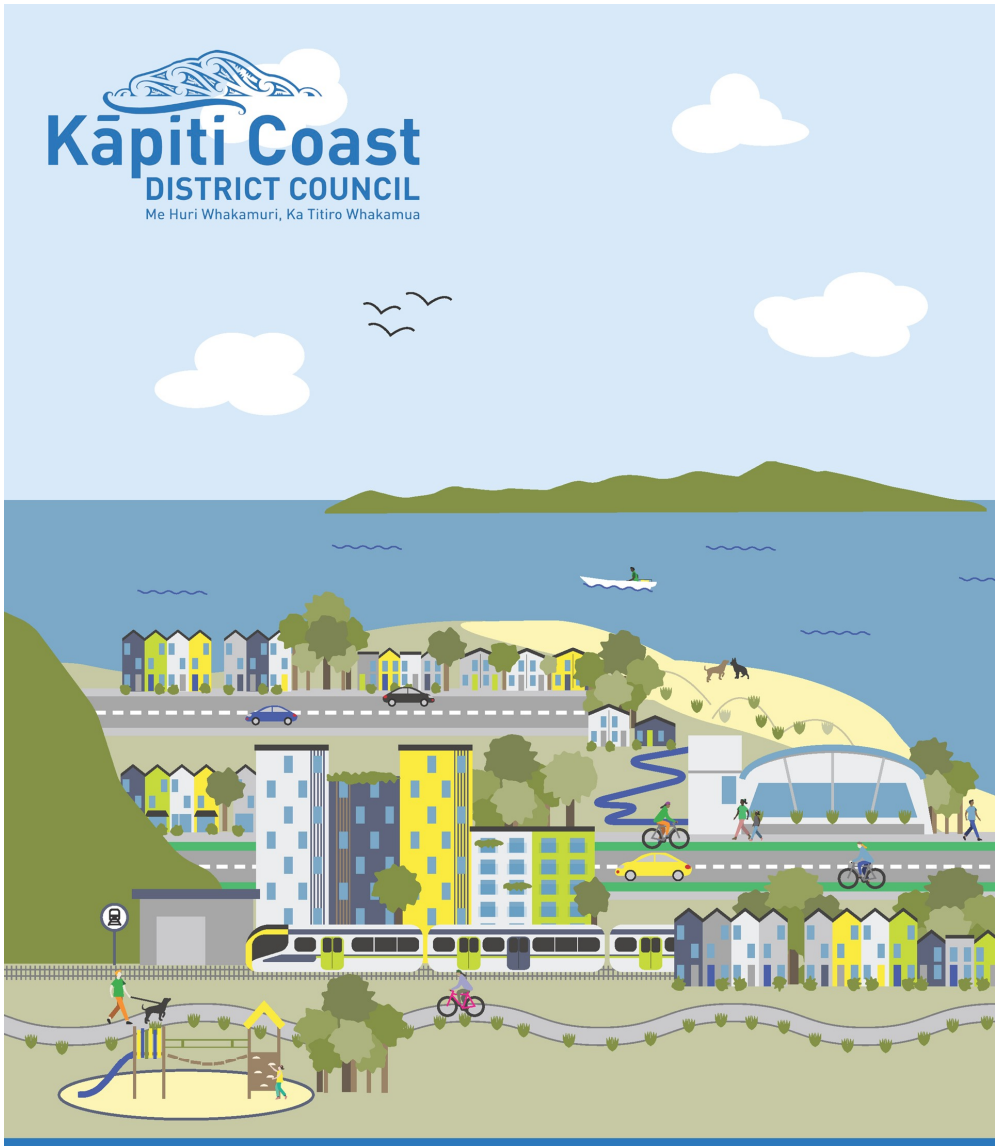
Appendix 24

Residential Design Guide



- Storage, waste and service areas

6.2 Built Form and Character

- Building mass and height
- Materials and façade articulation
- Entrances
- Responding to context
- Building diversity

6.3 Amenity and Sustainability

- Landscape Treatment
- Sunlight and daylight
- Energy efficiency
- Privacy and safety

1 Purpose

The purpose of this design guide is to provide urban design guidance to inform the design of high quality residential development in the Kāpiti Coast District. To achieve this purpose, the design guide outlines a series of principles that promote high-quality design, and outlines the matters that need to be considered in order to meet these principles.

