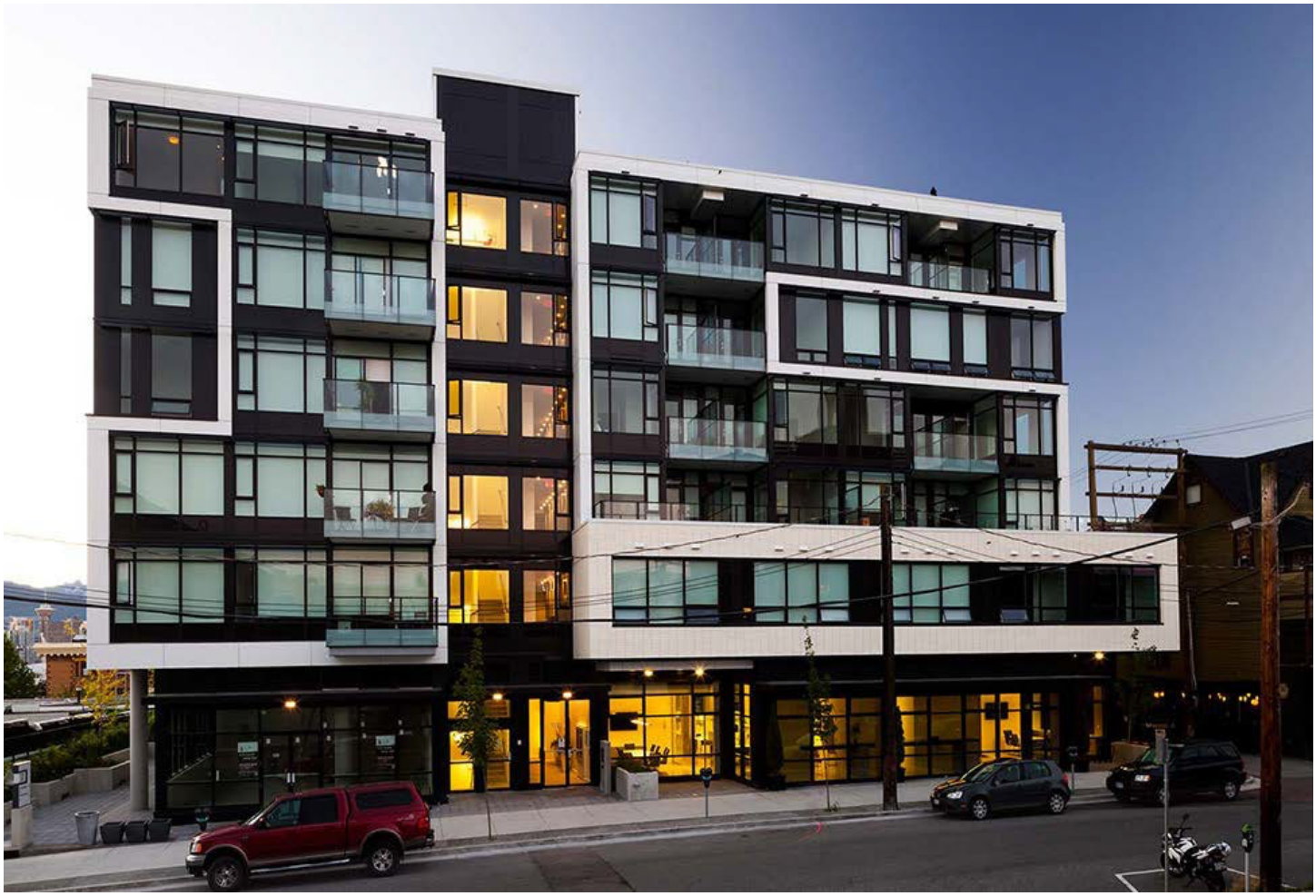
Auckland Design Manual

Auckland Council
Te Kaunihera o Tāmaki Makaurau



Mixed Use Development Design Guidance

Tāmaki Makaurau Design Ope 2/07/2025 Version 1.0

1. Introduction

Mixed use developments combine two or more uses within a building, site or block. They can be organised vertically, horizontally, or more complex arrangements. A common example of a vertical mixed use development is to have shops or commercial premises at ground floor, with apartments above.

Mixed use developments are enabled in specific zones in the Unitary Plan and are ideally located in or near centres and public transport. Mixed use developments can have multiple benefits including:

- Providing accommodation close to services and amenities
- Increasing demand and support for local businesses
- Increasing activity and vibrancy of streets
- Reducing distances between residential and commercial uses - placing more people within easy walking distance of services and reducing transport distances and costs
- Supporting pedestrian and bicycle-friendly environments
- Contributing to a safer environment by combining different uses used at different times of the day
- Increasing residential densities and reduction in urban sprawl

Developing a mixed use project can be more complex than a single use project. Consideration needs to be given to the design needs of different uses, and attention given to the compatibility of uses. However utilising good design and creating mutually beneficial relationships between uses, can provide enhanced benefits for a development.

Design Statements are a helpful tool to assist with designing mixed use buildings and communicating the rationale behind the design. The ADM has guidance on how to prepare a Design Statement in the Design and consenting processes section: Design statement guidance

This document provides guidance on how to design mixed use buildings well.

2. Site design

The first step in developing a building is site design. Existing site conditions such as ecology and topography can significantly impact on how the site is developed. It is important that the layout of the elements that comprise the development are considered at the same time as these elements themselves.

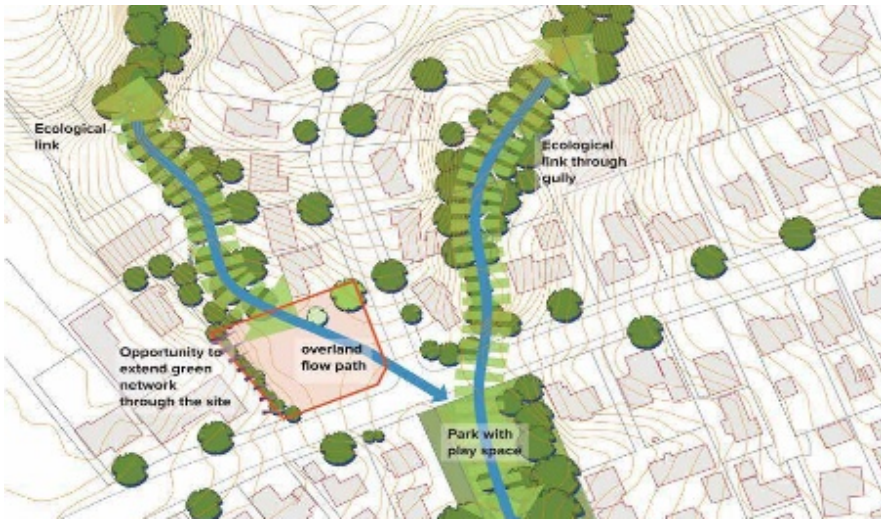
2.1 Site ecology and habitats

Design outcome: The design maintains and enhances the important natural features of the site and surroundings.

Part of the unique appeal of urban Auckland are the highly valued views of the natural environment, and the wide variety of native and exotic species. Urban development will bring change, but this change should not lead to a permanent loss of ecosystems or habitats.

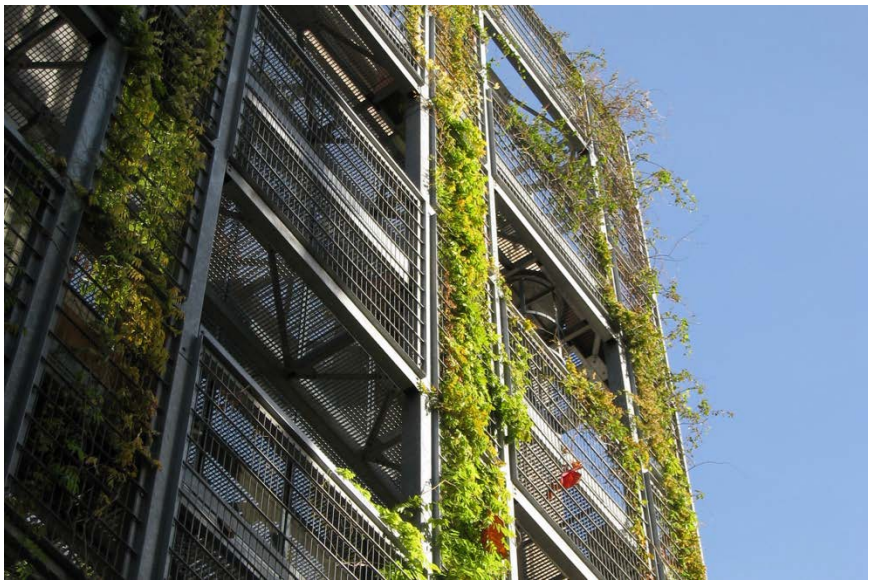
Prepare a thorough analysis of the natural environment before any design work is undertaken. This will identify key aspects of the natural environment that should be protected and enhanced.

1. Avoid building on or close to important habitat areas.
2. Protect mature trees or other vegetation, particularly natives, and use them as features of the development. This is an effective way of integrating a new development into an existing environment and providing amenity to residents.
3. Improve the ecology and habitat of the site as an integrated part of the development by:
4. Riparian and other planting, including street trees.
5. Treating land that has been contaminated.
6. Reducing stormwater quantity and improving stormwater quality through wetlands and natural ponds.
7. Changing exotic plant cover to native plant cover (preferably eco-sourced).
8. Pest and weed management.
9. Retaining and enhancing existing gullies and riparian corridors.
10. Designing the development to front and overlook non-sensitive natural environments including parks, vegetated areas, ponds and wetlands can increase amenity for residents and ensure the spaces are safe and well looked after.
11. Utilise endemic planting in the landscaping plan.



A sound understanding of the natural features and ecological systems around the site is important for ensuring climate-resilient development.

Wetland networks that detain and treat stormwater are valuable ecological assets that can minimise flooding and provide attractive amenity values for residents. Setback distances from riparian edges protect biodiversity corridors and houses from possible flooding and establish a recreational green connection.



Planting on external walls can help to reference ecologies that may have been lost from the site.

2.2 Designing for topography

Design outcome: The site design responds to and works with the existing topography to minimise earthworks. Ensure retaining elements are integrated.

It is important that any apartment building responds to the existing topography and maximises views, solar access and shelter from the wind. It is important to decide how the apartment form aligns with the slope (i.e. along contours or across them), as this can determine the visual impact of the scheme.

1. Any changes to sloping land should appear as natural as possible. This could include:

   a) Using stepped and angled retaining wherever possible to reduce the visual impact and create areas for landscaping.

   b) Including space for planting and vegetation to soften the view of large-scale engineering structures.

   c) Designing stormwater ponds like natural bodies of water, not artificial 'boxes' with straight sides.

2. Balance cuts into the land with fill, instead of only using cuts or fill alone. Use parts of the slope for the open spaces associated with the development, incorporating it as terracing, and create flat outdoor spaces around the buildings.

3. Use the slope for under croft or basement car parking wherever possible. Carefully locate the building entry and car parking access, while creating a street presence.

4. Incorporate retaining as part of the overall building or as part of the landscape proposal. This can enhance the value of the project. Design the building for 'up-slope' and 'down-slope' conditions relative to the street by:

5. Balancing car parking and access with the creation of a strong building façade along the street.

6. Minimising the setback for up-slope conditions to achieve a close relationship between the building and street edge. The setback of the building from the footpath determines the extent of earthworks.

7. Aiming for level access to the front door wherever possible. However, in situations where there are ground floor apartments close to the road, setting these units slightly higher can assist with privacy.

8. Minimise the use of large retaining walls. If they are over a metre, they should be stepped and landscaped.

2.3 Relating to the urban context

Design outcome: Buildings relate, respond and contribute to the local urban context.

Local urban context relates to all nearby built and natural features, as well as social, economic and environmental factors that impact a site.

1. Analyse and understand the context of the existing built environment. This includes the movement network, the land use and activity of the area, and the built form of the surrounding buildings and spaces.

2. New developments should be designed to respond to both the current and future context. Identify what aspects of the current character are significant to protect and enhance.

2.4 Integrating site and building

Design outcome: The building and layout of the development responds to the context of the street and wider neighbourhood now and in the future.

It is important to understand the context of a site and the surroundings including the streetscape, form and appearance of buildings, movement and open space networks, and location of facilities.

1. The layout and location of buildings should maximise solar aspect, views, access to and overlooking of trees and the natural environment, and protection from the wind. Design the development to capitalise on important views from the site, and views or connections from the wider neighbourhood onto the site.

2. The building and layout of the development should show an understanding of the street context including the scale and appearance of buildings, and existing building lines. To enhance the amenity of the street the development should have a distinctive form that addresses the street with good levels of passive surveillance. It should avoid blank facades and long monotonous street frontages.

3. An analysis of the wider neighbourhood within a 5–10-minute walk can show local facilities, movement and open space networks and how the development can support these. It can inform the best location for new access points and road crossings, making the site and

neighbourhood easier to move around.

4. Laneways created as part of the development need to have clear visibility from the main street, and separated vehicle and pedestrian spaces. These should connect safely to existing paths and movement networks.

5. The design should explore opportunities to incorporate Māori cultural values into the function and design of the building and landscaping. Engage mana whenua at the beginning of the project for guidance on how to appropriately respond to Whakapapa (ancestral lineage) and Taiao (natural world).

6. In larger developments the types of open space that will benefit residents the most, such as children's play facilities and communal open spaces, should be provided for.

7. Where a mixed use development includes residential apartments, a mix of tenures and housing types, including one and two bedrooms as well as larger family housing should be provided within the development to meet the housing needs of the community now and in the future.

2.5 Site Connectivity

Design outcome: The design utilises, strengthens and enhances local connections and movement networks.

Mixed use developments are generally located in or near town centres in accordance with Auckland Unitary Plan zoning.

Where practicable, new mixed use developments should be designed to provide connections toexisting walkways, streets and transport routes.

1. The development's pedestrian routes, entries and exits should connect with existing streets and walkways, allowing easy access to nearby destinations.

2. Integrate the site as much as possible with the external movement network.

3. Look for opportunities to create links with the surrounding street network and provide routes through the site where possible.

