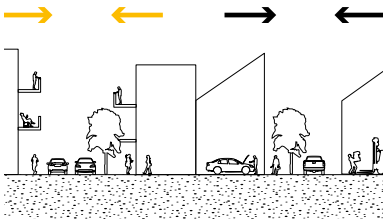
1.5.5 a Where lots border a public open space, provide an active frontage toward the public open space.

→ **TIP** Public spaces bounded by blank rear or side fences limit the opportunity for informal surveillance and reduce security for public space users and for properties bordering the public space. See Element 3 Public spaces.



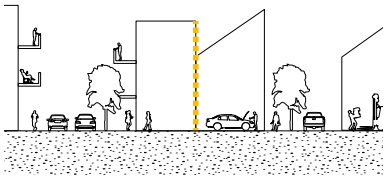
1.5.5 b Locate compatible uses facing each other across a street.

→ **TIP** Amenity and safety impacts can arise where potentially incompatible uses, such as industrial and residential uses, face each other across a street.



1.5.5 c Locate the transition between incompatible uses along rear boundaries of lots.

→ **TIP** Place land use zoning boundaries along rear lot boundaries rather than street frontage boundaries. A rear boundary wall can provide a buffer between incompatible uses and the amenity of the street is safeguarded.



Objective 1.5.6 To ensure a well-managed, high amenity public realm

The public realm has many stakeholders and is managed by a number of agencies, each with different responsibilities and interests. This adds to the complexity of developing and managing a successful place.

1.5.6 a Develop public spaces, civil infrastructure and streets to a standard acceptable for ongoing maintenance and management.

→ **TIP** The local council standards and materials should be met for adoption and for ongoing management of public spaces.

1.5.6 b Establish a an integrated management agreement for a precinct to coordinate the maintenance and repair program for the public realm.

→ **TIP** For example, regularly maintain landscaping and public facilities, and when repairing paving, also replant missing street trees.

1.5.6 c Where neighbourhoods experience increased residential densities, review the amount and type of public open space and street space to meet the local community's needs.

→ **TIP** Periodic reviews of use and density pattern changes and urban infrastructure performance will assess the need for intervention. Structure planning can assist in managing this change.

1.5 Public realm structure

Element 2
Movement network

VICTORIA State Government | Environment, Land, Water and Planning

2

Element 2 Movement network

This element covers

2.1 Movement network principles

The principles informing the overall form and layout of public streets, roads and paths.

2.2 Pedestrian priority streets

Streets that give high priority to walking, cycling and facilitating social contact, while allowing for low-speed motor vehicle traffic. They are usually in areas of concentrated activity.

2.3 Pedestrian and bicycle paths

Paths that provide for people moving on foot, bicycle or other mobility aid vehicles within streets or public and semi-public spaces.

2.4 Pedestrian and bicycle crossings

The parts of the movement network that allow pedestrians and cyclists to safely cross roads and other barriers.

2.5 Major roads

The pedestrian and bicycle paths adjacent to roads with high volume, high-speed vehicle traffic.

2.6 Public transport on roads

The stops and access routes to trams and buses.

2.7 On-street parking

Convenient, commercial vehicle and casual car parking close to local destinations.

2.8 Car parking lots

Open areas of land used for parking cars.

This element does not cover design of motorways and railways.

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Part 3 of 8 parts

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2.1

2.1 Movement network principles

The movement network is the interconnected system of streets, roads and paths that accommodates pedestrians and cyclists, on-road public transport, emergency and private vehicles. The movement network connects places and activities, and allows people and goods to reach their intended destinations and to access private land.

Among its many functions, the movement network land area can provide space for utilities infrastructure and car parking, and can also provide access to daylight and ventilation for adjacent buildings. A well-functioning movement network provides optimal walking and cycling access to destinations such as activity centres, work, schools, public transport and parks, and it has high levels of legibility, convenience, amenity and safety for users.

Why is it important?

Good connections to places and linkages between different modes of transport, ensures equitable access to facilities, services and public transport. The design and layout of the movement network greatly affects people's mobility and travel options as well as their safety and wellbeing. Streets play an important role in enabling people to be more physically active and healthy. Streets also play an important role as public spaces, supporting social interaction and providing places for cultural expression.

These guidelines focus on urban design for active transport – pedestrians and cyclists and access to public transport. Provision for street design for vehicles is covered elsewhere by civil engineering standards.

Related guidance

Element 1 **Urban structure**

Element 3 **Public spaces**

Element 4 **Public transport environs**

2.1 Movement network principles

Objective 2.1.1 To ensure the movement network accommodates the diversity of transport modes and supports activities, including active transport

2.1.1a Provide direct, continuous and well-lit pedestrian and bicycle routes.

2.1.1b Provide a pedestrian network that caters for persons of all abilities.

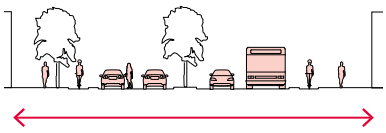
2.1.1c Provide for walking and cycling on all streets.

2.1.1d Allocate a street function and mode priority to each street in the network.

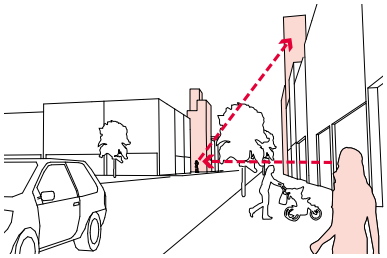
→ **TIP** SmartRoads, a tool for assigning priority to different modes of transport, was developed by VicRoads. It provides guiding principles for road use by transport mode, place of activity and time of day. See Guideline sources and references.

2.1.1e Establish a level-of-service provision for each mode on each movement network section.

→ **TIP** Streets need to allocate sufficient space to accommodate the anticipated volume of pedestrians and cyclists as well as on-road public transport, vehicles and on-street car parking. For other modes see Guideline sources and references.



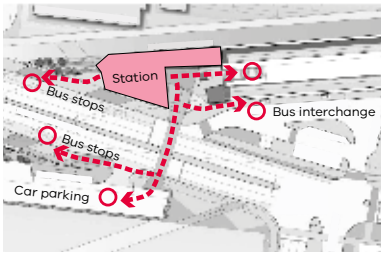
2.1.1f Maintain clear sightlines to landmarks to assist pedestrians and cyclists to orient themselves and move around an area.



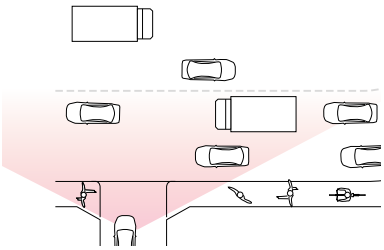
Objective 2.1.2 To ensure the movement network provides for safe interactions between transport modes

2.1.2 a Provide clearly marked, direct and safe connections for pedestrians travelling between movement modes.

→ **TIP** Whenever people move between modes, such as between a parked car and public transport, they are pedestrians.



2.1.2 b Arrange vehicle crossovers to allow clear sightlines between drivers entering the crossover and pedestrians and cyclists on the path.



Objective 2.1.3 To maintain a safe, inclusive and serviceable movement network

The movement network is managed by a number of agencies, each with different responsibilities and interests. This adds to the complexity of developing and managing a successful network.

2.1.3 a Manage the movement network and street space to respond to changes in use patterns and community needs.

→ **TIP** The movement network can be managed by creating shared zones, vehicle lane controls, pedestrian-only periods, public transport priority periods, variable traffic light phases, parking controls, speed limits, and space for kerb cafés, street vendors and buskers.

2.1.3 b Schedule periodic reviews of the movement network performance to inform network adjustments.

2.1 Movement network principles

2.2

2.2 Pedestrian priority streets

Pedestrian priority streets give high priority to walking and cycling, while allowing low-speed motor vehicle traffic (under 40km per hour). These streets are usually found in areas of intense and diverse activity such as activity centres, education facilities and public transport interchanges. They accommodate diverse travel modes as well as provide a public space function. Bicycle lanes may either be provided as a separate lane, or a shared path with other modes. Streets may also restrict vehicle types or access at times.

Why is it important?

Pedestrian priority streets perform many functions. They are comfortable and safe for all pedestrians, including those with a disability, and provide a safe environment for low-speed cycling. They can also be the setting for informal activity such as performers and vendors. Well-designed pedestrian priority streets encourage walking and cycling. Higher pedestrian numbers support the viability of nearby businesses, and allow uses such as cafes and restaurants to 'spill out' on to the street.

Related guidance

Element 2.1 Movement network principles

Element 3.2 Street spaces and plazas

Element 6 Objects in the public realm

2.2 Pedestrian priority streets

Objective 2.2.1 To ensure pedestrian priority streets maximise the convenience and safety of walking and cycling modes

2.2.1a Co-locate the pedestrian, bicycle and vehicle paths.

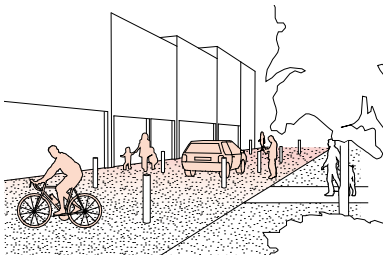
→ **TIP** Locating mode paths side by side increases the likelihood of informal surveillance, as there are more people on the street, more of the time. When pedestrian-only malls and separated pedestrian paths have low levels of activity they can feel unsafe.

2.2.1b Allocate a greater portion of street space to pedestrians and cyclists.

→ **TIP** Pedestrian priority streets work best with high levels of pedestrian traffic and of activity within adjacent buildings.

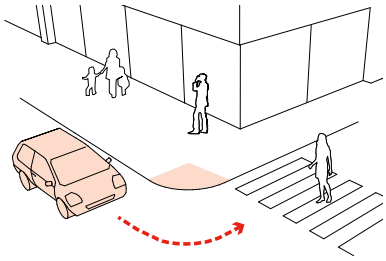
2.2.1c Where there are high numbers of pedestrians and low numbers of vehicle movements, create a 'Shared Zone'.

→ **TIP** If an existing street or lane is too narrow to provide a footpath that complies with Disability Discrimination Act requirements there may be no option but to treat the street as a 'Shared Zone'.



2.2.1d Keep the kerb radius at intersections to a minimum to encourage vehicle traffic to slow down when turning left into side streets.

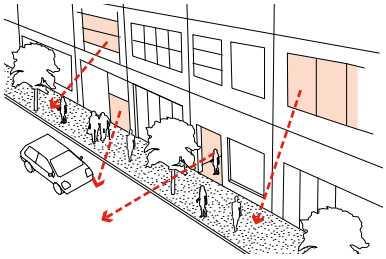
→ **TIP** The kerb radius should be kept to a minimum compatible with street cleaning, bus movements and road safety requirements. See Guideline sources and references.



Objective 2.2.2 To ensure the interface between the pedestrian priority street and buildings supports pedestrian amenity and safety

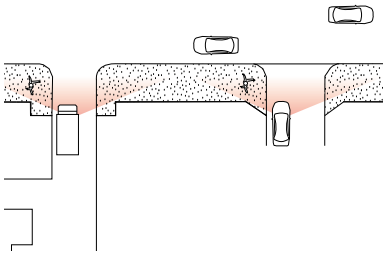
2.2.2a Place doors and windows of buildings to overlook the street.

→ **TIP** See Element 5 Buildings.



2.2.2b Include splays to driveway exits from laneways, buildings and car parking facilities to maintain sightlines from vehicles.

→ **TIP** See Guideline sources and references for VicRoads Supplement to the Austroads Guides to Road Design.

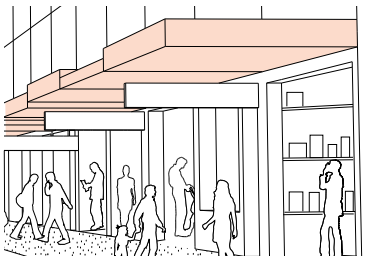


2.2.2c Provide space within the street for activities that support adjacent uses.

→ **TIP** To attract pedestrians, streets need to provide a high level of interest for users. Street spaces can accommodate outdoor dining, vendors, public art, performance and recreation.

2.2.2d Where possible integrate shelters and awnings onto the building facade on pedestrian priority streets.

→ **TIP** Integrating shelters, by attaching them onto the building wall, allows the street spaces to remain uncluttered. Building Code of Australia sets out design standards for building projections beyond the street alignment.
See Element 5.1 Buildings in activities areas, and Element 6 Objects in the public realm.



2.2 Pedestrian priority streets

Objective 2.2.3 To relate the scale of surrounding buildings to the pedestrian priority street

2.2.3 a Use street width, building height and landscape design to create a sense of enclosure for street users.

→ **TIP** The ratio of building height to street width can affect pedestrian activity. Narrow streets can encourage pedestrian activity. See Element 5 Buildings.

2.2.3 b Arrange the street furniture and finishes to emphasise the pedestrian space.

→ **TIP** Emphasising pedestrian spaces, for example by using entry markers and changed paving, sends a message to all street users that pedestrians are the priority.

Objective 2.2.4 To manage the use of the pedestrian priority street as an active public space

2.2.4 a Implement programs to facilitate and manage activities in the street space.

→ **TIP** See Element 3.2 Street spaces and plazas.

2.2.4 b Enable adjacent businesses to use the street space for café furniture and to display merchandise.

→ **TIP** Kerbside dining brings activity into the street. Increase the street space available for social activities as demand increases.

2.2.4 c Implement programs to enliven blank building walls.

→ **TIP** Architectural detail, wall art, lighting and advertising can transform windowless walls into attractive facades.

2.2 Pedestrian priority streets

Objective 2.2.5 To maintain clean, attractive and serviceable pedestrian priority streets

2.2.5a Design streets to facilitate efficient maintenance.

→ **TIP** Poorly maintained streets are known to influence perception of safety.

2.2.5b Promptly remove graffiti and replace damaged furniture.

→ **TIP** Damaged public furniture should be quickly removed and replaced to reinforce care and the perception of a safe environment. See Element 6 Objects in the public realm.

2.2 Pedestrian priority streets

2.3

2.3 Pedestrian and bicycle paths

Pedestrian and bicycle paths specifically provide for people on foot, bicycle or other mobility aid vehicles. Paths may be located on local streets and major roads, in public spaces such as parks and reserves, or through semi-private spaces such as car parking lots, forecourts and arcades. Paths may be solely for pedestrian use, cyclist use, or shared paths for pedestrians and cyclists. Pedestrian and bicycle routes should connect people directly with local destinations such as schools, shops, train stations and parks.

Why is it important?

Convenient, safe and comfortable pedestrian and bicycle paths are a valuable part of the movement network, and act as more than just thoroughfares. Footpaths are multi-use environments where people socialise, conduct business and observe the world around them as well as travel from one place to another on foot. Pedestrian and bicycle paths are also very important in enabling people to be physically active.

Pedestrian and bicycle paths are most inviting when they are direct, highly visible and well sign-posted, offer shade, seating and end-of journey facilities. The diverse needs of pedestrians and cyclists – children and young people, older people and those with a disability who may be using mobility aids – require inclusive design solutions..

Related guidance

Element 2.1 Movement network principles

Element 2.4 Pedestrian and bicycle crossings

Austroads 'Guide to Road Design' provides technical guidance for path design.

2.3 Pedestrian and bicycle paths

Objective 2.3.1 To ensure effective pedestrian and bicycle path connections to destinations

2.3.1a Establish a continuous system of pedestrian paths connecting neighbourhoods, along all streets, continuing through public spaces, and to activity centres and public transport nodes.

2.3.1b Include pedestrian paths on both sides of local streets and major roads.

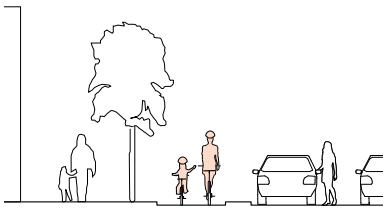
2.3.1c Where low levels of pedestrian and bicycle activity are expected, install *shared paths* for pedestrian and bicycle movement.

2.3.1d Where high levels of pedestrian and cycle activity are predicted, install mode *separated paths* for pedestrian and bicycle movement.

→ **TIP** A shared path is not appropriate where high volumes of pedestrian and bicycle traffic are expected. See Guideline sources and references for *VicRoads' Traffic Engineering Manual Vol 1*, Chapter 5 for traffic volume triggers.

2.3.1e Where high levels of cyclists are predicted, locate kerb separated bicycle lanes on the kerbside of an on-street parking lane.

→ **TIP** Kerb separated bicycle lanes, such as the 'Copenhagen' style bicycle lanes, are safest where few crossovers to properties or cross-streets will intersect with the bicycle lane.



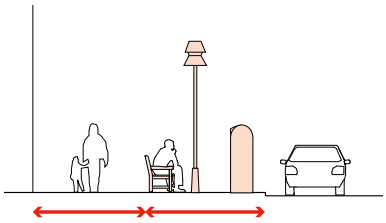
Objective 2.3.2 To ensure pedestrian and bicycle paths are accessible and serviceable

In designing a path, consider the functions the path will perform and the variety of people who may use it, including people with wheelchairs or prams.

2.3.2a Set the path width to accommodate the anticipated or predicted levels of pedestrian and bicycle traffic.

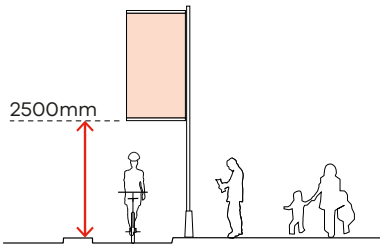
2.3.2b Allow for wider paths in areas with high levels of pedestrian or bicycle use or where growth in traffic is anticipated.

2.3.2c Allow for additional verge width to accommodate the space required for street furniture, facilities and infrastructure.

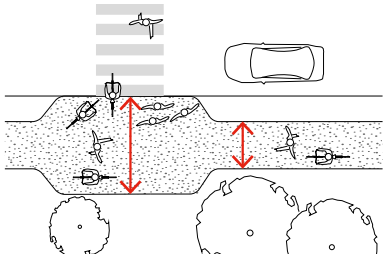


2.3.2d Preserve a minimum height of at least 2.5m above the path that is clear from overhanging objects.

→ **TIP** Overhanging objects, trees, wires or signs can reduce the functional height of a path, and can be a hazard to pedestrians and cyclists.



2.3.2e On shared paths, allocate additional width for passing places and crossing places.



2.3.2f Where bicycle paths curve, set an inside radius of at least 15m and preferably 30m.

→ **TIP** Cyclists rely on forward motion to maintain balance. Slowing for sharp turns can unbalance inexperienced riders.

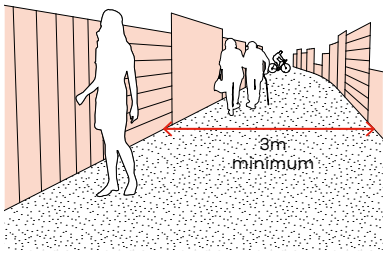
Objective 2.3.3 To ensure pedestrian and bicycle paths maximise pedestrian and cyclist safety, amenity and security

2.3.3 a Lay out paths to allow pedestrians and cyclists clear sightlines for a distance of at least 15m ahead.

→ **TIP** The clear distance provides a view line to potential threats or hazards, such as hiding spots or oncoming and crossing traffic.

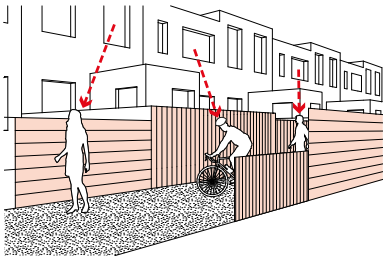
2.3.3 b Where bordered by fences, set pedestrian or bicycle paths to be greater than 3m wide, and with a straight, or near to straight alignment.

→ **TIP** Paths may need buffer space along sides where there are obstacles or hazards.



2.3.3 c Where bordered by fences, arrange pedestrian or bicycle paths with opportunities for informal surveillance from adjacent properties.

→ **TIP** Paths bordered by fences or walls can feel unsafe, particularly in areas of low activity. Wider view lines and buildings overlooking pedestrian paths provide a sense of safety.



2.3.3 d Minimise abrupt level changes along pedestrian and bicycle paths.

2.3.3 e Grade the surface of pedestrian and bicycle paths to shed water readily and locate drainage pits outside of the travel path.

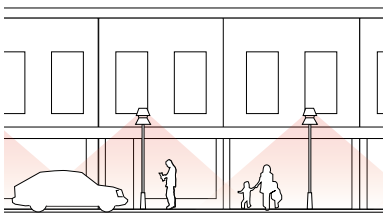
2.3.3 f On busy or long distance paths, provide shade and shelter, way-finding signs and frequent seating.

2.3.3 g Provide formal seating at regular intervals along major walking routes to assist those who need to pause or rest.

→ **TIP** Seating placed at 100m intervals provides a comfortable stopping distance for less able walkers.

2.3.3 h Provide directed, low-glare lighting to pedestrian and bicycle paths along streets.

→ **TIP** Ensure street lighting illuminates pedestrian paths, not just the roadway.

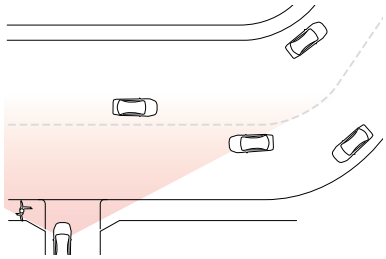


Objective 2.3.4 To ensure pedestrian and bicycle paths provide safety for pedestrians and cyclists on vehicle crossovers

Vehicle crossovers and entries to laneways can pose a risk to pedestrians and cyclists, both as trip hazards and vehicle collision hazards. For the design of vehicle exits from buildings see Element 5.4 Car parking structures, and for car parking lots see Element 2.8 Car parking lots.

2.3.4 a Minimise the number of vehicle crossovers that intersect pedestrian and bicycle paths.

2.3.4 b Locate essential vehicle crossovers on straight street sections in areas of high visibility to approaching pedestrians and cyclists.



2.3.4 c Provide path treatments across vehicle crossovers to signal priority for pedestrians and cyclists.

→ **TIP** Vehicle crossover surface treatments such as raised 'bump-over' paths, rumble strips and coloured path surfaces alert drivers to the presence of pedestrians or cyclists.

Objective 2.3.5 To minimise hazards to pedestrians and cyclists from path edges

2.3.5 a Set pedestrian and bicycle paths back from the roadway or other obstructions.

2.3.5 b Set planting and trees well back from pedestrian and bicycle path edges.

→ **TIP** Where dense shrubbery and planting is close to a path, it can provide potential concealment opportunities for attackers. This is a particularly high risk on off-street pedestrian and bicycle paths.

2.3.5 c Design fences and barriers along bicycle lanes or paths to limit snagging handlebars or pedals, spearing injuries or collision.

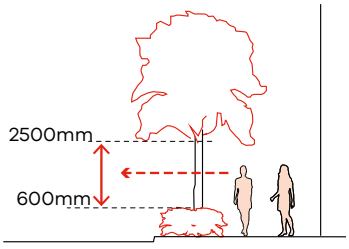
→ **TIP** Bollards, picket fences and log barriers pose a hazard to cyclists. See 6.4 Barriers and fences.

2.3.5 d Provide fences and barriers with reflective surfaces and light colours.

→ **TIP** Reflective treatments or light colours can enhance visibility of fences and barriers at night.

2.3.5 e Maintain clear sightlines along paths and remove obstructions from areas adjacent to pedestrian and bicycle paths.

→ **TIP** See Guideline sources and references for VicRoads Supplement to the Austroads Guide to Road Design.



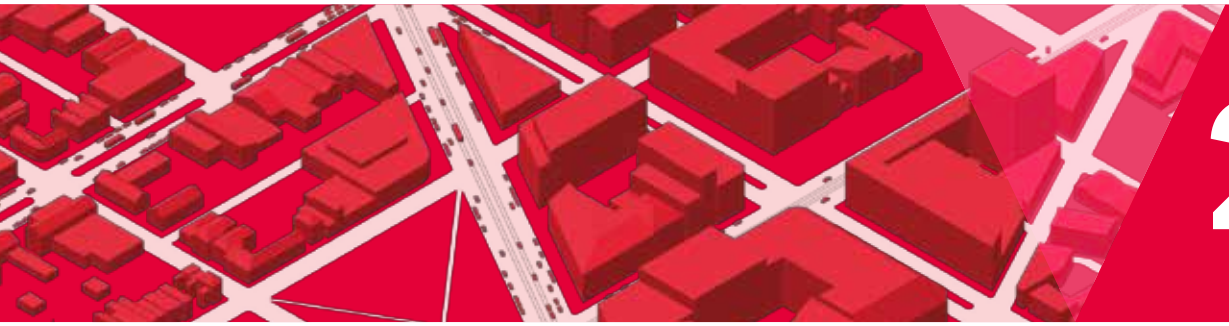
2.3.5 f Implement a path maintenance program to preserve firm path edges, keep gravel paths compacted and remove loose material, trip hazards or debris from path surfaces.