Successful residential development meets the needs of those who use or live within the development, while contributing positively to the surrounding environment and the environment of the District as a whole. This design guide is intended to help achieve this outcome.

Why is a design guide necessary?

There is a heightened emphasis on the need for higher density residential development in order to meet the demands of a growing district within a finite urban area. As the density of urban areas increases, high quality urban design becomes an important tool to ensure that the development of buildings, spaces and places provides for the demands of a growing population, while ensuring that the impacts of development on amenity and other environmental values within and around the development are appropriately managed through methods that are integrated into the design of the development.

Who is this design guide for?

This design guide is for anyone who has an interest in the design of multi-unit residential development. This will include:

- Land owners and developers looking to develop high quality residential developments;
- Resource consent applicants looking to demonstrate that their application meets relevant objectives and policies within the District Plan;
- Council consent officers considering resource consent applications;
- Neighbours or other parties affected by development.

Where does this design guide apply?

This design guide applies to residential development within the General Residential Zone.

2 Design Guide Structure

This guide does not prescribe development requirements but instead supports and complements the design outcomes sought for residential development in the Kāpiti Coast District Plan. It outlines the key features that characterises intensive residential development and offers practical advice to guide such development using good practice principles and relevant examples.

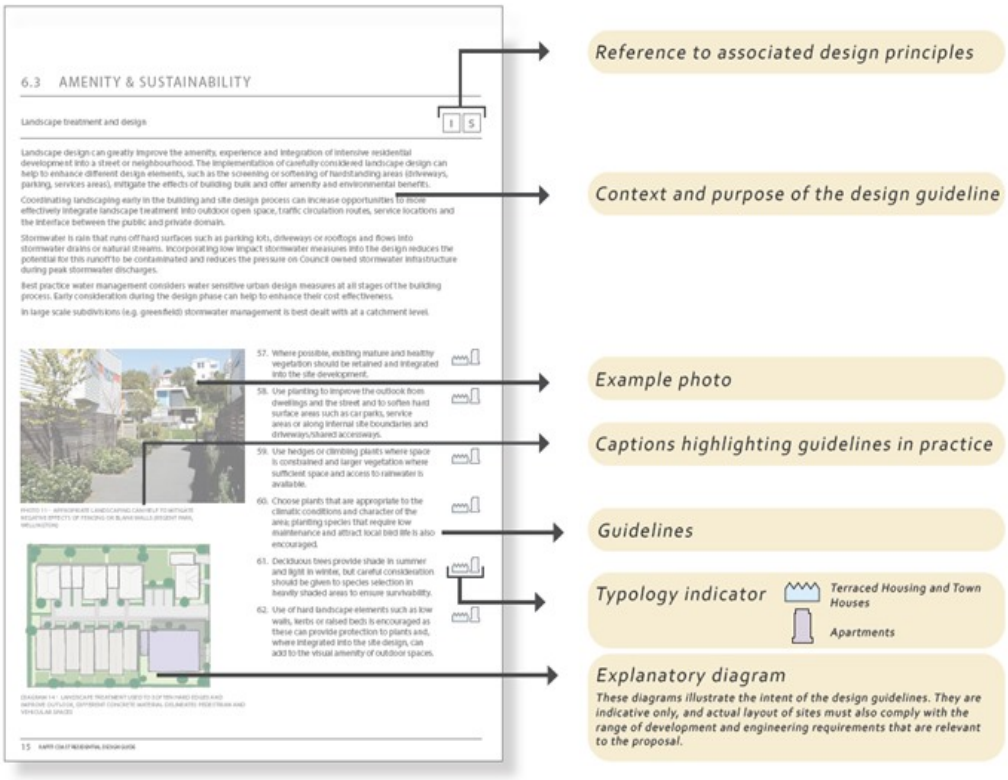
Key design considerations which help achieve the design principles are divided into 15 contributory elements split across three themes as follows:

- **Site Layout** covers the design elements that are related to effects of development at a site scale.
- **Built Form & Character** covers elements related to the appropriateness of the building design.

- **Amenity and sustainability** cover the elements that contribute to living comfort and environment.

Photographic examples and indicative diagrammatic interpretations provide supporting examples throughout the document, which show how these considerations can be met.

The guidelines apply to residential development in the General Residential Zone. As the guidelines are based on a relatively universal set of urban design principles, most are applicable to residential development at a variety of scales.



