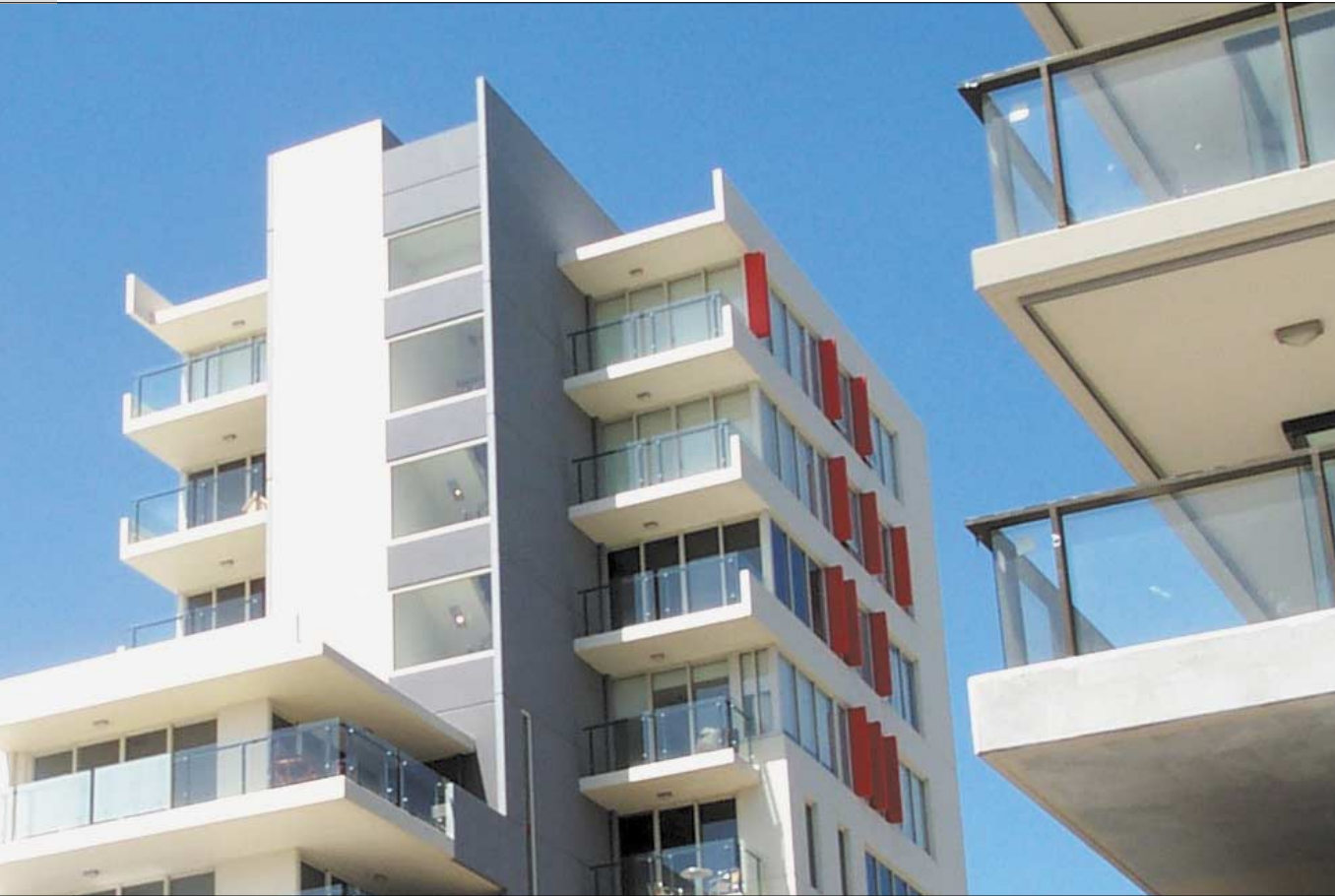


## ELEMENT 2 BUILDING ENVELOPE



Building envelopes – the location of buildings on their lot, their height and overall shape – can affect neighbourhood character, sunlight to adjoining buildings and open spaces, privacy and overlooking of other uses, the quality of spaces inside the building, the amenity and usability of private open spaces, and the sense of pedestrian scale and amenity in nearby streets. Higher density development means increasing the overall volume of building envelopes. To accommodate this increase it may be possible to increase heights, or to maintain existing built form patterns (with reduced areas of open spaces around them), or to adopt different building patterns (such as a change from freestanding to semi-detached or row houses). Different approaches have different impacts on the qualities listed above. It is therefore important to identify characteristics that support the preferred neighbourhood character of an area and to derive a design response appropriate to that context. It is also important to provide for a good result in the context of new higher density development – not only on the subject site but with likely future development on nearby sites.

## HEIGHT AND MASSING

### WHY THIS IS IMPORTANT

Building height can reinforce an area's character or relate to community aspirations for an area's future character. Appropriate building height is derived from local context, street conditions and character objectives for an area.

Building heights are best derived from specific design objectives rather than arbitrary limits or targets. For example, the protection of view lines, the natural features of an area, or solar access to the public realm may be important objectives.

Recommended building heights may already be identified within local planning policies. Where such guidance is not provided, issues to consider when determining a building envelope include:

- responding to agreed future character objectives as specified in the planning scheme or convincingly outlined in an urban context report
- achieving general design objectives, for example creating a consistent urban form
- achieving a particular design objective, for example protecting a specific view or solar access to an important public space
- reinforcing or responding to special characteristics of the broader urban structure, for example at main street corners or frontages
- revealing or expressing the topography of an area
- protecting existing character where a certain building height is a defining characteristic of the area

### OBJECTIVE 2.1:

**To ensure that the height of new development responds to existing urban context and neighbourhood character objectives of the area.**

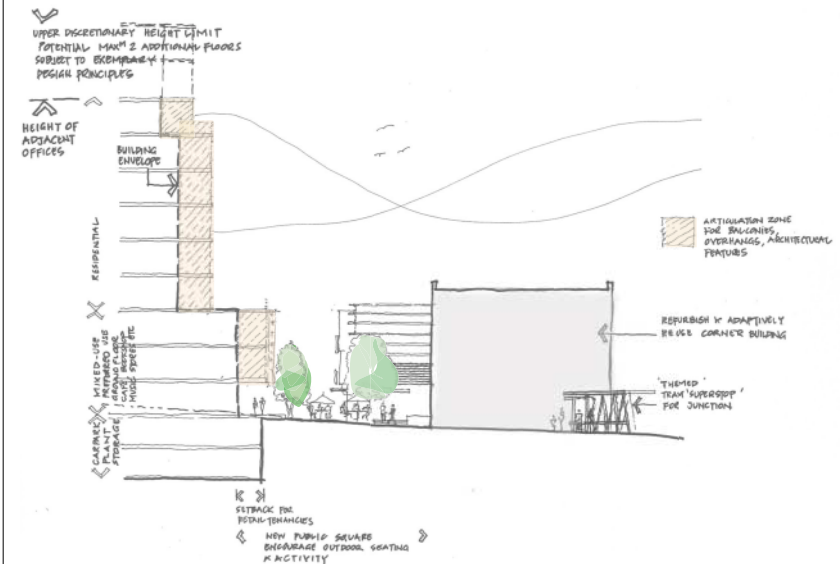
DESIGN SUGGESTION 2.1.1: ARRANGE BUILDING HEIGHT, MASSING AND FORMS TO REINFORCE THE STRUCTURE AND CHARACTER OF THE AREA.