Objective 2.3.6 To ensure pedestrian and bicycle path management responds to changes in use patterns

2.3.6 a Monitor pedestrian and cyclist numbers and safety on paths to inform future improvements to pedestrian and bicycle paths.

2.3.6 b Consult with users when locating or modifying pedestrian and bicycle paths.

→ **TIP** Local communities have detailed knowledge of user behaviour, needs and preferences regarding path types and locations.



2.4

2.4 Pedestrian and bicycle crossings

Pedestrian and bicycle crossings provide points to safely and conveniently cross roads and streets, or other barriers such as motorways, railway lines or waterways. Many crossings are located on paths to activity centres and schools, or at stations, bus or tram stops.

Crossings are either at-grade or grade-separated. At-grade crossings may have road markings and surface treatments, traffic signals and signs, or barrier gates. Grade-separated crossings include pedestrian bridges, overpasses, subway underpasses, or stairs and lifts.

Why is it important?

Pedestrian and bicycle crossings are critical for safe, easy movement around cities and towns. Crossings concentrate pedestrian and cyclist movement to specific locations where they can safely cross the road or barrier. Where crossings are poorly located, say away from movement desire-lines, or with interrupted sightlines to the approaches or crossing, it may be perceived as an inconvenience or safety risk, and not be used.

Related guidance

Element 2.1 Movement network principles

Element 2.3 Pedestrian and bicycle paths

Austroads Guide to Road Design provides technical guidance for crossing design.

2.4 Pedestrian and bicycle crossings

Objective 2.4.1 To maximise pedestrian and cyclist safety and security at crossings

2.4.1a Locate pedestrian and bicycle crossings on direct, desirable routes to destinations such as schools, parks, activity centres and public transport stops, or that link neighbourhoods.

→ **TIP** People often seek a direct route to their destination, even where this involves dangerous informal crossings of busy roads or railway lines.

2.4.1b Co-locate pedestrian crossings and bicycle crossings, but provide each mode with a separate crossing path.

→ **TIP** Road crossing points can become congested with waiting and crossing pedestrians and cyclists. Separating the waiting and crossing traffic is a safer practice.

2.4.1c Incorporate lighting on approaches to and at pedestrian and bicycle crossings.

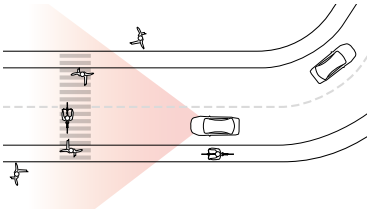
2.4.1d Clearly signpost upcoming crossings and intersections to alert pedestrians, cyclists and drivers.

2.4.1e Maintain clear sightlines on the approach to and at pedestrian and bicycle crossings.

Objective 2.4.2 To ensure convenient and safe at-grade crossings for pedestrians and cyclists

2.4.2a Locate at-grade crossings on roads where pedestrians and cyclists can be seen by approaching drivers.

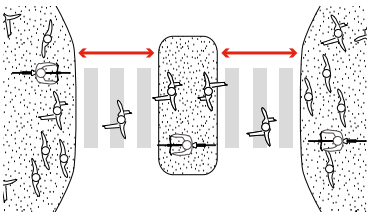
→ **TIP** Drivers must be able to see waiting or crossing pedestrians and cyclists. Crossings should not be located on road curves or hill crests that reduce sightlines to the crossing.



2.4.2b Where both pedestrian or bicycle traffic and vehicle traffic levels are high, provide formal controlled road crossings.

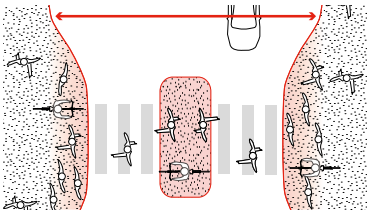
2.4.2c Provide a clear space for pedestrians waiting to cross a road, separate from the through pedestrian path.

2.4.2d Provide pedestrians and cyclists with the shortest practical road crossing distance.



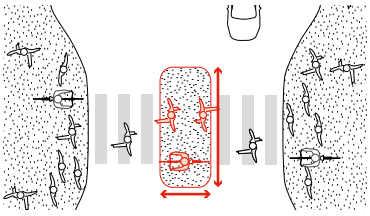
2.4.2e Where roadways are wide, install pedestrian and cyclist refuges such as kerb outstands, traffic islands, and median strips.

→ **TIP** Kerb outstands and mid-street refuges can shorten the pedestrian crossing distance and allow a staged crossing.



2.4.2f Provide pedestrian refuges of sufficient area, width and length to accommodate the projected numbers of waiting pedestrians and cyclists.

→ **TIP** Cyclists require refuge space for bicycles of up to 1.8m length, and larger for tandem and child buggy attachments.

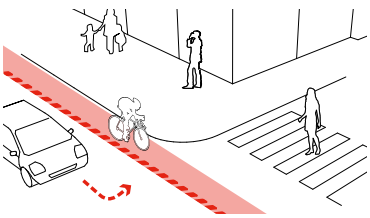


2.4.2g Where kerb outstands, traffic islands, or median strips are used at crossings, keep the path clear of obstructions.

2.4.2h Position crossing request buttons for ease of use by both pedestrians and cyclists.

2.4.2i Where pedestrian paths or bicycle lanes cross a left turning vehicle path, provide road pavement detail to alert drivers.

→ **TIP** A road pavement detail may be a rumble strip, a coloured road surface, or a raised road section.



Objective 2.4.3 To ensure convenient and safe grade-separated crossings for pedestrians and cyclists

Grade-separated crossings, while safer than at-grade crossings, can involve longer travel distances and crossing times so that pedestrians and cyclists might choose not to use them, and to cross barriers informally at risk to themselves and others.

2.4.3 a Locate grade-separated crossings of rail lines, motorways or waterways on direct, desirable routes to schools, parks, activity centres and public transport stops.

→ **TIP** Grade-separated crossings are most suitable where the topography minimises the length of ramps required.

2.4.3 b Locate grade-separated crossings adjacent to active uses that can provide opportunities for informal surveillance of the approach path and the crossing.

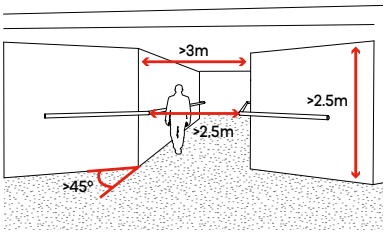
→ **TIP** An active use may be a busy public space, or a building with people coming and going and with overlooking windows.

2.4.3 c Provide grade-separated crossings with wide straight paths, clear sightlines and adequate lighting.

→ **TIP** Paths that are narrow or with few 'escape route' options, such as bridges, underpasses, stairways, lifts and walk-throughs, can feel unsafe and can increase opportunities for entrapment.

2.4.3 d Construct grade-separated crossings with a width greater than 3m, with a minimum of 2500mm between handrails, an unobstructed height no less than 2500mm, exit splays of 45 degrees, and clear sightlines for 15m.

→ **TIP** see Guideline sources and references for link to Austroads guidance.



2.4.3 e Continue the approach path width for the full length of the underpass or bridge.

Objective 2.4.4 To manage pedestrian and bicycle crossings to respond to local conditions

2.4.4 a Monitor pedestrian and cyclist numbers and safety at pedestrian and bicycle crossings to inform management and improvements.

→ **TIP** Management can include adjusting traffic light controls to respond promptly to the presence of pedestrians.

2.4.4 b Consult with users when locating pedestrian and bicycle crossings.

→ **TIP** Local communities have detailed knowledge of user behaviour, needs and preferences regarding crossing types and locations.

2.5

2.5 Major roads

Major roads accommodate high volumes of motor vehicle traffic including public transport and freight, and have higher design speeds (60–100 km/h). Major roads can have two or more traffic lanes in each direction and may provide for on-street car parking, bus lanes or tram tracks, bicycle lanes, as well as verge space for pedestrian paths, infrastructure and landscaping.

Major roads may be identified as priority routes for public transport, motor vehicle traffic or freight. Larger major roads that are declared arterial roads are managed by VicRoads. Pedestrians and cyclists, while accommodated on these roads, may be given a lower priority in terms of access and amenity while maintaining a high level of safety. A section of an arterial road through an activity centre or school zone may have lowered design speeds.

Why is it important?

Major roads carry large volumes of people and goods over longer distances. While they provide connections between major centres of population, regions and transport terminals, they also function as local area connections for all modes. Major roads sometimes lie within centres of high activity, where they may function as pedestrian priority routes to pedestrian priority places with periods of lowered traffic speed limits for a section of their length.

This element focuses on safe and convenient travel for pedestrians and cyclists on major roads.

This element does not cover design of motorways and railways.

Related guidance

Element 2.1 **Movement network principles**

Element 2.3 **Pedestrian and bicycle paths**

Element 2.4 **Pedestrian and bicycle crossings**

Element 2.6 **Public transport on roads**

2.5 Major roads

Objective 2.5.1 To ensure the safety and amenity of pedestrians and cyclists along major roads

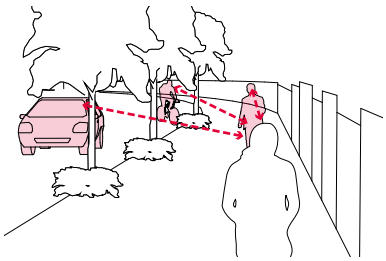
VicRoads is a referral authority for all landscape treatments and works adjacent to arterial roads.

2.5.1a Provide separate paths for pedestrians and cyclists travelling beside major roads.

→ **TIP** Bicycle paths along major roads may cater for commuter cyclists as well as school children and recreational cyclists. See Element 2.3 Pedestrian and bicycle paths.

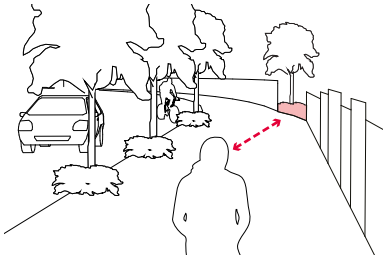
2.5.1b Position pedestrian and bicycle paths to achieve clear sightlines along paths and from the roadway to the path.

→ **TIP** Landscape elements such as trees, fences or earth mounds can provide safety and amenity to pedestrians and cyclists travelling alongside major roads so long as road safety and opportunities for informal surveillance are maintained.



2.5.1c Where major roads are bordered by existing rear fences and walls, provide pedestrian and bicycle paths with clear sightlines to visible exit paths.

→ **TIP** Isolated paths bordered by blank walls or fences and with few opportunities for 'escape routes' or for informal surveillance from overlooking buildings can feel unsafe and can increase opportunities for entrapment of walkers.



2.5.1d Provide for noise attenuation and safety treatments on pedestrian and bicycle paths along high noise, high-speed, high-volume major roads.

2.5.1e Provide safe and direct pedestrian and bicycle crossings on major roads.

→ **TIP** See Element 2.4 Pedestrian and bicycle crossings.

Objective 2.5.2 To ensure safe, convenient pedestrian access from neighbourhoods to public transport stops on major roads

2.5.2 a Locate public transport stops and pedestrian approach paths on major roads where there are opportunities for informal surveillance.

2.5.2 b Provide safe and direct crossings of major roads in locations that enable pedestrians of all abilities to reach public transport stops.

→ **TIP** See Element 2.4 Pedestrian and bicycle crossings and also see Element 2.6 Public transport on roads.

2.5 Major roads

2.6

2.6 Public transport on roads

There are two main types of public transport that use the road network: the fixed tram network, which is usually located on major roads and streets; and the bus network, which operates within standard traffic lanes or in bus priority lanes. Bus and tram priority routes have priority over general traffic.

Why is it important?

Public transport on roads helps move large numbers of people around a city, taking them to work, school, shopping or other activities.

This sub-element focuses on providing people with convenient access to public transport on roads. The engineering, servicing or management issues of the public transport are guided by other appropriate authorities. See also Public Transport Guidelines for Land Use and Development (Department of Transport 2008) and also Guideline sources and references for a list of technical guidance.

Related guidance

Element 2.1 **Movement network principles**

Element 2.5 **Major roads**

Element 2.4 **Pedestrian and bicycle crossings**

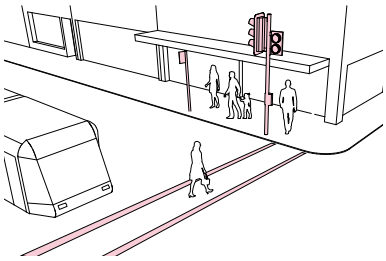
2.6 Public transport on roads

Objective 2.6.1 To ensure public transport stops are located in accessible, convenient and safe places

Public transport stops may be located on the road, kerbside or on centre road refuges.

2.6.1a Co-locate public transport stops with controlled pedestrian crossings or controlled intersections.

→ **TIP** If a public transport stop is near a traffic hazard, use traffic calming measures to maximise pedestrian safety.

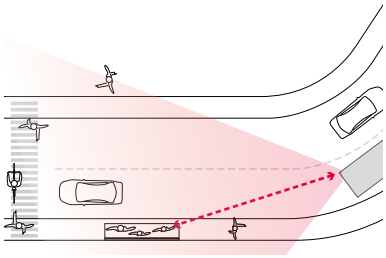


2.6.1b Where a stop is not at a controlled intersection, locate the public transport stop where pedestrians of all abilities can safely cross the road.

→ **TIP** Mid-block public transport stops mean pedestrians will need to cross the road to reach their stop or their return destination.

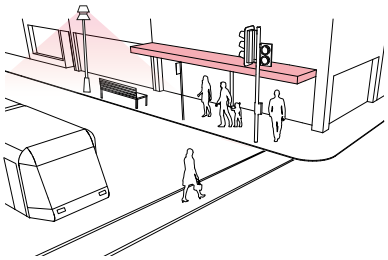
2.6.1c Locate public transport stops to enable approaching pedestrians and public transport drivers to see the stop.

→ **TIP** Sharp curves in the roadway can pose a hazard for pedestrians as car drivers' sight lines are limited.



2.6.1d Where possible, integrate shelters for public transport stops into the facade of adjacent buildings.

→ **TIP** Integrating shelters, by attaching them onto the building wall, allows the street spaces to remain uncluttered. Building Code of Australia sets out design standards for building projections beyond the street alignment. See Element 5.1 Buildings in activities areas, and Element 6 Objects in the public realm.



2.6.1e Provide seating at public transport stops.

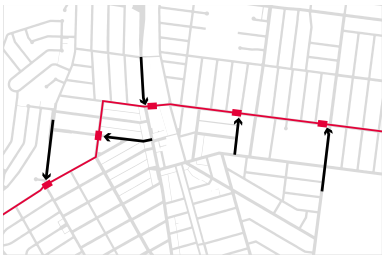
2.6.1f Provide adequate lighting on pedestrian approach paths to public transport stops.

2.6.1g Provide lighting at public transport stops to levels that enable public transport drivers to see waiting passengers.

2.6 Public transport on roads

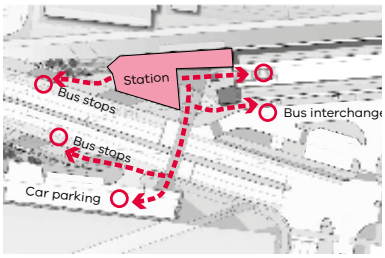
Objective 2.6.2 To enable travellers to safely reach public transport stops

2.6.2a Provide direct, convenient pedestrian links from neighbourhoods to public transport stops.



2.6.2b Provide direct, convenient pedestrian paths connecting between public transport modes.

→ **TIP** An integrated public transport service should provide efficient, safe pedestrian paths connecting public transport modes.



Objective 2.6.3 To maximise informal surveillance of public transport stops and their access routes

2.6.3a Position bus and tram stops at locations that have higher numbers of passers-by.

→ **TIP** Public transport stops in remote locations receive fewer passers-by and less informal surveillance.

2.6.3b Locate public transport stops where they are visible from nearby buildings.

2.6.3c Locate approach paths to public transport stops where the paths are visible from nearby buildings.

Objective 2.6.4 To maintain the amenity of public transport stop environs

2.6.4a Maintain public transport stops and surrounds in a clean, safe and well-lit condition.

→ **TIP** Ensure damaged shelters, furniture, paving or landscape elements are promptly repaired.

2.6 Public transport on roads

2.7

2.7 On-street parking

On-street car parking is part of the movement network. On-street parking provides convenient, short-term parking in close proximity to activities and destinations. On-street parking may be parallel, indented, angled, at kerbside or in centre-road islands. The street type and use pattern determines the appropriate type of on-street parking used.

Why is it important?

It plays an important role in inner urban areas with limited off-street parking. The presence of on-street parking can affect driver behaviour by reducing vehicle speeds. Parking manoeuvres can interrupt and calm traffic flow, providing additional opportunities for pedestrians to cross a road. The presence of parked cars can make a street feel more inhabited. Well-managed on-street parking can provide a good service with a minimal number of car parking spaces.

Related guidance

Element 2.1 Movement network principles

2.7 On-street parking

Objective 2.7.1 To ensure efficient provision of on-street parking

The civil design of on-street parking is guided by Australian Standard AS 2890.5 – 1993, Parking Facilities Part 5: On-street Parking.

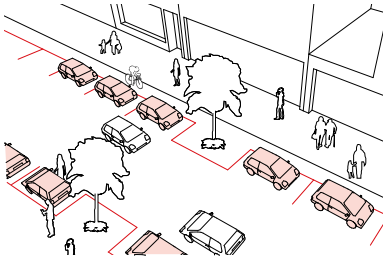
2.7.1 a Provide a street cross-section that accommodates the appropriate type of on-street parking.

→ **TIP** Different types of on-street parking are appropriate for different street types: angle or centre road parking requires wider streets; parallel parking is more appropriate in narrow streets.

Objective 2.7.2 To ensure on-street parking contributes to pedestrian amenity and safety

2.7.2 a Arrange kerbside and indented parking on streets as part of the buffer zone between pedestrians and moving traffic.

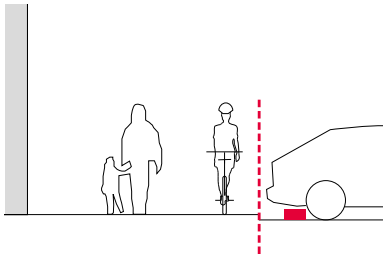
→ **TIP** If no on-street parking is provided, ensure traffic speeds are managed to achieve a sense of safety for pedestrians.



Objective 2.7.3 To optimise on-street parking opportunities

2.7.3 a Separate angled on-street parking bays from pedestrian and bicycle paths.

→ **TIP** Wheel-stops can prevent cars in angled parking bays from overhanging paths. The normal vehicle overhang allowance is 1m.



2.7.3 b Design high turnover, short-stay on-street parking spaces to provide 'forward only' vehicle movement into and out of the parking space.

→ **TIP** 'Backing out' in high turnover on-street parking areas (e.g. rail stations, schools or convenience stores) can pose a hazard for pedestrians, particularly children.

2.7.3 c Incorporate landscaping into kerbside, angled and centre road parking.

→ **TIP** Street trees can be incorporated into kerb outstands, centre road islands or in-road planters. In-road planters may be a practical way to avoid trees conflicting with footpaths and utilities. They can also capture and use stormwater.

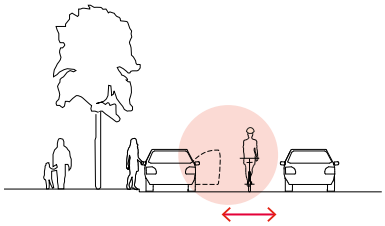
Objective 2.7.4 To minimise conflict between on-street parking and other road users

2.7.4 a Limit vehicle crossovers in areas where on-street parking is essential.

→ **TIP** Vehicle crossovers reduce the space available for on-street car parking.

2.7.4 b Where on-street parking is adjacent to on-road bicycle lanes, allow a safety strip width for opening car doors and the safe passage of the cyclist.

→ **TIP** The safety strip width will depend on the street's traffic speed and type. Car and truck doors opening into bicycle lanes are one of the major causes of cyclist crashes. Delivery trucks have poor sightlines and their open rear doors can intrude into bicycle lanes causing a hazard to cyclists.



2.7.4 c Where on-street parking is adjacent to on-road bicycle lanes, provide line-marking or a kerb to separate mode spaces.

→ **TIP** Providing marked or kerbed lanes and wider parking spaces allows better sightlines between a driver and cyclist when a car is exiting a parking space.

Objective 2.7.5 To manage on-street parking efficiently and equitably

Managing the use of on-street parking spaces is fundamental to on-street parking provision. Some methods to ensure regular turnover of parking spaces are controlling the parking period; parking permits; parking charges; or clearways periods. Some on-street parking spaces can also be converted to bicycle parking as demand increases.

2.7.5 a Use time limits on parking spaces closest to activity centres to ensure the greatest turnover of the most convenient spaces.

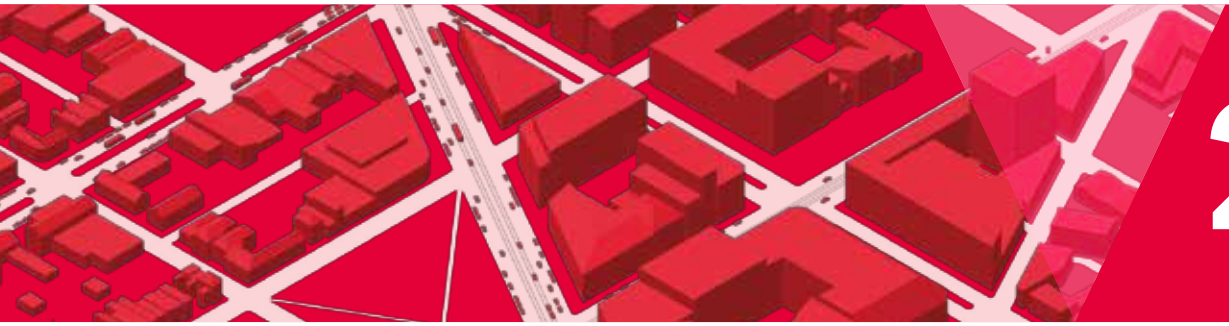
2.7.5 b Allocate controlled on-street parking bays for small delivery and service vehicles.

2.7.5 c Allocate some on-street parking spaces for bicycle parking in proximity to rider destinations. These destinations include schools, cafes and shops.

2.7.5 d Allocate on-street parking spaces for use by Carshare programs in accessible, well-frequented locations with opportunities for informal surveillance.

2.7.5 e Set vehicle speed limits in streets to allow safe car parking and exiting movements.

2.7 **On-street parking**



2.8

2.8 Car parking lots

Car parking lots are open areas of land used for parking cars. They can be publicly or privately owned and are generally located in activity centres, at train and bus stations, and other facilities accessed by car. Some higher density residential developments may incorporate private car parking lots.

While many car parking lots are open to pedestrian access, dedicated pedestrian paths are not common. Bicycle movement through car parking lots is generally restricted or not permitted. At times, car parking lots may be used for other purposes, such as a market, or for entertainment or sports activities.

Why is it important?

Car parking lots are important for the convenience of drivers and the viability of some businesses, and in activity centres they provide space for customer parking away from neighbouring residential streets. Where land is freely available and land values are relatively low, car parking lots are often the least costly method of providing parking in urban areas.

Car parking lots should be convenient, pleasant and safe for users. As they occupy large areas of land they should be designed not to create barriers for pedestrians. Measures should be taken to minimise the impact of paved surfaces in radiating heat in summer and generating stormwater run-off. After hours and during low demand periods, car parking lots should be managed to ensure they do not attract anti-social behaviour and are safe for users.

Related guidance

Element 2.1 **Movement network principles**

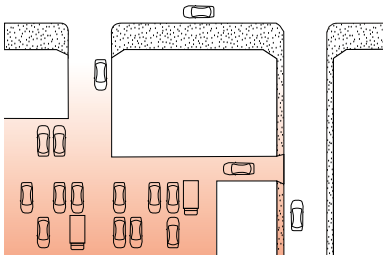
Element 5 **Buildings**

2.8 Car parking lots

Objective 2.8.1 To ensure that car parking lots support the amenity and safety of the local area

2.8.1a Locate larger car parking lots to the rear or side of the buildings they serve.

→ **TIP** Locating larger car parking lots between the street and the building frontage may reduce street amenity and compromise pedestrian access to buildings.