3 Using this Guide as a Part of a Resource Consent Application

The district plan contains a number of objectives and policies that will be relevant in the context of higher density residential development. This design guide is intended to assist with the consideration of whether a development is consistent with these objectives and policies. The design guide is also referred to as a Matter of Discretion within a number of District Plan rules.

Preparation of a Design Statement

Where this design guide is relevant to a resource consent application, it is expected that a Design Statement will be included within the resource consent application to explain how the proposal meets the principles and guidelines contained within the design guide.

The design guide aims to recognise that all development proposals will be unique and that only those guidelines that are relevant to the site, activity or development proposal should be applied. The Design Statement provides applicants with the opportunity to explain which guidelines are relevant to the proposal, and how they have been applied.

A Design Statement will include:

- A description of the proposal;
- An overarching statement that explains how the proposal meets the design principles outlined in the design guide;
- A description of how the proposal meets each relevant design guideline;
- Where the proposal does not meet a design guideline, a description of:
  - the alternative approach taken;
  - why this is appropriate; and
  - how the alternative approach enables the proposal to meet the overarching design principles.

4 Typologies

Terraced or multi dwelling housing

Three or more dwellings of two or three storeys each having separate access at ground level and private open space. Dwelling frontages generally align with an adjacent public road or internal street.

Walk-up apartments

A building, with one or more entries, that contains three or more units up to a maximum of four storeys. These units can have (a combination of) private and/or shared open space.

High density / apartments

A multi-storey apartment building or group of buildings of 4 to 6 storeys that contains multiple units, often with shared open space and the potential for mixed-use on ground floor. Apartments can be accessed directly via a lift or stair well, and from a shared corridor which connects to it.

5 Design Principles

The way we design buildings and the relationship they have with the street and surrounding neighbourhood has an influence on the way we live, work and meet. Good design provides neighbourhoods that are attractive and comfortable living environments. The following principles have been developed to promote high quality design that contributes to the existing and future urban environment of the Kāpiti Coast. These principles describe the design outcomes that are sought to be achieved by the design guidelines.

V	PROVIDE FOR VARIETY AND CHOICE
	» Ground floor uses contribute positively to the street and public realm » Provide opportunities for residential activities which are successfully integrated with commercial use » Provide for a range of dwelling sizes and types » Provide clear definition between public and private spaces, and clear building entrances

I	INTEGRATE WITH PUBLIC REALM AND SURROUNDINGS
	» Improve connectivity to town centres and local public spaces by creating through-site walking and cycling links where possible » Respond to the surrounding environment and open-up developments to front public spaces and amenities » Consider the existing environment (built and natural) when designing to the anticipated level of residential intensification » Consider the potential for development on neighbouring sites » Provide for passive surveillance of the public domain through windows and building orientation » Create an environment that enables, supports and encourages sustainable transport behaviour

A	PROVIDE APPROPRIATE BUILT FORM AND DESIGN
	» Achieve bulk, massing and scale appropriate to the anticipated design patterns of the surrounding neighbourhood » Use design features such as modulation, articulation, building materials and colour to integrate

	the built form into the surrounding area and provide visual interest » Ensure built form and design enables accessibility that provides for the day-to-day living and needs of future residents

S	CREATE A COMFORTABLE AND SAFE ENVIRONMENT
	» Provide accessible external and internal design that caters for people of all ages and abilities » Provide amenity through a balance of green, private and communal spaces » Orientate outdoor living spaces and buildings to maximise solar benefits » Provide for housing that serves the needs of different communities, ages, budgets and lifestyles

DESIGN PRINCIPLES	PROVIDE FOR VARIETY AND CHOICE	INTEGRATE WITH PUBLIC REALM AND SURROUNDINGS	PROVIDE APPROPRIATE BUILT FORM AND DESIGN	CREATE A COMFORTABLE AND SAFE ENVIRONMENT
	V	**I**	**A**	**S**
SITE LAYOUT				
Sitting and street frontage	o	o	o	o
Access and (bicycle) parking	o	o		o
Outdoor living space	o	o	o	o
Storage, waste and service areas	o			o
BUILT FORM AND APPEARANCE				
Building mass and height	o	o	o	
Materials and façade articulation		o	o	o
Entrances	o	o		o
Responding to context	o	o	o	
Building diversity	o		o	o
AMENITY AND SUSTAINABILITY				
Landscape treatment		o		o
Sunlight and daylight		o	o	o
Energy efficiency			o	o
Privacy and safety	o	o	o	o

6 Design Guidelines

6.1 SITE LAYOUT

Siting and street frontage V I A S

The configuration of a development on a site and its relation to adjoining public space is an important

consideration to ensure good amenity and reduce overshadowing and privacy effects on adjoining sites. Having a defined front and back, as well as a clear delineation between public, semi-public and private spaces contributes to the legibility of the site and street.