Reinforce valued aspects of existing neighbourhood character unless planning policies identify a new character, or a new character needs to be created to achieve the planning policies for the area.

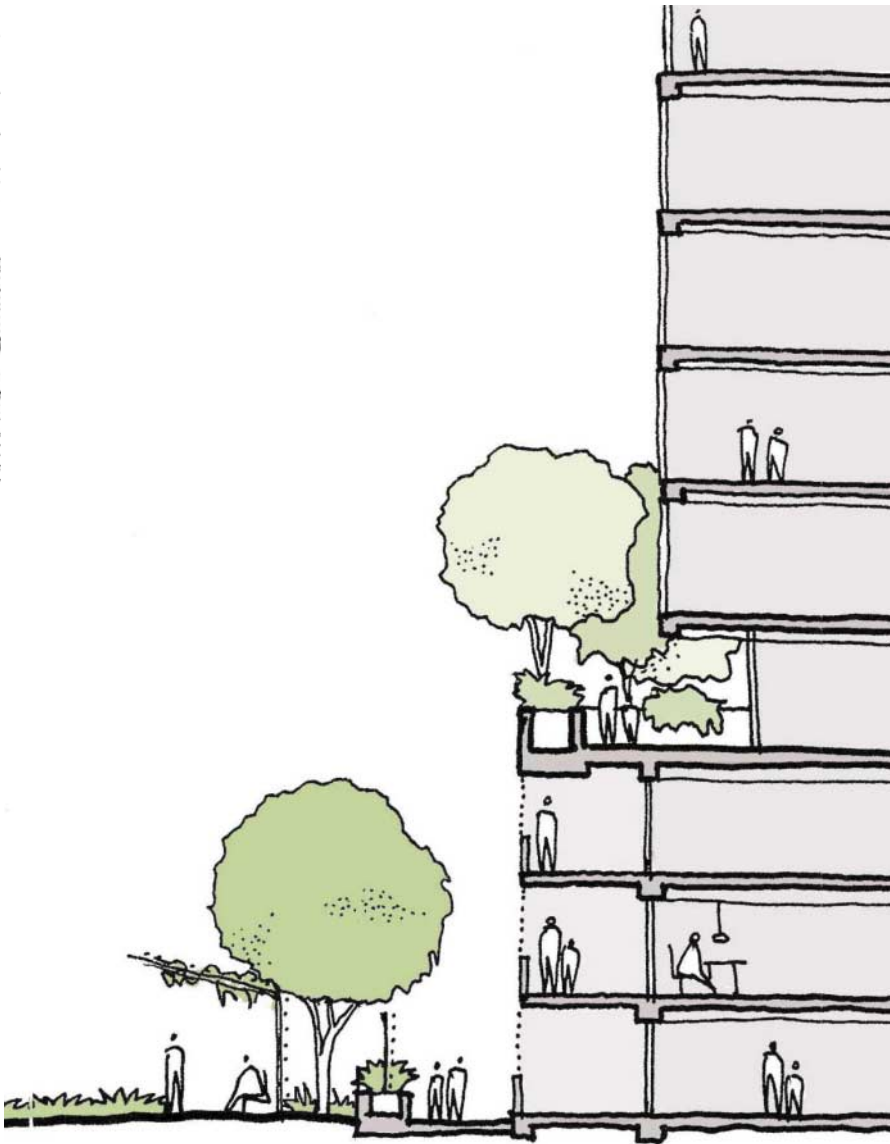
Increased densities do not always depend on tall buildings. Similar densities can be achieved using different development scenarios such as high rise-low site coverage, low rise-high site coverage and medium rise-site coverage. The type of development chosen should be appropriate to the area.

DESIGN SUGGESTION 2.1.2: MASS NEW BUILDINGS IN RESPONSE TO THE SCALE OF SURROUNDING BUILDINGS UNLESS DOING OTHERWISE HELPS TO ACHIEVE NEIGHBOURHOOD CHARACTER OBJECTIVES.

The existing context may often suggest that new developments on large sites be broken up into different buildings of varied design, or into subgroups of an overall building form. However this does not require simple repetition of the massing of the surrounding area, nor is there always a need to break up the massing of large buildings – the critical issue is how the development relates to its context.



MASS NEW BUILDINGS IN RESPONSE TO THE SCALE OF SURROUNDING BUILDINGS. Images: MGS Architects.



PODIUM AND TOWER FORMS CAN MITIGATE UNWANTED WIND EFFECTS, AND MAINTAIN PEDESTRIAN SCALE IN THE STREET.  
Image: Bates Stuart Architects.

#### OBJECTIVE 2.2:

**To ensure new development is appropriate to the scale of nearby streets, other public spaces, and buildings.**

DESIGN SUGGESTION 2.2.1: RELATE BUILDING HEIGHT TO STREET WIDTH AND INTENDED CHARACTER.

Urban centres are characterised by a strong sense of enclosure with street spaces that are generally lined by buildings set along the front property boundary. The relationship between street width (including front setbacks) and building height is important for defining the character of a place.

DESIGN SUGGESTION 2.2.2: SET BACK UPPER LEVELS OF TALL BUILDINGS OR USE A PODIUM AND TOWER FORM TO HELP CREATE A PEDESTRIAN SCALE AT STREET LEVEL.

Tower buildings or elements should be set back from the street on a podium to maintain a pedestrian related scale and to mitigate unwanted wind effects. Stepping taller elements down to the street, or neighbouring buildings, or wrapping them in 'smaller buildings' can also mediate differences in scale between buildings.

Setbacks allow greater light access to the street, broader views of the sky and reduce the 'canyon' effect for pedestrians at street level. A careful analysis of street width, levels and view lines is required to determine ideal setbacks. For example, a setback of upper levels can render these levels invisible from the street.

Taller buildings without a podium level create a dramatic urban form and this may be appropriate on some sites where the local context can support this approach.

DESIGN SUGGESTION 2.2.3: RESPECT NEARBY HERITAGE BUILDINGS AND PLACES.

Local heritage policies and statements of significance can provide guidance on how this can be achieved.

DESIGN SUGGESTION 2.2.4: REDUCE HEIGHTS, INCREASE SETBACKS OR STEP THE MASS OF THE BUILDING TO CREATE SENSITIVE INTERFACES WITH ADJOINING BUILDINGS.

Taller buildings adjacent to low rise buildings may be appropriate provided care is taken with the design of elements such as the side walls, parapets, upper level front and side setbacks, articulation and window patterns. New taller buildings should be designed to relate sensitively to existing lower scale buildings that will remain in an area.