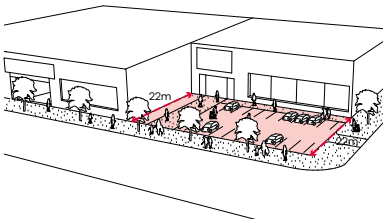


2.8.1b Provide car parking lots with opportunities to receive informal surveillance from surrounding buildings and spaces.

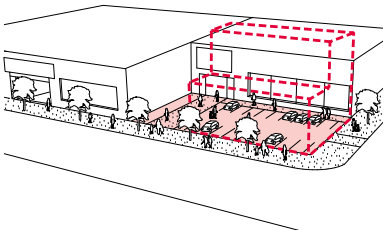
→ **TIP** Car parking lots bordered by blank walls or fences enclose the area and reduce the opportunity for informal surveillance.

2.8.1c Where a car parking lot must be located between the building frontage and the street, arrange the parking space to maintain a visual connection between the building and the street.

→ **TIP** A 22m setback allows for two rows of 90 degree parking with single vehicle access way between, landscaping along the street edge and pedestrian paths serving the parking. A setback of up to 22m will maintain a visual connection from the building to the street, whereas greater distances can compromise visual connection.



2.8.1d Where a car parking lot must be located between the building frontage and the street, arrange the site to allow for future development options.



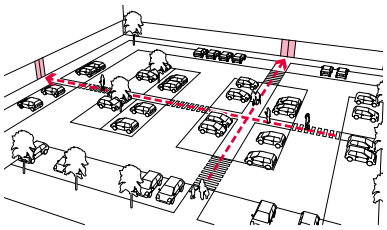
2.8.1e Lay out car parking lots to minimise noise, fumes and lighting impacts into adjacent properties.

Objective 2.8.2 To ensure safe and convenient movement for pedestrians and vehicles in car parking lots

Pedestrians will look for the most direct route to their destination. This preferred direct route, called a desire-line, may cross vehicle lanes and garden beds, putting pedestrians at risk and damaging landscaping.

2.8.2a In large car parking lots, position dedicated direct paths to take pedestrians from car parking spaces to main building entries.

→ **TIP** If a car park lies between the building entrance and the street, people need a convenient path from the street to the building entrance.



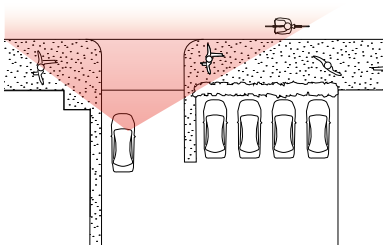
2.8.2b Locate pedestrian paths as close as possible to anticipated pedestrian desire-lines.

→ **TIP** When direct pedestrian desire-lines are not taken into account, people make their own informal direct path.

2.8.2c In large, busy car parking lots, orient the parking aisles perpendicular (90º) to the building entrance or other pedestrian destinations.

2.8.2d Arrange parking spaces to provide effective sightlines for drivers when turning and reversing.

2.8.2e Provide clear sightlines at entries and exits to car parking lots.



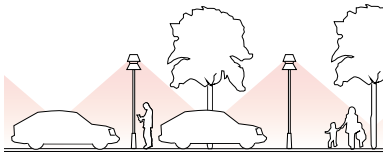
2.8 Car parking lots

Objective 2.8.3 To enhance the amenity and safety for pedestrians and drivers in car parking lots

2.8.3 a Provide pedestrian lighting in car parking lots that are used regularly at night.

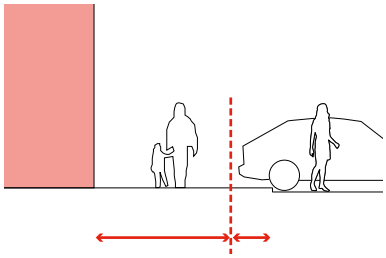
→ **TIP** Avoid unwanted light spill onto adjacent properties.

2.8.3 b Locate trees clear of lighting to allow direct illumination of paths and vehicle lanes.



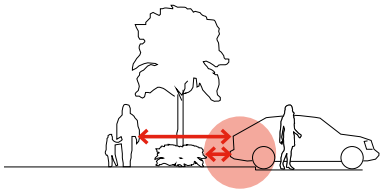
2.8.3 c Provide for vehicle overhang areas to be clear of pedestrian paths, trees or shrubs.

→ **TIP** Pedestrian paths may need extra width to allow for overhang from car bonnets or bumper bars. The normal vehicle overhang allowance is 1m.



2.8.3 d Construct a permanent kerb for wheel stops.

→ **TIP** Wheel stops constructed of logs, or kerbs fixed to the pavement with spikes may dislodge under the vehicle causing damage and may also pose a pedestrian trip hazard.



2.8 Car parking lots

Objective 2.8.4 To ensure car parking lots are safe and well maintained

2.8.4a Where the risk of damage from vehicles and vandalism is high, protect vegetation for up to four years from planting.

→ **TIP** Vegetation can be protected using tree guards, fencing and level changes.

2.8.4b Encourage alternative uses for car parking lots during no or low demand periods.

→ **TIP** Take advantage of differing periods of demand for car parks by encouraging community activities such as markets and festivals.

Objective 2.8.5 To maximise the environmental performance of car parking lots

2.8.5a Provide shade to parking spaces and pedestrian paths.

→ **TIP** A tree canopy or a shade structure may be used.

2.8.5b Landscape a minimum of 15 per cent of the car parking surface area.

→ **TIP** Larger planting areas with a minimum dimension of 2.5m support tree growth. Small planting areas or narrow strips do not provide sustainable planting conditions.

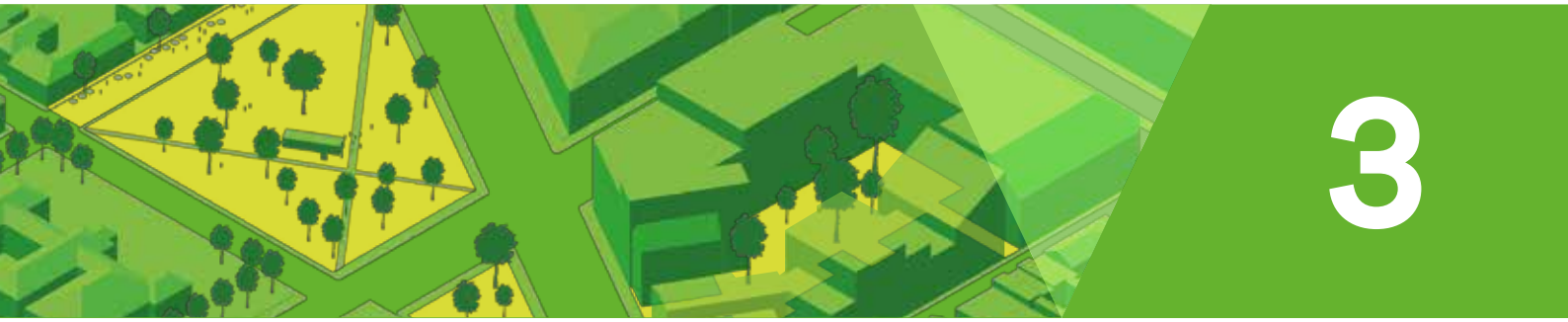
2.8.5c Provide for water harvesting and other on-site water re-use and treatment systems.

→ **TIP** Water harvesting can provide additional water to plants. See Guideline sources and references.

2.8 **Car parking lots**

Element 3
Public spaces

VICTORIA State Government | Environment, Land, Water and Planning



3

Element 3 Public spaces

This element covers

3.1 Public spaces principles

Urban design principles for parks, street spaces, plazas and communal open spaces.

3.2 Street spaces and plazas

Highly accessible public spaces that are extensions of the street system.

3.3 Local parks

Green public spaces up to one hectare in size that include grass, gardens and playgrounds.

3.4 Communal open spaces

Areas set aside on private land for shared recreation by building occupants and, in some cases, visitors.

This element does not cover infrastructure and conservation corridors that principally provide for natural systems, habitat and water management, and which have a subsidiary public space role.

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Part 4 of 8 parts

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3.1

3.1 Public spaces principles

Public spaces are those areas in the public realm that provide a public use or recreation function, such as parks, plazas and street spaces. Public spaces are generally located on publicly held land, are accessible to everyone and are managed and maintained by councils or other public agencies. Some privately held land provides for controlled public access and use as a public space, such as a building forecourt, a walk-through, a shopping mall or a communal open space. Public spaces are created as part of a land subdivision or by reallocation of land uses in existing urban areas.

Public spaces accommodate a diversity of activities, and provide interest and amenity for people. Critical factors for successful public spaces are their location, size, dimensions and the interfaces with adjacent properties, the paths and arrangement of activities within the space. The area surrounding public spaces also influences how they are used and perceived. A functional system of public spaces offers direct connections to the surrounding pedestrian network and includes through-paths.

Why is it important?

Public spaces are essential for the wellbeing of everyone in a community. They provide opportunity for relaxation, recreation and socialising, and contribute to a neighbourhood's local character and sense of place. Active, safe and enjoyable public spaces draw people to them.

More than a third of the urban land area is public space, mostly streets. Green spaces such as parks make up the second largest component of public space. Street spaces, plazas, forecourts and squares provide for regular and chance social encounters. Parks and green spaces provide opportunities to relax, participate in active recreation and experience nature. Semi-public and communal open spaces, such as courtyards in apartment buildings, hospitals and education facilities, provide for casual interaction and recreation

Related guidance

Element 1 **Urban structure**

Element 2 **Movement network**

Element 6 **Objects in the public realm**

3.1 Public spaces principles

Objective 3.1.1 To ensure all users have convenient and safe access to and through public spaces

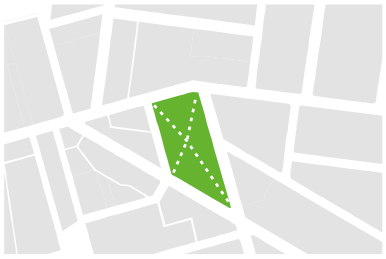
3.1.1a Connect the public space to the surrounding pedestrian network.

→ **TIP** See Element 1 Urban Structure: guidelines 1.1.5 and 1.1.6

3.1.1b Locate entry paths with clear views to other exits from the public space.

3.1.1c Continue pedestrian paths through the public space with direct, logical routes.

→ **TIP** Pedestrians feel safer when a public space has an obvious through-path, with frequent escape routes linking to surrounding streets.



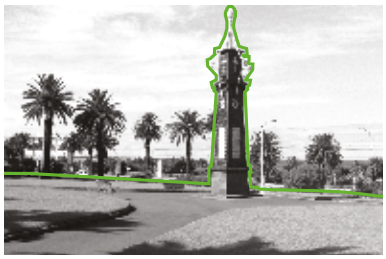
Objective 3.1.2 To achieve attractive and vibrant public spaces

3.1.2a Include a diversity of activities in public spaces that extend the hours of use.

→ **TIP** Aim for a public space to be attractive to a diversity of users and at different times of the day. A café, play facilities or community uses can assist in activating public spaces.

3.1.2b Locate features towards the centre of the public space to draw people into and through the space.

→ **TIP** Features could be a large shade tree, fountain or water feature, sculpture, play or performance space. They provide a focus that invites people into the space.



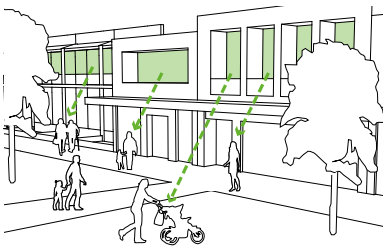
3.1.2c Locate spaces for vendor stalls beside the main pedestrian through-paths.

Objective 3.1.3 To establish and support activity at the edges of public spaces

Edges are often the most populated parts of public spaces. People tend to gravitate to, and occupy, the edges of places because they provide good vantage points to view activities within the space as well as to the surrounding area.

3.1.3 a Arrange doors and windows of buildings to overlook adjacent public spaces.

→ **TIP** Public spaces feel safer and are used more when there are opportunities for informal surveillance of the space.

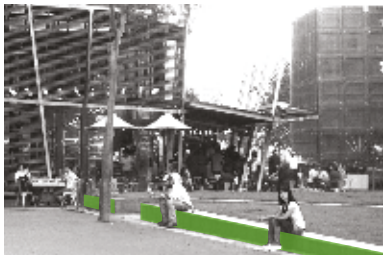


3.1.3 b Arrange the public space to allow direct, clear sightlines from surrounding areas into and through public spaces.

→ **TIP** An area's topography will affect the sightlines and ease of movement to and through a public space.

3.1.3 c Use the edge of a public space for informal seating.

→ **TIP** Low walls help define a space and provide informal seating to activate the edge.



3.1.3 d Define the boundary or transition between public space and private space without the need for high fences or barriers.

→ **TIP** A slight change in ground level can provide a boundary definition between public and private space.

Objective 3.1.4 To ensure safety and amenity in public spaces

3.1.4 a Locate public toilets, play and recreation facilities in accessible and active areas.

→ **TIP** Facilities that are located in secluded out-of-the-way places feel unsafe and users will avoid them. See Element 6 Objects in the public realm.

3.1.4 b Install low transparent fencing around children's play areas near busy streets or bicycle paths.

→ **TIP** A low fence between bicycle paths and children's play areas protects children who may wander on to a street or bicycle path while maintaining its visibility from the street and surrounding areas.

3.1.4 c Locate lighting to indicate paths and areas for night-time use.

3.1.4 d Locate utilities infrastructure in a designated zone away from the main pedestrian through-paths and recreation areas.

→ **TIP** Poorly located infrastructure such as service control boxes and telecommunications poles can block views, reduce the usable area and pose a hazard to pedestrians and cyclists.

Objective 3.1.5 To ensure comfortable and enjoyable public spaces

3.1.5 a Arrange paths, seating and main areas to catch the sun during winter and be shaded during summer.

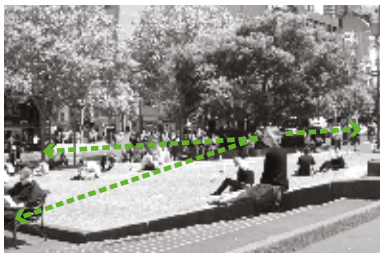
→ **TIP** Position trees to provide summer shade and shelter.

3.1.5 b Protect public spaces from the strong winds.

→ **TIP** When planting windbreaks or shade trees, avoid creating concealment opportunities.

3.1.5 c Locate seating to provide users with an interesting outlook and views of the space and opportunity to watch passers-by.

→ **TIP** Increase the number of seats in areas that are popular with people. Popular areas are often those with good sightlines of the whole space and its entry points.



3.1.5 d In larger public spaces, install signs with maps to show connections and destinations, location of public facilities, and estimated walking times and distances.

Objective 3.1.6 To support a strong sense of place and local character in public spaces

3.1.6 a Select planting and landscape elements that support the existing character or preferred future character of the area.

3.1.6 b Select planting and landscape elements that engage the senses.

3.1.6 c Integrate locally relevant urban art.

→ **TIP** Urban art that people can interact with is popular and can draw people to a space.

Objective 3.1.7 To ensure public spaces are well used and maintained

A number of agencies are responsible for managing public spaces. Any one public space may have multiple agencies and organisations with different responsibilities, leading to complexity in coordination of development and management.

3.1.7 a In large, complex public spaces, establish a committee of management with responsibility to coordinate all aspects of the public space management.

3.1.7 b Establish a program of ongoing events and activities for a wide range of users.

→ **TIP** Events and activities can include markets, performances, displays or community services.

3.1.7 c Establish a maintenance program for public spaces prioritising prompt identification, removal and repair of any signs of damage and misuse.

3.1.7 d Provide permeable ground surfaces, where possible, for absorption of rainwater and reduction of stormwater run-off.

3.2

3.2 Street spaces and plazas

Street spaces are that part of the street used for social purposes, such as a widened footpath or a pedestrian-only mall. Plazas range from a building forecourt to a large city square. A plaza is often bordered by buildings or streets.

Most street spaces and plazas are paved, and can include trees and other planting, but they are distinguished from parks. The spaces may have vehicles running adjacent to the pedestrian zone, be a shared zone, or may be free of vehicles. Some street spaces operate for specific periods of the day or week to accommodate different use patterns. While street spaces are generally publicly owned and managed, plazas may be publicly or privately owned but still open to the public at all hours.

Why is it important?

Streets are the predominant and most frequently used public spaces in any city. Street spaces and plazas link with the movement network, allowing people to use them as through routes as well as places to linger and socialise. They usually have places for people to sit, eat their lunch, find some sun or shade, get out of the cold wind or rain, chat with friends or watch their children play. They also provide opportunities for people to observe the world around them.

Related guidance

Element 2.2 **Pedestrian priority streets**

Element 3.1 **Public spaces principles**

Element 6 **Objects in the public realm**

3.2 Street spaces and plazas

Objective 3.2.1 To ensure attractive and functional street spaces and plazas

3.2.1a Locate a street space or plaza where pedestrian volumes will be high.

→ **TIP** High pedestrian numbers help the street space or plaza to feel safe and attractive.

3.2.1b Allow sufficient space in the street space or plaza to accommodate activities and seating, in addition to the space for pedestrian through-paths.

→ **TIP** Beware of making the street space or plaza too big. A bit of crowding at busy times is acceptable but an empty space may discourage people.

Objective 3.2.2 To ensure convenient and safe access to and through plazas

3.2.2a Arrange through-paths across a plaza on the same level as the surrounding pedestrian network.

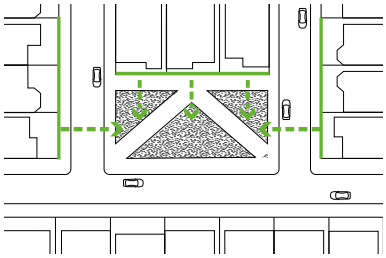
→ **TIP** Level changes, steps and obstructions reduce accessibility and hinder way-finding, discouraging pedestrians from entering a plaza.

Objective 3.2.3 To establish and support activity around the edges of street spaces and plazas

A street space or plaza performs well when bordered by pedestrian priority streets and buildings with a high level of activity that open on to the space.

3.2.3 a Provide an active front to buildings on at least one side of the street space or plaza.

→ **TIP** Buildings with uses that engage with the street, such as cafes, provide opportunities for interaction with and use of the street space.



3.2.3 b Where possible integrate shelters and awnings with the facades of buildings that are facing street spaces and plazas.

→ **TIP** Integrating shelters, by attaching them onto the building wall, allows the street spaces to remain uncluttered. Building Code of Australia sets out design standards for building projections beyond the street alignment. See Element 5.1 Buildings in activity centres, and Element 6 Objects in the public realm.

3.2.3 c Enable adjacent businesses to use the street space for café furniture and to display merchandise.

→ **TIP** Commercial use of a street space may require local standards to be set to ensure obstacle free paths and safe pedestrian movement.

3.2.3 d Provide a transition zone between traffic lanes and a street space or plaza.

→ **TIP** A transition zone may be landscaped verge or row of on-street car parking.

3.2 Street spaces and plazas

3.3

3.3 Local parks

Local parks are green public spaces up to one hectare in size and may include trees, grass, gardens and playgrounds. Some local parks also include water features, cafes or sports facilities. The location of a park in the movement network often influences its useability. Parks must connect directly to the pedestrian network and be located within easy reach of users.

The most valued parks will be those used by a range of people for a variety of reasons throughout the day. Parks with active uses adjacent to and fronting them are usually more popular than those surrounded by fences and blank walls. Parks can also support natural systems and habitat.

Why is it important?

Parks provide open space for relaxation, recreation and socialising. They also provide a space to be closer to nature, with relief from the noise, activity and hard surfaces of an urban environment. Parks also play an important role in enabling people to be more physically active and healthy. People prefer to use parks that are easy to reach and that feel safe and comfortable. Parks feel and become safer as more people use them. The success of parks is not just a question of scale or quantity, but where the park is located and how it is arranged.

Related guidance

Element 3.1 **Public spaces principles**

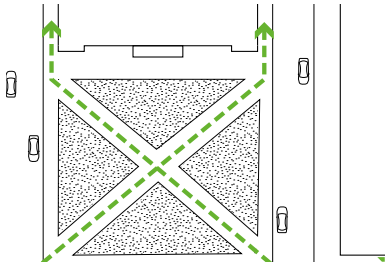
Element 6 **Objects in the public realm**

3.3 Local parks

Objective 3.3.1 To ensure convenient and safe access to and through local parks

3.3.1a Locate park entrances on pedestrian desire-lines.

3.3.1b Provide at least two main pedestrian through-paths across a local park, linked directly to the surrounding pedestrian network.



3.3.1c Where a principal bicycle route passes through a park, provide separated pedestrian and bicycle paths.

3.3.1d Locate bicycle paths away from children's play areas.

3.3.1e Provide a pedestrian path around the park perimeter for walkers and joggers.

Objective 3.3.2 To encourage use of local parks at different times of the day by a wide range of users

3.3.2a Provide areas and facilities suitable for active pursuits.

→ **TIP** Circuit training, ball games, skate boarding or kite flying may need designated areas.

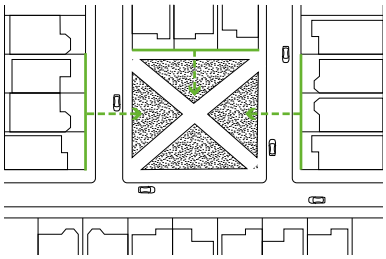
3.3.2b Provide areas and comfortable seating for quiet pursuits.

→ **TIP** Seating areas are important for encouraging people, particularly the elderly, to use and enjoy local parks and open spaces.

Objective 3.3.3 To ensure amenity and safety for local park users

3.3.3 a Surround local parks, on at least three sides, with streets and buildings with active frontages to overlook the park.

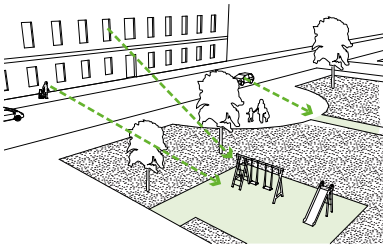
→ **TIP** A park bounded by blank rear or side fences limits the opportunity for informal surveillance and reduces security for both park users and properties bordering the park.



3.3.3 b Provide seats at the entry points of local parks.

→ **TIP** Seating at a park entrance sends a welcoming message, provides a place to meet and lets people feel they can be in the park yet connected to the street outside.

3.3.3 c Locate the paths, facilities and children's play areas in local parks where they can be seen from surrounding properties, paths and streets.



3.3.3 d Position trees and planting to maintain sightlines between paths within a park and surrounding streets and properties.

3.3.3 e Provide lighting along main paths and in areas intended for night-time use, lit to the same level as surrounding streets.

→ **TIP** Using the same lighting levels for park paths as the surrounding areas indicates they are intended as safe routes.

3.3 Local parks

Objective 3.3.4 To emphasise a sense of place and character in local parks

3.3.4a	Select planting and landscape elements that support the existing character or preferred future character of the park.
3.3.4b	Establish large trees and other plants to enhance the local habitat and microclimate.
3.3.4c	Protect natural features in or nearby to the park that contribute to a sense of place.

Objective 3.3.5 To ensure local parks are well maintained

3.3.5a	When designing parks, take account of the management agency's capacity to resource ongoing maintenance and management. → **TIP** Facilitate the formation of local community 'Friends of the Park' associations to participate in ongoing planning and decisions.
3.3.5b	Regularly maintain hard and soft landscape elements to ensure that parks are inviting, comfortable and safe.
3.3.5c	Close access to or do not light park areas intended for day-time uses only.

3.4

3.4 Communal open spaces

Communal open space is an area within a private site providing for informal recreation activities for common use by building occupants and, in some cases, visitors. Communal open space is often incorporated into higher density residential developments, education facilities, supported residential facilities, health care facilities and hospitals, or commercial buildings. They can include roof terraces, courtyards, contemplation gardens, atriums, walled gardens, playgrounds, play spaces and dog gardens. Communal open space may comprise paved areas, grass, gardens, shelters and seating. Depending on the intended user, it may also include pools, garden plots and barbecues.

Why is it important?

Access to well-designed communal open space is important for the wellbeing of building occupants, especially residents of higher density residential buildings. Communal open space provides opportunities for relaxation, socialising and to enjoy outdoors. Communal open space can also support natural systems and habitat.

Related guidance

Element 3.1 **Public spaces principles**

Element 5 **Buildings**

Element 6 **Objects in the public realm**

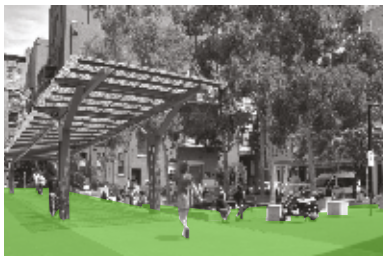
3.4 Communal open spaces

Objective 3.4.1 To ensure communal open space is accessible and functional

Communal open spaces need to be of an adequate size and in an accessible location to enable building occupants to use them. Remote, small or uncomfortable spaces are rarely used, and may become neglected or unsafe.