The setback and frontage of a building also contribute to a socially active and safe environment, while the front yard provides additional amenity for residents and a setting for the dwelling.

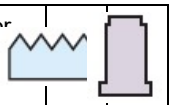
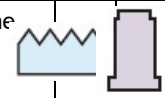
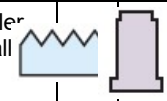
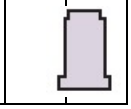
1. Buildings should be orientated with the front of the dwelling(s) facing the street or public space.	
2. Dwellings should be configured so that there are habitable spaces located at the front of the building, with windows or balconies overlooking the street or public space.	
3. Public, semi-public and private spaces should be clearly defined through planted landscaping, hard landscaping or fencing.	
4. Avoid tall solid fencing between outdoor spaces and the street or public spaces.	
5. Where a private outdoor living space fronts a street or other public space, a taller fence may be appropriate, but this should be designed to be at least 50% visually permeable.	
6. Where a building of four or more storeys is built to the street edge, consider setting back the upper storeys to maintain a human scale at ground level and increase privacy for upper storey units.	

Diagram 1 - Frontage and building orientation

A. Dwellings should have a clear frontage that addresses the street/public space along with a clear area to the rear
B. A clear delineation between private and public space
C. Front yard acts as a buffer between private and public space
D. Access directly from the street with a visible house number and letter box

Diagram 2 - Ground floors designed to support a human scale at street level

A. Upper storeys are set back to reduce the perceived density on street level
B. Landscaping in between buildings increases an intimacy and creates a softer people orientated space

Access and (bi)cycle parking		V	I	S

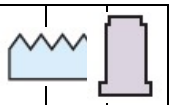
The location, type and design of pedestrian and vehicle access can have a significant bearing on the streetscape, site layout and building design.

Circulation networks should be legible and provide a safe environment for pedestrians and cyclists.

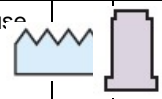
Garages should be sensitively integrated into any development as they can have a significant impact on its overall layout and design as well as on the associated streetscape.

Considering alternative modes of transport and maximising opportunities for cyclists (e.g. bicycle parking) can also help ease pressure on car parking. A lack of sufficient bicycle storage opportunities can result in clutter and inconvenience for residents, which can detract from the amenity and usability of the development.

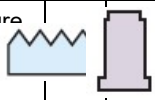
7. Bicycle storage should be secure and covered, and integrated as part of the building design.



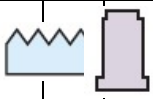
8. If bicycle storage is provided as an accessory building, it should not affect the use and/or accessibility of outdoor living space.



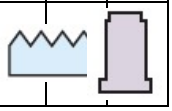
9. If on street parking is provided it should not conflict with active mode infrastructure (e.g. walking, cycling).



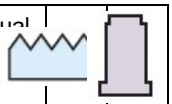
10. Minimise the number of additional vehicle crossings provided for any new development.



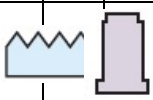
11. Locating off street at grade parking between buildings and the street is discouraged.



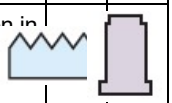
12. At grade parking should be screened landscaped to provide amenity, reduce visual dominance, and be designed to offer safe and comfortable pedestrian routes.



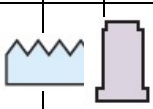
13. Pedestrian access routes should be designed to be universally accessible to people of all ages and abilities.



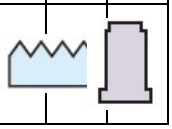
14. Pedestrian access should be differentiated from vehicle access through variation in surface treatment or texture. Preferably, pedestrian and vehicle access should a be separated by a buffer such as vegetation or a raised surface.