4. Link pedestrian routes to public transport routes & stops.

5. Provide convenient, covered, and visible bicycle parking on the street for shortterm users of the mixed use services.

6. Make pedestrian, cyclist and vehicle routes work together.

7. Design movement networks as spaces that provide a pleasant experience for people using them.

8. The design of a development should prioritise pedestrian and bicycle movement over the movement of private vehicles.

9. Give the community good access, via walking and public transport.

2.6 Wayfinding

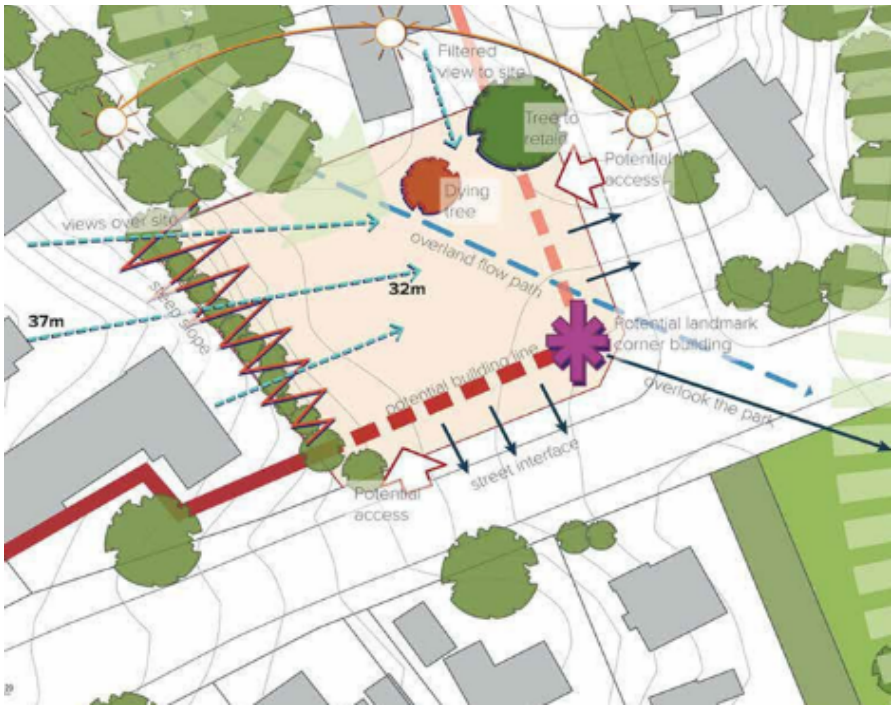
Design outcome: Occupants, visitors, and people with vision, hearing or mobility impairments, should be able to effortlessly navigate a mixed use development.

Wayfinding should be considered as early as possible so that it is well integrated within the design of the development.

Easy navigation of a site extends beyond simply providing signage; there are numerous opportunities to enable easy navigation through building design.

1. Consider utilising architectural elements such as:
   a) an identifiable entrance visible from all directions of approach
   b) a central orientation space into which other areas connect
   c) an information desk visible on entering the building
   d) spatial or architectural reference points (e.g. a staircase, seating, or sculpture) that visitors will remember and use to orientate themselves in the future.
2. Design the development to have legible movement networks.
3. In complex situations consider engaging an expert to develop a comprehensive wayfinding strategy.

An analysis of the streetscape can help to understand existing form, appearance and character and how the development could respond.



An understanding of the solar aspect, prevailing winds, views to open spaces and green areas can inform how and where to locate buildings on the site to maximise amenity for residents.

An analysis of the surrounding neighbourhood within a 5–10-minute walk can help to identify activities, movement and open space networks that the development can respond to.

The building demonstrates an understanding of the immediate street context.

3. Uses and Activities

When planning a mixed use development it is important to assess local demand for, or sensitivities to, the proposed onsite activities.

3.1 Viable and complimentary uses and activities

Design outcome: activities and uses meet the needs of, and are well frequented by, local residents.

1. Analyse any commercial opportunities and projections to enable viable commercial activities at the site. Consider the diverse needs of local populations and future populations.

2. On large sites, locate retail and service activities on prominent areas of the site, such as at corners and intersections. Being highly visible with good exposure to foot traffic will support retail activities and have a large impact on people's impressions of the development.

3. Analyse any sensitivities (eg, noise, cultural) to ensure that use and activity is compatible within the development and within the neighbourhood.

3.2 Reverse sensitivity

Design outcome: Mutually compatible uses are located together to benefit each other and the surrounding area. Where diverse uses are placed in close proximity, reverse sensitivity issues have been considered and designed for.

A diversity of commercial and residential activity can help to activate an area, however, there is the potential for uses to conflict within the development or between adjoining sites. Choose appropriate uses for your site and manage potential conflicts through good design.

Location is an important factor in the success of mixed use developments. Town centre and mixed use zones are usually expected to accommodate an increase in density and range of uses, including residential uses.

1. Consideration needs to be made when residential uses are included in a development (or are located on adjacent sites) as residential activities can be particularly prone to reverse sensitivity effects.
2. Address noise control issues in the early design stages of the project as noise is one of the most common adverse effects within mixed use areas.
3. Consider the compatibility of uses during both the day and at night.
4. Arrange the development so that there is compatibility between uses within the development. Place compatible uses together to reduce reverse sensitivity issues.
5. Consider the activities already occurring on adjacent sites. This is increasingly important when enabling activities that generate high noise levels, vibrations and/or odours.

3.3 Spatial buffers

Design outcome: Spatial buffers mitigate the impact of noise or smells of different activities.

A spatial buffer is a means of physically separating incompatible uses, either internally within a mixed use development or between the development and surrounding neighbourhood. Provide spatial buffers wherever possible to separate incompatible uses and to avoid conflict between uses or occupants.

1. On large sites, separate incompatible uses with a space or courtyard between the buildings containing incompatible uses. Consider orienting incompatible uses away from each other.
2. Consider transitional uses as buffers. A floor of offices can provide a buffer between lower commercial floors and upper residential floors.
3. A physical part of a building may also serve as a buffer. For example, a well insulated wall or break in the building may minimise transmission of noise from one part of a building to another.

4. Landscape features and planting can be an effective buffer. A screen of trees can be used as an amenity and privacy buffer.

5. Buildings should have noise generating areas such as roller doors and loading bays as far away as possible from bedrooms and bedroom windows.

3.4 Technical solutions

Design outcome: Technical solutions mitigate the impact of noise or smells of different activities.

In mixed use developments where spatial buffers are not practical, (for example, apartments located directly above restaurants, cafes or bars) the following techniques can help minimise adverse effects:

1. Technical material solutions may include acoustic wall and floor systems, insulation, acoustic cladding panels, double-glazing and thicker window glass. High-mass construction (e.g. masonry and concrete), separated and/or staggered framing arrangements, multiple linings, and mechanical plant isolation can be highly effective at reducing noise transmission between different spaces within a building or development.

2. Double glazing and mechanical ventilation can be used to ensure residents can be protected from noise while still having access to fresh air. This is particularly important where noise from traffic, hospitality uses, etc. prevents windows from being opened.

Use specialised building methods and materials to reduce or eliminate sources of disturbance such as dust, odour, ambient noise, vibration, or structurally transmitted noise.

4. Placing the building

Placement of the building(s) should be considered early in the design process to ensure quality street address, building separation, open space and outlook, and designing for privacy and passive surveillance.

The immediate proximity of residential apartments and commercial spaces within a mixed use development requires greater focus on the arrangement and orientation of buildings on site.

4.1 Interface with the street

Design outcome: The design of the apartment frontage responds to the context and character of the wider street.

The interaction between the ground floor of the building and the public street is of primary importance.

1. To provide strong activation of the streetscape, mixed used developments should build to the street boundary. A clear and contiguous edge of buildings along the street should be provided to create an active, interesting and engaging streetscape.

2. Retail relies on open interface with the street to attract passing trade. Ensure that this edge is designed to maximise the activation and connection between the public street and retail edge.

3. Where buildings are built up to the street edge, upper-level setbacks should be used to maintain a human scale along the street. This can celebrate any heritage or character of the street and prevents taller buildings appearing oppressive or dominant.

4. Respond to the form, scale and character of the surrounding urban environment, including inter-floor levels, façade rhythms and upper level setbacks.

A lower height street frontage allows the new developments to sit comfortably within the existing context of a lower scale streetscape. The taller form is set back from the street edge to avoid dominance and overshadowing.

4.2 Public fronts and private backs

Design outcome: Mixed use buildings activate the street edges and address the public realm.

1. Buildings should provide amenity and passive surveillance to the street, access lanes and driveways or communal parking courts. Key qualities of 'fronts' include:

   a) Active uses at the street edge.

   b) Clearly visible communal building entries, with a sheltered porch or threshold.

   c) Functional and attractive planting.

   d) Larger windows and balconies should be provided at the first to third floor levels to address the street and provide additional passive surveillance, particularly for situations or times of day where there is less ground floor activation and surveillance.

2. Align buildings with street edges or open space and maximise back-to-back distances with other buildings. This also allows for 'perimeter blocks' which reinforce the street edge and maximise the available open space within the centre of the block.

3. Design external walls visible to public streets and open spaces with as much attention as the front façade.

Building to the street edge can help to create perimeter blocks, which maximise the available open space within the centre of the block.

The Beaumont Quarter mixed use development successfully mixes different residential typologies with offices and heritage buildings.

Well designed fronts and backs: in this block development the fronts of buildings face onto the street while the backs of buildings face other buildings or internal open spaces.

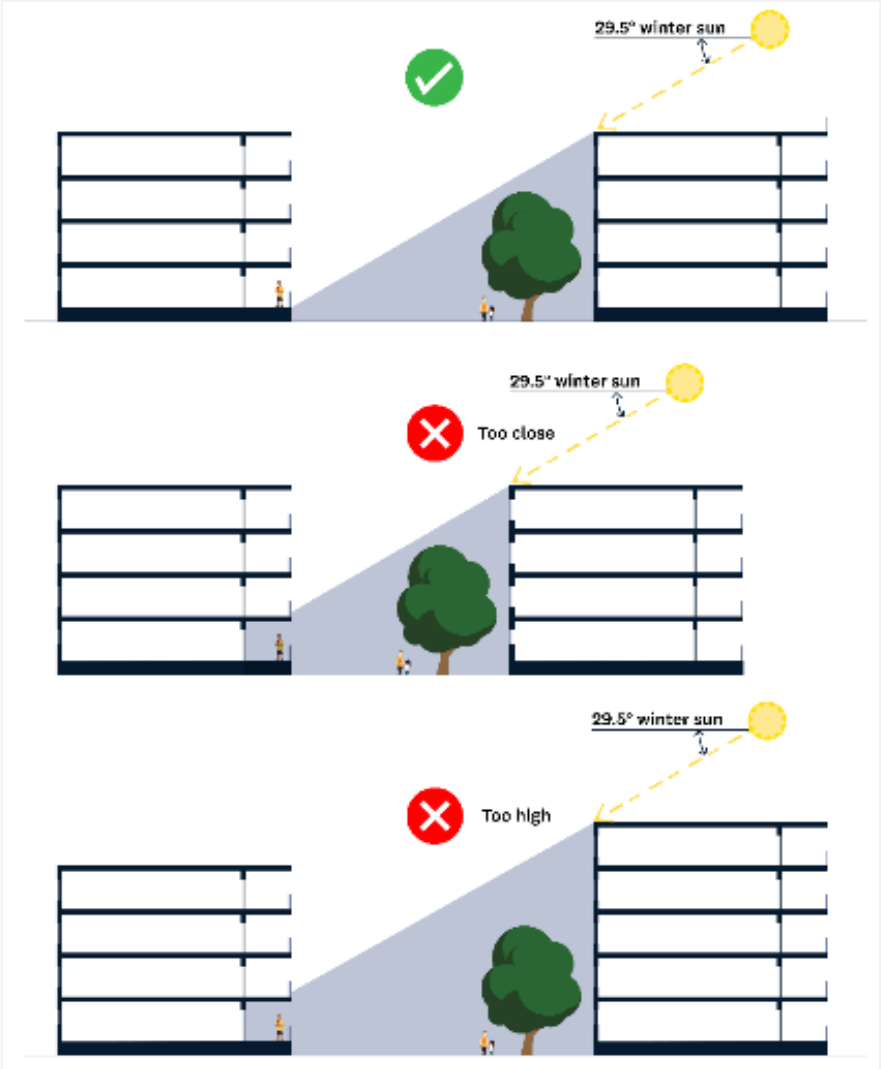
4.3 Building separation and outlook

Design outcome: Dwellings have adequate separation distances between them that provide for a sense of space and openness and ensure privacy.

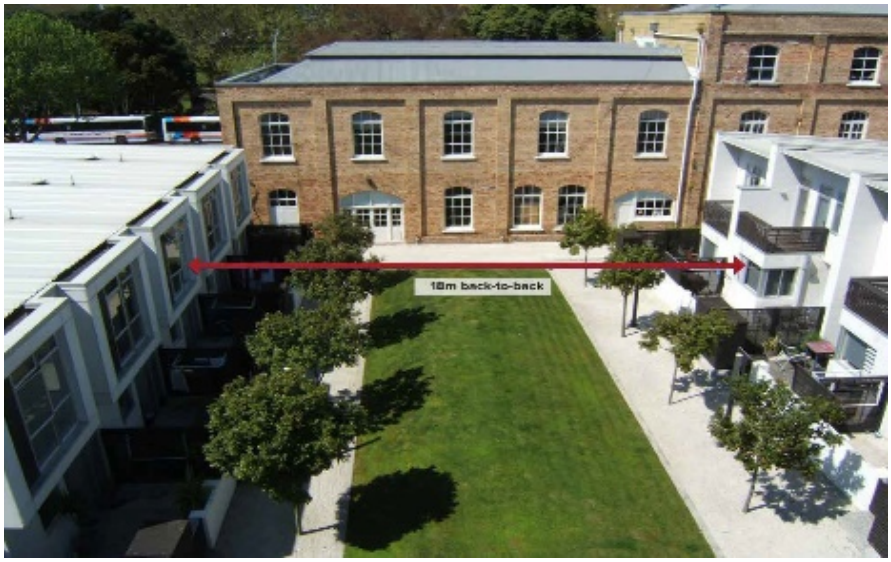
The back-to-back distance between buildings is particularly important for residential development, and contributes to:

- Visual and acoustic privacy.
- The perception of building dominance from surrounding sites.
- The admittance of sunlight and daylight.
- Extent and quality of outlook.
- The provision of communal open space behind buildings.
- Space for trees and planting.
- Microclimatic performance, especially shelter from wind.

1. Ensure the building separation allows for the admittance of sunlight and daylight as well as providing a good standard of outlook and privacy. A wider separation distance is always better than a smaller one and designs should allow for sunlight access into the outdoor spaces.
2. Where the separation distance is less than 15m, additional design measures such as offsetting, screening and other devices should be used to ensure sunlight access and a good standard of outlook and privacy.
3. Taller buildings will require greater separation to achieve private amenity outcomes where windows directly face the windows of another development across the boundary. Consider sunlight and outlook for adjacent sites and open spaces. This will require a shading analysis of neighbouring sites and an understanding of where their outdoor spaces are located.
4. Design the buildings to anticipate where neighbouring sites are likely to redevelop or where areas are changing. The correct response will depend on the site, but building along any street edge and maximising the separation distance to adjoining sites is always a good start point.



Ensure adequate building separation relative to height to allow sunlight access into ground floor apartments.



An 18m separation distance allows for sunlight access into the homes and the communal open space, as well as ensuring privacy between habitable windows and balconies.

The separation from the adjacent buildings means good sunlight access to the lower apartment and the private communal spaces.