### OBJECTIVE 2.3:

#### To protect sunlight access to public spaces.

DESIGN SUGGESTION 2.3.1: AVOID REDUCING SUNLIGHT TO IMPORTANT PUBLIC SPACES.

Shadows cast by a new development should not be considered in isolation, but as part of the cumulative shadowing effect of surrounding buildings, structures and trees. Each new building will add to this overshadowing and should be considered as an additional impact to the existing situation.

A key decision about overshadowing is the appropriate time of the year to measure when additional overshadowing might occur – there are two choices: equinox (22 September) or winter solstice (22 June). The appropriate measure for private open space is typically accepted as equinox, but local policy can identify public spaces that should be protected at the winter solstice. These spaces will typically include local open spaces and plazas. Where a shopping street currently enjoys sun at mid winter there will usually be a reasonable presumption that the sun access will be preserved.

## STREET SETBACKS

### WHY THIS IS IMPORTANT

The setback of buildings from a street edge affects how uses relate to the public space of the street. For example, direct access may be provided from footpath to shopfronts where there are no setbacks, or ground level residential units may be buffered from the street by private gardens. Front setbacks, or the absence of them, are also an important aspect of neighbourhood character. Setbacks at ground level add to the apparent breadth of the adjoining street and provide space for plantings. They can emphasise views of the overall shape of a building while also reducing the contribution of fine-grained architectural detail. Setbacks of upper building levels also affect the visual enclosure of street spaces, the apparent scale of these spaces in proportion to people using them – as well as providing protection from weather and access to sunlight.

### Objective 2.4:

#### To respond to existing or preferred street character.

DESIGN SUGGESTION 2.4.1: DON'T SET BUILDINGS BACK FROM THE STREET IN RETAIL AREAS OR WHERE A CONSISTENT STREET EDGE NEEDS TO BE REINFORCED, EXCEPT WHERE CREATING A NEW PUBLIC SPACE IS AN INTEGRAL PART OF THE PROPOSAL.

DESIGN SUGGESTION 2.4.2: MATCH EXISTING SETBACKS WHERE AN ESTABLISHED LANDSCAPE SETTING CONTRIBUTES TO THE PROPORTIONS OF THE STREET AND TO THE STREET'S CHARACTER.

Whether or not a setback is required will vary from place to place depending on local context, the character of the streets and the preferred urban form for the area. New development should acknowledge and respond to different conditions in different areas.

DESIGN SUGGESTION 2.4.3: RESPOND TO THE LOCAL PHYSICAL CONTEXT IN A WAY THAT MAKES A POSITIVE CONTRIBUTION TO THE PEDESTRIAN ENVIRONMENT AT STREET LEVEL.

Sometimes a different setback to the predominant setback can add a welcome break or point of interest. The difference needs to be justified in terms of the wider benefits it will bring.



GREATER SET BACK ADDS INTEREST TO THE STREET



MATCH EXISTING SETBACKS WHERE THE LANDSCAPE SETTING IS AN IMPORTANT ELEMENT OF THE URBAN CHARACTER.



USE SIDE SETBACKS TO AVOID UNREASONABLE IMPACTS ON NEIGHBOURING PROPERTIES AND PUBLIC SPACES.

## RELATIONSHIPS TO ADJOINING BUILDINGS

### WHY THIS IS IMPORTANT

The proximity of buildings to each other affects the amenity of spaces inside the building, the quality of space between buildings, visual and acoustic privacy and solar access to private and shared open spaces. The challenge is to provide appropriate separation between buildings to maximise light, air and outlook while meeting strategic planning goals and respecting neighbourhood character. In some areas, side setbacks are an important part of the local character and should be maintained. However, in other places (especially in areas of relatively high density development) key objectives may best be supported by a continuous built form with party walls and no side setbacks.

### OBJECTIVE 2.5:

**To ensure building separation supports private amenity and reinforces neighbourhood character.**

DESIGN SUGGESTION 2.5.1: DON'T SEPARATE BUILDINGS WITH SIDE SETBACKS IN STREETS THAT HAVE CONNECTED BUILDINGS WITH PARTY WALLS, E.G. TERRACE HOUSING.

DESIGN SUGGESTION 2.5.2: WHERE SIDE SETBACKS ARE AN IMPORTANT PART OF THE LOCAL STREETScape CHARACTER BUT DO NOT CONTRIBUTE TO PRIVATE AMENITY, BUILD WITH PARTY WALLS AND USE RECESSES AT THE STREET FRONT TO CREATE THE APPEARANCE OF SEPARATED BUILDINGS.

DESIGN SUGGESTION 2.5.3: USE SIDE SETBACKS WHERE THEY ARE IMPORTANT FOR PRIVATE AMENITY, E.G. FOR SOLAR ACCESS, ACCESS TO THE REAR OF THE LOT, OR TO AVOID UNREASONABLE IMPACTS ON NEIGHBOURING PROPERTIES AND PUBLIC SPACES.



**OBJECTIVE 2.6:**

**To ensure areas can develop with an equitable access to outlook and sunlight.**

DESIGN SUGGESTION 2.6.1: CONSIDER THE POSSIBLE FUTURE DEVELOPMENT OF ADJOINING SITES AND ALLOW, AS BEST AS POSSIBLE, OR AN EQUITABLE SPREAD OF DEVELOPMENT POTENTIAL THROUGHOUT THE AREA.

DESIGN SUGGESTION 2.6.2: MAINTAIN SUNLIGHT AND DAYLIGHT ACCESS TO ADJOINING PRIVATE OPEN SPACES OF DWELLINGS IN ACCORDANCE WITH CLAUSE 55 OF PLANNING SCHEMES.

DESIGN SUGGESTION 2.6.3: PROVIDE SPACING BETWEEN TALLER BUILDINGS TO PROVIDE OUTLOOK, DAYLIGHT ACCESS AND PRIVACY FOR RESIDENTS.

DESIGN SUGGESTION 2.6.4: ORIENT NEW BUILDINGS TO OPTIMISE SUNLIGHT AND AMENITY FOR DWELLINGS, PRIVATE OPEN SPACES AND ADJOINING PUBLIC SPACES.

Development proposals should demonstrate:

- their contribution to the public realm or communal spaces
- design initiatives to optimise daylight access to interiors of new and existing dwellings
- site design and building massing to respond to neighbouring properties and their windows (considering outlook, privacy and daylight)
- consideration of planting, fences and architectural features; and their impact on daylight access to neighbouring properties.