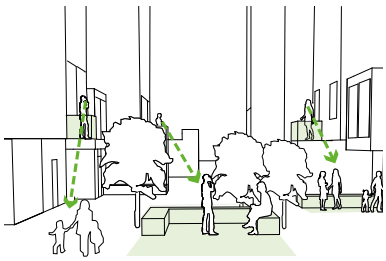
3.4.1a Locate communal open space to be convenient and accessible to building occupants.

3.4.1b Provide communal open space of a size that accommodates a wide range of activities and uses appropriate for the building occupants.



3.4.1c Lay out communal open space to create informal surveillance opportunities within the space and from adjacent buildings.

→ **TIP** Dwellings that have an outlook toward communal open space provides opportunities for informal surveillance of the space. This arrangement should, however, maintain the privacy and security of residents in their homes.



3.4.1d Design communal open space to be usable in a range of weather conditions and at all times of the year.

→ **TIP** When designing communal open space, take into account orientation of the space for optimum winter solar access and summer shading, shelter from wind and rain and providing all-weather ground surface materials.

3.4 Communal open spaces

Objective 3.4.2 To support a safe and enjoyable communal open space for its intended users

3.4.2a Include a place where adults and children can gather and socialise.

→ **TIP** In higher density residential buildings, simple solutions can attract greater use. Arranging tables and seating can encourage informal gatherings while people watch their children play.

3.4.2b Provide seats and tables to cater for large gatherings of people.

→ **TIP** A large table can accommodate resident gatherings and support social engagement.

3.4.2c Provide lighting in communal open space to support safe movement and evening use.

→ **TIP** Avoid light spill to adjacent sensitive uses.

3.4.2d Provide landscape areas with sufficient space and soil volume for trees to grow.

3.4.2e Incorporate containers for trees and shrubs where free ground with sufficient soil volume is not available.

→ **TIP** Opportunities for planting may be limited on balconies and roof gardens and over underground structures such as car parks.

Objective 3.4.3 To ensure the communal open space protects the amenity for adjacent sensitive uses

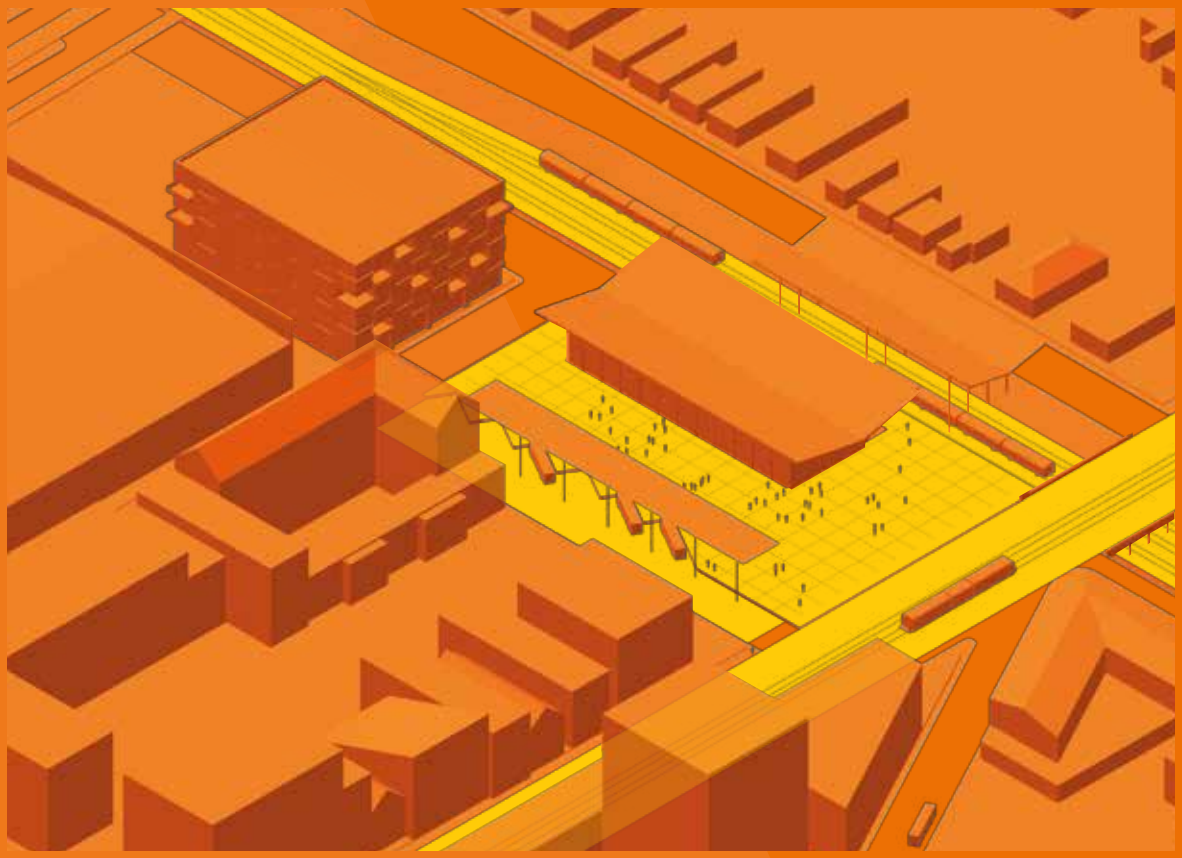
3.4.3a Locate facilities such as driveways, foyers and barbecue areas to minimise noise, fumes and lighting impacts into sensitive uses in adjacent properties.

Objective 3.4.4 To ensure communal open spaces are well maintained

3.4.4a Establish a regular maintenance program for communal open space.

3.4 Communal open spaces

Element 4
Public transport environs



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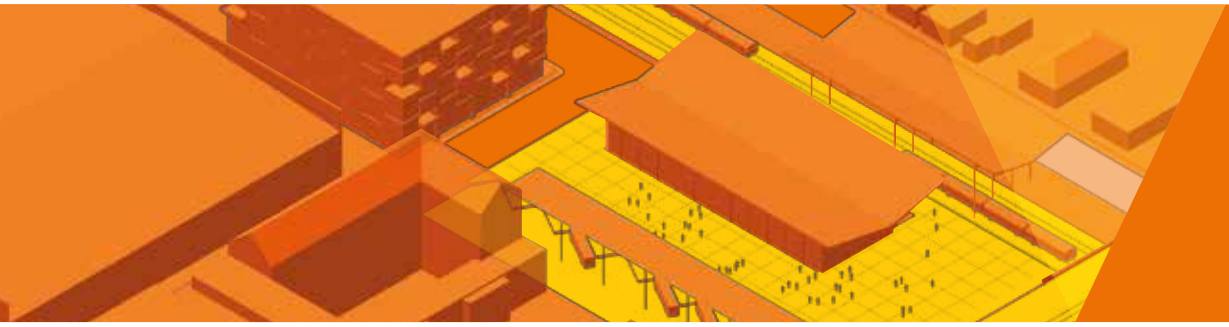

4

Element 4 Public transport environs

This element covers

4.1 Public transport environs principles

Urban design principles for public transport environs.

4.2 Railway station precincts

The integration of railway stations with their surrounding environment.

4.3 Public transport interchanges

Bus or tram interchanges that are either stand-alone, adjacent to a railway station or located at a transport node, such as a park-and-ride facility.

4.4 Railway corridor environs

Land and activities adjacent to the railway operating corridor.

This element does not provide guidance on public transport infrastructure design, level of service for public transport, or the train, tram or bus traveller experience while travelling on public transport.

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Part 5 of 8 parts

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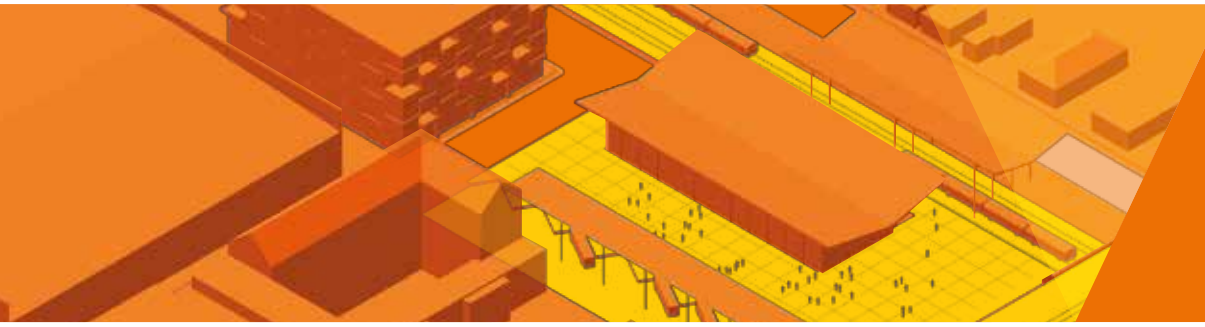


4.1

4.1 Public transport environs principles

Public transport environs includes the public spaces, streets, buildings and activities located around railway stations, bus and tram interchanges, and adjacent to railway corridors.

Why is it important?

Where public transport nodes are located near other activities and facilities, they provide mutual support through enhanced convenience and accessibility, and a safer public realm.

This element assists in delivering enhanced safety and amenity in the public realm and in private development in the vicinity of railway stations, public transport interchanges, and railway corridors. The engineering, servicing or management issues of the public transport are guided by other appropriate authorities. See also Public Transport Guidelines for Land Use and Development (Department of Transport 2008) and also the Guideline sources and references for a list of technical guidance.

Related guidance

Element 2	**Movement network**
Element 2.6	**Public transport on roads**
Element 3.1	**Public spaces principles**
Element 3.2	**Street spaces and plazas**

4.1 Public transport environs principles

Objective 4.1.1 To ensure convenient pedestrian and bicycle access to railway stations and public transport interchanges

4.1.1a Provide continuous, direct pedestrian and bicycle access routes from the surrounding neighbourhood to railway stations and public transport interchanges.

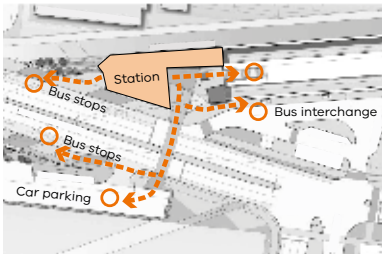
→ **TIP** Pedestrian and bicycle access routes to a public transport node should accommodate both public transport users and others moving around the neighbourhood. More people on the paths will create a safer environment.

4.1.1b Provide a continuous active frontage along pedestrian approach paths to railway stations and public transport interchanges.

→ **TIP** Pedestrians feel unsafe where vacant lots or blank walls front pedestrian paths.

4.1.1c Arrange pedestrian approach paths with clear sightlines to and from railway station buildings, and to and from public transport interchanges.

4.1.1d Where a bus or tram interchange is co-located with a railway station, connect them with a direct, sheltered pedestrian path.



Objective 4.1.2 To ensure safety and amenity around railway stations and public transport interchanges

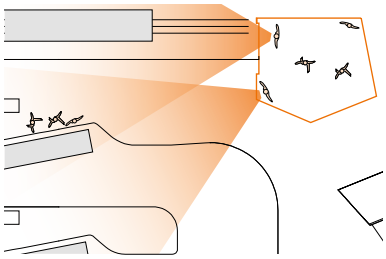
4.1.2a Locate active public spaces and secondary uses adjacent to railway stations and public transport interchanges.

→ **TIP** Active public spaces and secondary uses, such as food vendors, or drycleaners, can attract other people to the railway station or public transport interchange area. This helps increase the numbers of people using the station or interchange area and improves security.

4.1.2b Locate public transport waiting areas, particularly pick-up and drop-off areas, and taxi ranks where they are clearly visible from the pedestrian approach paths and nearby buildings.

4.1.2c Where railway stations are co-located with a bus interchange, arrange waiting areas with clear views to approaching buses.

→ **TIP** Sharing waiting areas for train and bus travellers can increase activity levels and contribute to a sense of safety.



Objective 4.1.3 To ensure comfortable and serviceable railway stations and public transport interchanges

4.1.3a Provide weather protection, comfortable seating and public amenities, such as waste bins and drinking fountains.

4.1.3b Locate way-finding signage at logical and visible points along approach paths to and within the railway station or public transport interchange.

4.1.3c Locate real-time travel information where it can be seen by waiting passengers in all light conditions.

→ **TIP** When selecting a location for electronic display screens take into account the effects of bright sunlight and sun angles on screen visibility.

4.1.3d Provide both casual and secure bicycle storage near the railway station or public transport interchange.

→ **TIP** Casual bicycle storage, such as hoops, provide an easy-to-use facility, while secure cages provide for longer term storage.

Objective 4.1.4 To ensure the railway station or public transport interchange contributes to a sense of place and local character

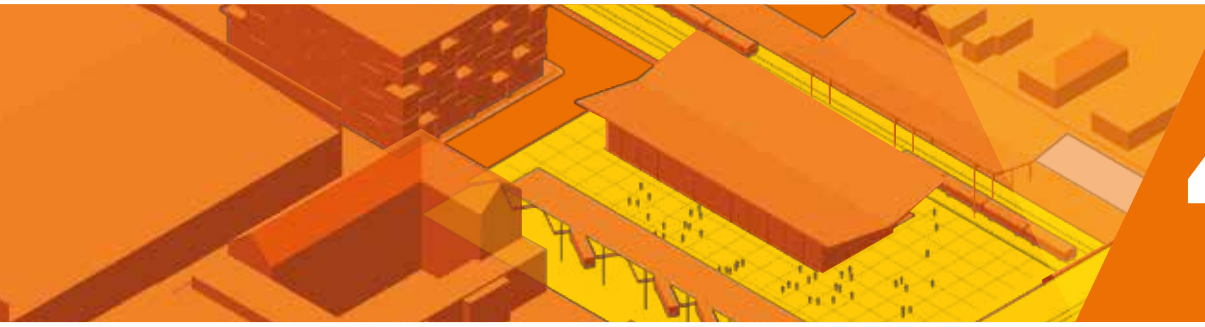
4.1.4 a Develop a palette of materials, furnishings and plantings for public space within the railway station precinct or public transport interchange that is consistent with the preferred palette of the surrounding area.

→ **TIP** Where multiple agencies deliver infrastructure and urban design works, a consistent palette of fixtures and finishes enables co-ordinated repairs and contributes to a sense of place.

Objective 4.1.5 To effectively maintain public transport environs

4.1.5 a Establish a place management agreement that identifies management and maintenance responsibilities and processes.

→ **TIP** Public transport interchanges and their adjacent public spaces have different agencies responsible for management. A place management agreement and place maintenance processes can assist a coordinated and consistent approach.



4.2

4.2 Railway station precincts

A railway station precinct is the area in the immediate surrounds of a railway station. Local movement networks converge on railway stations, concentrating activity in the precinct. Railway stations also provide for pedestrian crossing of the railway line. The railway station precinct can function as a social space where people meet or watch the world go by. Railway stations are located in a number of different settings – activity centres, residential neighbourhoods, semi-rural or industrial – resulting in different levels of activity and use patterns in each precinct.

Where a railway station is co-located with other uses and facilities, activity may be spread over more of the day. Where a station stands alone, activity may have temporal peaks, often resulting in patchy activation through the day. Where present, station and ancillary staff can provide informal surveillance in the station area.

Why is it important?

Railway stations attract a wide range of travellers and commuters who arrive or depart on foot, by car, bus, tram, or bicycle, and who wait or change modes. Station buildings also may be used for community activities.

This element provides design guidance for the immediate surroundings of railway stations. It does not include design considerations within the paid (ticketed) area. The engineering, servicing or management issues of public transport are guided by other appropriate authorities. See also Public Transport Guidelines for Land Use and Development (Department of Transport 2008) and also the Guideline sources and references for a list of technical guidance.

Related guidance

Element 2 **Movement network**

Element 4.1 **Public transport environs principles**

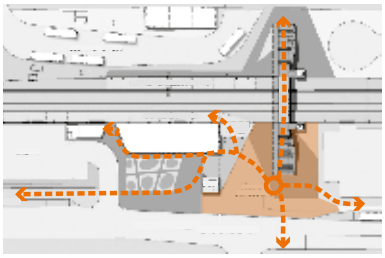
Element 6 **Objects in the public realm**

4.2 Railway station precincts

Objective 4.2.1 To integrate the railway station with the surrounding area

4.2.1a Arrange railway station forecourts as a key part of the public space system and movement network.

→ **TIP** Station forecourts are both public spaces and arrival and setting-off points for a journey.



4.2.1b Locate convenience retail uses close to the station entry.

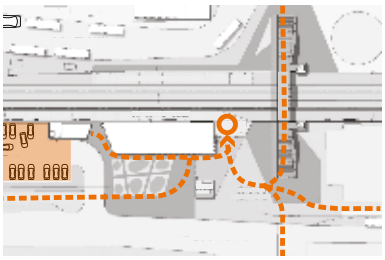
→ **TIP** Where a station kiosk or a shop overlooks the station approach path and platform, staff provide informal surveillance and passengers feel safer.

4.2.1c Locate local pedestrian and bicycle crossings of railway lines outside the station 'paid' (ticketed) area.

→ **TIP** By locating railway line crossings outside the paid area, the paths can be used by the general public to move about the wider neighbourhood.

4.2.1d Locate commuter car parking areas away from main pedestrian approaches to the railway station.

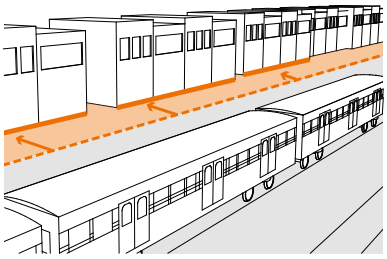
→ **TIP** Large commuter car parking areas can pose a barrier to pedestrian movement and they are inactive areas outside peak times. See Element 2.8 Car-parking lots.

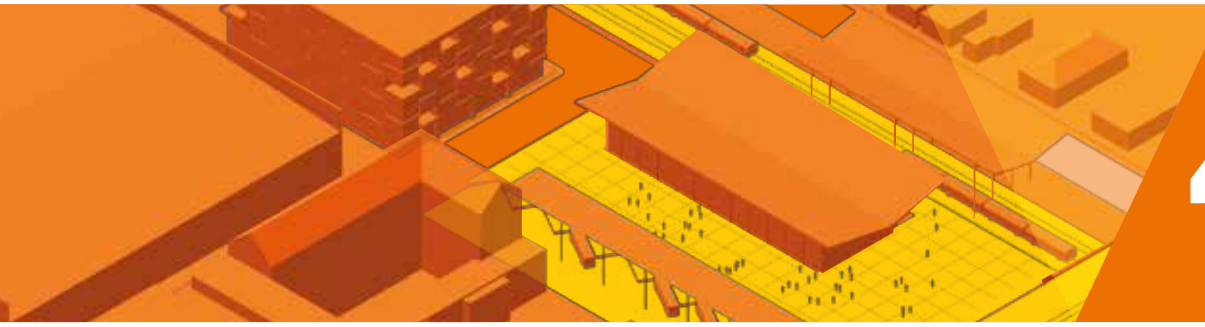


Objective 4.2.2 To support amenity and safety on private property in railway station precincts

4.2.2a Where a private lot abuts a railway property, set buildings back from the boundary with the railway property.

→ **TIP** Avoid building to the lot boundary on the railway land interface. Railway property is not usable as a public way or for providing access to light and ventilation in adjacent buildings. Set buildings a sufficient distance back from the boundary to provide access for maintenance and repairs to buildings and services, and to allow for light and ventilation access for the building.





4.3

4.3 Public transport interchanges

A public transport interchange is a place where people can access or transfer between public transport modes and routes. Interchanges vary in size and may be stand-alone, adjacent to a railway station, or located at a transport node, such as a park-and-ride facility.

The interchange may be located in a building or an open area, with passenger facilities such as shelters and enclosed waiting spaces, travel information, public conveniences and shops. Buses and trams are large vehicles with limited manoeuvrability, therefore detailed design must consider safety and engineering issues.

Why is it important?

Interchanges have a concentration of pedestrian activity, accessing the interchange from multiple directions or changing modes. The movement patterns may have temporal peaks, often resulting in patchy activation. Functional, safe and convenient pedestrian movement to and within a public transport interchange is a major objective.

This element provides design guidance for the immediate surroundings of public transport interchanges. It does not include design considerations within a paid (ticketed) area. The engineering, servicing or management issues of the public transport are guided by other appropriate authorities. See also Public Transport Guidelines for Land Use and Development (Department of Transport 2008) and also the Guideline sources and references for a list of technical guidance.

Related guidance

Element 1.2 **Activity centre structure**

Element 2.6 **Public transport on roads**

Element 4.1 **Public transport environs principles**

Element 6 **Objects in the public realm**

4.3 Public transport interchanges

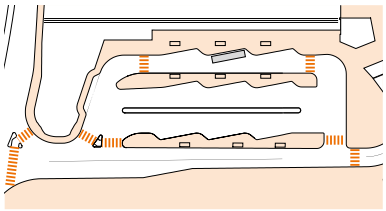
Objective 4.3.1 To provide functional and safe movement within public transport interchanges

Public transport interchanges function well when centrally located with direct and separated access lanes for public transport vehicles. See Element 1.2 Activity centre structure for location and access guidance for public transport interchanges.

4.3.1a Within public transport interchanges, provide pedestrian paths separated from the vehicle lanes.

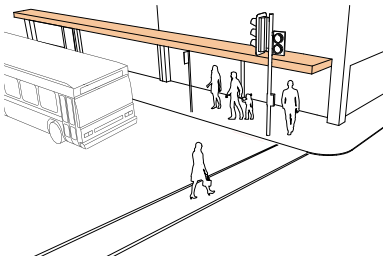
4.3.1b Where a bus interchange is arranged as parallel ranks, provide direct, dedicated pedestrian paths and crossings over bus lanes or roads.

→ **TIP** When pedestrian paths and crossings are located in inconvenient places, pedestrians may cross roads informally and put themselves at risk.



4.3.1c Where a bus interchange is linear along a street edge, provide a continuous, unobstructed passenger shelter.

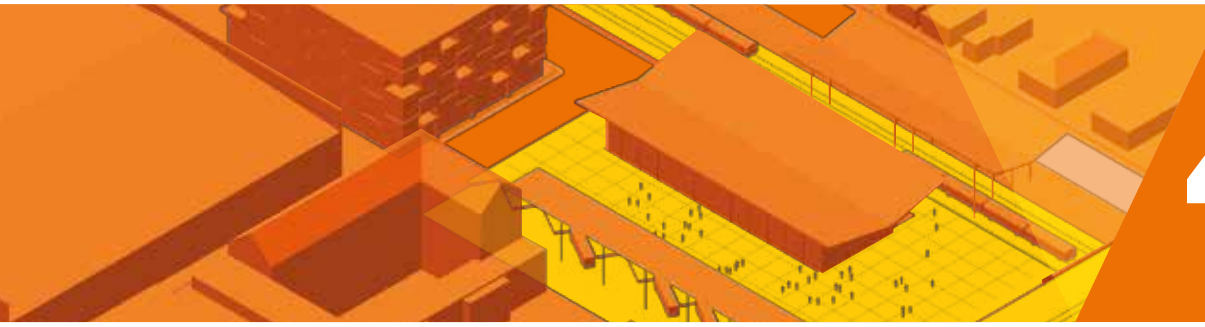
→ **TIP** Shelter structures and other obstructions must be clear of pedestrian and vehicle travel paths, and meet requirements for disability access. See Guidelines sources and references for further guidance.



Objective 4.3.2 To ensure the public transport interchange protects the amenity of adjacent sensitive uses

4.3.2a Locate active, non-residential uses on the interface with public transport interchanges, and locate more sensitive uses away from the interchange area.

→ **TIP** Bus and tram interchanges generate many vehicle movements and operate from early morning to late night. Noise and light may disturb sensitive uses nearby if located close to an interchange.



4.4

4.4 Railway corridor environs

Railway corridor environs focuses on land and activities adjacent to the railway operating corridor. Along the length of the corridor, adjacent land may accommodate a variety of uses including streets and roads, public open space, residential or commercial development.

Railway corridors contribute to an effective movement network. Railway corridors may carry metropolitan passenger, regional passenger or freight trains. Railway corridor crossing points channel and concentrate pedestrian, bicycle and vehicle movement to specific locations.

Railway crossing points are used by both commuters and the general public. Crossing points can be existing at-grade or new grade-separated crossings. Grade separated crossings are either by an underpass (subway) or an overpass (footbridge). The design of new transport routes and new developments, where applicable, must provide for grade separation at railway crossings except with the approval of the Minister for Public Transport.