4.4 Designing for privacy

Design outcome: The building design and arrangement provides a good level of privacy for residents and neighbours.

Privacy is an important consideration in the design and arrangement of residential units within mixed use buildings. It is important that individual desires for privacy are balanced with potentially conflicting communal desires for street activation and openness within mixed use developments.

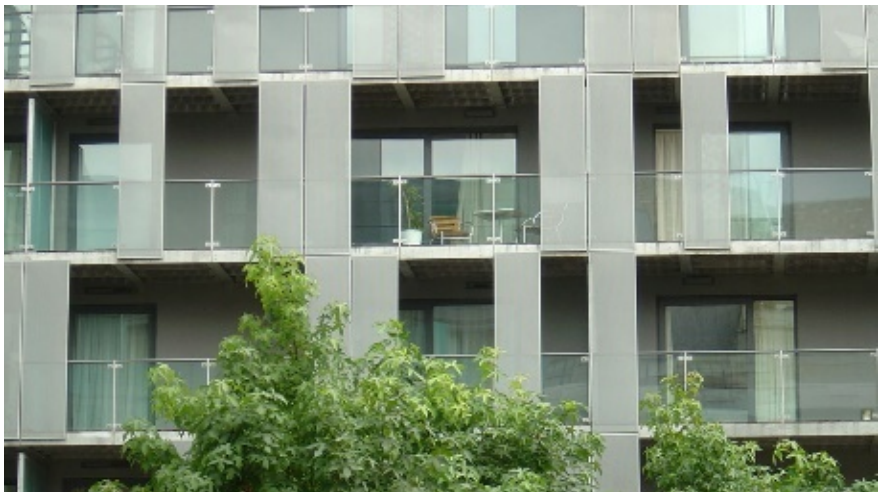
1. Design building layouts to minimise direct overlooking of neighbouring developments, on the same or adjacent sites, and their private or communal outdoor spaces. This can be achieved by staggering buildings and increasing separation distances.

2. To reduce risks of overlooking, orientate proposed living spaces, balconies and outdoor spaces towards the street or toward the back of the site.

3. Where direct overlooking is unavoidable, offset windows, provide quality screening or planting, and provide sufficient setback to reduce privacy impacts.

4. Consider potential development on adjacent sites and ensure that the proposed development guards against any impacts on residential privacy. By checking the development rights and potential building envelopes of adjacent sites, principal living spaces and primary views can be located where they will not be built out.

5. Orientate buildings so that habitable rooms do not face each other directly. Separation between blocks can help create a good level of amenity and privacy for each unit.



Thin mesh screens are used as part of the overall building design and provide privacy to each balcony. Balconies are integrated into the building to provide privacy for adjoining residents.

Wooden louvres are set behind the edge of the balcony, allowing them to be folded back and hidden when not needed.

4.5 Designing for light and sun for residential apartments

Design outcome: Apartments are orientated to make the best use of sunlight to principal living areas and open spaces, and to provide for shading from summer sun.

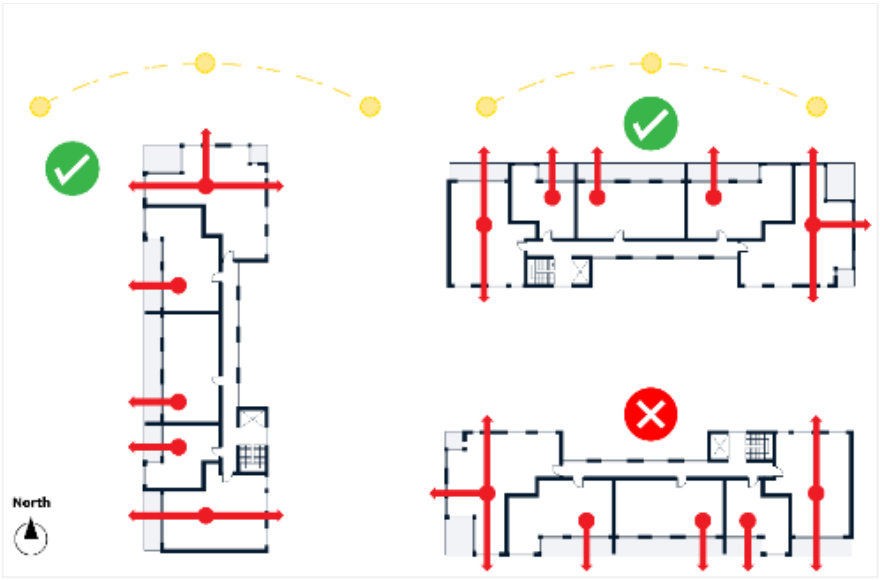
This section addresses the location, bulk, programming and orientation of the building to enable light and sun. For information on passive solar design see Building Performance section.

1. Plan the site to optimise solar access by:

   a) Providing adequate building separation within the development and from adjacent buildings to allow sunlight into ground floor apartments and outdoor living spaces.

   b) To minimise the risk of overheating, aim for dual aspect apartments wherever possible.

c) Orientate single aspect apartments to face east, west or north, while managing overheating risks (see Building Performance Section).



Orientate single aspect apartments to face east, west or north.

2. Sunlight should be prioritised to the principal living area and the accessible outdoor garden or balcony, so that everybody in the house can maximise the enjoyment of this space.

3. All private open spaces should receive at least five hours of sunlight across at least half of the space, as measured on the equinox (22 March / September).

4. Design and orientate all principal living spaces to be directly accessible from private outdoor spaces, and to maximise sunlight admission as measured at the equinox (22 March / September).

5. Single aspect apartments with a southerly aspect (southwest to southeast) should account for a maximum of 10 per cent of the total units proposed. Developments that do not meet this minimum should be able to demonstrate how site constraints and orientation prohibit these outcomes from being achieved.

The building is located and orientated to make the best use of sunlight.

4.6 Site Access

Design outcome: All access points to the site are located and designed to integrate effectively with the street and movement network beyond the site.

Selecting the best location for pedestrian, car and cycle access into the site is an important site planning decision.

1. Site access should allow for direct pedestrian and cycle access into the site from the street.
2. Vehicular access from the street to a basement or other car park should be supported by attractive and well-designed pedestrian and cycle access for those entering the site on foot or bicycle.
3. Minimise the number and width of vehicle entry and exit points. Large sites may require separate site access points for servicing vehicles and residents.
4. Design site access to be direct, legible, clear and safe for residents and visitors alike, and ensure pedestrian safety is maintained by minimising conflicts between pedestrian and vehicle accessways.
5. Maintain adequate separation distances between street junctions and vehicle entry points.

5. Street to front door

A successful city has streets that people feel connected with. Undertake an analysis of the streetscape to understand the characteristics of the street, the built environment and building lines, the landscaping and boundary treatments.

First impressions count, and the perceived quality of a development is strongly influenced by the design of the transition between a public street and private building. A well-designed frontage can enhance the safety of users, reduce management costs and create long-term success.

This section provides advice on the elements of the apartment building that contribute to creating a successful street including:

- The interface to the street.
- Boundary treatments.
- Safety, activity and overlooking.
- Shared driveways and accessways.

The building should be designed to create activity and interest at the street level through the provision of commercial, retail or hospitality activities on the ground floor level. Where residential apartments are provided at ground, ensure these have well considered relationship with the street for a sense of openness while retaining privacy.

5.1 Responding to the street context

Design outcome: The design of the building frontage responds to the context of the wider street, and the building entrance is safe, welcoming and clearly visible from the street.

1. Undertake an analysis of the streetscape to understand the characteristics of the street, the built environment and building lines, the landscaping and boundary treatments.
2. Design the development so that the massing of the building reinforces the street edge. The building frontage should face the street and should be well composed with careful attention to the arrangement of components such as entrances, windows and canopies, to support an attractive pedestrian experience. Main entrances should provide shelter from wind and rain.
3. The building entrance should be well lit and have level (or gently sloping) access from the street (1:12 / 1:20), to enable access for all.
4. Locate all services (waste, recycling etc.) away from the building frontage or entrances. Provide designated areas that are visually contained but easily accessible for residents.
5. On sites that have commercial ground floors a 'zero' setback maintains a strong street edge

and provides a direct relationship between the commercial ground floor uses, which are often shops, and the street.

6. Where buildings are built up to the street edge, generally in commercial (shopping) streets, and where no podium is provided, upper-level setbacks should be used to maintain a human scale along the street. This prevents taller buildings appearing oppressive or dominant and can establish a positive relationship with any neighbouring character or heritage buildings.

Commercial / retail uses should generally abut the street and align with their neighbours. This reinforces the street's character and contributes to a sense of enclosure.

The retail premises on the ground floor means that this apartment building has a zero setback from the street.

Mixed developments with commercial ground floor uses should ensure this floor has a high stud height. The street frontage should be appealing and have a direct relationship with the street.

5.2 Interface with the public street

Design outcome: Mixed use developments, with active uses at ground level, provide amenity and activation of street environments.

1. Mixed Use developments have a unique opportunity to activate and enrich the public realm.
2. Provide street-activating commercial uses on ground floor areas that front the street. Provide connection between the activities within the building and the public realm
3. The street frontage should be appealing and have a direct relationship with the street.
4. Ground floor spaces facing the street should have windows and doors which look directly onto the street.
5. Glazing should comprise a major portion of the ground floor facade.
6. Ground floor openings should provide clear access to any commercial premises.
7. Where apartment buildings have commercial uses at the ground floor, the clarity of a residential entrance is important and can be used to provide added activity and interest to the public realm.

5.3 Privacy for ground floor residential apartments

Design outcome: Any ground floor residential units that front the street are carefully designed to provide adequate privacy for residents while contributing to the amenity of the street.

It is generally preferable to avoid residential ground floor uses at the street frontage of a mixed use development. Any ground floor street facing apartments will need to carefully balance privacy for residents with the need for street activation and passive surveillance.

1. Raised floor levels should be provided to offer privacy from the street for any residential apartments on the ground floor.
2. Place active areas within the dwelling, including kitchens and dining rooms, to face the street to provide regular passive surveillance and overlooking of these spaces.
3. Avoid placing full-height windows at the street level as this will create a conflict with privacy and lead to closed curtains. Waist and shoulder height windows with blinds provide a balanced solution to passive surveillance and privacy.
4. Avoid continuous and monotonous lengths of blank walls at street level.
5. Design fences and walls to add value to the amenity of private or communal open spaces e.g. by incorporating seats into their edge.
6. Where a private outdoor area is between the apartment and the street, privacy and street surveillance can be balanced by:
    a) Providing visually permeable soft landscaping or planted elements to soften the street edge whilst providing privacy, dappled light and intermittent views of the street.
    b) Using a fence, wall, hedge or planting that is sufficiently visually permeable to give passing pedestrians a sense of the private garden or terrace without a clear view in.
    c) Minimising direct sightlines by using a change in level from the street to the private outdoor area
    d) Carefully designing the height of boundary and retaining walls to control views into a property while allowing views out.

Low walls allow good views from the apartment to the street while providing separation and privacy.

5.4 Safety, activity and overlooking

Design outcome: Public streets and other common or public spaces are safe and secure through natural surveillance.

Providing a mix of uses on site can be an effective method for creating safer environments, both on the site itself, and in surrounding areas.

1. Where a mix of commercial and residential uses occur in a development, these different uses at differing times of day and night can maximise passive surveillance and street activation.

2. Commercial activities contribute to street activity and safety during the day with foot traffic and large windows facing onto the street.

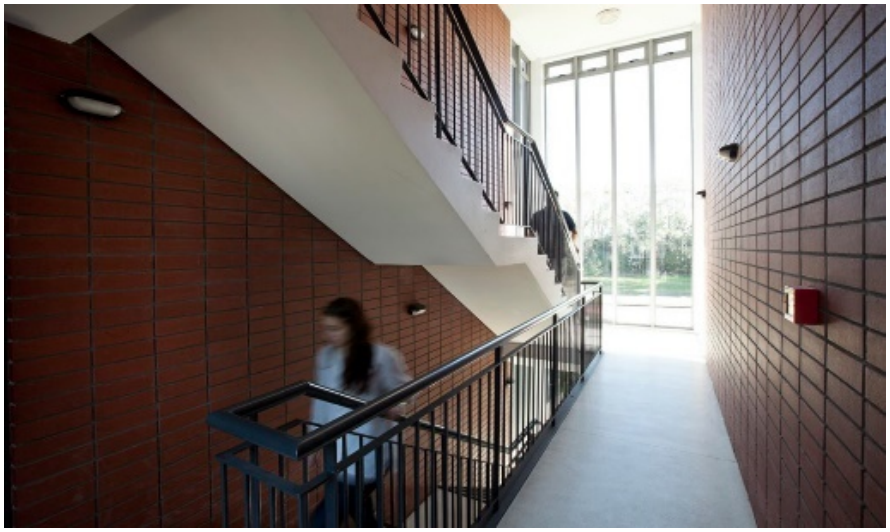
3. Design building entrances to be directly visible from the street front to ensure that these areas are informally monitored by passers-by.

4. Design the building to maximise natural surveillance of public and communal areas by orientating buildings to address these spaces and locating windows and balconies to provide views over them. The more windows overlooking public and communal spaces the better.

5. Large windows and balconies should be provided at upper levels to address the street and provide additional passive surveillance.

6. Avoid blind or dark alcoves near entrances, lifts and stairwells, and within car parks, corridors and walkways. Create clear sightlines into the development and provide well-lit routes throughout the development and communal areas.

7. On corner sites provide windows, balconies and front doors on both facades to ensure passive surveillance to both streets and public/communal environments.



The double height glazing in this common stair allows casual surveillance to and from the exterior.

6. Outdoor space

For residential dwellings the design of outdoor spaces, both private and communal, is as important as the design of the building. Outdoor areas help to meet people's fundamental expectations to be able to enjoy the outside environment, and the arrangement and quality of the spaces will have a significant impact on residents and neighbours.

Well-designed outdoor spaces are highly valued by residents and should be provided for all dwellings. Outdoor space mitigates the effects of living in smaller dwellings and improves the overall liveability of a development. Outdoor spaces provide areas for children and young people to play and help to foster a sense of community amongst residents.

6.1 Communal outdoor spaces

Design outcome: Communal outdoor space is provided for additional places for residents to meet, play, relax and to create community cohesion.