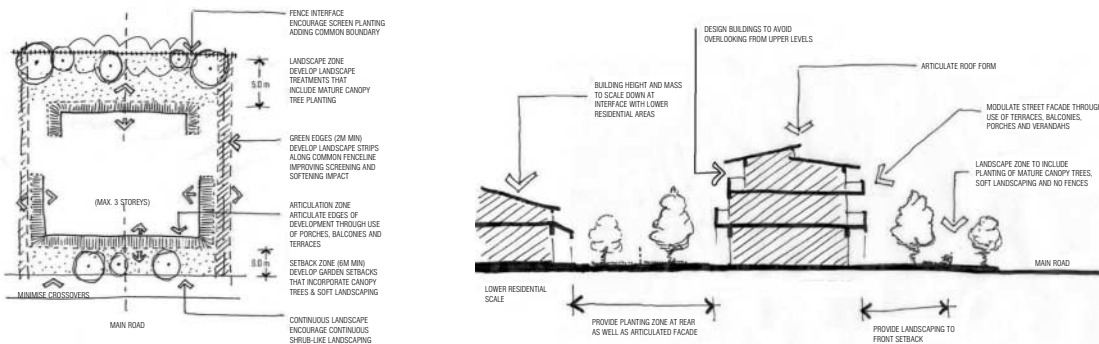
In areas of higher density housing, the amenity of public spaces and shared facilities may be of particular importance to the perceived amenity of the area as a whole.

**OBJECTIVE 2.7:**

**To ensure visual impacts to dwellings at the rear are appropriate to the context.**

DESIGN SUGGESTION 2.7.1: CONSIDER VIEWS FROM DWELLINGS AT THE REAR OR SIDES OF THE DEVELOPMENT.

In many areas of Melbourne the rear of buildings have a distinct character. These spaces should be assessed and where they make an important contribution to the area's local character, this should be respected in new developments.



CONSIDER VIEWS FROM ADJOINING DWELLINGS AT THE SIDES AND REAR OF THE DEVELOPMENT. Image: MGS Architects.



ORIENT NEW BUILDINGS TO OPTIMISE SUNLIGHT AND AMENITY FOR DWELLINGS AND OPEN SPACES.



PROVIDE SPACING BETWEEN TALLER BUILDINGS TO PROVIDE OUTLOOK, DAYLIGHT, ACCESS AND PRIVACY FOR RESIDENTS.



MAXIMISE RESIDENTIAL AMENITY BY DESIGNING INTERNAL LAYOUTS TO MINIMISE POTENTIAL FOR OVERLOOKING OF ADJACENT DWELLINGS.



MAXIMISE POTENTIAL FOR PASSIVE SURVEILLANCE OF STREETS AND OTHER PUBLIC SPACES.

## VIEWS TO AND FROM RESIDENTIAL UNITS

### WHY THIS IS IMPORTANT

Views from residential units are desirable for the amenity of their occupants and are of value to the broader public in providing passive surveillance of public spaces. However, views to dwellings can also be a potential threat to their privacy. These concerns apply both to new developments and existing nearby properties. Overall the balancing of views to and from buildings needs to be a carefully considered aspect of new building design. Generally, views onto and across streets and other public spaces are encouraged. For these frontages, the design of each building (or the use of blinds or other screening devices) is expected to deal with issues of privacy for residents. Views from one building into adjoining buildings are, generally not acceptable, and the design of new buildings is expected to limit intrusion into the privacy of existing residential properties. The location and design of buildings, and open spaces must be carefully orchestrated to maintain reasonable levels of privacy for adjacent development.

The design of new developments should optimise visual privacy for all dwellings, including views to and from windows and private open spaces. To completely restrict views to adjoining properties as well as other dwellings within the development is unrealistic. However, the orientation and layout of buildings and internal spaces should encourage views of public and shared communal spaces, while avoiding directly facing private spaces in close proximity.

### OBJECTIVE 2.8:

**To maximise informal or passive surveillance of streets and other public open spaces.**

DESIGN SUGGESTION 2.8.1: PROVIDE WINDOWS OVERLOOKING STREETS AND OTHER PUBLIC SPACES.

DESIGN SUGGESTION 2.8.2: LOCATE LIVING AREAS TOWARDS ADJOINING STREETS AND OTHER PUBLIC SPACES.

DESIGN SUGGESTION 2.8.3: USE LEVEL CHANGES, ESPECIALLY FLOOR AND BALCONY SPACES ELEVATED ABOVE THE STREET LEVEL, TO ALLOW VIEWS FROM RESIDENTIAL UNITS ONTO ADJACENT PUBLIC SPACES WHILE CONTROLLING VIEWS INTO THESE UNITS.

### OBJECTIVE 2.9:

**To maximise residential amenity through the provision of views and protection of privacy within the subject site and on neighbouring properties.**

DESIGN SUGGESTION 2.9.1: LOCATE LIVING AREAS, WINDOWS AND PRIVATE OPEN SPACES TO MINIMISE THE POTENTIAL FOR OVERLOOKING.

The internal layout of buildings and individual apartments should take adjoining properties into account. Existing dwellings should be protected from potential overlooking in accordance with the requirements of Clause 55 of planning schemes. Overlooking between new residential units should be minimised by appropriate site and building layout, window location and design.



## WIND PROTECTION

### WHY THIS IS IMPORTANT

Areas with taller buildings can produce a range of unwanted wind effects. These need to be considered and carefully managed.

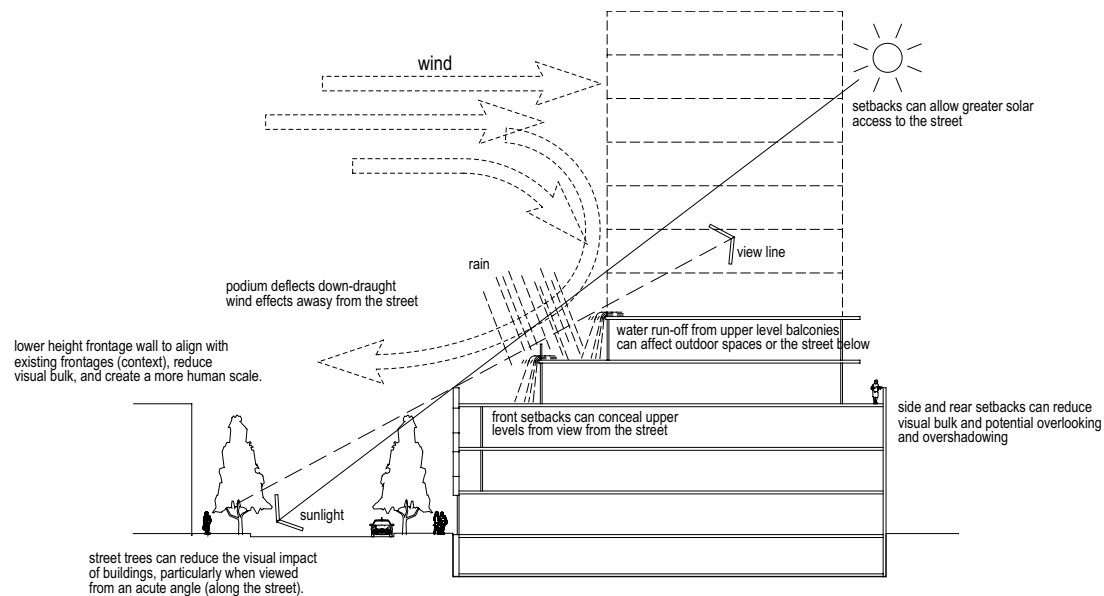
### OBJECTIVE 2.10:

**To ensure new tall buildings do not create adverse wind effects.**

DESIGN SUGGESTION 2.10.1: USE STEPPED BUILDING FORMS AND ARTICULATION OF THE BUILDING MASS TO REDUCE WIND TURBULENCE AT GROUND LEVEL.