Why is it important?

Some railway corridors, due to their length and widely-spaced safe crossing points, can be a barrier to movement in the wider area. Space adjacent to the railway operating corridor, if safely separated, can provide opportunities for linear open space, and pedestrian and bicycle paths. Railway stations and crossing points along the corridor can be locations for more intense activity.

Some train operations can result in noise and vibration effects on nearby properties, especially where a freight service operates or the track curves or climbs, or where there is a signalised level crossing. Development within the railway corridor environs should consider the potential amenity impacts of the railway operating corridor, and constraints on public access.

This element provides design guidance for the immediate surroundings of railway corridors. It does not include design considerations within the operational rail corridor. The engineering, servicing or management issues of the public transport modes are guided by other appropriate authorities. See also Public Transport Guidelines for Land Use and Development (Department of Transport 2008) and also the Guideline sources and references for a list of technical guidance.

Related guidance

Element 2 **Movement network**

Element 4.1 **Public transport environs principles**

4.4 Railway corridor environs

Objective 4.4.1 To enhance connectivity and access in railway corridor environs

4.4.1a Provide conveniently located grade separated pedestrian and bicycle crossings across railway corridors, motorways and other natural barriers, to connect neighbourhoods and key destinations.

→ **TIP** In urban areas, the crossing location and frequency should be informed by local circumstances and need.

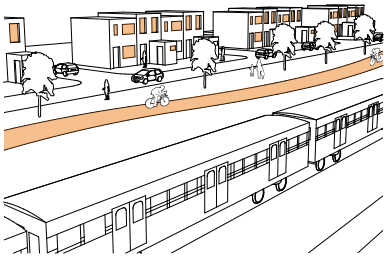
→ **TIP** The design of transport routes at new developments must provide for future grade separation at railway crossings except with the approval of the Minister for Public Transport.

Objective 4.4.2 To enhance the amenity and safety for adjacent uses in the railway corridor environs

Railway corridors are not public spaces. However, as there is no requirement on the railway operator to fence the railway track area, the railway operating corridor may sometimes appear as quasi-public space, in particular where it is adjacent to a public road or actual public space. Development adjacent to a rail corridor should include suitable fencing to prevent access to the corridor. Advice from the rail track authority is to treat rail land as private property, unless advised otherwise by the authority.

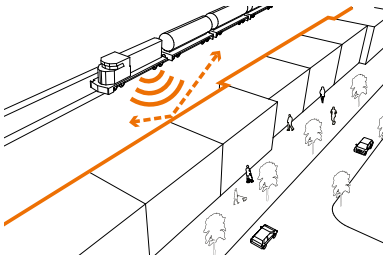
4.4.2a Where a railway operating corridor serves only metropolitan passenger services, provide a street between the railway operating corridor and the surrounding area, to provide an active frontage.

→ **TIP** A street is not an effective noise buffer, but metropolitan services generally make less noise than diesel freight trains.



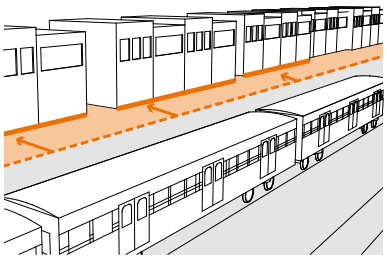
4.4.2b Where a railway operating corridor serves freight or regional passenger services, design buildings or structures to provide a noise buffer for adjacent buildings and the surrounding area.

→ **TIP** While buildings designed to provide a noise and vibration barrier are appropriate in freight or regional passenger corridors, sound walls, if well designed, may also be a solution.



4.4.2c Where a private lot abuts a railway corridor, set buildings back from the boundary with the railway property.

→ **TIP** Avoid building to the lot boundary on the railway land interface. Railway property is not usable as a public way or for providing access to daylight and ventilation in adjacent buildings. Set buildings a sufficient distance back from the boundary to provide access for maintenance and repairs to buildings and services, and to allow for light and ventilation access for the building.



4.4.2d Where a building wall faces a railway corridor, design the building facade to dissipate noise.

→ **TIP** Faceting the building wall, or using a sound-absorbing surface finish can reduce noise transmission into bordering buildings.

4.4.2e Where a building wall or fence interfaces a railway corridor, use wall and fence finishes that resist graffiti and vandalism.

→ **TIP** While vegetation on walls discourages graffiti, maintaining the plantings is an additional management cost and responsibility.

4.4 Railway corridor environs

Objective 4.4.3 To ensure buildings and uses adjacent to the railway corridor support safe railway operations

4.4.3a Locate trees and planting along railway corridors to maintain clear sightlines for train drivers, and to ensure branches do not fall onto the rail infrastructure.

→ **TIP** Maintaining clear sightlines between an adjacent path and the rail operating corridor also ensures that pedestrians and cyclists can see approaching trains.

4.4.3b Use visually non-reflective surfaces on buildings and structures facing the railway corridor to avoid glare and train driver distraction.

4.4.3c Shield the railway operating corridor from light spill from adjacent properties to avoid train driver distraction.

→ **TIP** Train driver distraction, caused by bright lights, colours or shiny surfaces, can pose safety risks to train operations.

Objective 4.4.4 To ensure effective place maintenance in railway corridor environs

4.4.4a Where development or works are proposed on land abutting a railway corridor, consult with railway agencies early in the planning process.

→ **TIP** See Guideline sources and references, for rail environs responsible authorities and agencies.

4.4.4b Establish a place management agreement that identifies management and maintenance responsibilities and processes.

→ **TIP** Railway corridor environs are complex areas to manage. A place management agreement and place maintenance processes can provide for coordination and consistency.

Element 5
Buildings

VICTORIA State Government
Environment, Land, Water and Planning

5

Element 5 Buildings

This element covers

5.1 Buildings in activity centres

Larger, more complex buildings located in places with higher concentrations of urban activity.

5.2 Higher density residential buildings

Apartments or flats in a single building of five or more storeys in height.

5.3 Large format retail premises

Large floor area buildings used for retail purposes.

5.4 Car parking structures

Buildings either used solely for car parking or mixed with other uses.

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Part 6 of 8 parts

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5.1

5.1 Buildings in activity centres

Buildings in activity centres accommodate a wide range of uses, such as living, working, shopping and services. Buildings in these locations may be larger than those in surrounding neighbourhoods, take up more of the site and be built to the front and side boundaries. They may incorporate a mix of uses that mean people are present at different times of the day.

Depending on the location within the activity centre, a building may be an intense development, it may provide a transition to more sensitive uses, or it may blend in with the surrounding area. Buildings in activity centres often accommodate a variety of uses and over time, these uses may change. A building's design should consider future changes in use and internal layout.

Why is it important?

Buildings, together with the streets and public spaces, form the city. Buildings make a significant contribution to a city's sense of place, and its comfort and liveability. The physical form and character of buildings shape the public spaces of a city. The activities buildings accommodate will have an effect on the surrounding area. Importantly, larger or complex buildings make a significant contribution to their setting. Buildings in activity centres, whether private or public, contribute to the vitality of the street and public spaces.

Related guidance

Element 1.2 **Activity centre structure**

Element 2.2 **Pedestrian priority streets**

Element 3.2 **Street spaces and plazas**

Element 4 **Public transport environs**

5.1 Buildings in activity centres

Objective 5.1.1 To ensure the building scale and form supports the context and preferred future character of the activity centre

In activity centres, buildings define the street spaces, focus views and provide a sense of enclosure for public spaces.

5.1.1a Locate and shape the building to accommodate local topography and natural and cultural features of the site.

5.1.1b Locate and shape the building to protect view corridors from streets and public spaces toward landmarks.

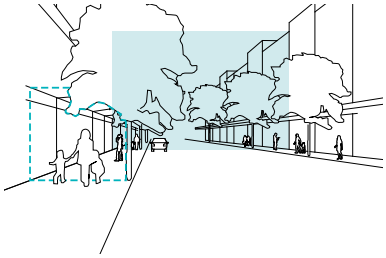
→ **TIP** An important function of the public realm is to celebrate elements of value to the community. View corridors from streets and public spaces to significant landmarks, such as a memorial or a natural feature, are highly valued by the community.

5.1.1c Shape the building scale and form to support the existing character or the preferred future character of the area.

→ **TIP** The building silhouette against the sky can make a significant contribution to the character of the area.

5.1.1d Use the building height and setbacks to frame the street space as a public space.

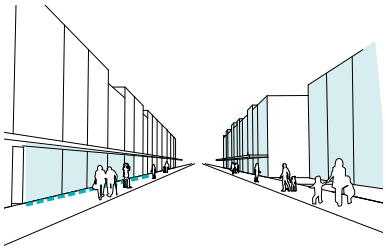
→ **TIP** Building form and placement can effectively widen a narrow street or enclose a wide street. See Element 2.2: Pedestrian priority streets.



5.1.1e Where the street proportions and character are strongly defined, align the building frontage with existing front setbacks.

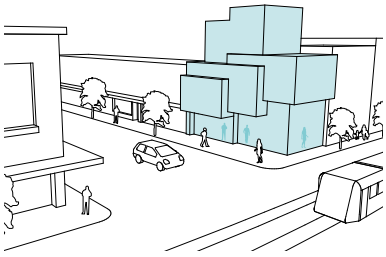
→ **TIP** Street character may also be defined by heritage buildings and landscape settings.

5.1.1f In retail and commercial mixed-use areas, place the building frontage on the front lot line.



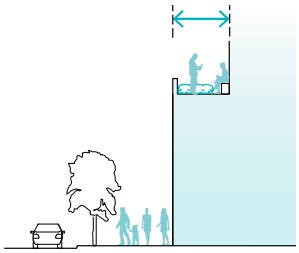
5.1.1g Shape the building form and detail to reinforce important street corners.

→ **TIP** Not all corners are important. A strategic planning process can identify important corners.



5.1.1h Set back upper levels of tall buildings or use a podium and tower form to create a pedestrian scale at street level.

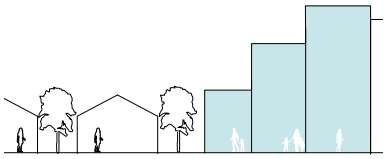
→ **TIP** A podium with a tower set back from the street allows greater daylight access into the street and wider views of the sky and reduces wind turbulence at street level. A strategic planning process or built form analysis can identify appropriate street wall heights.



Objective 5.1.2 To ensure the activity centre provides a graduated transition between different building scales and uses

5.1.2a Provide a transition in scale from larger buildings to adjacent areas of smaller scale built form.

→ **TIP** A larger building can transition to a lower scale neighbour by placing smaller scale buildings at the interface, or by stepping down the building towards the interface edge.



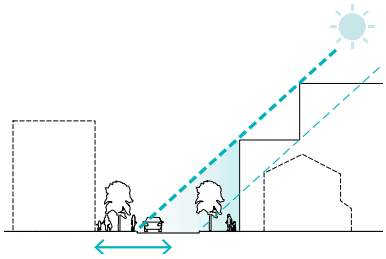
5.1.2b Define the boundary or transition between public space and private space without the need for high fences or barriers.

→ **TIP** A slight change in building level can provide a boundary definition between public and private space.

Objective 5.1.3 To ensure buildings in activity centres provide equitable access to daylight and sunlight

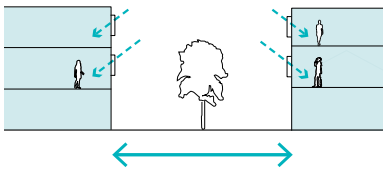
5.1.3 a Locate and arrange the building to allow daylight and winter sun access to key public spaces and key pedestrian street spaces.

→ **TIP** A strategic planning process can identify and establish key public spaces.

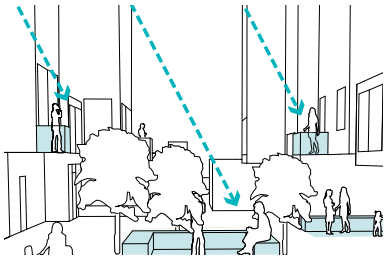


5.1.3 b Allow sufficient distance between buildings to allow access to daylight for neighbouring windows.

→ **TIP** The higher the surrounding buildings the further they may need to be separated.



5.1.3 c Protect daylight and sunlight access to the private and communal open space of adjacent dwellings.



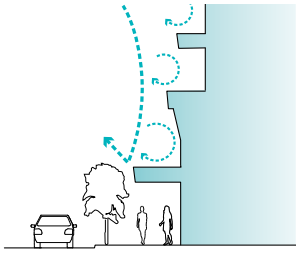
Objective 5.1.4 To minimise adverse wind effects caused by buildings in activity centres

5.1.4 a Orient large buildings to minimise wind effects at street level and on adjoining properties and public spaces.

→ **TIP** Winds from a certain direction (such as the west) may be dominant, so avoid tall wall surfaces which would catch wind and cause down draughts.

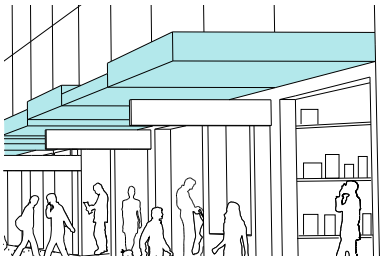
5.1.4 b Detail the building façade to minimise wind effects on streets and public spaces.

→ **TIP** The shape and surface of a building can reduce wind turbulence at street level. Technical analysis of the wind and turbulence effects of tall buildings on adjacent public spaces can inform building design.



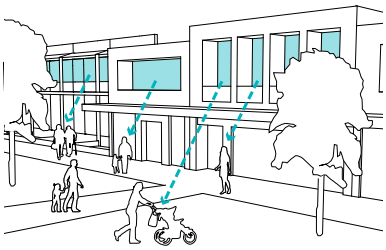
5.1.4 c As part of a building's design, install continuous weather protection for pedestrian priority streets and public spaces.

→ **TIP** Awnings provide protection from sun, wind and rain at street level. The Building Code of Australia sets out design standards for building projections beyond the street alignment. Where a building projection is over an Arterial Road Reserve, approval from VicRoads is required.



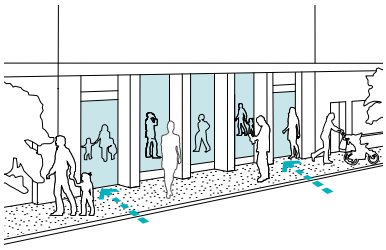
Objective 5.1.5 To maximise safety through informal surveillance of streets and public spaces from within buildings in activity centres

5.1.5 a Arrange windows of buildings to overlook adjacent streets and public spaces.



5.1.5 b Provide building entries and transparent windows to the street frontage.

→ **TIP** Transparency need not be complete. Privacy and views need to be balanced and be appropriate to the building use.



5.1.5 c Where security covering to windows is needed, install open-grill type shutters.

→ **TIP** People prefer to walk along streets where there is activity, visual interest and a perception of being visible from nearby windows. People tend to avoid streets with long blank walls or solid security shutters that contribute no interest or activity at street level.

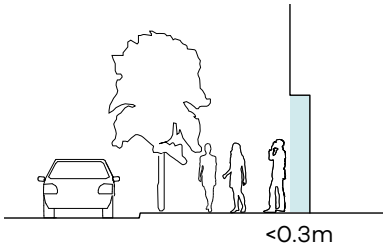
5.1.5 d Use low-height or semi-transparent front fences to assist informal surveillance of the street.

5.1.5 e Where front fences are more than one metre in height, provide a minimum of 50 per cent transparency.

→ **TIP** Front fences at street level that are low, open or partially transparent also create an impression of openness on the street. Where a fence is needed to minimise noise intrusion, consider using a solid, transparent material.

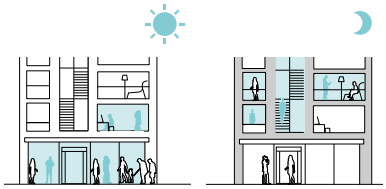
5.1.5 f Limit wall recesses along the street edges of buildings to less than 300mm deep to avoid their use as concealment places.

→ **TIP** Wall recesses deeper than 300mm can provide potential hiding places.



5.1.5 g In mixed-use buildings, provide a compatible mix of activities that attract people after business hours.

→ **TIP** Mixing uses in buildings, with retail and other commercial uses at street level, and residences on upper floors, provides activity during the day and evening.



Objective 5.1.6 To ensure buildings in activity centres connect to the movement network

5.1.6 a Locate pedestrian entries to buildings on the pedestrian network.

→ **TIP** Entries should be clearly visible from footpaths along the street.

5.1.6 b Emphasise pedestrian entries with prominent design features, signage or landscape treatments.

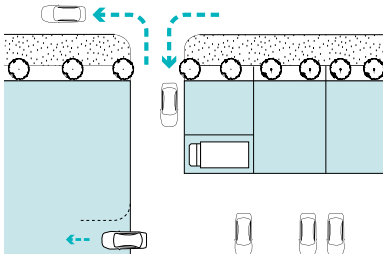
5.1.6 c Provide visitor bicycle parking near to pedestrian entries to buildings.

5.1.6 d Arrange vehicle entries to buildings to allow convenient, safe and efficient vehicle access to the street network.

→ **TIP** reducing vehicle crossovers on footpaths, ensuring vehicles can enter and exit in a forward direction and having clear sight lines enhances both pedestrian and driver safety.

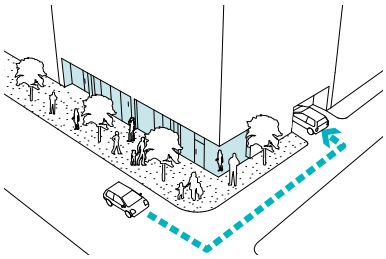
5.1.6 e Arrange vehicle entries to minimise the number of vehicle crossovers on pedestrian paths.

→ **TIP** See Element 5.4 Car parking structures.

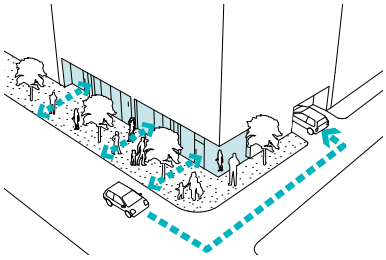


5.1.6 f Locate vehicle and service access to the rear or side of the building.

→ **TIP** Locating vehicle access away from the street frontage supports safe active pedestrian streets. See Element 2.8 Car parking lots and 5.4 Car parking structures.



5.1.6 g Separate the pedestrian entries from the vehicle entries to buildings.



Objective 5.1.7 To ensure the building facade detail supports the context or preferred future character of the activity centre.

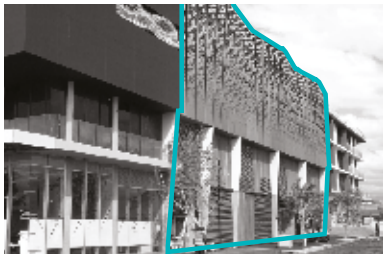
Larger buildings are more visible from the street and from a distance. Their facades can contribute to the character of the area and reinforce place identity.

5.1.7 a Arrange building elements such as roofs, balconies, windows, doorways and cladding materials to contribute to the preferred future character of the area.

→ **TIP** An overall façade composition may use, for example, proportion, contrast, repetition, or alignment of the building elements to create an identity for the building.

5.1.7 b Where a building has a solid external wall facing a street or public place, detail the walls to provide an interesting appearance.

→ **TIP** Detail on a building's external walls may include, for example, decorative cladding and materials, artwork, signage or graphics.



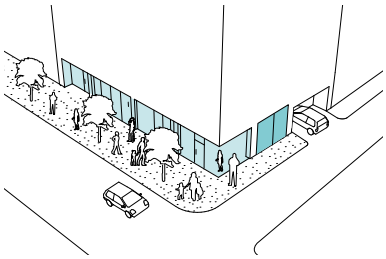
5.1.7 c Incorporate lighting of walls facing streets and public spaces to contribute to lighting of streets.

→ **TIP** Wall lighting can also show off the building façade at night.

5.1.7 d Shield from view or remotely locate mechanical plant, unless it forms an integral part of design.

5.1.7 e Locate and arrange utility service installations to minimise their impact on the building's active street frontage.

→ **TIP** People prefer to walk along streets where there is activity, visual interest and a perception of being visible from nearby windows. People tend to avoid streets with long blank walls that contribute no interest or activity at street level.



Objective 5.1.8 To achieve sustainable buildings in activity centres

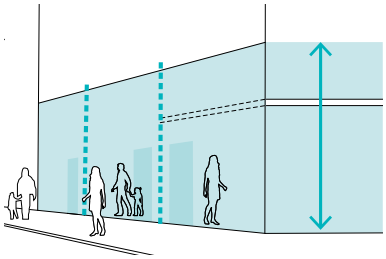
5.1.8 a Use durable, sustainable and attractive materials that will minimise maintenance and contribute to the character of the area.

→ **TIP** The use of specific materials should be based on local precedent or functional requirements.

5.1.8 b Adapt and re-use existing buildings, where practical.

5.1.8 c Lay out the building structure and internal spaces to allow future adaptation to other uses.

→ **TIP** High ground floor ceiling heights and provision for multiple entry points support flexible re-use of a building. Car parks should also have ceiling heights and flat floors to facilitate future conversion to other uses.



5.1.8 d Collect and use stormwater and recycled water for landscape irrigation, toilet flushing and cleaning.

→ **TIP** Water reuse systems need to be planned into a building at an early stage. See Guideline sources and references.

5.1.8 e Provide for efficient storage, separation and removal of waste and recycled materials from buildings.

→ **TIP** For links to advice on waste management and disposal planning, see Guideline sources and references.

5.2

5.2 Higher density residential buildings

Higher density residential buildings house a number of individual apartment dwellings in a single building, and are five or more storeys in height. They may be residential only or residential combined with other uses such as retail, offices or car parking. They are often located in or close to activity centres, and within walking distance of a wide range of services, employment opportunities and public transport. Higher density residential buildings may include common entrance and circulation spaces. Open space for residents may be provided as private balconies, or as communal open space at ground level or on upper level terraces.

Why is it important?

Higher density residential buildings contribute to housing choice and meeting the needs of a growing population. Where located in or near activity centres, they provide residents with easy access to services and facilities. When designed to integrate with their surroundings, they minimise impacts on adjacent lower scale or density residential areas.

Apartment building design needs to take into account the number and diversity of its residents. As people are present 24 hours a day, seven days a week, this type of housing can improve residents' perceptions of personal safety and enhance the viability of nearby businesses.

Related guidance

Element 1.4 **Higher density residential precinct structure**

Element 2.2 **Pedestrian priority streets**

Element 2.8 **Car parking lots**

Element 3.4 **Communal open spaces**

Element 5.1 **Buildings in activity centres**

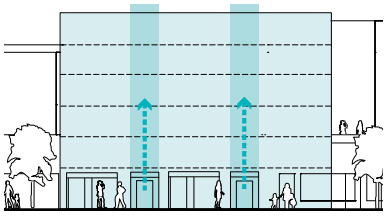
Element 5.4 **Car parking structures**

5.2 Higher density residential buildings

Objective 5.2.1 To create a sense of address for dwellings within higher density residential buildings

5.2.1a Create multiple building entries that serve smaller groups of dwellings within a building.

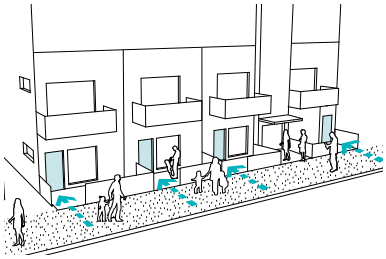
→ **TIP** By having a smaller number of dwellings sharing a single street entry, each unit or group of units has a greater sense of individual identity and street address. Multiple entries to a residential building also provide more activity and interest to the street.



5.2.1b Arrange building façades to identify individual dwellings.

→ **TIP** Façade materials and elements, such as balconies and windows, can reduce the apparent overall building scale, assist individual dwellings to be identified from the street, thus enhancing a sense of ownership for residents.

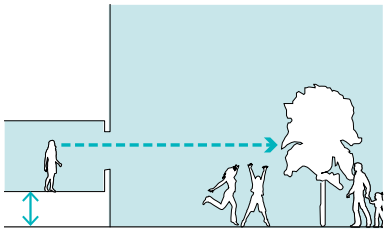
5.2.1c Where ground floor dwellings face the street, provide individual entrances to each dwelling.



Objective 5.2.2 To enable informal surveillance of streets and public spaces from higher density residential buildings

5.2.2a Elevate ground floor dwellings to provide views to adjacent public spaces and streets.

→ **TIP** Elevating dwelling floor levels and balcony spaces slightly above the street level provides both a sense of privacy and better sightlines to streets and public spaces.



5.2.2b Locate windows of living areas to overlook streets and other public spaces.