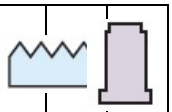
15. Multi-unit developments on large or deep sites should be accessed from new streets and lanes with multiple access points, rather than long driveways with a single access point. The frontage of dwellings along internal streets should be treated in a similar fashion to frontage onto a public street.



16. Large developments with multiple street frontages should create pedestrian connections between streets. A fine grained block pattern encourages more intensive pedestrian use and enables the development of comfortable and sheltered public open spaces or walking routes.

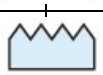


17. Internal streets or rear lanes should be designed to be safe for active modes of transport (e.g. pedestrians, cyclists) and contribute to the amenity and attractiveness of the site. This can be achieved by incorporating landscape elements, bollards and variation in paving treatment into the design.



18. Any garaging forming part of an overall development should be designed to be consistent with the style of the dwelling(s).

19. Garages and carports should be set back from the front façade of any dwelling t minimise visual dominance and increase visibility of main pedestrian entries.



20. Garages, carports and associated driveways should:

    a. reflect the rhythm and consistency of the street frontage
    b. be located to minimise interruption of pedestrian movements along footpaths

Photo 1 - Sheltered and screened bicycle parking

Photo 2 - Landscape treatment incorporated into car parking (Hobsonville, Auckland)

Photo 3 - Landscape treatment and rain gardens as part of parking lot

Diagram 3 - On site car parking integrated into design

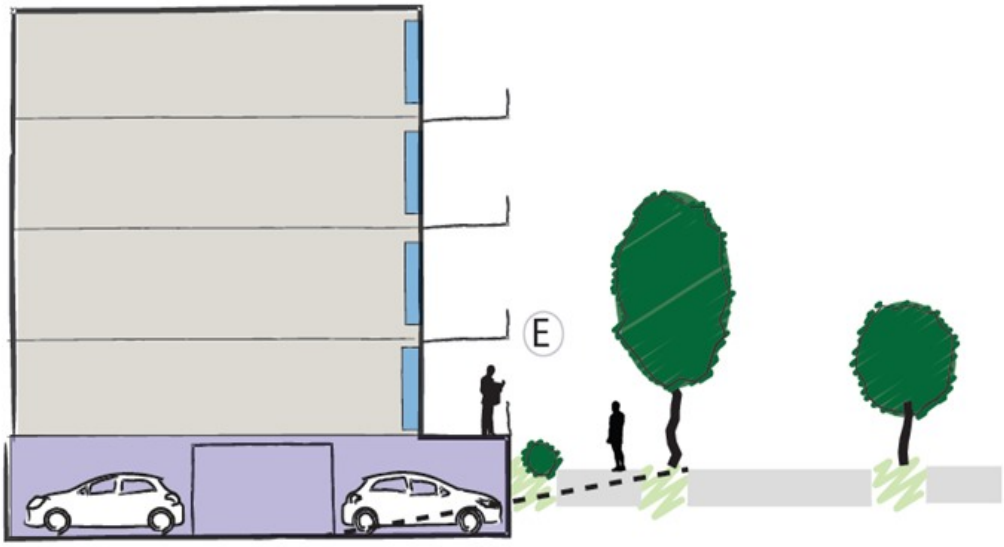


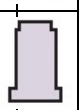
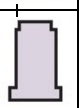
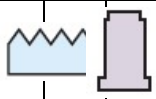
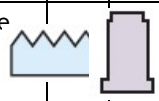
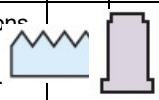
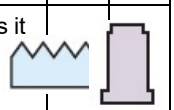
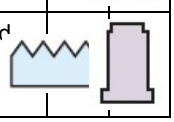
Diagram 4 - Underground car parking maximises positive street interface