DESIGN SUGGESTION 2.10.2: PROVIDE PROTECTION FOR PEDESTRIANS IN PUBLIC AND PRIVATE SPACES FROM WIND DOWN DRAFTS WHERE A BUILDING IS TALLER THAN THE SURROUNDING DEVELOPMENT.

Taller buildings invariably create challenging wind conditions at street level. These include down drafts and wind tunnel effects. Measures to reduce the impact of these effects should be considered. An expert analysis of wind impacts is strongly recommended, especially where relatively tall buildings are exposed to large open spaces.



ARTICULATED BUILDING FORM TO REDUCE WIND EFFECTS.





LEFT AND ABOVE: TREAT ROOF FORMS AS A CONSIDERED ASPECT OF THE BUILDING DESIGN. Image: MGS Architects.

## ROOF FORMS

### WHY THIS IS IMPORTANT

The design of the roof of a building has a significant impact on its appearance and its integration with its surroundings. A roof may also accommodate private or shared open space. The type, shape, materials and details of a roof's design can significantly affect views of, and beyond, a building.

### OBJECTIVE 2.11:

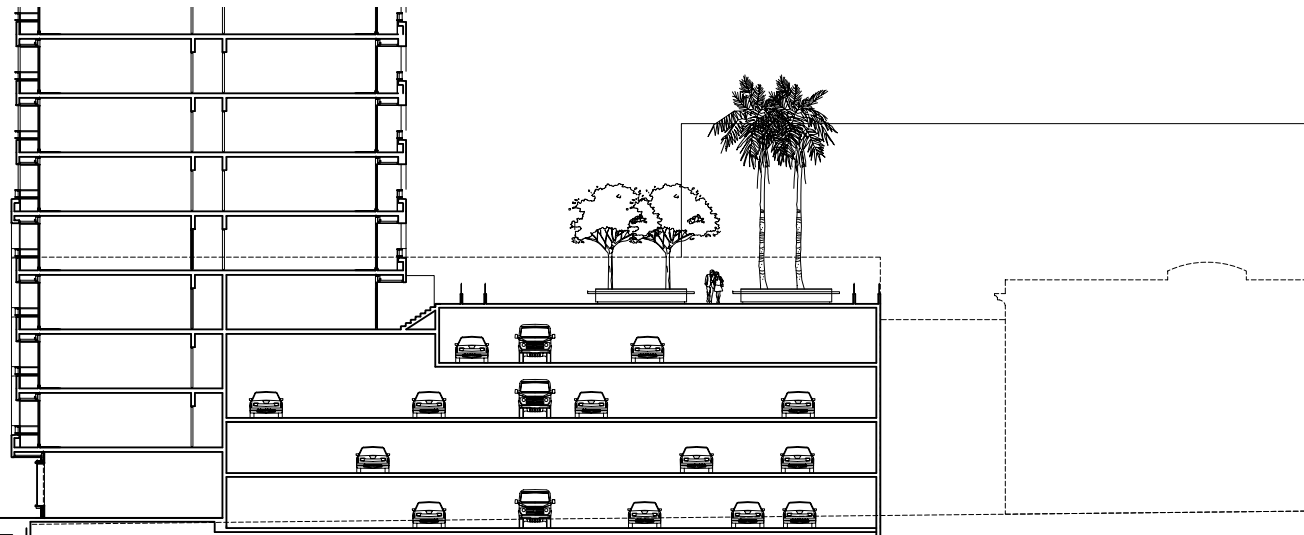
**To treat roof spaces and forms as a considered aspect of the overall building design.**

DESIGN SUGGESTION 2.11.1: INCORPORATE PLANT AND LIFT OVERRUNS AS AN INTEGRAL PART OF ROOF DESIGN.

Plant equipment, vents or lift over-runs or solar energy and stormwater collectors should be carefully designed to avoid visibility from the surrounding spaces and buildings, or incorporated into the roof design.

DESIGN SUGGESTION 2.11.2: DESIGN THE ROOF TO BE USED.

Roof spaces can be used as outdoor recreation areas, taking advantage of access to sunlight and distant views. They also provide opportunities for rainwater and solar energy collection.



ROOF SPACES CAN PROVIDE RECREATION AREAS, ACCESS TO SUNLIGHT AND VIEWS. Image: Rothe Lowman Architects.



## ELEMENT 3 STREET PATTERN AND STREET-EDGE QUALITY





Because of their generally larger site sizes, built form and frontage widths, higher density residential buildings have a significant part to play in the comfort and usable qualities of the streets they edge. New development that supports a dense street and block pattern and provides for the thoughtful location of building entries, front fences and car park entries will contribute significantly to streets that are safe, comfortable and interesting to use.

## STREET PATTERN AND STREET EDGE INTEGRATION

### WHY THIS IS IMPORTANT

Local street patterns and the size of the building blocks are important to the liveability of a local area. In general terms, areas with a finely subdivided street and block pattern encourage more intensive pedestrian use than areas with larger building blocks and a more widely spaced pattern of local streets. New development that supports, or creates, a finer subdivision of streets will contribute to stronger patterns of local pedestrian and cycle use and to the social benefits that flow from this activity.

A building's frontage to a street creates a transition between public and private space. The careful design of this street edge zone will contribute to the liveliness, interest, comfort and safety of the street for those who use it.

### OBJECTIVE 3.1:

**To create walkable areas within a safe and interesting public setting.**

DESIGN SUGGESTION 3.1.1: MAINTAIN AND EXTEND STREET NETWORKS TO CREATE A CLOSELY SPACED AND INTERCONNECTED STREET SYSTEM IN AREAS WHERE HIGHER DENSITY BUILDINGS ARE PROPOSED.

An interconnected, closely spaced grid (regular in shape or otherwise) provides many possible choices for movement. A spacing of 80 to 100 metres between parallel streets provides for good pedestrian and vehicular access while allowing for an efficient subdivision pattern of the block. This spacing may not always be possible. Intermediate pedestrian connections through blocks that link into routes beyond the site should be considered to maintain a finely-grained pattern of local movement.

DESIGN SUGGESTION 3.1.2: CREATE NEW CROSS-SITE PEDESTRIAN LINKS WHERE THE WALKABLE PERIMETER OF A BLOCK IS GREATER THAN 400 METRES. POSITION THESE LINKS TO TAKE ADVANTAGE OF OBVIOUS DESIRE LINES FOR LOCAL PEDESTRIAN MOVEMENT.

Evidence of common pedestrian behaviour suggests that blocks with perimeters of greater than 400 metres are more likely to discourage regular pedestrian use than smaller block sizes with a closer spacing of streets. Streets that are less conducive to pedestrian use reduce levels of activity, with compromising effects on the perceived safety of a street.



CREATE NEW CROSS-SITE PEDESTRIAN LINKS.  
Image: HPA Architects.