5.2 Higher density residential buildings

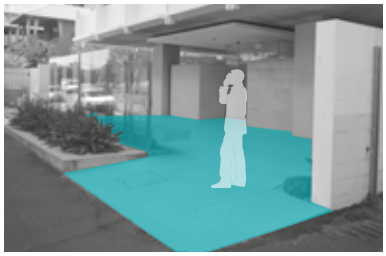
Objective 5.2.3 To support safe and convenient access and circulation for residents and visitors to higher density residential buildings

5.2.3 a Locate the main pedestrian entry to be clearly visible and accessible from the street.

→ **TIP** Building entrances help visitors orient themselves. Entries and foyers should be comfortable, sheltered, safe, convenient and visible at all times of day and night.

5.2.3 b Provide shelter and waiting space on the street at pedestrian entries to buildings.

→ **TIP** Higher density residential buildings often have secure entries requiring visitors to buildings to wait on the street.



5.2.3 c Provide clear sightlines from the building foyer to the street so people can see both in and out when entering or leaving a building.

5.2.3 d Lay out building entry areas to achieve direct sightlines from the outside of the entry door to all of the lobby space.

5.2.3 e Provide mail boxes and parcel post facilities close to the building entries in an active, well-lit and weather-protected area, with potential for informal surveillance.

→ **TIP** For links to advice on post delivery facilities, see Guideline sources and references.

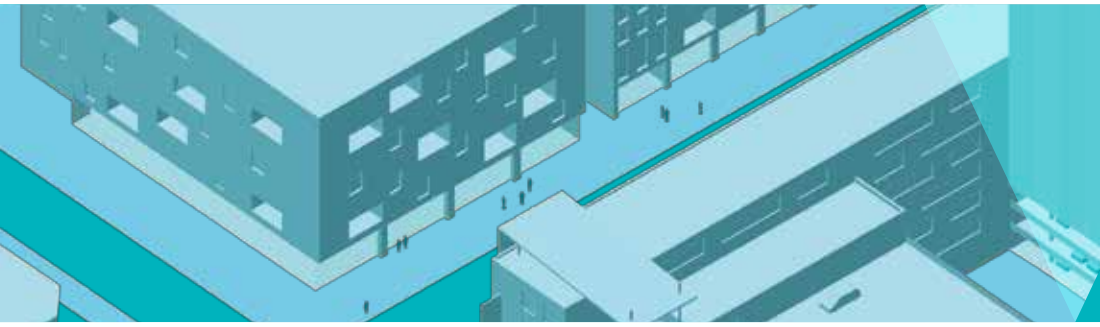
5.2 Higher density residential buildings

Objective 5.2.4 To minimise noise reverberation between faces of neighbouring higher density residential buildings

5.2.4 a	Apply sound diffusing surfaces to walls within light courts, or walls facing onto streets or lanes less than 7.5m wide.
5.2.4 b	Locate mechanical plant rooms in sound insulated areas.
5.2.4 c	Shield adjacent dwellings from mechanical plant noise.

Objective 5.2.5 To maintain common spaces, services and landscaped areas to ensure residents' safety in higher density residential buildings

5.2.5 a	Locate waste bin storage areas away from property boundaries so the bins cannot be used to climb walls and fences.
5.2.5 b	Maintain landscaping near higher density residential building entries to remove potential concealment places.



5.3

5.3 Large format retail premises

Large format retail premises are mostly free-standing buildings or complexes with a single large building footprint and associated infrastructure. They are often single-level or low-rise buildings and they may include large at-grade car parking lots or car parking structures.

They can be shopping centres, supermarkets, restricted retail premises or department stores. Large format retail premises differ from other large buildings with regard to visitor patterns, goods delivery requirements, and goods display practices. They are often located in high visibility places, for example at major road intersections or adjacent to highways that are highly accessible by car.

Why is it important?

Large format retail premises are a part of modern living and contribute to the mix of uses in activity centres. When well integrated physically and functionally into their surrounding area, they draw many customers, enhance the viability of nearby businesses, increase street activity and provide diversity and choice for customers. To achieve this integration they require an adequate level of private vehicle, public transport and pedestrian accessibility, safety and amenity.

Related guidance

Element 1.2 **Activity centre structure**

Element 1.3 **Large redevelopment site structure**

Element 2.8 **Car parking lots**

Element 2.3 **Pedestrian and bicycle paths**

Element 5.1 **Buildings in activity centres**

Element 5.4 **Car parking structures**

5.3 Large format retail premises

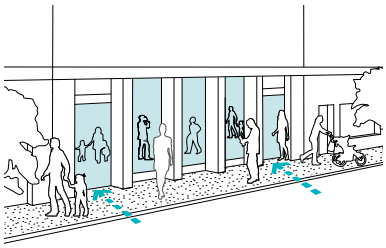
Objective 5.3.1 To support an active frontage interface of large format retail premises with the street

The level of active frontage depends on the presence of a pedestrian entry point as well as a level of clear window area. The appropriate level of active frontage will be influenced by the existing or preferred future character of the street. See Glossary: Active frontage.

5.3.1a Locate main pedestrian entrances and entry paths in prominent locations where they can be seen from the street.

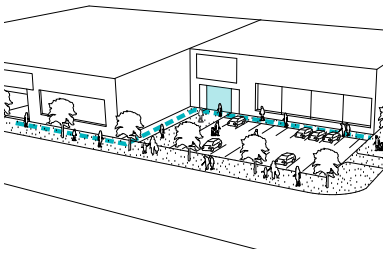
5.3.1b Where a building is located on the front lotline, provide a level of clear window that allows opportunities for informal surveillance of the street from within the building.

→ **TIP** The street frontage of a retail building that has areas of clear window provides opportunities for informal surveillance of the public realm. As well, it allows the public to see the activity within and to see displayed goods.



5.3.1c Where a large format retail premises requires a solid external wall or a setback adjacent to the street frontage, maintain a visual connection and a walkable distance from the building entry to the street.

→ **TIP** If a wall is set back from the street, allow the future opportunity for smaller scale retail or community activities along the frontage.

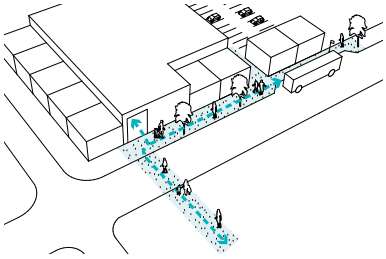


5.3 Large format retail premises

Objective 5.3.2 To support safe and direct pedestrian and cyclist access to large format retail premises

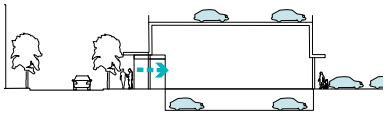
5.3.2a Provide convenient and direct pedestrian and cyclist access from a large format retail premises to public transport stops and to the surrounding area.

5.3.2b Locate main pedestrian entrances on direct pedestrian paths from the surrounding area.



5.3.2c Locate access points for loading bays and waste collection, and site storage areas away from pedestrian priority streets, paths and residential areas.

5.3.2d Where a large format retail premises is in an activity centre, locate the main customer car parking facility away from the main street frontage.



→ **TIP** Large car parking lots located between the street and a large format retail premises can detract from the amenity of the street and create a barrier to the surrounding area. See Element 2.8 Car parking lots and also Element 5.4 Car parking structures.

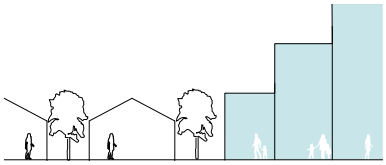
5.3 Large format retail premises

Objective 5.3.3 To integrate the built form of large format retail premises into activity areas and their surrounding neighbourhoods

5.3.3 a Arrange the building form and the facade detail of large format retail premises to respond to the local context and enhance the public realm.

5.3.3 b Where the large format retail premises is adjacent to a lower scale neighbourhood, provide a transition in scale to the surrounding streets and residential areas.

→ **TIP** Stepping the building down at the edges can mediate differences in scale between a taller building and its neighbours.



5.3.3 c Use landscape treatments to reduce the visual impact of blank walls and large areas of car parking.

→ **TIP** Avoid landscaping that blocks views into and out of a building, or across the site, or that provides a concealment opportunity.

Objective 5.3.4 To support the safety and amenity of the area around large format retail premises

5.3.4 a Maintain windows in the large format retail premises clear of visual obstructions to the outside to enable informal surveillance of the public realm.

5.3.4 b Manage landscaping to maintain sightlines into and out of a large format retail premises, and across the site.

→ **TIP** Overgrown landscaping can block sightlines and provide concealment opportunities.

5.4

5.4 Car parking structures

Car parking structures are buildings used solely for car parking or mixed with other uses, and may provide parking for residents and commercial tenants, shoppers and visitors. They can be constructed above or below ground. Car parking structures cater for both vehicle and pedestrian movement, however pedestrians may be required to share paths with vehicles to reach a lift or stairwell, which can be a safety hazard.

Why is it important?

Car parking structures provide secure places for shoppers, residents and workers to store cars and are an efficient use of land compared to car parking lots. Well-designed car parking structures provide both efficient access for cars from the street and within the structure, and also provide clear, safe and direct pedestrian circulation within car parking area, and at exits.

Related guidance

Element 2 **Movement network**

Element 5.1 **Buildings in activity centres**

Element 5.2 **Higher density residential buildings**

Element 5.3 **Large format retail premises**

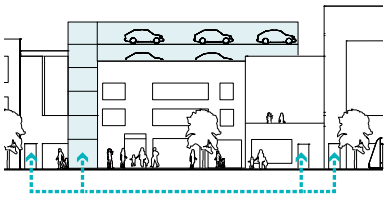
5.4 Car parking structures

Objective 5.4.1 To provide conveniently located car parking structures

5.4.1a Locate car parking structures in proximity to the activities they support.

5.4.1b Where possible, share the car parking facility between multiple neighbouring uses.

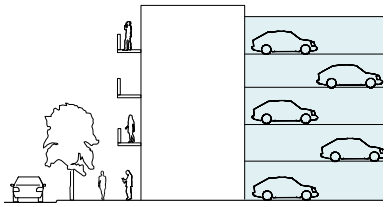
→ **TIP** Locating car parking structures a short walking distance from a number of activities encourages walking and extends the hours of use.



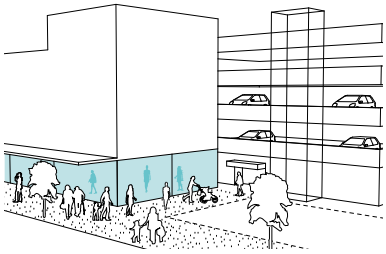
Objective 5.4.2 To ensure car parking structures support an active and safe interface with the street

5.4.2a Where practical, locate larger car parking structures below ground or within buildings or wrap them in a residential or commercial use.

→ **TIP** Locating car parking structures above or below ground provides opportunities for other active uses such as shops or dwellings at street level.



5.4.2b Incorporate active uses into the building frontage of car parking structures.



5.4.2c On the principal street façades of the car parking structure, detail the walls to provide an interesting appearance.

→ **TIP** Detail on a car parking structure's external walls may include, for example, decorative cladding, artwork, signage or graphics.

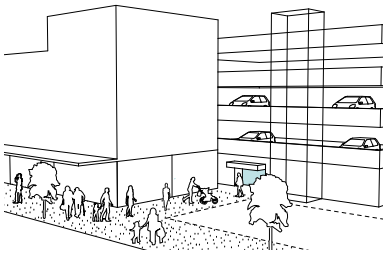
5.4.2d Protect sensitive adjacent uses from vehicle noise, vibrations and emissions.

5.4 Car parking structures

Objective 5.4.3 To maximise informal surveillance opportunities within car parking structures

5.4.3a Locate pedestrian entrances to car parking structures in convenient and visible locations at ground level on an active street frontage.

→ **TIP** Ground level shops or attended cashier stations provide opportunities for informal surveillance, while above-ground entries (bridges or overpasses) or underground (underpasses) can reduce the level of passing pedestrian traffic.



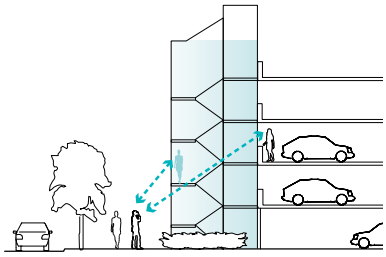
5.4.3b Minimise the number of pedestrian entry and exit points to multi-level car parks.

→ **TIP** Multiple entry and exit points result in dispersed pedestrian traffic. Concentrating the pedestrian movement at a single exit allows for greater informal surveillance and facilitates way-finding.

5.4.3c Locate pedestrian ramps, stairs and lift entrances in areas that are easily seen from internal pedestrian paths.

5.4.3d Locate stairwells and lifts at the perimeter of the car park and clad walls with transparent materials.

→ **TIP** Transparent external walls can improve safety levels by creating opportunities for informal surveillance of people in the car park and in the stairwell.



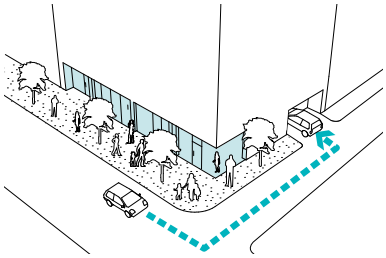
5.4 Car parking structures

Objective 5.4.4 To ensure safe and convenient pedestrian movement around and within car parking structures

See Guideline sources and references for link to Standards Australia technical guidance on car parking and access ways.

5.4.4a Locate vehicle entrances to car parking structures away from pedestrian priority streets and public transport routes.

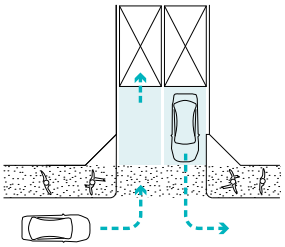
→ **TIP** Locating vehicle entrances and service access to car parking structures to the rear or side of the building will minimise crossovers on pedestrian priority streets, and avoid vehicles queuing across public transport lanes.



5.4.4b Arrange vehicle exits so that vehicles leave car parking structures in a forward direction and do not block pedestrian paths when exiting.

5.4.4c Where car lifts are employed, provide sufficient space for car queuing off the street and away from pedestrian paths.

→ **TIP** Vehicles queuing across pedestrian paths pose a hazard and inconvenience to pedestrians.

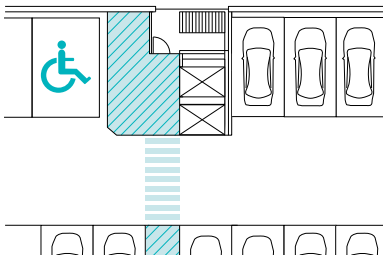


5.4.4d Provide and locate bicycle parking close to vehicle entry points, with easy access to the public area of the car parking structure.

→ **TIP** Minimising the distance bicycles need to travel within the car parking structure reduces cyclists' exposure to moving vehicles. (Refer to detailed guidance in Victoria Planning Provisions Clause 52.34 Bicycle Facilities)

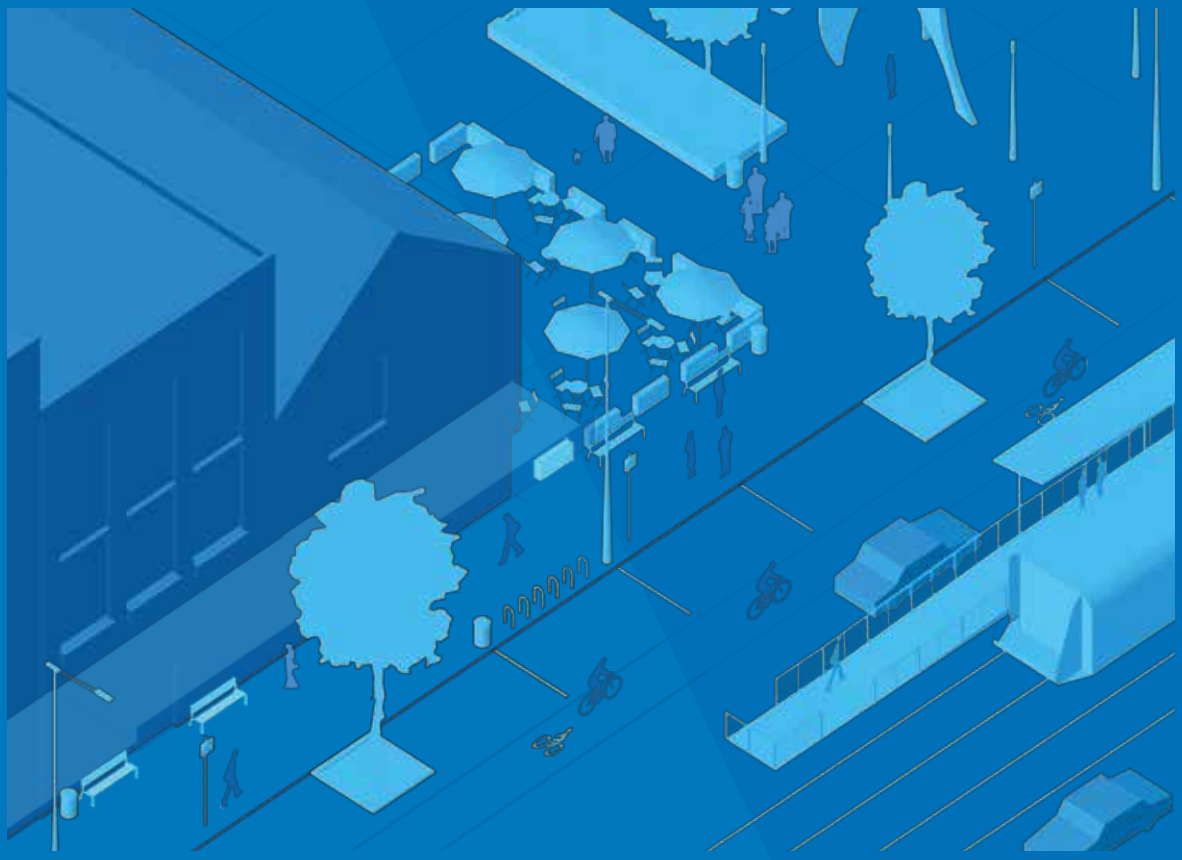
5.4.4e Locate visitor and disabled parking close to the vehicle entry and with easy access to pedestrian paths and the public area of the car parking structure.

5.4.4f Provide dedicated and marked pedestrian paths in busy areas within car parking structures.



5.4.4g Use colours, lighting and numbers as part of a way-finding system within the car parking structure.

Element 6
Objects in the public realm



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6

Element 6 Objects in the public realm

This element covers

6.1 Principles for objects in the public realm

The placement and arrangement of street furniture, utilities and small structures within the public realm.

6.2 Street and park furniture

Seats, drinking fountains, bins, automatic teller machines, and public art and sculpture, payphone cabinets.

6.3 Trees and planting

Trees, shrubs, ground covers.

6.4 Barriers and fences

Walls, fences and bollards.

6.5 Lighting

Lighting for the public realm.

6.6 Signs and way-finding

Information, instructions and advertising.

6.7 Small public buildings and structures

Shelters, toilets and kiosks.

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Part 7 of 8 parts

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6.1

6.1 Principles for objects in the public realm

Objects in the public realm include those items located in streets and public spaces that are either for public use and convenience, or for utilities infrastructure and services. Objects include street furniture, service cabinets, trees and planting, barriers and fencing, lighting, signs and small public buildings and structures. Some objects for people to use are seats, drinking fountains, post boxes, payphone cabinets, kiosks and public toilets; some objects enhance the amenity and safety of a space, such as trees, lighting, barriers and signage. Other objects, such as service cabinets, power and telecom poles are not directly used by the public although they are located within the public realm.

Why is it important?

Street furniture and utilities infrastructure are installed and managed by many public bodies, agencies and service providers. Locating objects in the public realm can affect the accessibility, functionality and safety of a place. The location, design and management of objects in a public space, can support street function, complement existing activities and contribute to a sense of place. Poorly located objects can contribute to diminished safety, and physical and visual clutter.

These guidelines introduce general principles for the placement, integration, form and management of objects in the public realm. Further guidance on the placement of specific utilities can be found in other technical publications and codes, noted in Guidelines sources and references.

Related guidance

Element 2	**Movement network**
Element 3	**Public spaces**
Element 4	**Public transport environs**
Element 5	**Buildings**

6.1 Principles for objects in the public realm

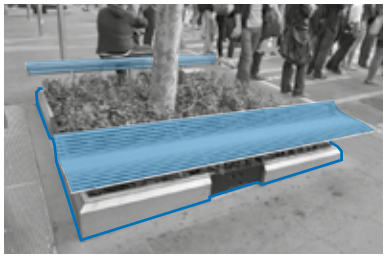
Objective 6.1.1 To ensure that objects in the public realm support safety and amenity

6.1.1a Place only the necessary objects in public spaces.

→ **TIP** While placing service cabinets and other objects in public spaces can appear an easy option, the accumulation of many objects can detract from the safety and amenity of a place.

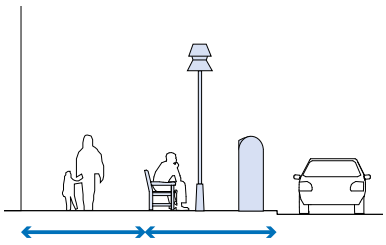
6.1.1b Where practical, combine or co-locate two or more street furniture functions into a single object.

→ **TIP** To minimise clutter, a tree guard may also provide support for a seat or bicycle parking post; a lighting pole may also support telecommunications.



6.1.1c Place all objects outside main pedestrian or bicycle travel paths and away from street corners.

→ **TIP** When placing objects, avoid creating concealment opportunities, collision or tripping hazards or blocking critical sightlines.



6.1.1d Place all objects outside view lines to significant landmarks and cultural elements.

6.1.1e Where practical, conceal services infrastructure objects within landscaping or adjacent building.

6.1.1f Allocate space for temporary objects such as on-street shop display, cafe tables, vendor stalls, advertising boards, temporary barriers and signs.

6.1 Principles for objects in the public realm

Objective 6.1.2 To ensure objects in the public realm that are robust and easy to maintain

6.1.2a Develop a simple, standardised palette of materials and designs for street furniture and objects.

→ **TIP** Where objects have a simple design and use a minimal palette, people rather than the object provide the visual richness.

6.1.2b Use resilient materials that are easily cleaned, maintained and repaired or recycled.

→ **TIP** Quality materials are durable and maintain their appearance over time.

6.1.2c Develop and use local design standards for furniture, objects and materials.

→ **TIP** Design standards for furniture and materials facilitate maintenance, repairs and replacement.

6.1.2d Conduct periodic reviews of street furniture for changes in use patterns and performance

6.1.2e Develop and implement an area wide public art strategy.

→ **TIP** Public art is not an expedient to fill an available corner or space; each artwork has its place and purpose. Placement and selection should be guided by a precinct or council-wide plan or strategy.

6.1 Principles for objects in the public realm

6.2 Street and park furniture

Street and park furniture includes seats, waste bins, drinking fountains, café furniture, bicycle parking hoops, post boxes, parking meters, payphone cabinets, vending and ticket machines. This element also includes public art, play and active recreation equipment.

Street and park furniture and public art support the function and vitality of public places. Equally important is their contribution to the enjoyment of being in public spaces.

The presence of seats and other amenities invites people to gather and linger in a place. Public spaces are also safer and more attractive when people are present. Seats and other amenities should be located where as many people as possible will want and be able to use them.

Related guidance

Element 6.1 Principles for objects in the public realm

6.2 Street and park furniture

Objective 6.2.1 To locate street and park furniture in accessible and convenient places

Seating is the most frequently used type of furniture, followed by waste bins and bicycle hoops.

6.2.1a Locate seats at public transport stops, in parks and plazas, and along pedestrian routes.

6.2.1b Place seats where people gather and linger, and at locations where people can enjoy views or watch activities.

→ **TIP** Where people are expected to sit for more than 15 minutes, provide comfortable seating.

6.2.1c Place seats on main pedestrian routes at 100m intervals or more frequently.

6.2.1d Locate waste bins adjacent to litter generators such as food vendors, cafes or picnic areas.

→ **TIP** Waste bins may be co-located with other utilities infrastructure, such as poles, to minimise clutter.

6.2.1e Locate drinking fountains adjacent to and visible from frequently used pedestrian and bicycle routes.

6.2.1f Position play equipment where children would naturally play.

→ **TIP** Children will not feel safe using play equipment located in isolated places.

6.2.1g Position post boxes near a safe road crossing.

→ **TIP** Boxes are used by people of all abilities and need to be safely accessible from the neighbourhood they serve.

6.2.1h Position bicycle parking hoops to accommodate a bicycle on either side.

→ **TIP** Bicycle hoops can also double as tree protectors.