1. Provide a distinction between the communal outdoor space for residents, and any outdoor space that is available to the public or to users of commercial spaces.
2. The location and design of the communal outdoor space should take advantage of the sun, be protected from prevailing wind and provide shade in summer.
3. Design communal open space to maximise sunlight at the spring and Autumn Equinox (22 March and 22 September).
4. Communal outdoor space should be universally accessible and well overlooked by surrounding apartments within the development.
5. Size communal outdoor spaces relative to the number of potential users and appropriate to its location. This should be informed by the availability and type of public open space nearby. Buildings next to a park may require less communal space than those further away.
6. Use both soft landscaping (trees, shrubs, grass, planted beds etc.) and hard landscaping (paving, furniture, fixtures etc.) to define areas.
7. Design for both day and nighttime use. Good lighting helps to ensure that communal spaces are attractive and aids surveillance after sundown.
8. Provide formal and informal play spaces that are suitable for the intended apartment mix and future resident demographics, particularly children of different ages.
9. Design communal spaces so there is a clear distinction between any areas designated for servicing (rubbish collection, outdoor washing-drying spaces) and communal amenity spaces. Locate ventilation duct outlets to avoid noise and loss of amenity within the communal space.
10. Use a water sensitive design approach and locate outdoor areas to suit the natural overland flow path.
11. Use productive gardens and trees to aid amenity.

The private communal space has been designed to be well overlooked by adjacent apartments.

This private courtyard uses hard and soft landscaping to create an attractive space for all residents.

This rooftop outdoor space capitalises on the small site and great views to provide usable space for residents above ground.

Communal open space in a mixed development should incorporate elements that are useable and practical for the residents such as seating, shaded areas and landscaping. Providing safe and visible play areas will encourage families to inhabit the development's units.

6.2 Residential private outdoor space

Design outcome: Private outdoor spaces for residential apartments are well designed, maximising spaciousness and are fit for purpose for the size of the apartment.

1. Balconies should be integrated within the building form to ensure privacy from dwellings adjoining either side, while extending outdoor living spaces. Wing walls on balconies can

provide privacy for and from adjoining dwellings. Design options to improve the privacy of balconies could include:

a) Offset windows or balconies on elevations that face each other.

b) Recessed balconies and / or vertical fins, screens, louvres on balustrades as well as pergolas and planter boxes between adjacent balconies.

c) Solid or semi-solid balustrades on balconies.

2. The location and design of the private outdoor space should take advantage of the sun and be protected from the prevailing wind. All private outdoor spaces should receive at least five hours of sunlight on the equinox (22 March or 22 September) on at least half the garden, courtyard or balcony. If primary open spaces are to the south, a secondary open space facing as close to north as possible should be provided.

3. For any ground level apartments, private outdoor space should be provided as a garden, paved terrace (patio) or courtyard area.

4. For apartments located above the ground floor, the private outdoor space should be provided as a balcony.

5. Above-ground balconies should be oriented to maximise views over public and communal spaces, and natural areas, and away from neighbouring windows and private outdoor spaces.

6. The connection between the principal living area and the private garden, courtyard or balcony should be directly accessible with a level threshold.

7. Private outdoor spaces should allow for a range of different uses including outdoor dining in reasonable privacy, as well as clothes drying, bin storage and other service functions. Balconies or patios should provide an area which can be screened to allow for clothes drying.

8. A balcony, deck or terrace should be large enough so that the equivalent of two people per bedroom can circulate, sit, eat or barbeque safely and comfortably.

9. Balconies and terraces should be integrated into the overall architectural form and detail of the building. Utilise screens, pergolas, shutters and opening walls to control sunlight, wind and to manage privacy.

10. Consider the most appropriate balcony type (recessed, cantilevered or partially cantilevered) according to available daylight, wind, acoustic privacy and visual privacy.

11. In some cases, it will be a better to enclose the balcony on tall buildings, along busy roads or accessways or other areas where noise and privacy is an issue, and in areas with adverse environmental conditions such as wind.

12. Enclosed balconies should always be in addition to the living area and should still allow for the same uses as an open balcony. These should open for the majority of the wall area above balustrade height and should be made out of an all-weather surface and include a drain.

13. Ensure balconies are not so deep that they prevent sunlight entering the apartment below.

14. Aim for recessed balconies where possible as they provide better privacy, better weather

protection and better architectural articulation and façade depth than cantilevered balconies.

15. In larger apartments, use secondary balconies for clothes drying and accommodating any services. Ensure that heat pumps, air conditioning units and other mechanical services do not cause safety issues for climbing and are screened for visual amenity.

16. Design balustrades to allow views and natural surveillance of the street, while ensuring safety and visual privacy.

Balconies and terraces are integrated into the overall architectural form and detail of the building.

A large sliding door allows level access from the living room to the balcony while being weathertight.

This recessed balcony offers good shading and weather protection while still being outside.

The sliding external screens can be moved by the residents as they need privacy.

The living spaces are recessed but the balconies allow uninterrupted views of the street below.

This balcony can be fully enclosed via sliding doors to further assist with noise reduction from the street.

6.3 Service areas

Design outcome: Service areas are integrated into the design of the development, are located for ease of use, and are not visible from the street, communal areas or building entrances.

Service areas are external to the building and used for storage and collection of waste and recycling from individual apartments.

1. Auckland Council's Solid Waste Calculator can be used to determine space requirements for

storing waste.

2. Locate storage areas for rubbish bins away from the front of the development where they can adversely impact on the streetscape, the visual presentation of the building entry and on the amenity of residents.

3. Locate bin storage areas in places that are safe and convenient for residents.

4. Consider integrating rubbish areas into a communal refuse area for efficient collection. Communal rubbish areas should always be screened and integrated with the design of the building and the landscaped area.

5. Rubbish collection is an important part of how to design for rubbish bins. Having rubbish collection that is twice as frequent will require half as much storage for bins.

6. Design service areas to provide easy access for service contractors, rubbish and recycling trucks, and other large vehicles.

7. Consider the efficiency of access, parking and turning requirements, and potential noise issues upon residents from service vehicles.

The planting and low-level brick walls help to disguise the bin store from the street.

6.4 Landscaped areas

Design Outcome: The landscape design adds greening, biodiversity and amenity, works with the topography and reinforces the local distinctiveness of the area.

1. The landscaped areas can improve the appearance of the development, liveability of the unit and, provide shade and reduce temperatures in summer, bring biodiversity to the area, and help to manage stormwater.

2. New landscape should include trees, shrubs and ground covers, ideally native that are

common to the area to reinforce local character. Hard landscape elements that are characteristic of the area should be used in the local concept.

3. Retain existing mature trees and incorporate them into the overall development. Locate private and communal spaces and entranceways to take advantage of existing trees. Trees reduce sun and heat in summer, provide an essential rainwater soakage function, and contribute to landscape amenity both on site and for the wider neighbourhood.

4. Identify ecological areas, streams and planted areas in the adjoining and surrounding areas that development can connect to and enhance through the landscape design.

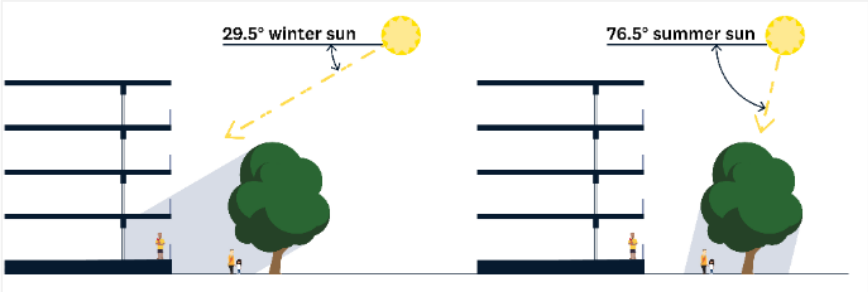
5. Use specialist landscape inputs to design the landscape areas. This will ensure that it is given the same attention to detail as the buildings.

6. Prepare and implement a landscape maintenance plan to ensure landscape areas remain attractive and contribute to biodiversity and stormwater management over time.

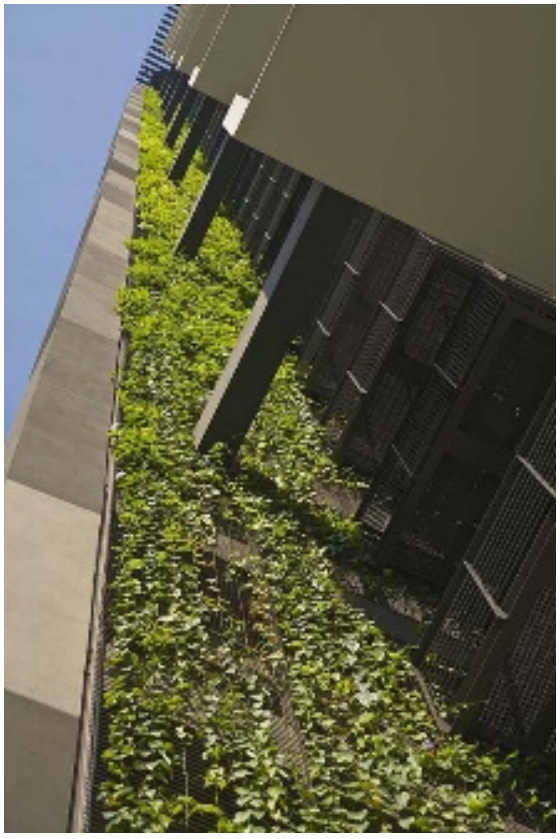
Specialist landscape design input has meant that this small communal area is well designed with a mixture of natural planting and hard paving.

Hard and soft landscape elements contribute to the identity and character of the development.

Native climbers can bring greenery to blank walls.



Deciduous planting can ensure direct solar access to outdoor spaces between March and September and provide appropriate shading in summer.



Vertical planting helps to 'green' the building façade.

7. Designing the building

Mixed use developments are often the prevailing development form in town centre areas. Their facades play an important role in enhancing the street's amenity and attractiveness. This section covers the scale, massing and design and appearance of the building.

7.1 Scale and massing

Design outcome: The scale and massing of the development responds well to its context and reduces the impacts on privacy and shading.

1. The scale and massing of a development will have an impact on how it is perceived from adjoining neighbours, the street and the surrounding environment.

2. Building massing refers to the overall form and composition of the building. The way a building is arranged on its site is particularly important for larger buildings. The following should be considered in relation to building massing:

    a) Permitted maximum height.

    b) Street character and position within the town/city context – is the location part of an established neighbourhood and does there need to be a consistent height.

    c) Height punctuation and accent at corners, junctions, or to terminate views.

    d) How to support local street views and strategic views.

    e) Avoiding overshadowing and optimising sunlight access into adjacent public space and neighbouring properties.

    f) Local micro-climatic factors, particularly wind.

3. The massing of building developments should maximize access to daylight and sunlight – for internal spaces, outdoor spaces and for the adjacent street(s).

4. Subdividing the overall mass of a building into smaller forms that results in a hierarchy of elements to avoid, or break up, overly large forms.

5. Avoiding significant and visually jarring contrasts in scale between the proposed building and adjacent buildings / sites. Consider setbacks, steps in façades or variations in roof form to create a softer transition.

6. Introducing setbacks at upper levels to achieve a human scale form at street level and encourage sunlight into the street.

7. When the form is predominantly vertical, organise the building's mass to express the base, middle and top.

8. Horizontal and vertical elements can be emphasised through different bands of colour or materials and through recessed elements and staggered building lines.

9. Providing >3m internal floor-to-ceiling height at the ground level to enable commercial flexibility at ground and offering a more substantial and well connected street frontage.

10. The mass of an apartment building can be further broken down by:

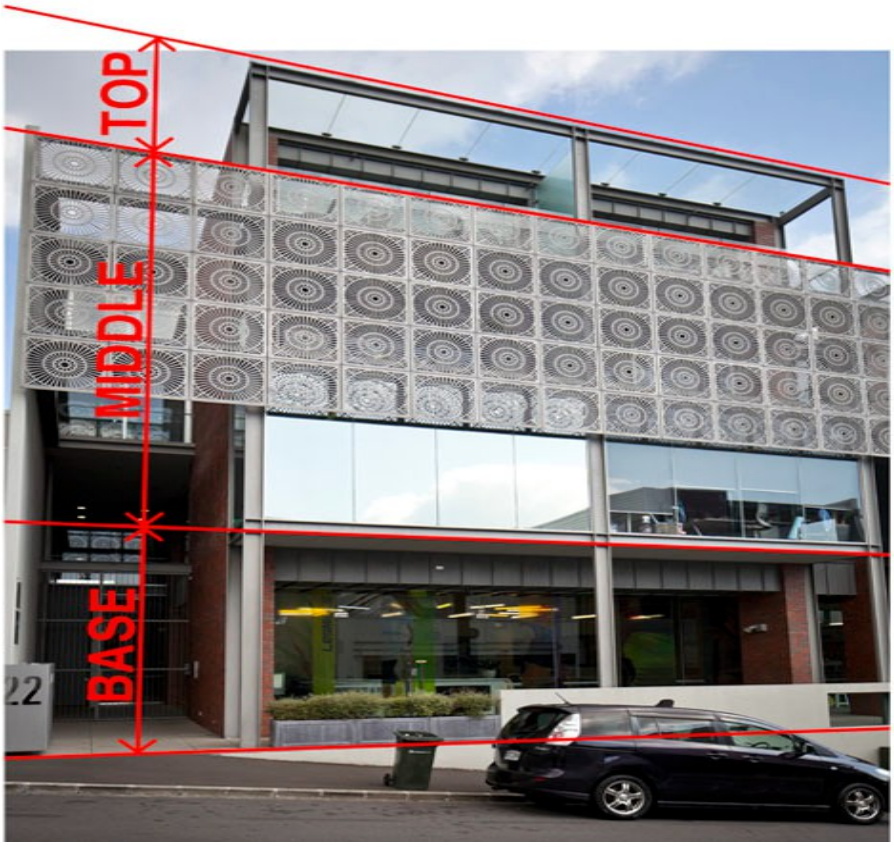
    a) Recessing and projecting elements such as balconies to avoid flat façades.

    b) Expressing the entry points.

    c) Expressing the individual units to achieve identity.

d) Creating a relationship between the front façade and street edge to achieve a consistent streetscape.

e) Varying roof form to create visual interest.



On taller or larger buildings different materials or elements can be utilised to visually break up building height or mass, clearly breaking the building up into sections.

This building has been designed with a large block broken up into smaller secondary forms, using predominantly vertical elements to reduce the overall scale.

7.2 Building access and internal circulation

Design outcome: The design of the building access is safe and legible and contributes to the overall amenity of the development.

This section focuses on internal access and circulation of residential apartments. This is relevant to mixed use buildings where residential apartments are a major component. The type of access provided to apartments will have a large influence on the design and configuration of the building.

Vertical access arrangements are where apartments are accessed directly via a stairwell or lifts. Vertical cores can be placed internally or externally and can contribute to the external appearance of the building.

Horizontal access arrangements are where apartments are accessed from a shared corridor, which connects to a lift or stair core.

A single-loaded corridor can be placed internally or externally. There is potential for a dual-aspect apartment with cross-ventilation if the corridor is external. External corridors are often referred to as breezeways.

The following should be considered in relation to the access arrangement of a building:

1. Ensure that breezeways are carefully designed to be integrated into the overall form of the building and does not look ‘stuck on’, has good weather protection and feels safe.