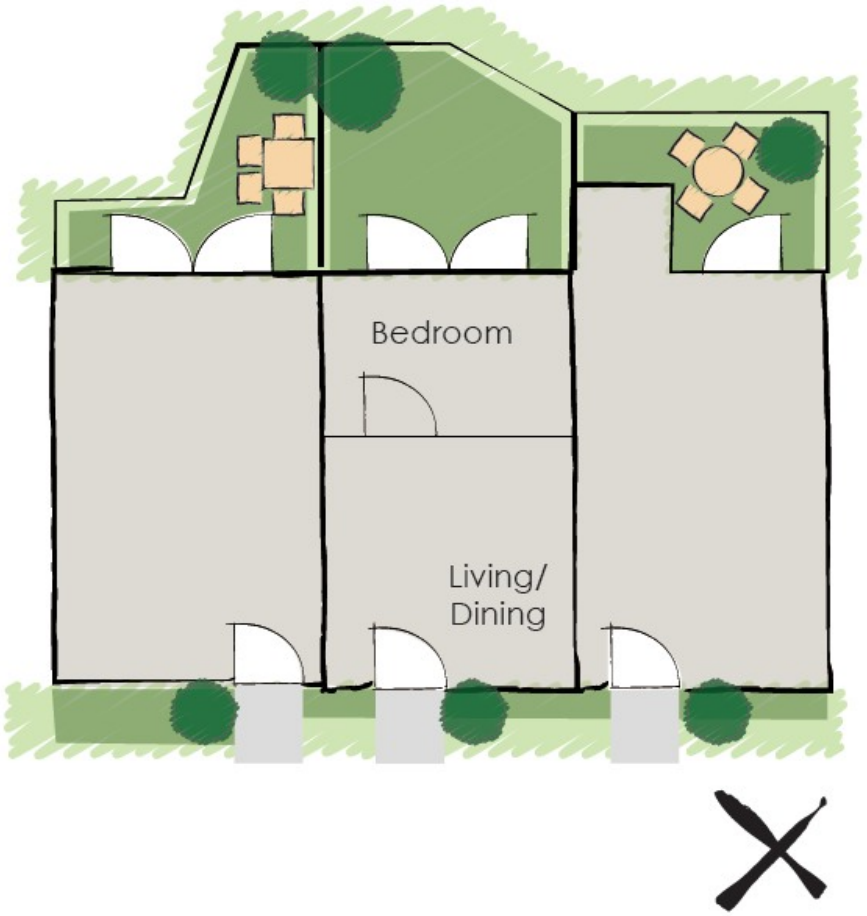
A. Clustered car parking allows for larger pockets of landscape treatment to soften outlook onto hard surfaces
B. Clear separation in surface treatment between driveways and pedestrian access
C. Where garages aren't provided, secure, covered bicycle parking provides safe and convenient storage
D. Communal rubbish storage screened and covered for amenity and odour
E. Slightly elevated outdoor area allows for privacy, passive surveillance over the street and underground garage ventilation

Outdoor living space	V	I	A	S

Outdoor living space is an important consideration when designing intensive residential developments and should be considered early on in the design process to ensure it is an integral part of the development.

Higher densities often result in a reduction in the amount of outdoor space available to residents, influencing the sense of privacy and level of individual amenity experienced. Outdoor space allows residents to be able to enjoy a range of activities, express personal and creative identity around their property and, in the case of communal open space, provide for casual social interactions.

21. Provide direct access from primary habitable living spaces (such as lounge or dining areas) to private or communal outdoor spaces (or balconies in the case of upper floor apartments).	
22. Provide balconies as outdoor living space where access to ground floor private open space is not possible.	
23. Higher density developments are encouraged to consider use of the roof as communal outdoor living space.	
24. Outdoor spaces should offer privacy to users, and be orientated to maximise sunlight access.	
25. Consider the need to provide for summer shade, through methods that integrate with the design of the space such as tree cover, eaves, verandas or balconies.	
26. Provide for functional outdoor living space by carefully considering the dimensions and location of the space. Wide or square spaces (i.e. ones that allow for the placement of outdoor furniture) are more efficient than long and narrow spaces.	
27. Include screening devices and strategic landscaping to increase privacy, limit outlook into adjacent private properties or prevent the space from being directly overlooked by neighbouring properties.	
28. The size of any communal space should correspond to the number of residents it is intended to serve and be equally accessible to use by all units. It should also encourage opportunities for social interactions between users by incorporating seating, barbecue, sporting or play equipment into the design.	
29. Provide screening where unit balconies adjoin to increase privacy.	
30. Solid screening should be considered for any balconies large enough to be used for storage of bicycles and/or large items.	