Objective 6.2.2 To ensure that seating is attractive and comfortable

6.2.2a Locate seats in a sheltered position with access to summer shade and winter sun.

→ **TIP** By combining seating with a tree guard, you can minimise clutter and provide shade.

6.2.2b Orient seats with backs against a wall or fence, facing forwards, with an interesting outlook to activity or views.

6.2.2c Arrange seating with clear views of activities and entries.

→ **TIP** Places where people sit and relax need good sightlines of the whole space and its entry points.

6.2.2d Locate seats with no back in busy open areas where people can sit on either side.

6.2 Street and park furniture

Objective 6.2.3 To ensure that the location of street and park furniture supports safety and amenity

6.2.3a Place waste bins a minimum distance of 2m from public seating or play areas.

→ **TIP** Odours from bins may deter people from using seats or play equipment.

6.2.3b Place post boxes, payphone cabinets, parking meters, vending and ticket machines to be accessible from, but not obstructing, the pedestrian path.

6.2.3c Locate bicycle parking hoops near to an active street or use.

→ **TIP** Proximity to active uses provides informal surveillance opportunities.

Objective 6.2.4 To provide for engaging, accessible active recreation and play equipment

6.2.4a Select play equipment that stimulates imagination and active play.

6.2.4b Provide a variety of active recreation and play equipment suitable to a range of ages and abilities.

→ **TIP** Both young and older children need to engage in stimulating imaginative play. Adults may also enjoy play and recreation equipment.

6.3 Trees and planting

Planting trees, shrubs and ground covers in urban areas contributes visual interest and microclimate moderation. Trees can provide shade, shelter, and cool air pockets; they can screen an unsightly view, act as landmarks, or provide a sense of enclosure with leafy walls and ceilings.

Trees are frequently the most important element for setting the character of an area. A tree-lined street can be beautiful even when the architecture is mundane. Trees lining streets and paths in parks make the space comfortable and desirable. Places with trees tend to attract more people. A landscape changes with the seasons and gives people a sense of passing time and dynamic vitality.

Related guidance

Element 6.1 Principles for objects in the public realm

6.3 Trees and planting

Objective 6.3.1 To select trees and planting that are fit-for-purpose

In selecting plants, have regard to the landscape heritage, size of plants at maturity, microclimate and soil conditions.

6.3.1a Select lawn types that are suitable for sitting on and for recreation.

→ **TIP** If a public space is heavily trafficked then a hard-wearing surface may be more suitable. Synthetic lawn surfaces may be an option.

6.3.1b Use drought-resistant plant species when irrigation is not available.

6.3.1c Use plant species appropriate to the available root space.

6.3.1d Select deciduous tree species where winter sun is desired.

6.3.1e Select dense, canopied tree species where summer shade is desired.

6.3.1f Select evergreen species with dense foliage where wind protection or screening is needed.

6.3 Trees and planting

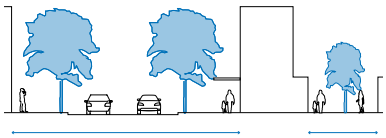
Objective 6.3.2 To ensure trees and planting contribute to local identity and context

6.3.2a Select trees and planting appropriate to the cultural context and local identity.

6.3.2b Provide trees and planting that engage the senses.

→ **TIP** Plants that change appearance with the seasons provide a dynamic experience and enhance a sense of place. The sounds and scents of plantings are also important considerations.

6.3.2c Select trees in keeping with the scale of the street or public space.



6.3.2d Position trees and planting to define a street or path.

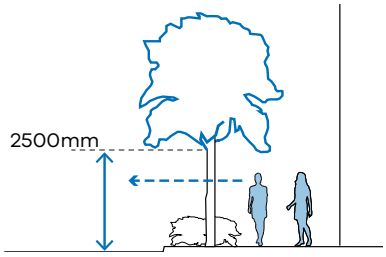
→ **TIP** Trees placed between a pedestrian path and a traffic lane can provide both psychological and physical protection from vehicles.

6.3.2e In wide streets or large open spaces, position trees to form a canopy and enclose the space.

Objective 6.3.3 To ensure trees and planting support the safety and amenity of public space

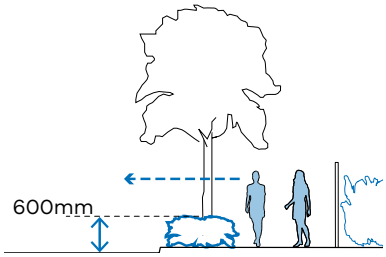
6.3.3 a Select tree species with clear trunks, and no branches or foliage below 2500mm in height.

→ **TIP** Foliage free zones between 600mm and 2500mm from the ground allow clear sightlines and eliminate opportunities for concealment.

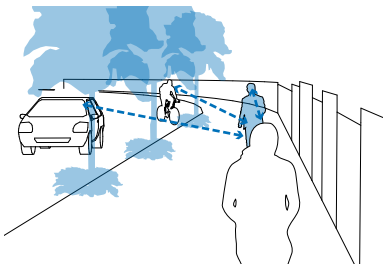


6.3.3 b Select shrub and ground cover plantings to be no more than 600mm in height.

→ **TIP** In areas behind a non-climbable fence or screen, plantings may be greater than 600mm, as the fence provides protection.

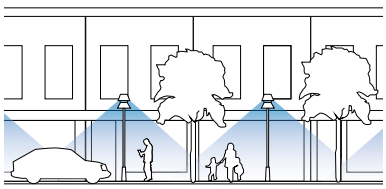


6.3.3 c Position trees and planting to allow clear sightlines along streets and across the different mode paths.

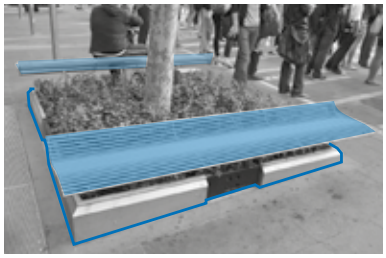


6.3.3 d Position trees away from overhead wires and public lighting to limit overshadowing of public lighting and interference with overhead wires.

→ **TIP** This will require coordination between utilities agencies and local councils.



6.3.3 e Where protective barriers are required around landscaping, combine with other street furniture such as seating, bicycle posts, or public artwork.



6.3.3 f Provide tree grates that are flush with the surrounding pavement surface.

→ **TIP** Making grates flush with the pavement surface avoids trip hazards and allows the potential for water gathering. Porous pavements may be an effective alternative.

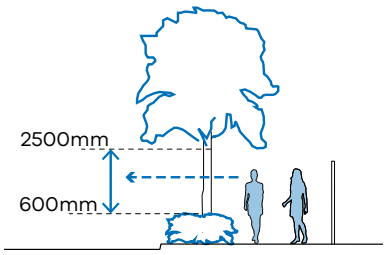
Objective 6.3.4 To ensure trees and planting are managed and maintained

6.3.4a Manage ongoing maintenance and replacement of trees and planting according to a precinct-wide plan.

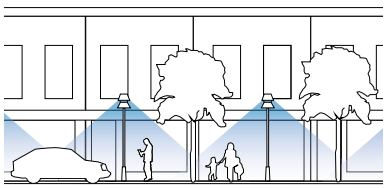
→ **TIP** When undertaking street or path works, replant missing trees.

6.3.4b Manage street planting to maintain clear sightlines along paths and streets.

→ **TIP** Landscaping along roads, streets, pedestrian and bicycle paths should not block sightlines for drivers, pedestrians or cyclists.



6.3.4c Maintain vegetation clear of lighting to allow direct illumination of paths.



6.3.4d Maintain trees clear of overhead wires.

6.3 Trees and planting

6.4 Barriers and fences

Barriers such as bollards and fences can define boundaries and protect people from traffic hazards and level changes. They also protect trees and shrubs from people and vehicles. A barrier may be made as bollards, screens, rails, fences, kerbs and walls. Barriers and fences can provide an opportunity for public art or to communicate local stories. They may also provide opportunities for seating.

Related guidance

Element 6.1 Principles for objects in the public realm

6.4 Barriers and fences

Objective 6.4.1 To ensure barriers and fences support amenity and safety

6.4.1a Locate bollards to allow free pedestrian movement, while controlling vehicle access to an area.

→ **TIP** Use bollards where the purpose is to filter movement modes. Bollards may be removable or permanent. Bollards are preferable to continuous a fence or barrier, as they allow choice of movement for pedestrians and cyclists, while limiting vehicle access.

6.4.1b Position bollards to be highly visible to pedestrians, drivers and cyclists and of a height to avoid injury.

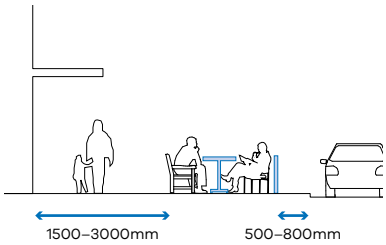
→ **TIP** Bollards should not be used in place of hazard markers. Use specific hazard marker signs.

6.4.1c Use highly visible barrier materials for both day and night visibility.

→ **TIP** People with vision impairment must also be able to detect barriers. Tactile ground surface indicators may also be needed.

6.4.1d Set back cafe screens or barriers an optimal 800mm (minimum 500mm) from the kerb, leaving a 3000mm clear path (minimum 1500mm).

→ **TIP** Cafe screens can define a street cafe area, protect customers from wind and provide psychological protection from vehicle traffic, but they can also block pedestrian movement on a footpath . Screens may be fixed in position or movable.



6.4.1e Provide barriers and fences with a non-injurious top rail detail.

→ **TIP** Low level fences with pointed prongs are a hazard and have resulted in accidental injuries.

6.4 Barriers and fences

Objective 6.4.2 To ensure that barriers and fences contribute to the character of the area

6.4.2a Use a style, scale and materials for barriers that contribute to the existing or desired future character of an area.

→ **TIP** Front fences can be a strong visual element, especially in higher density residential precincts, and contribute significantly to the character of the street.

Objective 6.4.3 To ensure front fences support informal surveillance to the street and public spaces

6.4.3a On a property boundary abutting a street frontage or public space, use fence types that are low height or partially transparent.

→ **TIP** Low or transparent fences provide opportunities for informal surveillance of streets and public spaces.

Objective 6.4.4 To ensure temporary barriers and fences support the safe use of public spaces

6.4.4a Implement a process to manage placement of temporary barriers and fences in public places by public and private entities.

→ **TIP** Temporary barriers can pose a hazard to pedestrians and cyclists at night.

6.4 **Barriers and fences**

6.5 Lighting

Lighting performs a number of functions, from supporting way-finding, orientation and safe movement at night to providing a decorative effect for building facades, landmarks and paths. Lighting systems can be large-scale and utilitarian or small scale and ornamental. They may use overhead lamps, bollards, up-lights, bulkhead or veranda lighting, feature and facade illumination. Shop display lighting can also contribute to overall public realm lighting levels.

Lighting is critical to creating a public realm that is safe and inviting for users. Well-located lighting can enable the use of public spaces for active recreation during the evening, especially in winter. These guidelines focus on public space lighting design for safety and amenity.

Related guidance

Element 6.1 Principles for objects in the public realm

6.5 Lighting

Objective 6.5.1 To ensure lighting supports night-time social and recreational activity, amenity and safety in the public realm

Path and street lighting should, as a minimum, meet Australian Standard 1158 Road Lighting.

6.5.1a Locate lighting for safe travel and way-finding along pedestrian and bicycle paths, and to emphasise crossings, landmarks and destinations.

6.5.1b Light only those public space areas and paths intended for night use.

→ **TIP** Absence of lighting can identify areas to avoid.

6.5.1c Provide lighting on all pedestrian and bicycle path approaches to and through activity centres.

→ **TIP** In activity centres, lighting levels can be higher than surrounding areas.

6.5.1d Where pedestrian and bicycle paths pass through public open space, light the paths to the same level as surrounding streets.

6.5.1e Where a path passes through an underpass, light the approach and exit path to the same level as the underpass.

→ **TIP** Long underpasses and tunnels may require lighting during the day.

6.5.1f Locate lighting at points of potential pedestrian-vehicle and pedestrian-bicycle conflict.

6.5.1g Locate lighting in social spaces used at night for recreation, cafes or events.

6.5.1h Provide lighting at public transport stops, pedestrian refuges and median openings, bicycle parking hoops, way-finding signs, and payphone cabinets.

6.5.1i Light the interiors of public transport shelters to the same level as surrounding area and approach paths.

→ **TIP** Consistency between lighting at public transport stops and surroundings will mean surroundings do not seem dark by contrast.

6.5.1j Install lighting at building entrances and car parking vehicle exits.

Objective 6.5.2 To ensure lighting contributes to local character and cultural values

6.5.2a Use external lighting to enhance the appearance of a building or landscape feature.

6.5.2b Integrate lighting with signs, landscaping and other public space elements.

Objective 6.5.3 To ensure lighting aids night-time way-finding

The overall lighting level in public spaces may comprise light from a combination of sources including street lights, signs, adjacent shops and buildings.

6.5.3a Provide consistent, continuous lighting levels along paths.

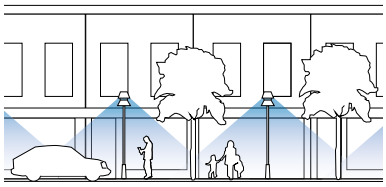
→ **TIP** Infrequent large, single-point lights can result in glare and unilluminated patches, and are detrimental to people with visual impairment.

6.5.3b Use lighting types that minimise distortion and glare, and maximise colour recognition of objects and surfaces.

→ **TIP** White light lamps provide better colour rendition and object recognition.

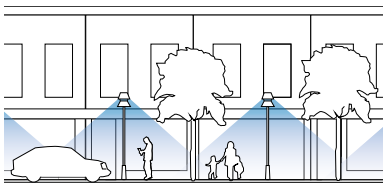
6.5.3c Place lighting poles and lamps away from tree canopies, verandas and overhead wires.

→ **TIP** Where a street is narrow, light fittings may be fixed to building walls or suspended from catenary wires to minimise pedestrian path obstruction.



6.5.3d Direct the path and activity lighting downwards to illuminate the immediate surrounds.

→ **TIP** Lights placed at eye level can prevent pedestrians and cyclists from seeing beyond the light source.



6.5.3e Where lighting bollards are adjacent to pathways, direct the light beam downwards.

→ **TIP** Unhooded light bollards can cause glare for pedestrians, limiting visibility into the distance.

6.5.3f Provide lighting levels that enable recognition of an approaching person's face from 10–15 metres away.

→ **TIP** Strong light sources produce deep shadows and can reduce local visibility and surveillance.

6.5 Lighting

Objective 6.5.4 To ensure sensitive uses adjacent to public spaces are protected from light spill

6.5.4 a Control unwanted light spill to sensitive uses from public space lighting.

→ **TIP** Avoid lighting that shines upwards to limit general light pollution.

6.5.4 b Provide a gradual transition between bright-lit and dimmer-lit areas.

→ **TIP** Over-lighting an area can create the impression that surrounding places are under-lit.

Objective 6.5.5 To ensure effective management and maintenance of public space lighting

6.5.5 a Establish a standard design for public space lighting elements.

→ **TIP** Consistent use of standard details and parts supports efficient management and maintenance.

6.5.5 b Use low-energy, long-life, high-colour rendering index, glare-controlled light fittings.

6.5.5 c Maintain established trees foliage clear of path lighting.

6.6 Signs and way-finding

Signs give information about way-finding, directions, place and street names, cultural identity, buildings, uses and activities, or for advertising products. They can also act as a landmark. Signs may vary in scale and appearance, and may use maps, text, images or symbols to convey information.

These guidelines focus on designing and locating signs in the public realm, particularly for pedestrians and cyclists.

Related guidance

Element 6.1 Principles for objects in the public realm

6.6 Signs and way-finding

Objective 6.6.1 To ensure signs inform pedestrians and cyclists and aid way-finding

Road signs are often designed to inform drivers. However, pedestrians and cyclists may find information on road signs misleading or unintelligible. It is important to provide signage useful to people on foot or bicycle.

6.6.1a Provide maps and signs in public spaces showing connections and destinations, and the location of public facilities and public transport routes.

→ **TIP** Maps and signs are particularly important in large public open spaces where there may be few other visual cues for locations.

6.6.1b Provide clear and regular sign posting on main pedestrian routes.

6.6.1c Concentrate pedestrian signs at node points on the pedestrian routes.

6.6.1d Position signs clear of pedestrian and bicycle spaces and paths.

→ **TIP** Incremental installation of signs can encroach on and obstruct paths, and clutter public spaces.

6.6.1e Position signs clear of vegetation.

6.6.1f Place pedestrian and cyclist signs at user eye level.

→ **TIP** Many streets signs are designed and located for driver information, elevated above pedestrian eye height.

6.6.1g Locate property street numbers to be visible from the street, day and night.

6.6 Signs and way-finding

Objective 6.6.2 To ensure signs contribute to the amenity and local character of an area

6.6.2a Scale advertising signs to be consistent with the surrounding urban context.

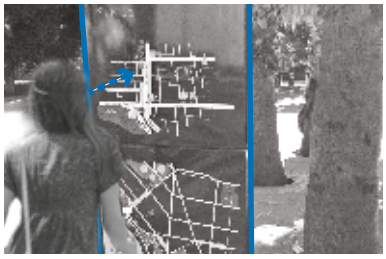
→ **TIP** Large signs can impede sightlines and views. Refer to detailed guidance in the Victoria Planning Provisions Clause 52.05 Advertising signs.

6.6.2b Consolidate multiple messages into a single sign.

6.6.2c Provide vandal-proof and graffiti-resistant signs.

Objective 6.6.3 To ensure signs can be read and understood

6.6.3a Orient perspective maps to be consistent with the viewer's position; orient plan view maps with north at the top.



6.6.3b Provide walking times or distance information to major destinations and facilities.

6.6.3c Provide operating hours information at entrances to public areas.

6.6.3d Illuminate signs in areas used at night.

6.6.3e Use strong colours, clear contrasts, non-reflective surfaces and simple graphics on maps.

6.6.3f Where the audience may not read English, use alternative communication methods to indicate pedestrian paths and destinations.

→ **TIP** International symbols, paving markings or changes in paving surfaces and materials are useful to indicate different paths, destinations and intended use, particularly for people who do not read English or have vision impairment.

6.6 Signs and way-finding

Objective 6.6.4 To ensure sensitive uses adjacent to illuminated signage are protected from light spill

6.6.4 a Where a sign is illuminated, shield light spill to adjacent sensitive uses.

→ **TIP** Illuminated signs can cause glare and dazzle viewers at night, and intrude into sensitive uses.

Objective 6.6.5 To manage the placement, currency and design of signs in public spaces

6.6.5 a Undertake a periodic review of signs in public spaces.

6.6.5 b Maintain up-to-date information on signs, and remove redundant signs.

6.6.5 c Implement processes to coordinate the design and placement of signs.

→ **TIP** Signs erected by diverse agencies can lead to inconsistent styles and clutter in public spaces.

6.7 Small public buildings and structures

Small public buildings and structures include kiosks and vendor stalls, shelters, toilets, bicycle storage cages and utility buildings, such as electrical substations, which are most often located in public spaces. While most small public buildings and structures are permanent, some may be temporary or relocatable to allow for the flexible use of public spaces.

Related guidance

Element 6.1 Principles for objects in the public realm

6.7 Small public buildings

Objective 6.7.1 To ensure small public buildings and structures are accessible and support use of public spaces

6.7.1a Locate small public buildings and structures where there are opportunities for informal surveillance from nearby activities.

6.7.1b Locate small buildings and structures to be visible from a distance and adjacent to a busy pedestrian route.

→ **TIP** Passers by will provide a level of informal surveillance of the building.

6.7.1c Position small public buildings and structures to allow clear passage for pedestrian and bicycle paths.

Objective 6.7.2 To ensure small public buildings and structures are safe and attractive

6.7.2a Provide an open approach path to the small public building or structure.

→ **TIP** People feel safer approaching the building where they have clear open sightlines to surroundings.

6.7.2b Site the building or structure to provide adequate circulation space around it.

6.7.2c Shape the exterior of a small public building or structure to eliminate potential concealment places.

6.7.2d Provide shelter from wind, rain and sun for visitors to the building.

6.7.2e Provide lighting to all sides of the building.

Toolbox

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Part 8 of 8 parts

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Accessibility

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Glossary

Accessibility

The ease of reaching destinations. In a highly accessible location, a person, regardless of age, ability or income, can reach many activities or destinations quickly, whereas people in places with low accessibility can reach fewer places in the same amount of time. The accessibility of an area can be a measure of travel speed and travel distance to the number of places ('destination opportunities') to be reached. The measure may also include factors for travel cost, route safety and topography gradient.

Active frontage

Refers to street frontages where there is an active visual engagement between those in the street and those on the ground and upper floors of buildings. This quality is assisted where the front facade of buildings, including the main entrance, faces and opens towards the street. Ground floors may accommodate uses such as cafes, shops or restaurants. However, for a frontage to be active, it does not necessarily need to be a retail use, nor have continuous windows. A building's upper floor windows and balconies may also contribute to the level of active frontage. Active frontages can provide informal surveillance opportunities and often improve the vitality and safety of an area. The measures of active frontage may be graded from high to low activity.

Active use

Active uses are uses that generate many visits, in particular pedestrian visits, over an extended period of the day. Active uses may be shops, cafes, and other social uses. Higher density residential and office uses also can be active uses for particular periods of the day.

Activity centre

Activity centres within cities and towns are a focus for enterprises, services, shopping, employment and social interaction. They are where people meet, relax, work and often live. Usually well-served by public transport, they range in size and intensity of use from local neighbourhood strip shopping centres to traditional town centres and major regional centres. An activity centre generally has higher intensity uses at its central core with smaller street blocks and a higher density of streets and lots. The structure of activity centres should allow for higher intensity development, street frontage exposure for display and pedestrian access to facilities.

Adaptability (or 'adaptive re-use')

The capacity of a building or space to respond to changing social, technological, economic and market conditions and accommodate new or changed uses.

Glossary

Amenity

The features of an area, street or building, that provide facilities and services that contribute to physical or material comfort and benefit, and are valued by users. An amenity can be either tangible, such as open space, seating, a swimming pool or gym; or intangible, such as pleasant views, air quality, or proximity to a local school or supermarket.

Arterial road

The principal routes for the movement of people and goods within a road network. They connect major regions, centres of population, major transport terminals and provide principal links across and around cities. Arterial roads are divided into primary and secondary arterial roads. Declared arterial roads are managed by VicRoads. Also see 'Major roads'.

Barriers and fences

Barriers such as bollards and fences can define boundaries and protect people from traffic hazards and level changes. They also protect trees and shrubs from people and vehicles. A barrier may be made as bollards, screens, rails, fences, kerbs and walls. Barriers and fences can provide an opportunity for public art or to communicate local stories. They may also provide opportunities for seating.

Blank wall

A wall which has few or no windows or doors, and has no decoration or visual interest. See also active frontage.

Building line

The actual or apparent line created by a building's front wall along a street. A consistent building line in a street can visually unify diverse building types and forms, and can assist new buildings to fit in with the surrounding context. The building line, whether setback or situated on the street edge, is an important aspect of urban character.

Buildings in activity centres

Buildings in activity centres accommodate a wide range of uses, such as living, working, shopping and services. Buildings in these locations may be larger than those in surrounding neighbourhoods, occupy more of the site area and be built to the front and side boundaries. They may incorporate a mix of uses that mean people are present at different times of the day.

Built form

The height, volume and overall shape of a building as well as its surface appearance.

Car parking lot

Car parking lots are open areas of land used for parking cars. They can be publicly or privately owned and are generally located in activity centres, at train and bus stations, and other facilities accessed by car. Some higher density residential developments may incorporate private car parking lots.

Glossary

Car parking, on-street (see On-street parking)

On-street parking is part of the movement network. On-street parking provides convenient, short-term parking in close proximity to activities and destinations. On-street parking may be arranged as parallel, indented, or angled bays, at kerbside or in centre-road islands. The street type and use pattern determines the appropriate type of on-street parking used. It plays an important role in inner urban areas with limited off-street parking.

Car parking structure

Car parking structures are buildings used solely for car parking or mixed with other uses, and may provide parking for residents, commercial tenants, shoppers and visitors. They can be constructed above or below ground. Car parking structures cater for both vehicle and pedestrian movement, however pedestrians may be required to share paths with vehicles to reach a lift or stairwell, which can be a safety hazard.

Carshare

A commercial system providing access to cars on demand for rent either by the hour or by the day. Carshare vehicles have dedicated on-street parking spaces, at locations throughout the service area, and often located for access by public transport.