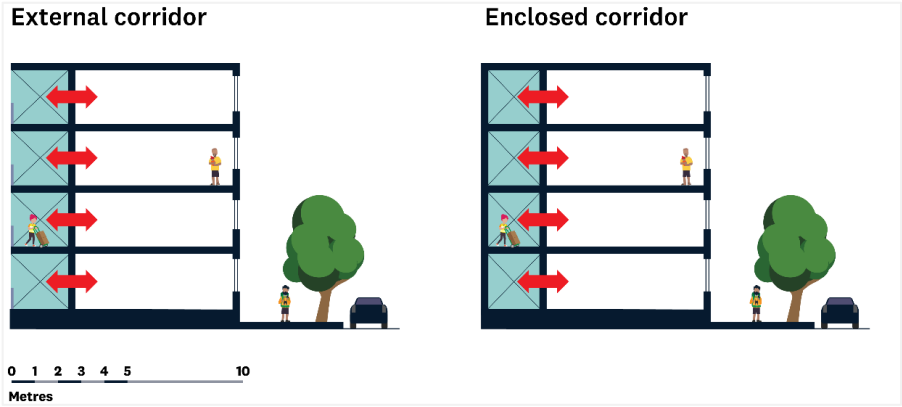
2. Have windows opening onto the external breezeway to enable cross-ventilation.

3. Locate the entrance or kitchen areas adjacent to the external corridor (breezeway). A bedroom in this location with windows opening onto the breezeway will require careful design to ensure adequate levels of privacy, ventilation and quietness. Habitable room windows should not open into or access an internal corridor.

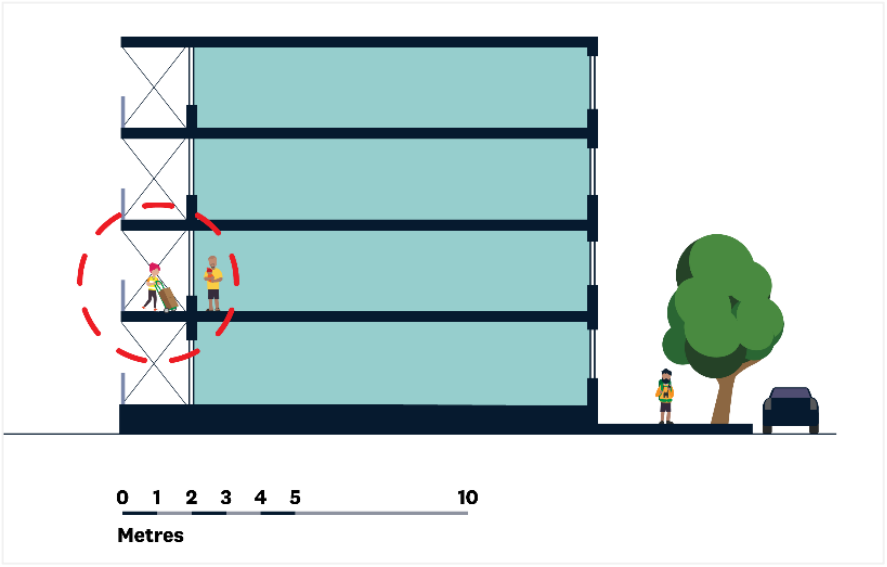
4. Include extra space around stairs and lifts to form a lobby space where people can meet. This may also give a feeling of spaciousness.

5. Have windows at the end of internal corridors to let in light and air and allow views out.

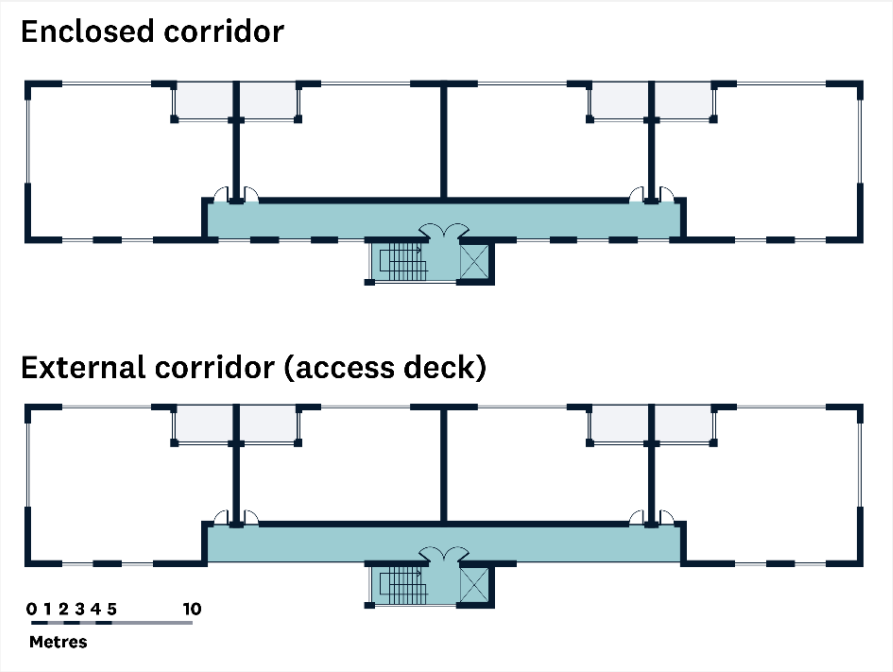
6. Use an atrium in a building with a deep plan. This can let in light to the middle of the building.



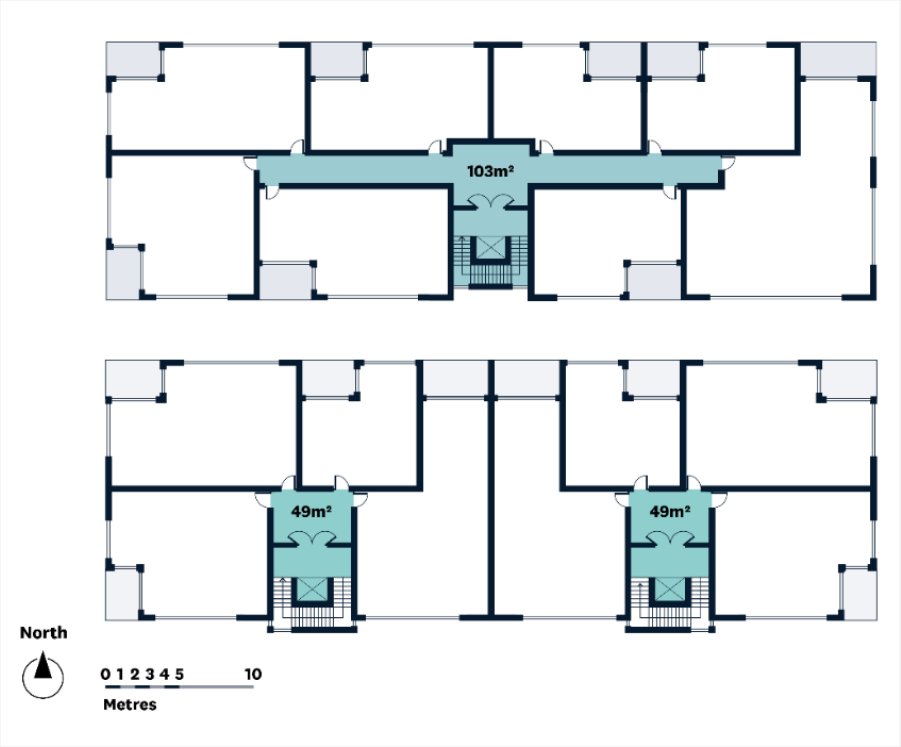
The horizontal access can be an external breezeway on the outside of the building (left image) or an enclosed corridor within the building (right image).



Ensure there is an adequate level of amenity - natural light, natural ventilation, privacy – where a habitable room faces onto an external accessway (breezeway).



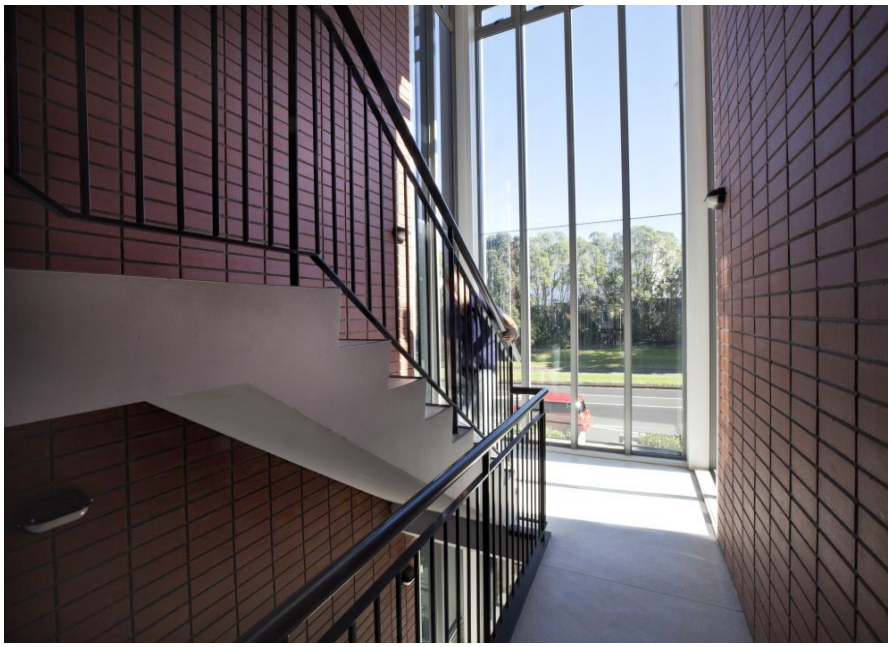
A single-loaded corridor apartment block tends to be one apartment deep with apartments accessed from one side of a corridor.



A double-loaded corridor is located within the building. Apartments are accessed off both sides of the internal corridor and are therefore predominantly single aspect. The overall building depth is deeper than a single-loaded arrangement.
Note the circulation area of the double vertical access core is roughly the same per level as the example with a single core and corridors.

The external stairs are integrated into the overall building design.

Access is by an internal, double-loaded corridor with apartment accessed off both sides of the corridor.



Double height glazing at the end of the corridor provides a good quality of natural light and passive surveillance in this communal stair.

This building provides well-lit and weather-protected horizontal, semi-external access to individual apartments, with a separation between common accessways and habitable rooms.

7.3 Design and appearance

Design outcome: The design and appearance of walls, roofs, windows are considered together to create a high-quality building that relates well to its context.

1. The building will usually comprise of a principal façade that addresses the adjacent street or communal accessway. That façade should be visible and attractive and should enhance the existing character of the local area or street context. When a building is exposed to public

view on all sides all visible parts of its façades should be carefully designed.

2. Ensure the façade displays an appropriate scale, rhythm and proportion through a hierarchical arrangement of elements. The façade should achieve this by:

   a) Avoiding monotonous repetition of the same unit.

   b) Having dimensions appropriate to the scale of the building and adjoining development.

   c) Establishing vertical and horizontal lines and modules with features such as party walls, exposed downpipes, setbacks, string courses, cornices, balconies, eaves lines and door or window heads.

   d) Clearly defining building entries.

   e) Incorporating a well-proportioned solid-to-void ratio of openings along the façade.

3. Elevations should be designed to express aspects of the building such as internal spaces, fronts and backs, entrances and orientation to sun and views.

4. Any apartment units should be well defined and expressed as a separate entity.

5. Integrate façade depth and shadow casting detail, including projecting elements, setbacks and expression of window reveals, to give visual richness and interest.

6. Respond to any locally relevant or important character. The design should either directly reference or contrast with this. Mimicking, or a pastiche, of character is never a good design response.

7. Coordinate details and integrate building service elements such as down pipes, grilles, screens, ventilation louvres and garage doors into the overall façade. Consider the position and attachment details of fixtures such as TV aerials in the early design stages.

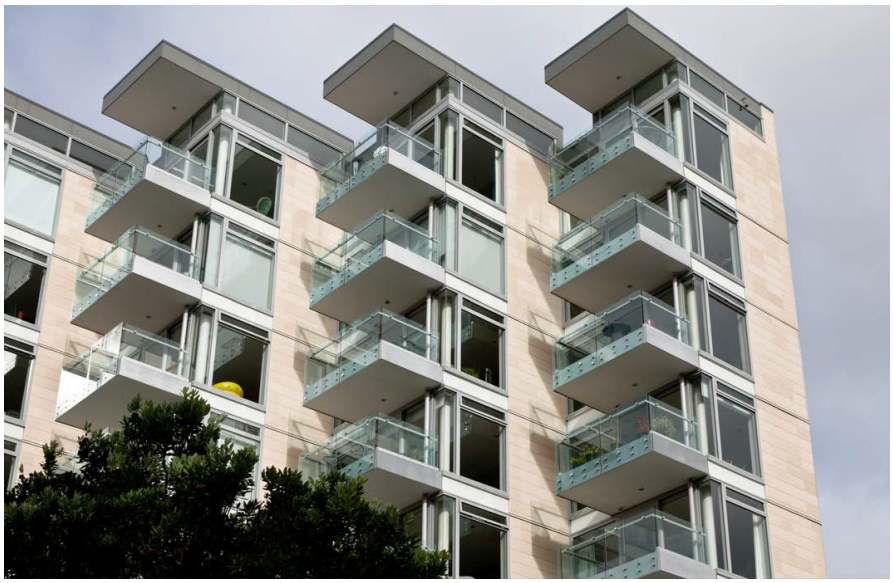
8. Incorporate elements such as sunshades, screens, fins and blades to control the admittance of sunlight where required.

9. Ensure the different elevations or façades respond to their particular orientation for optimal access to sunlight. Integrate any required signage into the façade design.

10. Balconies have the potential to enhance the design of a building. They should be designed to ensure the user will have a good level of privacy and to provide functional space. Cheap balustrade treatments should be avoided.

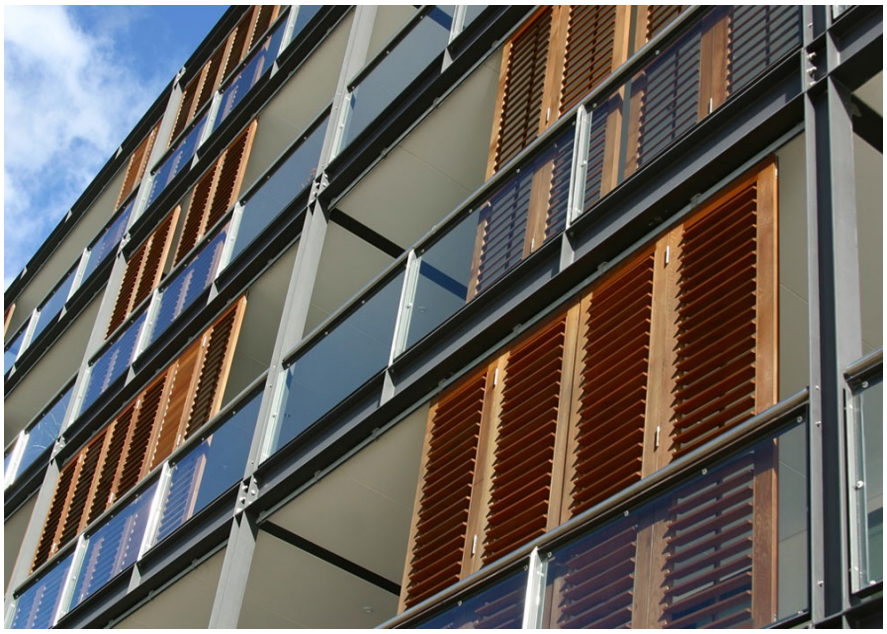
11. The roof should be integrated into the overall design of the apartment building and create interesting rhythms to reduce any visually dominant massing.