CREATE NEW CROSS-SITE PEDESTRIAN LINKS.  
Image: Williams and Boag Architect



ACTIVE GROUND FLOOR USES INCREASE SAFETY, INTEREST AND ACTIVITY IN THE STREET.

### OBJECTIVE 3.2:

#### To closely integrate the layout and occupation patterns of new development with the street.

DESIGN SUGGESTION 3.2.1: LOCATE ACTIVE GROUND FLOOR USES ALONG THE STREET PERIMETER OF NEW DEVELOPMENT TO INCREASE THE SAFETY, USE AND INTEREST OF THE STREET.

The incorporation of retail space, cafes, restaurants or home offices in the ground floor street edges of new residential development increases visual and physical connections between the interiors of new buildings and adjacent streets. Where this pattern occurs, residential units are typically elevated above street level with corresponding benefits of improved privacy and security. Care should be taken to provide acoustic separation between ground floor non-residential uses and apartments located above them.

In activity centres (and particularly in shopping areas), the aim should be to create frontages that provide interest and activity. Qualities include:

- A large range of activities addressed to the street
- Fine grain of shopfronts or residential frontages
- Frequency of doors and windows addressed to the street
- No blank facades
- Depth and relief in building surfaces addressed to the street
- High quality materials and refined details

DESIGN SUGGESTION 3.2.2: MAXIMISE GROUND LEVEL WINDOWS AND ENTRANCES TO PROMOTE ACTIVE FRONTAGES.

In situations where non-residential activity is not appropriate, windows and doors should provide a connection between the building and the street.

DESIGN SUGGESTION 3.2.3: AVOID CREATING BLANK WALLS, LARGE SERVICE AREAS, CAR PARKING, CO-LOCATED OR CONTINUOUS GARAGE DOORS OR DENSE PLANTING TO GROUND LEVEL STREET FRONTAGES OF NEW DEVELOPMENTS.

Blank walls or areas with minimal use or occupation located along the street edges of new development are never appropriate. They do little to animate the street and are usually avoided as a preferred walking environment. Where the active occupation of a ground floor street edge is genuinely difficult to achieve, street entries and related windows and building detail should be used.

DESIGN SUGGESTION 3.2.4: AVOID RECESSES TO GROUND LEVEL STREET FRONTAGES THAT COULD ALLOW CONCEALMENT.

Recesses to ground floor street frontages should be less than 300mm deep to omit potential hiding places that undermine the safety of the street.



**OBJECTIVE 3.3:**

**To ensure car parking does not dominate the street frontage.**

DESIGN SUGGESTION 3.3.1: SCREEN OR DISGUISE ABOVE-GROUND PARKING AREAS IN NEW DEVELOPMENT FROM THE STREET.

A variety of strategies ranging from innovative screening (potentially including artworks) to the mixing of screen panels with sections of residential occupation can be used to reduce the visibility of car parking areas from the street.

DESIGN SUGGESTION 3.3.2: SCREEN HALF BASEMENT CAR PARKING.

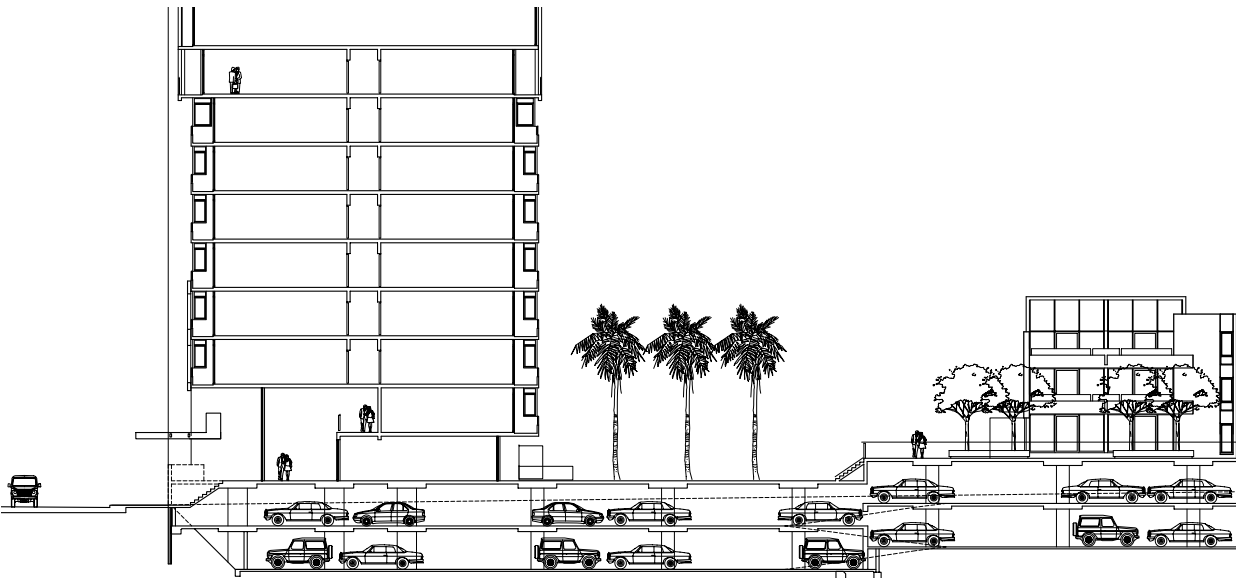
Half basement car parking refers to car park areas that are set down half a level below the street. The use of half basement parking raises ground floor residential units above the street. While this can provide for more privacy in the residential units, and allow for casual surveillance of the street, half basement car parks can present long blank walls to the street, or a gap with unattractive views into the basement car park. Open gaps and simple security grilles to car parks are not desirable. More effective screening techniques include planting, semi-transparent fences or screens. Where solid walls enclose the car park, careful surface articulation and the use of high quality finishes are appropriate for a wall placed close to pedestrians' eye levels.



ACTIVE GROUND FLOOR USES INCREASE SAFETY, INTEREST AND ACTIVITY IN THE STREET.



ABOVE GROUND PARKING IS WELL SCREENED FROM THE STREET THROUGH THE USE OF SHOPS OR RESIDENCES.



SCREEN HALF-BASEMENT CAR PARKING FROM THE STREET.  
Image: Rothe Lowman Architects.

CREATE STREET ENTRANCES WITH A STRONG IDENTITY.



RIGHT AND ABOVE: CAR PARK ENTRANCES CAREFULLY DESIGNED TO AVOID UGLY GAPS IN STREET FRONTAGES.

## BUILDING ENTRIES

### WHY THIS IS IMPORTANT

Building entries are important points of activity in the street. They support the identity of buildings as well as providing access. They may occur as entries to individual units or shared entries to multiple units. A variety of activity is associated with entries including resident access, deliveries, meetings, and visitor access. In addition to 'front doors' there are car park entries and other service entries (eg. rubbish collection). Service entries should be located to subdue their presence, especially on major pedestrian streets and shopping areas. The primary and secondary roles of different entries should be clearly identifiable.