Circulation space (or 'circulation area')

Circulation spaces are part of the common area of a commercial, mixed use or higher density residential building and are used by occupants, residents and other building users. These spaces include foyers, corridors, car parking areas, and garden and recreation areas.

Communal open space

An area within a private site providing for informal recreation activities for common use by building occupants and, in some cases, visitors. It is distinct from private open space. Some communal open spaces can be accessible to the public (such as that associated with a library or hospital) while other spaces can be accessible to customers only (such as the courtyard of a restaurant or café).

Concealment place

Spaces that are not easily visible and provide the opportunity to conceal potential offenders, their victims, illegitimate uses, antisocial activity or crimes.

Connectivity

The number of connecting routes within a particular area, often measured by counting the number of intersection equivalents per unit of area. An area may be measured for its 'connectivity' for different travel modes – vehicle, cyclist or pedestrian. An area with high connectivity has an open street network that provides multiple routes to and from destinations.

Continuous accessible paths of travel (CAPT)

An uninterrupted path of travel to or within a building that provides access to all facilities. This kind of path avoids any step, stairway, turnstile, revolving door, escalator or other impediment that would prevent it being safely negotiated by people with disabilities.

Glossary

Crossover (vehicle crossover)

Part of a pedestrian path where motor vehicles cross to access a property. The pedestrian path section may be raised to path level to alert drivers to the crossing, or the path may be dropped to form a ramp for pedestrians.

Cul-de-sac

A street with only one inlet/outlet connected to the wider street network. A closed cul-de-sac provides no possible passage except through the single road entry. An open cul-de-sac allows cyclists, pedestrians or other non-automotive traffic to pass through connecting paths at the cul-de-sac head.

Design response

Explanation and demonstration of how a proposed building development or public space design is informed by and responds to the site and context analysis.

Design standard

A statement of function and performance criteria for the production of an object or place, often as agreed by a professional, technical or representative body.

Desire-line (or 'pedestrian desire-line')

The desire-line path usually represents the preferred route and the shortest or most easily navigated route between an origin and destination. Desire-lines can often be seen as alternative shortcut tracks in places where constructed pathways take a circuitous route. They are almost always the most direct and the shortest route between two points.

Edge condition

A term used in urban design analysis to describe the transition or interface characteristics of a public space with its adjacent land uses and structures. An edge may be 'active', with a building's doors and windows addressing the space, or it may be 'inactive', with blank walls or a barrier edge, such as a water body, high traffic volume road or infrastructure corridor. The edge condition assessment is part of the urban context analysis.

Enclosure (or 'sense of enclosure')

Where the building frontage height, street width and street tree canopy creates a feeling of a contained space within the street.

Entrapment place

Small confined areas, shielded on three sides by some sort of barrier that may be used by criminal offenders to trap potential victims or to conceal themselves. The area may be poorly lit, have limited sightlines and have no possible escape route.

Escape route

An alternative and safe means of exit from an area. See also 'Entrapment place'.

Glossary

Facade (or 'building facade')

The principal wall of a building that is usually facing the street and visible from the public realm. It is the face of the building and helps inform passers-by about the building and the activities within.

Frontage (or 'front lot line')

The property boundary that abuts the street. If a property abuts two or more streets, it is the boundary the building or proposed building faces.

Higher density residential building

Higher density residential buildings house a number of individual apartment dwellings in a single building, and are five or more storeys in height. They may be residential only or residential combined with other uses such as retail, offices or car parking.

Higher density residential precinct

A higher density residential precinct generally has larger lot sizes that are able to accommodate apartment and mixed-use developments. The precinct may be in or adjacent to an activity centre or within a large development site. The structure of a higher density residential precinct provides a high level of amenity in public spaces, access to facilities and services, while protecting privacy and personal safety.

Informal surveillance

Observation, from the street or from adjacent buildings, provided by ordinary people as they go about their daily activities. This kind of observation can deter criminal activity or anti-social behaviour and make places feel safer. Sometimes termed 'casual surveillance' and 'eyes-on-the-street'.

Key public space

Key public spaces may be located in parks, plazas, or streets. They are generally public places of significance, with high levels of amenity. They may be identified through strategic assessment processes.

Land development

The construction, buildings or works made on a parcel of land to support the use to which the land is put.

Land use

The purpose for which the land has been or is being or may be developed. The activity on the land.

Lane

A travel path for a vehicle as part of a roadway. As in 'bicycle lane', 'traffic lane', or 'bus lane'.

Laneway

A vehicular way or pedestrian access way, often narrower that a street, located to the rear or side of lots providing access to the service areas, parking and outbuildings, and it may accommodate utility easements.

Glossary

Large format retail premises

Large format retail premises are mostly free-standing buildings or complexes with a single large building footprint, and associated infrastructure. They are often single-level or low-rise buildings and they may include large at-grade car parking lots or car parking structures. They can be shopping centres, supermarkets, restricted retail premises or department stores. Large format retail premises differ from other large buildings with regard to visitor patterns, goods delivery requirements, and goods display practices. They are often located in high visibility places, for example at major road intersections or adjacent to highways that are highly accessible by car.

Large development site

Large parcels of land within cities and towns sometimes become available for redevelopment and new uses. Often in prime locations, these sites can be publicly owned (such as railway corridors, surplus government land or dockyards) or they can be former commercial, industrial or institutional sites that are no longer needed for their original purpose. They may be located in activity centres or are accessible to transport connections, services and jobs.

Legibility

The ease with which a person is able to see, understand and find their way around an area, building or development. A 'legible' layout is one that people find easy to navigate and move through.

Level-of-service (also called 'quality of service' or 'service quality')

The capacity and effectiveness of a system's functionality, as experienced by users, to provide the service for which it is intended. For a pedestrian street or a park, the service can comprise various factors such as active, interesting surroundings, path width, pavement surface, seating opportunities, obstacles, safety from traffic, cleanliness.

Light spill

Unwanted light falling on areas outside those intended for illumination, and that causes annoyance, discomfort, distraction, or a reduction in visibility. Often defined as light illuminating areas outside the property line containing the lighting system. But may also be applied to lighting in public spaces that affects amenity in private spaces.

Lighting

Lighting performs a number of functions, from supporting way-finding, orientation and safe movement at night to providing a decorative effect for building facades, landmarks and paths. Lighting systems can be large-scale and utilitarian, or small and ornamental. They may use overhead lamps, bollards, up-lights, bulkhead or veranda lighting, feature and facade illumination. Shop display lighting can also contribute to overall public realm lighting levels. Lighting is critical to creating a public realm that is safe and inviting for users.

Glossary

Local park

Local parks are green public spaces up to about one hectare in size and may include trees, grass, gardens and playgrounds and are located within easy reach of users. Some local parks also include water features, cafes or sports facilities. The location of a park in the movement network often influences its useability.

Main street

The principal retail and small business street in an area, a focus of many local trips, and accommodating higher volumes of pedestrians.

Major road

Major roads accommodate high volumes of motor vehicle traffic including public transport and freight, and have higher design speeds (60–100 km/h). Major roads can have two or more traffic lanes in each direction and may provide for on-street car parking, bus lanes or tram tracks, bicycle lanes, as well as verge space for pedestrian paths, infrastructure and landscaping. Also see 'Arterial roads'.

Mixed-use development

A range of complementary uses within the same building, site or precinct. The different uses may be arranged floor by floor, or side by side. The uses may be residential, commercial, retail or institutional.

Movement network

The interconnected system of streets, roads and paths that accommodates pedestrians and cyclists, on-road public transport, emergency and private vehicles. The movement network connects places and activities, and allows people and goods to reach their intended destinations and to access private land. The movement network is managed by a number of agencies, each with different responsibilities and interests.

Objects in the public realm (includes 'street furniture')

Objects in the public realm include those items located in streets and public spaces that are either for public use and convenience, or for utilities infrastructure and services. Objects include street furniture, service cabinets, trees and planting, barriers and fencing, lighting, signs and small public buildings and structures.

Off-road public transport

Public transport that runs on a network largely independent of streets and arterial roads. It includes light rail, metropolitan and regional rail. It does not include on-road public transport such as the metropolitan bus and tram network.

On-road public transport

See 'Public transport on roads'.

On-street parking

On-street parking is part of the movement network. On-street parking provides convenient, short-term parking in close proximity to activities and destinations. On-street parking may be arranged as parallel, indented, or angled bays, at kerbside or in centre-road islands. The street type and use pattern determines the appropriate type of on-street parking used. It plays an important role in inner urban areas with limited off-street parking.

Open space

See 'Public open space' and 'Private open space'.

Outlook

A place from which a view is possible; a vantage point.

Pathway

A pedestrian path, bicycle path or other area for use by people but not by motor vehicles.

Pedestrian and bicycle crossings

Pedestrian and bicycle crossings provide points to safely and conveniently cross roads and streets, or other barriers such as motorways, railway lines or waterways. Many crossings are located on paths to activity centres and schools, or at stations, bus or tram stops. Crossings are either at-grade or grade-separated.

Pedestrian and bicycle paths

Pedestrian and bicycle paths specifically provide for people on foot, bicycle or other mobility aid vehicles. Paths may be located on local streets and major roads, in public spaces such as parks and reserves, or through semi-public spaces such as car parking lots, forecourts and arcades. Paths may be solely for pedestrian use, cyclist use, or shared paths for both pedestrians and cyclists.

Pedestrian priority street

Pedestrian priority streets give high priority to walking, cycling and facilitating social contact, while allowing for low-speed motor vehicle traffic (under 40km per hour). These streets are usually found in areas of intense and diverse activity such as activity centres, education facilities and public transport interchanges. They accommodate diverse travel modes as well as provide a public space function. Bicycle lanes may either be provided as a separate lane, or a shared path with other modes. Streets may also restrict vehicle types or access at times.

Pedestrian shed (or 'ped shed')

A graphic representation of the area surrounding a particular destination that can be reached on foot within a specific walking time. Its extent is related to walking distances to the destination, as opposed to a simple radius from a centre point. It can be expressed as walking time (10 minutes at average walk speed), or as a distance (800m). It is related to "walkable catchment".

Glossary

Permeability

The extent to which the urban structure permits, or restricts, movement of people or vehicles through an area, and the capacity of the area network to carry people or vehicles.

Plaza

A type of public open space connected to the street network that can range in size from a building forecourt to a large city square. A plaza may be a wide mid-block pedestrian link, bordered by buildings or attached to a public building such as a town hall, school, or entertainment and sports facility.

Podium

The lower levels of a tall building that are built up to or near the property boundary edges. The upper levels (the tower component) are set back from the lower podium building edges. The podium and tower is often arranged to achieve a relationship between the new building and existing streetscapes and urban context.

Primary use

Primary uses are those uses that have induced people to spend time in the area, such as workplaces, businesses and residences, or institutions and services like museums or libraries. Also see 'Secondary uses'.

Private land

Land that is owned by a private person or group and kept for their exclusive use. Some privately held land is available for the public to access and use, but the land owner may control aspects of access and use – see 'Public space'.

Private open space

An open area or place that is privately owned and exclusively occupied. Private open space is usually attached to a private dwelling. See also communal open space.

Public open space

Under the Subdivision Act 1988 – SECT 18, public open space is intended as a place of public resort or recreation. A public open space may be provided as a plaza, park and square. See also 'Public space', 'Public realm'.

Public realm

The public realm comprises spaces and places that are open and freely accessible to everyone, regardless of their economic or social conditions. These spaces can include streets, laneways and roads, parks, public plazas, waterways and foreshores.

Public space

An area in the public realm that is open to public access, provides a public use or recreation function, and that is owned and maintained by councils or other government agencies. However, some privately-held land is available for the public to access and use, such as a building forecourt, a walk-through, or a shopping mall. The private land owner may control aspects of access and use – see Private land.

Public transport environs

Public transport environs includes the public spaces, streets, buildings and activities located around railway stations, bus and tram interchanges, and adjacent to railway corridors.

Public transport interchange

Places where people can access or transfer between public transport modes and routes. For example, between train, tram or bus mode, or a multi-route bus or train station. Interchanges vary in size and may be stand-alone, adjacent to a railway station, or located at a transport node, such as a park-and-ride facility.

Public transport node

A tram or bus stop, interchange or train station, and the area immediately around it.

Public transport on roads (sometimes called 'on-road public transport')

There are two main types of public transport that use the road network: the fixed tram network, which is usually located on major roads and streets; and the bus network, which operates within standard traffic lanes or in bus priority lanes. Bus and tram priority routes have priority over general traffic.

Railway corridor environs

Railway corridor environs includes the land and activities adjacent to the railway operating corridor. Along the length of the corridor, adjacent land may accommodate a variety of uses including streets and roads, public open space, residential or commercial development. Railway corridor crossing points channel and concentrate pedestrian, bicycle and vehicle movement to specific locations. Crossing points can be at-grade or grade-separated.

Railway station precinct

A railway station precinct is the area in the immediate surrounds of a railway station. Local movement networks converge on railway stations, concentrating activity in the precinct. Railway stations also provide for pedestrian crossing of the railway line. The railway station precinct can function as a social space where people meet or watch the world go by.

Safer design

Specific public space design responses aimed at promoting personal safety and reducing people's fear of and vulnerability to crime. Design actions focus on improving safety in places by increasing informal surveillance and community usage of public spaces, reducing opportunities for crime and antisocial behaviour, and creating connected and integrated streets and public places.

Scale

The size of a building in relation to its surroundings, or the size of parts or details of the building, particularly in relation to the scale of a person. Scale refers to the apparent size, not the actual size.

Secondary use

Secondary uses are those that capitalise on opportunities to serve people who are already in the area for other reasons, such as their work place, residence, or visiting institutions, services or facilities. Secondary uses may be service and convenience shops, or cafes. See also 'Primary uses'.

Setback

The distance of a building wall from any lot boundary. A building front setback can add to the perceived width of the street, provide additional public or private space, and allow space for landscaping. A building set on the front property boundary has zero street setback.

Shared path

A path that is shared by both pedestrians and cyclists, but does not accommodate motor vehicles. On a shared path, cyclists must give way to pedestrians.

Shared zone

A street where pedestrians, cyclists and vehicles share the roadway, and pedestrians outnumber motor vehicles. A shared zone has no cross motor traffic.

Sightline

Lines of clear, uninterrupted sight from a viewer's location to other locations and distances.

Sign (see also 'Way-finding')

Signs give information about way-finding, directions, place and street names, cultural identity, buildings, uses and activities, or for advertising products. They can also act as a landmark. Signs may vary in scale and appearance, and may use maps, text, images or symbols to convey information

Site analysis

Detailed description and examination of the features of a site, to determine how these features will effect and contribute to the design of a proposed development. A site analysis directly informs the design response.

Site coverage

The proportion of a site covered by buildings.

Site description

An account of the essential characteristics of a site. It is a prerequisite for undertaking site analysis.

Small public buildings and structures

Small public buildings and structures include kiosks and vendor stalls, shelters, toilets, bicycle storage cages and utility buildings, such as electrical substations, which are most often located in public spaces. While most small public buildings and structures are permanent, some may be temporary or relocatable to allow for the flexible use of public spaces

Glossary

Street cross-section

A street cross-section is a diagram showing street details, generally from private property boundary to boundary, and includes building frontage, street edge, footpaths, verges, kerbs, services, below ground infrastructure and road space.

Street edge

The interface between building frontage or private property boundary and the street. The way a building, space or wall meets the street affects the character of the street.

Street and park furniture

Street and park furniture includes seats, waste bins, drinking fountains, café furniture, bicycle parking hoops, post boxes, parking meters, payphone cabinets, vending and ticket machines. This element also includes public art, play and recreation equipment.

Street spaces and plazas

Street spaces are that part of the street used for social purposes such as a wide footpath or a pedestrian-only mall. Plazas range from a building forecourt to a large city square. A plaza is often bordered by buildings or streets. Most street spaces and plazas are paved, and can include trees and other planting, but they are distinguished from parks. The spaces may have vehicles running adjacent to the pedestrian zone, be a shared zone, or may be free of vehicles.

Streetscape

The visual character of a street space that results from the combination of street width, curvature, paving, street furniture, plantings and the surrounding built form and detail. The people and activities present in the street also contribute to the streetscape.

Structure plan

A land use planning framework of policies, objectives and actions in an identified area, guiding decisions about change for a period of years into the future. The plan sets out an integrated vision for the desired future development of a place and can use clauses, diagrams and schedules to guide infrastructure, built form and land-use change in order to achieve specific environmental, social and economic objectives. The process is called structure planning.

Subdivision

The act of subdivision means the division of a land parcel into two or more parts which can be disposed of separately. It is also a term used for the resulting pattern of blocks and lots, and streets.

Traffic calming

Physical devices installed in streets to slow or reduce vehicle traffic and improve safety for pedestrians and cyclists. Traffic calming devices include speed humps, chicanes and narrows, sized for the desired speed. These measures can slow cars speed to between 15 and 40km per hour.

Trees and planting

Planting trees, shrubs and ground covers in urban areas contributes to visual interest and microclimate moderation. Trees can provide shade, shelter, and cool air pockets; they can screen an unsightly view, act as landmarks, or provide a sense of enclosure with leafy walls and ceilings. Trees are frequently the most important element for setting the character of an area.

Urban context (or 'context')

Urban context refers to the broader setting of an identified area. The context may include the physical surroundings of topography, movement patterns and infrastructure, built form and uses, the governance structures, and the cultural, social and economic environment. The urban context can include the community vision for the area, and preferred future character, form and function.

Urban context analysis

Similar to a site analysis, content analysis provides a detailed description and examination of aspects of the wider area around a site, to determine how these aspects will effect and contribute to the design of a proposed building development or public space design. An urban context analysis informs the building development or public space design response.

Urban design framework

A framework sets out, in words and graphics, the intentions, principles and actions to guide and manage changes in the public realm in particular places.

Urban structure

The overall topography and land division pattern of an urban area including street pattern, the shapes and sizes of blocks and lots. Urban structure also includes the location and types of activity centres, public transport corridors, public space, community facilities, and urban infrastructure. Whether at the scale of a city, town, neighbourhood, precinct or large development site, it is the interrelationship between all of the elements of urban structure, rather than their individual characteristics, that together make a place.

Utilities infrastructure

In this document, the utilities and infrastructure installations that are located on and take up space within street and public spaces. They may be traffic control boxes, fire hydrants, poles, overhead wires, traffic control signs. Utilities infrastructure may also be installed below ground and could affect development at ground level.

Walkability

The extent to which the built environment supports walking for transport and for recreation, where the walking environment is safe, connected, accessible and pleasant.

Walkable catchment

The area within a specified walking distance of a destination and where paths provide a specific level of service and amenity. Often a 400m walking distance is defined as walkable, being about a five minute walk for most people. More important destinations, such as train stations or major centres, may serve a wider walkable catchment.

Glossary

Walkable neighbourhood

A neighbourhood where travel on foot, and also by bicycle, is made easy, direct and safe as possible for all members of the community including children, people with prams or shopping carts and those using mobility aids.

Water efficient urban design

Integrating and managing the water cycle in an area through collection, treatment and reuse technologies, to minimise environmental impacts and improve aesthetic and recreational appeal. It often includes managing both potable water use, and stormwater, groundwater and wastewater. Also known as water sensitive urban design.

Way-finding (see also 'sign')

The act of finding one's way around an area, and the experience of orientation and choosing a path within the built environment. Wayfinding can be aided by logical space planning and a consistent use and organisation of definite sensory cues, such as visual, audible or tactile elements along paths and at destinations. Signs can aid way-finding.

White light

Illumination produced from lamps where colours appear as in normal daylight.

Guideline sources and references

A list of information sources and references used or cited in the Urban Design Guidelines for Victoria.

Note: These references and links are provided for further information.

If you find a link is broken please email: planning.web@delwp.vic.gov.au
and include in the subject line: 'Urban Design Guideline web link broken'
and copy the broken link into the email text.

Department of Environment Land Water and Planning

Urban Design and Planning

Urban Design Guidelines for Victoria and other urban design information
www.planning.vic.gov.au
and follow the links to Urban Design Guidelines for Victoria

Victoria Planning Toolkit

www.planning.vic.gov.au
and follow the links to find:

- Victoria Planning Practice and Advisory Notes: main page
- Victoria Planning Codes and Guidelines: main page
- A Code of Practice for Telecommunications Facilities in Victoria, July 2004
- Ruby Town Structure Plan – a model, 2010
- Ruby Town Structure Plan Background Report outline, 2010

Local government guidance

www.delwp.vic.gov.au/local-government
and follow the links to Infrastructure, land and asset management to find

- A Guide to Governing Shared Community Facilities, 2010
- A Guide to Delivering Community Precincts, 2010

Transport design guidance

www.economicdevelopment.vic.gov.au
and follow the links to Transport and infrastructure, to find:

- Public Transport Guidelines for Land Use and Development, 2008
- Passenger Rail Infrastructure Noise Policy, 2013
- You are here: a guide to developing pedestrian wayfinding.
- Providing bicycle facilities as part of transport projects, 2010
- Bicycle Parking: providing bicycle parking facilities, 2000
- The Bicycle Parking Handbook, Bicycle Victoria, 2004

Department of Health and Human Services

Design for Everyone: A Guide to Sport and Recreation Settings

http://sport.vic.gov.au/design-for-everyone-guide

Guideline sources and references

Victorian Planning Authority

Precinct Structure Planning Guidelines

www.vpa.vic.gov.au
and follow the links to 'Precinct Structure Planning Guidelines'

Heritage Victoria

Provides a range of information, technical guides and leaflets on all aspects of caring for heritage places and objects

www.heritage.vic.gov.au

Public Transport Victoria

Victorian Rail Industry Operators Group (VRIOG) Standards

Client Design Requirements for Accessible Tram Stops, 2010

To request any documentation relating to this, please contact
dms@ptv.vic.gov.au

VicTrack

VicTrack Rail Maintenance Guidelines, 2012

https://www.victrack.com.au/-/media/victrack/documents/resources/rail-maintenance-guidelines.pdf
and follow the link

VicRoads

www.vicroads.vic.gov.au
and follow the links to Technical Documents Search for

- VicRoads Design Standards, manuals, notes
- VicRoads Supplements to Austroads Guides
- Guidelines for public transport
- VicRoads Traffic Engineering Manual: Volume 1
- Cycle Notes and Extended Guidelines
- SmartRoads Connecting Communities, July 2011
- Transport planning handbook: A guide to integrated transport planning in growth areas, 2013

Austroads Guide to Roads Design

www.austroads.com.au and follow the links

Austroads 'Guide to Road Design' publications may be purchased from Austroads.

Smartroads Tool link can be found at www.austroads.com.au/road-operations/network-operations

Guideline sources and references

Community Crime Prevention Victoria

Guide to Developing CCTV for Public Safety in Victoria

www.crimeprevention.vic.gov.au

Australian Standards

For technical guidance on structures adjacent to rail corridors, car parking and accessways, and mailbox design refer to Standards Australia

www.standards.org.au/Pages/default.aspx

- AS 5100 Bridge Design

Parking

- AS 2890 Parking Facilities
- AS/NZS 2890.1 Parking Facilities. Part 1: Off-street Car Parking
- AS 2890.2 Parking Facilities. Part 2: Off-street Commercial Vehicle Facilities
- AS 2890.3 Parking Facilities. Part 3: Bicycle Parking Facilities
- AS 2890.5 Parking facilities—On-street parking
- AS/NZS 2890.6 Parking Facilities. Off-street parking for people with disabilities

Mailboxes

- AS/NZS 4253:1994 Mailboxes

Australia Post

Street posting box policy

auspost.com.au/media/documents/street-posting-box-policy.pdf

Protecting your mail

auspost.com.au/media/documents/letterbox-security-specification.pdf

Telstra

Telstra payphones services

https://www.telstra.com.au/consumer-advice/customer-service/universal-service-obligation

EPA Victoria

Guidelines for environmental management: Code of practice – onsite wastewater management, 2016

Maintaining water sensitive urban design elements, 2008

Go to **www.epa.vic.gov.au** and search for title.

Guideline sources and references

Commonwealth Government

Disability Standards for Accessible Public Transport 2002

www.comlaw.gov.au/Details/F2011C00213/Html/Text#_Toc291754850

The *Disability Discrimination Act 1992* seeks to eliminate discrimination, 'as far as possible', against people with disabilities. Public transport is a service covered by the Disability Discrimination Act.

The purpose of these Standards is to enable public transport operators and providers to remove discrimination from public transport services.

Australian Building Codes Board

National Construction Code

The NCC is an initiative of the Council of Australian Governments developed to incorporate all on-site building and plumbing requirements into a single code.

The NCC is a performance based code containing all Performance Requirements for the construction of buildings

www.abcb.gov.au and follow the links to NCC.

Index

TBS

Index

Index

Index

List of amendments

TBS

List of amendments

Tools

To be developed in future

Tools