12. Apartment buildings on corner sites or adjacent to laneways or public open spaces should offer as much attention to detail on the secondary elevation as the primary street façade. Providing balconies and windows on the ends of rows is encouraged.

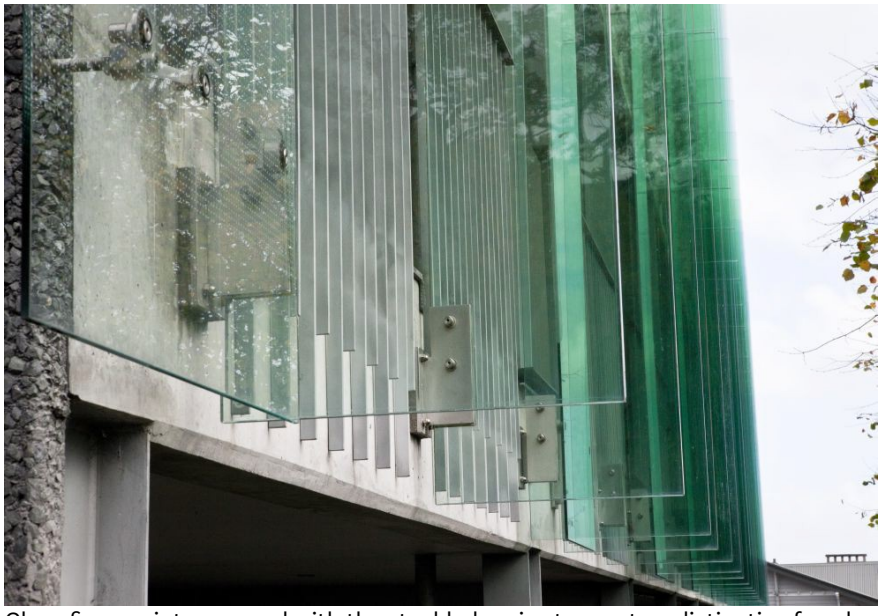


The staggered balconies create a strong vertical form to the street.

This building uses a simple material (brick) but it is used in an innovative manner to add shadow and depth to the façade.



All the building elements the balcony structure, the balustrade, the wooden louvres are coordinated and carefully detailed.



Glass fins are interspersed with the steel balconies to create a distinctive façade.

These sliding movable screens create an attractive point of interest for the building façade.

The movable screens in this building are located on long tracks. This means the whole façade changes on a regular basis as the residents move their individual panels as they need them.

7.4 Detailed building elements

Design outcome: The detailed parts of the apartment building contribute positively to the overall design.

It is important to design the building and all façades as a whole, not forgetting about the details.

7.4.1 Apartment building entries

Apartment building entrances establish a desirable and strong residential identity for the development, which contribute positively to the streetscape and integrate into the overall building facade design.

1. Entries should be designed as an integral part of the building and be clearly visible, address the street or driveway/accessway and provide shelter for people entering the building.

2. Make communal entries deep enough to be functional, allowing them to accommodate a person with shopping and/or a pram, as well as providing a suitably generous space for meeting and greeting.

3. Use a main communal entry plus multiple private ground floor entries where appropriate to animate the street edge and create a rhythm of openings along the street.

4. Car park and service entries should be recessed and made secondary to the main entrance.

5. Provide safe and secure access by providing a direct physical and visual connection between the street and building entry, and providing sheltered, well-lit and highly visible spaces in which to enter the building.

6. Provide separate entrances, especially from the street, for:

    a) Pedestrians and vehicles.

    b) Different uses, e.g. residential and commercial uses in a mixed-use development.

    c) Ground floor apartments (where possible).

    d) Recycling, waste collection and removal.

7. Make mailboxes safe and convenient for residents and ensure that they do not clutter the appearance of the development from the street by:

    a) Locating them adjacent to the major entrance in a common collection area and integrating them into a wall.

    b) Setting them at 90 degrees to the street, rather than facing it.

    c) Making the public side of mailboxes vandal-resistant and secure.

    d) Provide orientation signage that is clearly visible and in character with the building.

The entry is a functional, accessible, safe area with good shelter and lighting.

The entrance on the left provides a clear line of the sight from the street. The entrance on the right uses the overhead canopy and the sun to project the apartment number onto the door.

7.4.2 Materials and colours

1. Integrate material selection with the overall façade design. Materials are an important element to consider in responding to character and reinforcing or establishing sense of place.

2. Use a materials board, including colours, to illustrate materials, choice, and how they work together.

3. Consider how materials selection and use of colour can reinforce and tie together the primary building elements of the apartment building.

4. Provide a varied but co-ordinated palette of materials where appropriate.

5. Aim for low maintenance, robust materials that will weather well.

7.4.3 Verandahs

On most commercial streets in Auckland there is a longstanding pattern of verandahs projecting from buildings, providing weather protection to pedestrians and contributing to the local urban character.

Verandahs or canopies can reinforce the rhythm of multiple retail frontages, add to the architectural articulation of the buildings and allow opportunities for integrated signage to create a comfortable and visually rich pedestrian environment. This in turn attracts more people to use the street and brings associated economic benefits to local businesses.

1. Consider the local context and provide a verandah where there is, or is intended to be, continuous street front verandahs.

2. Individual gaps in an otherwise continuously sheltered footpath can adversely affect the attraction of the whole street block to pedestrians.

3. Carefully consider the height and depth of verandahs. Keep above minimum heights to allow for any planned lighting and signage, and to minimise potential damage from vandalism, however do not place canopies so high that they provide inadequate weather protection.

4. Keep back from road kerbs to avoid damage from high-sided vehicles that “lean in” because of street cambers.

5. Consider integrating well designed and robust signage into the verandah design. Well integrated signage in the edge or underside of a verandah reduces clutter from piecemeal signage and sandwich boards.

6. Consider the incorporation of lighting into the verandah. This might be both public space lighting for pedestrians as well as architectural lighting of the building facades themselves.

7.4.4 Signage

Well considered building design and wayfinding signage can provide an easily navigable development, while also contributing to the character of the development.

Commercial signage can quickly get out of control if thought is not given to its integration at the design stage.

1. Incorporate signage that is designed to support the architectural form, character and detail of the building and wider context.

2. Clearly define commercial signage zones during the design so that expectations are clear for new owners/tenants.

3. Establish clear rules for commercial tenants. Retail tenants/owners will always attempt to maximise their signage areas unless restrictions are in place.

4. Provide building signage that is readable from the street

5. Provide safety signage and lighting that integrates with the building design.It is important that the building designer controls the quality and placement of this equipment, which is often specified and supplied by subcontractors.

6. Name and number spaces clearly and consistently. Apply common-use terms in a clear and consistent manner.

7. Walk the route, walk it again and walk it in reverse. Do this with others of different ages and cultural groups to check their understanding. Make sure to consider the arrival points of different modes of transport to the development.

8. Select signage materials wisely. Hardwearing materials that stand up to wear, tear and general maintenance are essential in public and common areas. Flexibility of signage systems is important in certain situations, particularly where there are changing tenancies or occupants.

9. Aim for consistency of wayfinding signage throughout the development. Colour coding can make a significant difference when navigating a complex development; for example emergency signs, directional information and parking signs should each be represented by a different colour. Good colour contrast is important, especially for people with impaired vision.

7.4.5 Lighting

Artificial lighting around entrances and common areas can provide character, safety and usability without excessive energy use or light pollution.

1. Provide lighting levels in interior and exterior communal areas that support safety, ensuring all areas are sufficiently illuminated.

2. Reduce artificial lighting use and save energy by:

   a) using natural lighting where possible;

   b) providing a mix of lighting fixtures, including dimmable lighting, to allow for a range of light level requirements (for example, low background lighting supplemented by effect lighting as required);

   c) using separate lighting circuits for flexibility of use;

   d) using motion sensor and/or timed switches in common areas, doorways, entrances, car parks, and for additional outdoor security lighting.

3. Provide safety signage and lighting that integrates with the building design.

4. Engage a lighting designer to provide quality lighting solutions, and attractive exterior lighting around entrances and street facades.

7.4.6 Stud Height

1. Design the ground floor of a mixed use development to have a minimum floor-to-floor height of 4.5 metres. Note that this recommended dimension is given as a floor-to-floor height, as the finished floor-to-ceiling height will depend on the fitout.

2. Providing >3m internal floor-to-ceiling height at the ground level to enable commercial flexibility at ground and offering a more substantial and well connected street frontage.

3. Commercial buildings have increased service requirements. Dependent upon structure and service depths, floor-to- underside-of-slab heights of 3.5-4.0 metres might be needed to achieve minimum ceiling heights of 3.0 metres.

8.Internal Living Spaces

This section provides guidance on internal space requirements of residential apartments, including for kitchen/living/dining spaces, habitable rooms and storage, so that they meet the needs of occupants.

Best practice design should provide homes which are flexible and adaptable over time. Where relevant, this section also incorporates Universal Design principles. Universal Design refers to designs and spaces which are accessible to all.

This guidance references the New Zealand Lifemark Standards which have been created to achieve adaptable, accessible design solutions.

For further detailed information refer to the Lifemark website www.lifemark.co.nz

8.1 Living and dining spaces

Design outcome: That the fittings and furniture for the target occupancy level (two people per bedroom) can be accommodated to enable occupants to comfortably carry out normal daily activities.

Apartments tend to combine dining, kitchen and living areas into open plan layouts and this is often considered desirable by occupants. However, where apartments are being designed for specific cultural needs it may be preferable to separate the kitchen from living and dining or other combinations.

1. Living and dining rooms should have a minimum width of 3.8m. This helps to create functional spaces that can comfortably accommodate furniture and allow for easy movement through rooms.

2. When designing living and designing rooms consider how the space will function. Floor plans should show a proposed furniture layout. The arrangement of furniture should create spaces that are practical and pleasant to use. This includes:

a) A circulation space of at least 800mm around furniture and fittings.

b) Dedicated access and seating space of at least 1000mm between a dining table and a wall or fixtures.

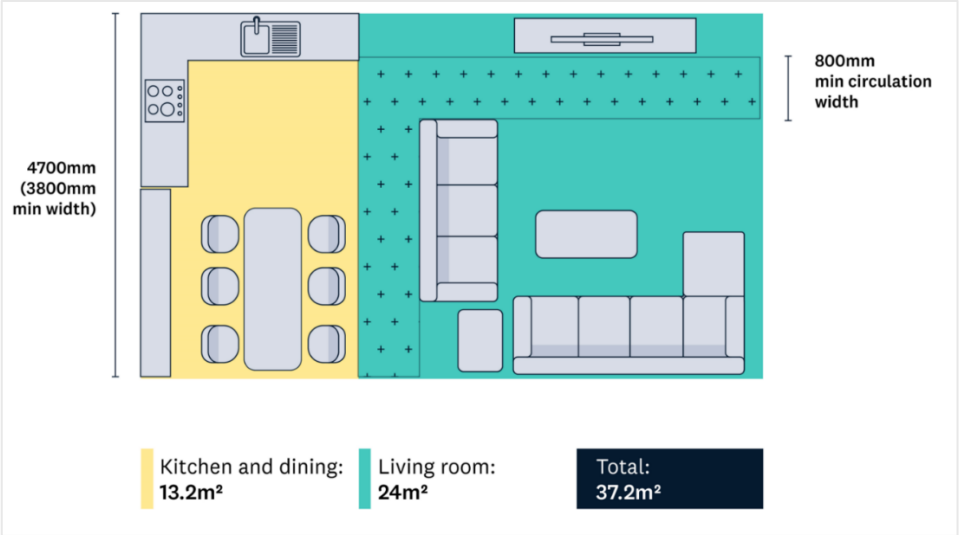
c) Dedicated seating space of at least 600mm if a dining table is alongside circulation space.

d) Access to bedrooms and bathrooms that avoids crossing through the middle of living spaces. Movement should be directed around the edges of these rooms.

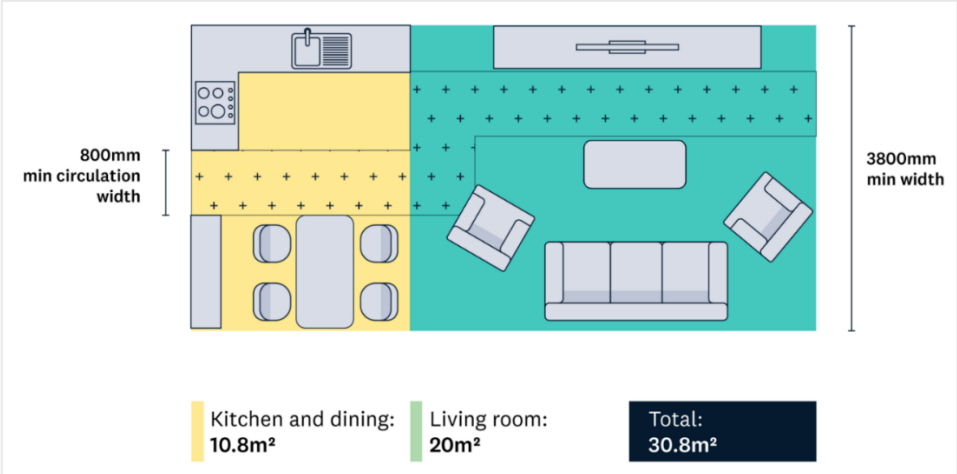
3. The size of furniture should also be considered when designing living spaces as this has an impact on the size of the spaces and circulation areas required. The type and size of furniture also affects the sense of spaciousness within the home.

4. All living spaces should have external windows. To maintain views to the outside while seated, living areas should have a maximum window sill height of 800mm above the finished floor level, while ensuring windows meet requirements for safety from falling.