### OBJECTIVE 3.4:

**To create street entrances with a strong identity that provide a transition from the street to residential interiors.**

DESIGN SUGGESTION 3.4.1: ACCENTUATE AND IDENTIFY BUILDING ENTRANCES.

Design entries and associated elements including signs, street numbers, post boxes, landscaping etc. to emphasise their visible presence from various locations or approaches to the building.

DESIGN SUGGESTION 3.4.2: SUPPORT THE ROLE OF ENTRANCES AS POINTS OF ORIENTATION.

Orientation or way-finding within the development is largely established at the entrance. Consider providing clear sightlines and visual connections between the street, the entry, foyers and residential interiors.

DESIGN SUGGESTION 3.4.3: CREATE MORE RATHER THAN FEWER ENTRIES TO HELP ACTIVATE THE STREET.

DESIGN SUGGESTION 3.4.4: PROVIDE INDIVIDUAL ENTRIES TO GROUND FLOOR DWELLINGS ACCESSED FROM THE STREET.

High density residential buildings often have single shared entries for numerous units. By limiting the number of units per entry, a greater sense of identity can be provided for each unit or group of units, with more activity and interest provided to the street.

DESIGN SUGGESTION 3.4.5: PROVIDE GOOD VISUAL AND PHYSICAL CONNECTIONS BETWEEN THE STREET AND LOBBY SPACES.

Entries and foyers should be comfortable, sheltered, safe, convenient and visible at all times of day and night.

### OBJECTIVE 3.5:

**To ensure car park entries do not detract from the street.**

DESIGN SUGGESTION 3.5.1: AVOID CAR PARK ENTRANCES ON SHOPPING STREETS.

Car park entrances and crossovers should be avoided where possible in retail and commercial areas. Where possible entrances should be located in streets that have a predominantly service role, and these streets should be upgraded as necessary to cater for this role.

DESIGN SUGGESTION 3.5.2: INCORPORATE PEDESTRIAN ACCESS WITH CAR PARK ENTRANCES, OR PROVIDE DISCRETE CAR ENTRANCES.

Car park entrances need to be carefully designed to avoid ugly or extensive gaps in street frontages. Combining pedestrian and car access can reduce the visual impact of the car park entrances.

## FRONT FENCES

### WHY THIS IS IMPORTANT

The character of street frontages in residential developments is often significantly affected by front fences. Aspects such as height, materials and transparency of fences determine the level of visibility and outlook, informal surveillance, privacy, security and frontage activity.

### OBJECTIVE 3.6:

**To avoid creating inactive frontages as a result of fencing private open spaces.**

DESIGN SUGGESTION 3.6.1: USE LOW HEIGHT, TRANSPARENT OR PARTIALLY OPEN FENCES TO CREATE AN IMPRESSION OF OPENNESS AND PERMEABILITY.

Front fences (and fences onto open space) should be low, open or partially transparent. Designs that place private open space in the front setback are generally inappropriate because residents' need for privacy cannot easily be reconciled with the need for a visual connection to the street.

### OBJECTIVE 3.7:

**To ensure that front fences respect and contribute to the neighbourhood character.**

DESIGN SUGGESTION 3.7.1: FRONT FENCES SHOULD RESPECT THE EXISTING CHARACTER OR CONTRIBUTE TO ESTABLISHING A NEW NEIGHBOURHOOD CHARACTER.

This may be achieved by analysing existing fence types, including materials, height, and styles and assessing the desired character of a street.



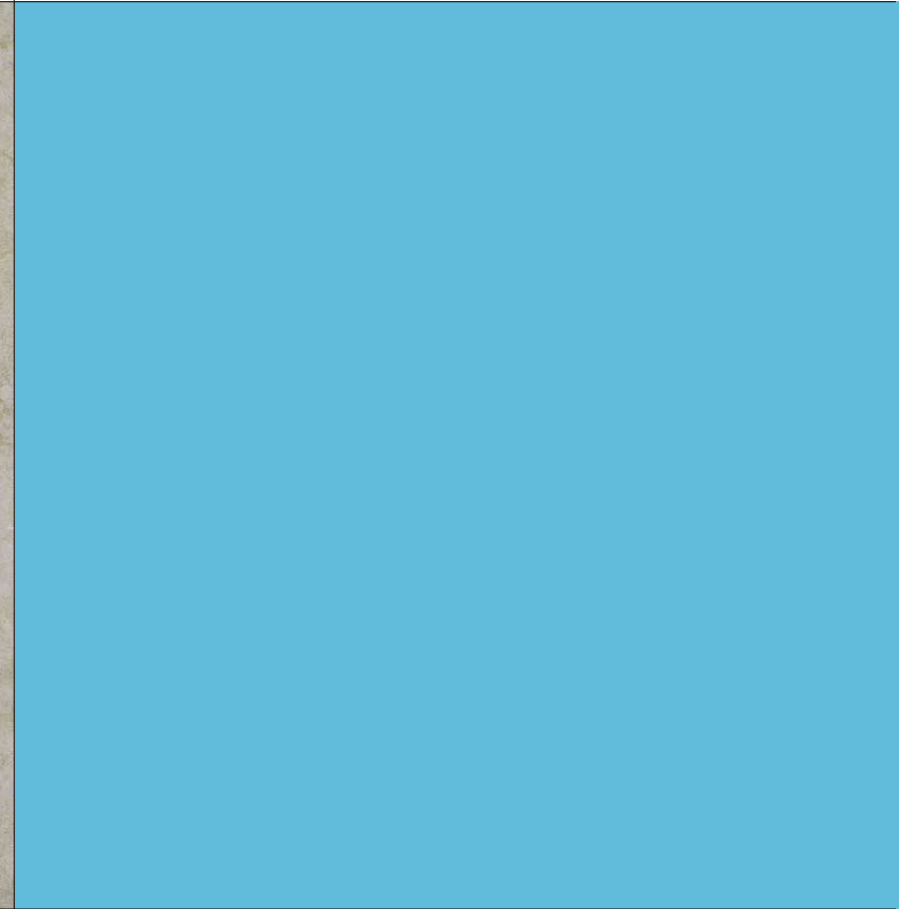
FRONT FENCES SHOULD BE LOW,  
OPEN OR PARTIALLY TRANSPARENT.





FRONT FENCES SHOULD BE LOW,  
OPEN OR PARTIALLY TRANSPARENT.

## ELEMENT 4 CIRCULATION AND SERVICES



The shared 'infrastructure' in higher density development, including circulation, parking and service spaces is important to ensure that buildings function well, are efficient and capable of being properly maintained.



## PARKING LAYOUT

### WHY THIS IS IMPORTANT

Despite its preferred location near public transport facilities, higher density residential development will still require car parking. The space required for car parks is significant and represents a substantial proportion of new buildings' overall space allocation.

#### Objective 4.1:

**To provide adequate, safe and efficiently designed parking layouts.**

DESIGN SUGGESTION 4.1.1: CLEARLY MARK ACCESS INTO, AND MOVEMENT THROUGH CAR PARKS WITH CLEAR SIGNAGE, FLOOR MARKINGS AND LIGHTING.