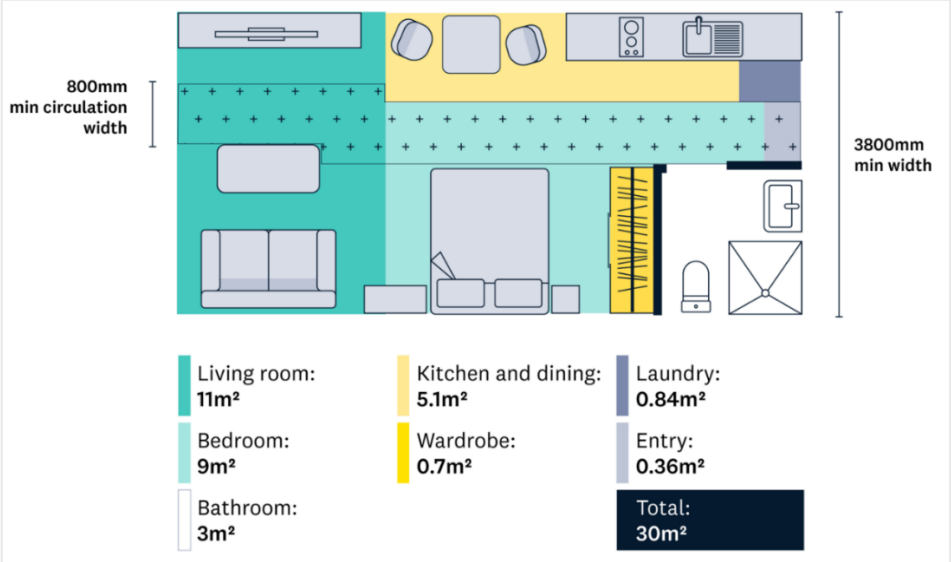
5. Apartments should conform to New Zealand Standard 4121 (Design for Access and Mobility) for wheelchair user access.



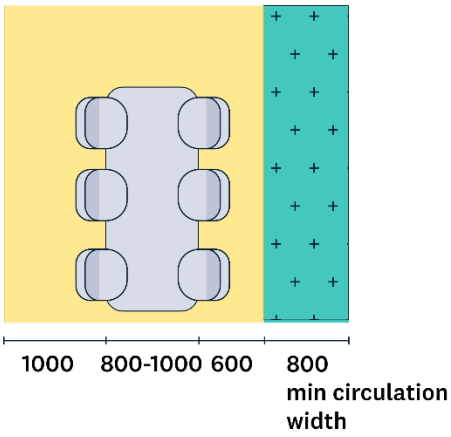
Minimum living / dining / kitchen room dimensions for a 2-bedroom dwelling.



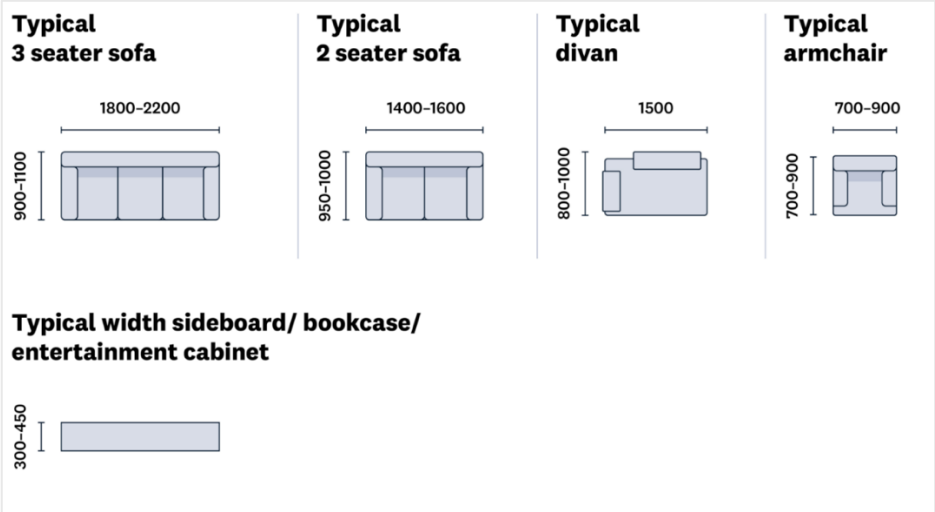
Minimum living /dining/kitchen room dimensions for a 1-bedroom dwelling.



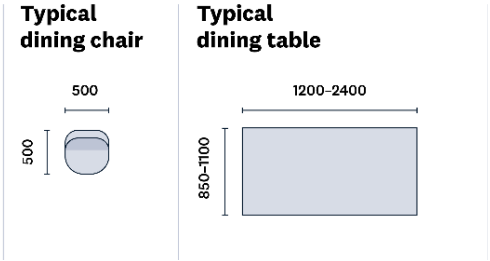
Minimum room dimensions for a studio dwelling.



Minimum space to enable access and circulation around a dining table



Standard size of living room furniture.



Standard sizes of dining room furniture.

Adequate space is provided around the dining table.

Kitchen, living and dining spaces are often provided in open plan rooms in apartments.

The apartments are functional, well organised and have enough space to meet the needs of the intended number of occupants.

8.2 Kitchens

Desing outcome: Kitchen space, fittings and furniture allow two people to circulate conveniently, carry out food storage, food preparation and cooking, serving, eating (if no separate dining area) and storage of separated waste.

1. Kitchens should have a 1.2m access space in front of the base kitchen units. This may be reduced to 700mm where the access space adjoins general circulation space (i.e. a 500mm deep overlap is acceptable).

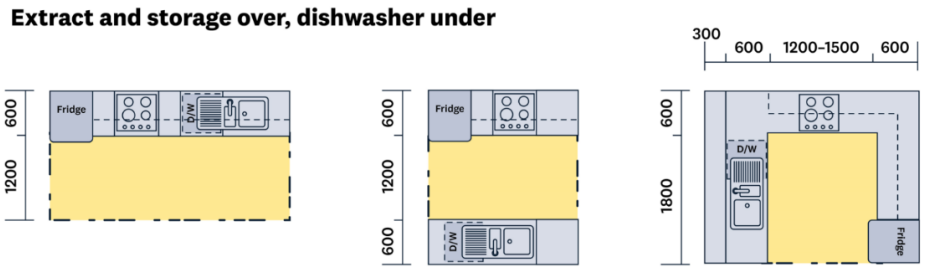
2. Kitchen design will vary according to the size of the apartment unit. A large, family unit has

different requirements to a more compact apartment. However there are some basic space requirements to be incorporated in a kitchen area, as illustrated below:

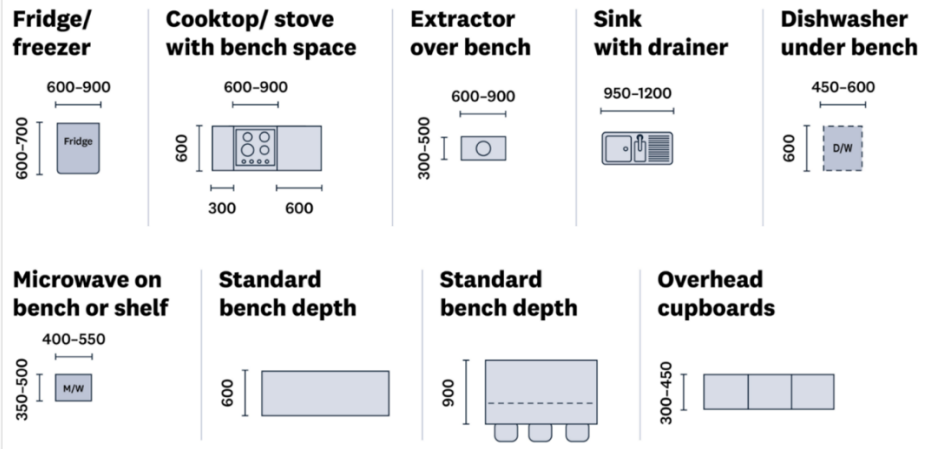
a) The standard bench depth should be 600mm.

b) Storage should be provided for:

- Food
- Crockery
- Cutlery
- Miscellaneous kitchen appliances
- Bowls, baking and roasting dishes
- Baking papers, wraps etc.



Kitchen layout with adequate circulation space.



Standard kitchen dimensions.

8.3 Bedrooms

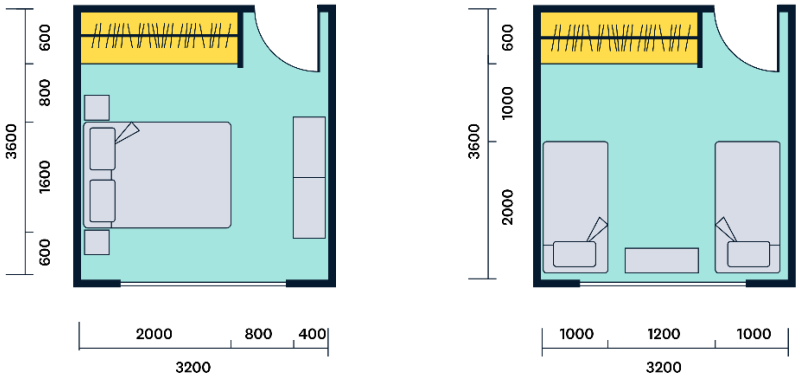
Design outcome: Bedrooms comfortably fit two people per bedroom, as well as their fittings and furniture.

1. Design the size of bedrooms to accommodate standard NZ furniture dimensions.

2. Two-person bedrooms should allow for at least one queen-size bed with circulation space on both sides of the bed.

3. For a two-person bedroom a 2.8m minimum dimension gives little plan flexibility and no room for drawers or a desk.

4. A 3.2m x 3.6m minimum dimension allows space for secondary furniture, and allows more flexibility of furniture layouts, as illustrated below:



5. Bedroom layout should provide the following minimums:

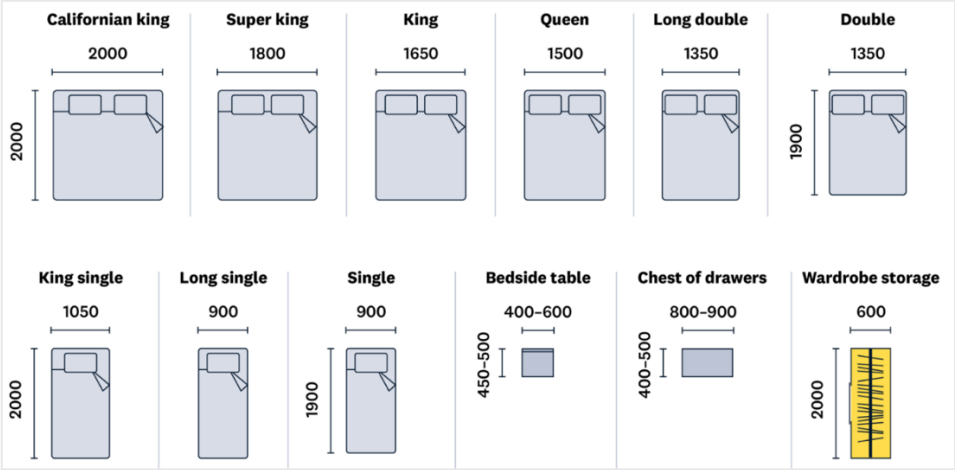
6. A bed space 2m long by 1.6m wide, or two bed spaces side-by-side each 2m long by 900mm wide.

7. An 800mm wide access space free from obstruction at the foot of the bed or beds - a total of 1200mm of side access space. If split around the two sides of one bed, there should be 600mm per side.

8. A wardrobe 2m long and 0.6m deep, with adequate access space in front (e.g. taking clothes from a wardrobe drawer or chest of drawers requires a space of 710mm to 990mm).

9. A desk or dressing table space of at least 800mm wide by 500mm deep with a 500mm wide access space in front.

10. An access space from the entry door to the foot of the bed that is no less than 800mm wide. Note: Access space requirements for different elements in bedroom spaces may overlap.



Standard bedroom furniture sizes (sizes vary slightly due to manufacturing tolerances, levels of padding and support / frame type).

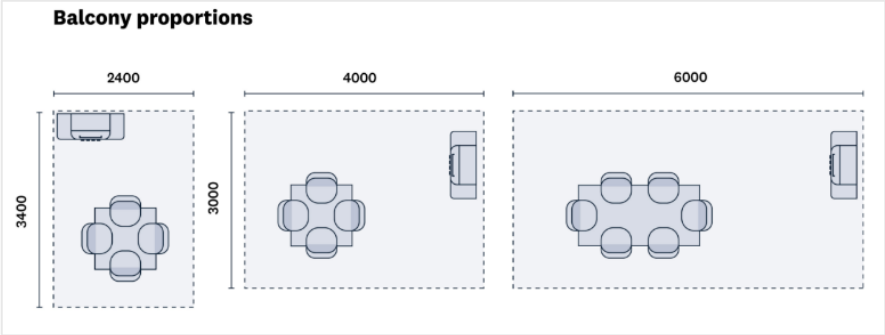
8.4 Decks and balconies

Design outcome: Apartments have a balcony, deck or paved area (patio) directly accessible from the living or dining room.

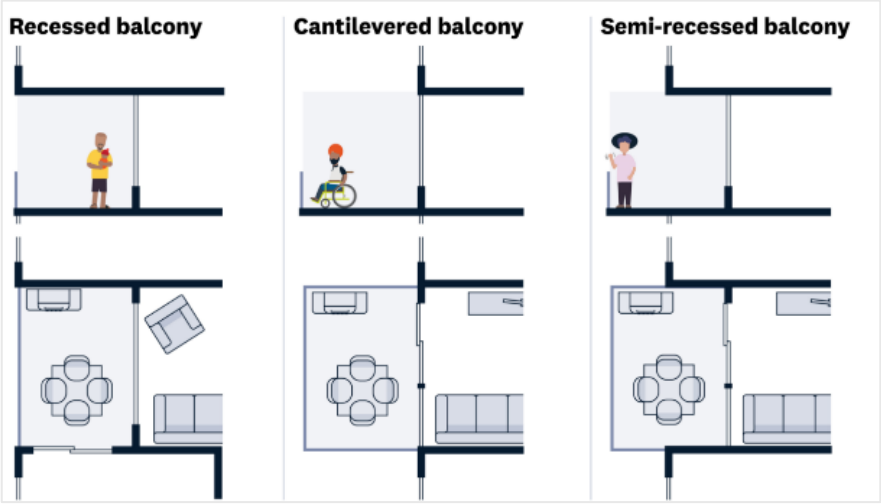
Access between living rooms and outdoor spaces provides private access to the outdoors and an opportunity for outdoor passive recreation. This can also be a major source of daylight and natural ventilation for the unit via large opening glazed areas.

(See also Section 5: Outdoor space).

1. The deck or patio should be directly accessible from the living or dining area.
2. Balconies, decks or terraces may be accessible from any other habitable room.
3. A balcony, deck or patio space should be large enough so that the equivalent of two persons per bedroom can circulate, sit, eat or barbeque safely and comfortably.
4. For apartments of four bedrooms or more, these spaces should be able to accommodate six people.
5. Balconies or patios should provide an area that can be screened to allow for clothes drying.



Balconies should be proportioned to the number of people and for their intended purpose.



Balconies can be cantilevered, semi-recessed or recessed into the building line. Recessing the space can offer a greater degree of privacy.

8.5 Storage and utility spaces

Design outcome: Adequate space is provided for storage of everyday household items and for utility activities such as washing and drying.