DESIGN SUGGESTION 4.1.2: CLEARLY IDENTIFY PARKING SPACES ALLOCATED TO SPECIFIC DWELLINGS.

DESIGN SUGGESTION 4.1.3: MAKE PROVISION FOR LOADING AND UNLOADING OF GOODS AND SERVICES.

DESIGN SUGGESTION 4.1.4: MAKE PROVISION FOR BICYCLE PARKING.

#### OBJECTIVE 4.2:

**To provide safe and convenient access between car parking and bicycle areas and the pedestrian entry to buildings.**

DESIGN SUGGESTION 4.2.1: PROVIDE WELL CONSIDERED ENTRANCES FROM THE CAR PARK TO RESIDENTIAL LOBBIES, FOYERS AND INDIVIDUAL APARTMENT ENTRANCES.

Many people will enter the building from the car park. It should be given as much consideration as the front door or entry lobby to the street.

DESIGN SUGGESTION 4.2.2: DESIGN CAR PARKS TO ASSIST ORIENTATION AND WAY-FINDING.

Within the car park, entry points to the building (stairs or lifts) should be clearly visible and identified as serving particular buildings or parts of buildings, to assist orientation. Space should be provided in front of lifts, with distinct floor surfaces and protection from vehicle movements.

DESIGN SUGGESTION 4.2.3: PROVIDE ADEQUATE PARKING FACILITIES FOR VISITORS.



CLEARLY MARK ACCESS INTO, MOVEMENT THROUGH AND OUT OF CARPARKS.



PROVIDE PARKING FOR VISITORS



MAKE PROVISION FOR BICYCLE PARKING.

## CIRCULATION SPACES

### WHY THIS IS IMPORTANT

Higher density living, often relies on shared landscape and recreation areas, car parks and lobbies to provide for recreation purposes, internal orientation and circulation of residents and other building users.

### OBJECTIVE 4.3:

**To create shared internal spaces that contribute positively to the experience of living in higher density development.**

DESIGN SUGGESTION 4.3.1: ENSURE THAT THE MAIN ENTRY AND INDIVIDUAL DWELLING ENTRIES ALLOW FOR THE DELIVERY OR REMOVAL OF LARGE FURNITURE ITEMS.

DESIGN SUGGESTION 4.3.2: ENSURE SERVICE LIFTS CAN ACCOMMODATE LARGE FURNITURE ITEMS TO THE UPPER LEVELS.

DESIGN SUGGESTION 4.3.3: DESIGN QUALITY INTERNAL SPACES.

Quality internal circulation spaces:

- have a generous height and width to maximise space and light
- allow for visibility and ease of movement, including movement of furniture and emergency access and escape
- are articulated by small lobbies, if corridors are exceedingly long
- provide clear directional information, apartment numbers and building name
- provide external windows (perhaps at the end of corridors) to provide natural light and ventilation to create more spacious circulation space
- are mechanically ventilated where required.

## SITE SERVICES

### WHY THIS IS IMPORTANT

Site services and related enclosures (for waste disposal and recycling, mail and deliveries, water and energy metering and emergency services) are necessary elements in any development. It is important, however, that these elements are assimilated in a subdued way into the design while still meeting the size and location requirements of service authorities.

### OBJECTIVE 4.4:

**To minimise running and maintenance costs.**

DESIGN SUGGESTION 4.4.1: CONSIDER THE TOTAL 'LIFECYCLE' COST OF THE BUILDING.

Construction costs are only one part of the cost of buildings. The impact of design decisions on long term running costs of the building, particularly the need for security, maintenance, lighting, heating and cooling should be considered.

DESIGN SUGGESTION 4.4.2: DESIGN MECHANICAL AND ELECTRICAL SYSTEMS TO MINIMISE ENERGY CONSUMPTION.

A dual circuit system with minimum background security lighting and sensor based higher lighting levels can save between a third and a half of energy bills.

### OBJECTIVE 4.5:

**To minimise water use.**

DESIGN SUGGESTION 4.5.1: COLLECT AND RE-USE STORMWATER WHERE PRACTICAL.

Stormwater can be stored temporarily and eventually drained away (i.e. stormwater retardation) or collected and stored for re-use. Re-use is preferred. Water re-use systems often need to be planned into a building at an early stage.

DESIGN SUGGESTION 4.5.2: USE NATURAL IRRIGATION IN LANDSCAPE AREAS.

Where possible irrigation of landscaped areas should be achieved through collection and re-use of stormwater and grey water.

### OBJECTIVE 4.6:

**To incorporate provision for site services in the building design to ensure good function and ease of service and maintenance.**

DESIGN SUGGESTION 4.6.1: PROVIDE A CLEAR METHOD FOR REFUSE DISPOSAL.

A waste management and disposal plan should be prepared for all developments. This should address how rubbish will be disposed of, and how it will be stored prior to disposal. Large developments will generate cardboard waste as people move in and this should be addressed. In general, waste plans should address the storage and disposal of:



COLLECT AND RE-USE STORMWATER WHERE POSSIBLE.



INTEGRATE MAIL BOXES INTO THE OVERALL DESIGN OF THE ENTRY/FOYER.



PROVIDE SECURE WEATHER PROTECTED LOCATIONS FOR MAIL DELIVERY.



- household waste
- bottles
- paper and cardboard
- green waste.

When providing for waste disposal, consider the following:

- vertical refuse chutes accessible at each floor level and within a convenient distance of all residential units.
- refuse room with sufficient space for the required number and size of bins and with ease of access to an external collection area.
- refuse room or bin storage may require compacting equipment, with an appropriate space allocation for its operation.
- current and future waste separation requirements (i.e. separate chutes and bins for general waste, recyclables, and compost material, and waste storage/separation space sufficient for one day's waste generation)
- any additional local authority requirements for waste disposal.

DESIGN SUGGESTION 4.6.2: PROVIDE FACILITIES FOR MAIL DELIVERIES AND PARCEL DROP OFF.

When providing for mail deliveries, consider the following:

- secure, weather-protected location, at or close to the building entry, with easy access for postal deliveries including parcels
- separate entries and addresses clearly marked
- mailboxes integrated into the overall entry/foyer design, to be visually unobtrusive and secure
- space for newspaper delivery
- any additional postal authority requirements for deliveries.

DESIGN SUGGESTION 4.6.3: ENSURE THAT ALL UTILITY METERS ARE EASILY ACCESSIBLE.

The type and location of metering equipment should be selected in consultation with the relevant authorities and engineers, but may be required to be located at or close to the street frontage of the development, with a suitable and visually integrated enclosure design.

DESIGN SUGGESTION 4.6.4: PROVIDE SPACE FOR CLEANING AND SERVICING EQUIPMENT.

Space for cleaning, maintaining and storing equipment and tools should be provided in common areas.

DESIGN SUGGESTION 4.6.5: ENSURE EMERGENCY SERVICES HAVE EASY ACCESS.

The building design should allow for emergency services requirements, including water supply for fire fighting and access to the building for emergency personnel. Consult the relevant authorities.