A lack of storage space is often cited as a major dislike of occupants in more compact residential units. Providing storage space for items ancillary to people's living needs, including everyday items such as cleaning equipment and occasional use items such as suitcases, is an important part of the design.

1. Suitable space for utilities (washing, drying, waste and recycling) should be designed into the apartment unit, and in a way that does not negatively impact on any habitable rooms. Utility areas should be well ventilated or otherwise allow for drying clothes.

2. Readily accessible space inside the apartment should be provided for equipment associated with children, such as pushchairs and bicycles.

3. The size of the storage space should be proportional to the number of occupants intended for the apartment unit.

4. Ideally, storage spaces are built-in as this allows for the most efficient use of space. They should be easily accessible and located in entry ways, hallways or living spaces. Storage space must be considered in the early stages of the design process.

5. Owner-supplied freestanding storage units should be allowed for in the apartment plan.

6. Consider providing storage outside/remote to the unit. This space is particularly important for storing larger items (sporting equipment etc).

7. Dedicated storage rooms or spaces within basements, or otherwise located close to car parking, are convenient for sports equipment as this is usually transported by car and may be difficult to move upstairs.

8. Bedroom wardrobes should be at least 600mm deep internally and 1.8m wide.
9. Minimum dimensions for an audio-visual unit should be 450mm deep and 900mm wide.

Storage is integrated into the design of the unit

9 Building Performance

This section provides guidance on how the building configuration and orientation can provide good levels of amenity through optimising sunlight access and natural ventilation.

9.1 Heating and cooling

Design outcome: Apartments are designed to maximise the ability of the natural environment to heat and cool the house.

Employing passive solar design principles including the building orientation and configuration of the units can make buildings both less expensive to run and healthier to live in. This means designing the building to maximise the ability of the natural environment to heat and cool the building and individual apartment units.

Healthy and efficient apartment design will require balancing heating from the sun, making sure heat does not leak out, while also ensuring the inside of the dwelling is naturally ventilated.

There are a number of tools available that provide guidance on how to design and build more sustainably. One of these is New Zealand's own Homestar www.homestar.org.nz tool which has been developed by the New Zealand Green Building Council www.nzgbc.org.nz in collaboration with BRANZ www.branz.co.nz to enable homeowners and house builders to evaluate and benchmark the sustainable performance of their homes.

1. Locate living areas and bedrooms towards the north, east or west side of the house, to

maximise the sun for heating and daylight.

2. Locate bathrooms and / or service areas internally or on the southern side of the dwelling as these spaces require less heat and daylight than living areas and bedrooms.

3. Provide eaves, louvres and screens on the outside of the building to reduce the direct sun during summer and allow sun during winter.

4. Add extra insulation to lower heating and cooling costs - insulation costs nothing to maintain or run.

5. Avoid recessed down lights that require large insulation clearances as these can compromise ceiling insulation. Use lighting or down lights that are designed to allow insulation.

6. Use double glazing to reduce heat loss through windows. This will also reduce condensation, mould growth and noise. Well fitted drapes are also effective at reducing heat loss.

7. Design for summer shading and glare control by:

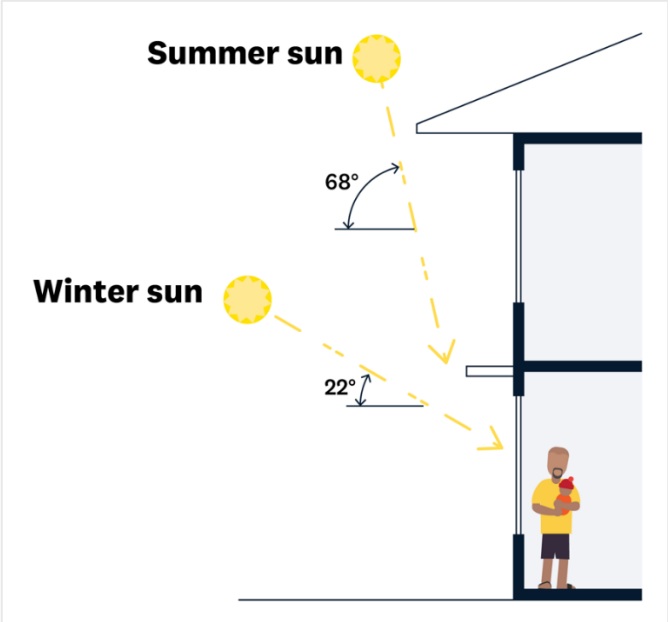
    a) Using shading devices, such as eaves, awnings, colonnades, balconies, pergolas, external louvres and planting.

    b) Providing eaves, "eyebrows" and external horizontal shading to north-facing windows to manage the high summer sun.

    c) Providing vertical shading to west windows to manage the low western sun.

    d) Enabling residents to adjust natural lighting to suit their needs.

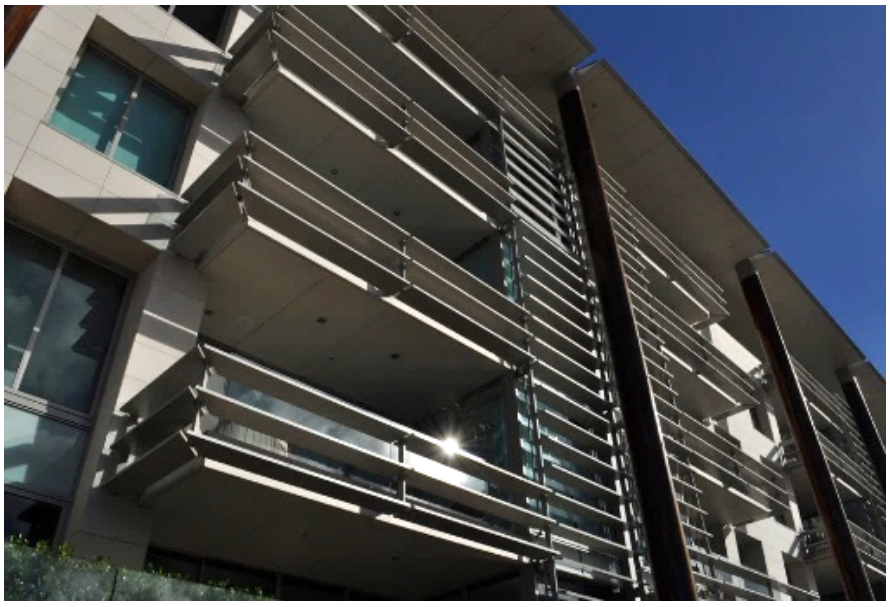
Deep recessive eaves, mechanical louvers and planting prevent overheating



Design eaves for different sun angles.

Rotating vertical louvres allow residents to modify and reduce passive solar gain.

Sliding screens allow residents to adjust natural lighting to suit their needs.


The roof overhangs and horizontal louvres help as shading and privacy devices for north facing apartments.

9.2 Natural ventilation and daylight

Design outcome: Sun, light and air move through the house through natural ventilation and solar movement.

Ventilation is important as many health issues are connected to damp conditions. As well as being environmentally advantageous, natural ventilation is free. The cost of artificial ventilation over the long term can be considerable.

1. The depth of dual aspect apartments should not exceed 14m to allow natural light and ventilation.

2. Dual aspect buildings that are greater than 14m in depth should be at least 4.5m wide to

avoid deep, narrow layouts.

3. Dual aspect buildings greater than 14m should be able to demonstrate how internal daylighting and natural ventilation will be achieved. Artificial light and mechanical ventilation will be required.

4. The depth of single aspect apartments should not exceed 8m. The back wall of a primary living space (kitchen, living or dining) should be no more than 8m from a window.

5. Provide windows on external walls to make all habitable rooms, including studies, naturally lit and ventilated.

6. An enhanced ceiling height greater than 2.4m may provide superior daylighting and ventilation.

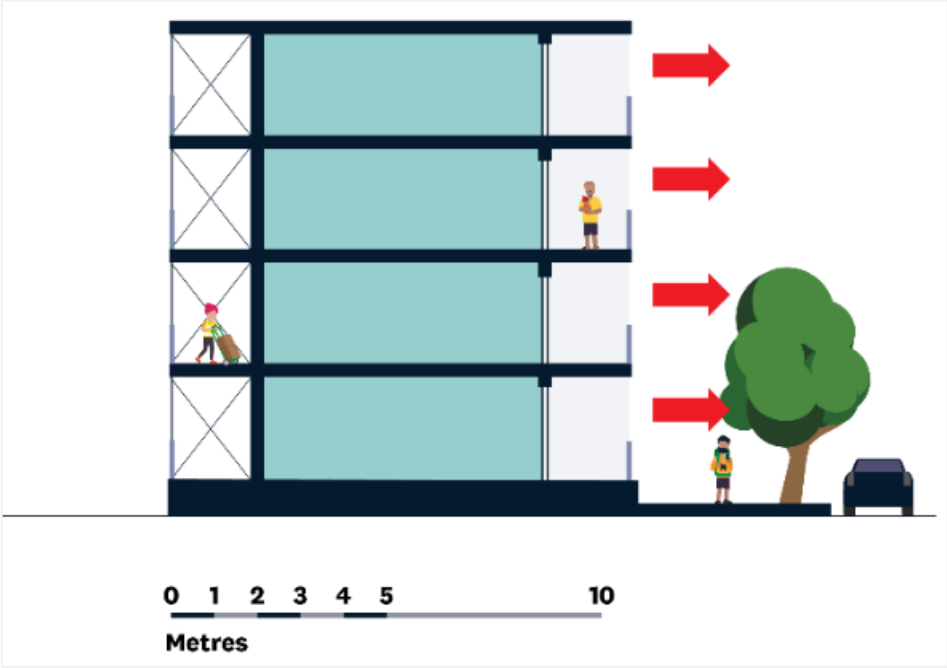
7. Stack-ventilation for double-level apartments moves air vertically up through the unit and ventilates it through a high window. Design any double-level apartments to utilise the 'stack effect' to optimise how natural air movement can cool the dwelling. It is also possible to use the action of hot air rising and cool air falling to redistribute heat through the double-storey apartment.

8. Providing windows on two walls of a room will allow for cross-ventilation.

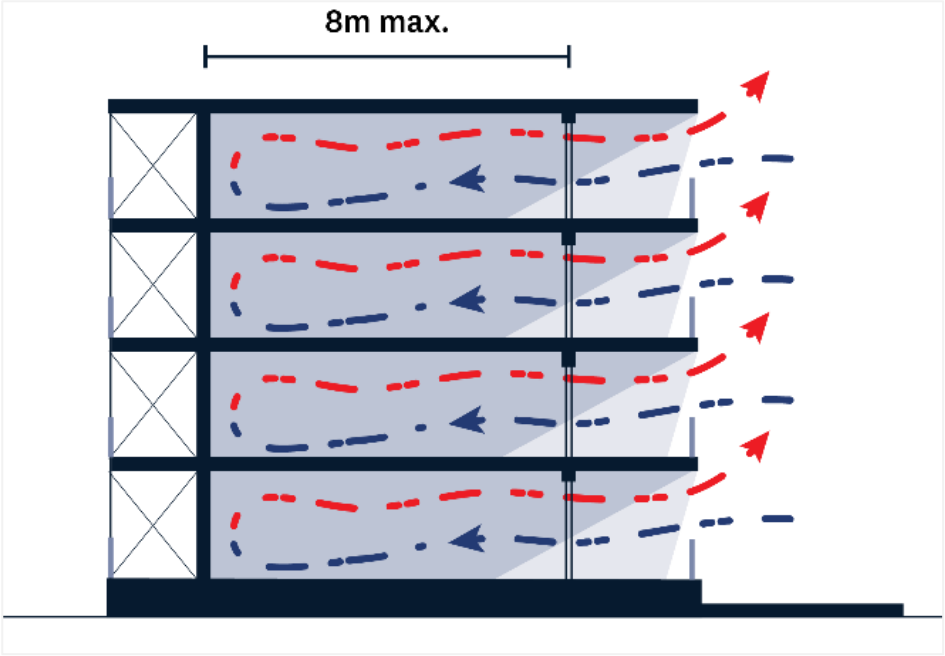
9. Use fans as a way of circulating cool air in summer, and warm air in winter.

10. Position windows and doors to take advantage of cooling summer breezes and avoiding winter winds. The dwelling should be protected against the cold south westerly wind and opened to the warmer north-easterlies. Consider enclosable balconies on upper levels of apartment buildings which are exposed to Auckland's prevailing winds.

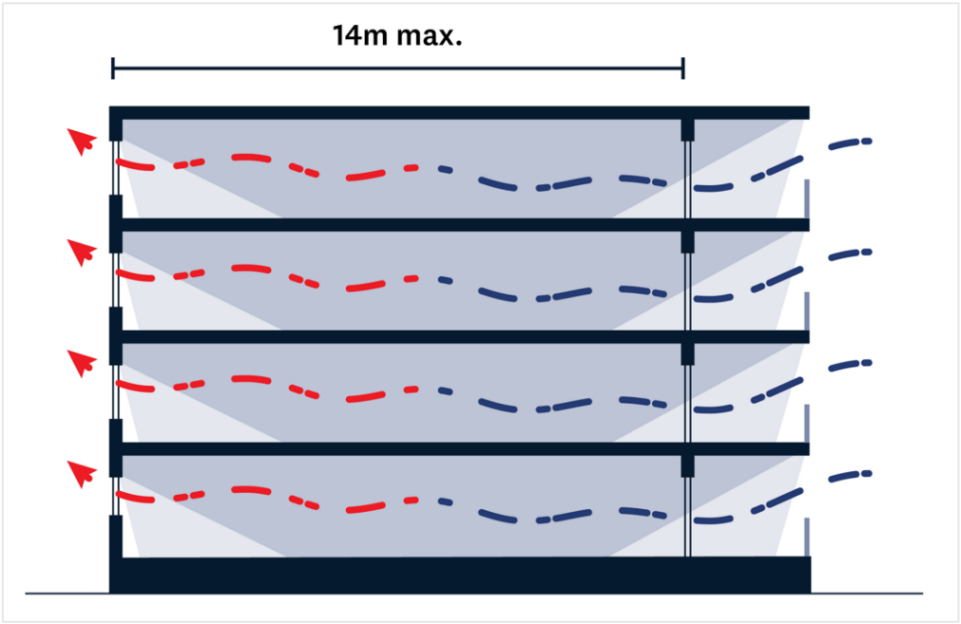
11. Ventilate all bathrooms and kitchens to the outside to prevent a build-up of moisture. Natural ventilation is preferred.



The preferred depth of rooms in single aspect apartments is less than 6-8 metres to achieve adequate natural light.



In single aspect apartments a maximum depth of 8m can allow natural ventilation to occur.



Dual aspect buildings should be no deeper than 14m to enable effective natural ventilation and daylight access.

For any questions or feedback, please contact us through our email address:
AKDesignmanual@aklc.govt.nz

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