Bedroom
Living/
Dining

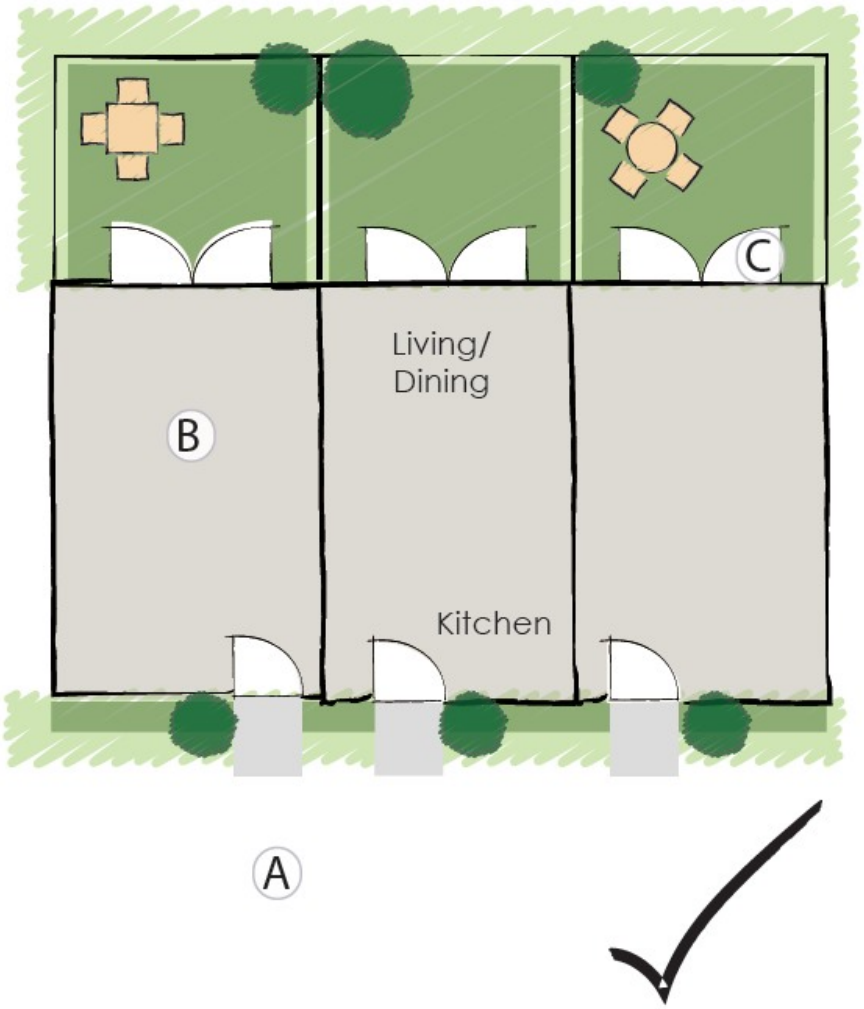


Diagram 5 - Ensure that outdoor living spaces are usable and of an appropriate size

A. Good access from indoor to outdoor, with integration of ramps into the design where necessary
B. Where possible link indoor habitable spaces with outdoor space
C. Practical dimensions that allow for recreation or seating

Storage, waste and service areas			V	S

Integrating storage, waste and service areas into the overall site design can have a beneficial effect on the amenity and quality of a development. Considering how waste is managed, stored and collected, as well as the location of storage and service areas, helps to minimise visible clutter that could create lower standards of amenity and poorer impressions of an area.

31. Consider providing outdoor space for the storage of recreational or maintenance equipment, or other large household items. Outdoor storage space should be proportionate to the size of the dwelling.
32. Ensure that waste and service areas do not restrict on-site pedestrian or vehicle movement, create potential health and safety hazards, or create nuisances for adjacent dwellings or outdoor living spaces.
33. Integrate waste and storage areas into the building design and ensure that they are of a sufficient size relative to the number of units.
34. Waste areas should be able to accommodate all waste bins and be directly accessible to the collection area.
35. Position storage and service areas in locations that are obscured from public view.
36. Areas set aside for wheelie bins or rubbish storage and collection should be integrated into the development in a way that is visually discrete and be located away from commonly used areas to prevent the impact of odour or leakage. On sites where access to the side or rear of a dwelling is limited, locating the rubbish storage area to the front of the site may be appropriate where visibility from the street is mitigated by appropriate landscaping or screening.
37. Communal storage spaces should be accessible from common circulation spaces such as hallways or laundry rooms.

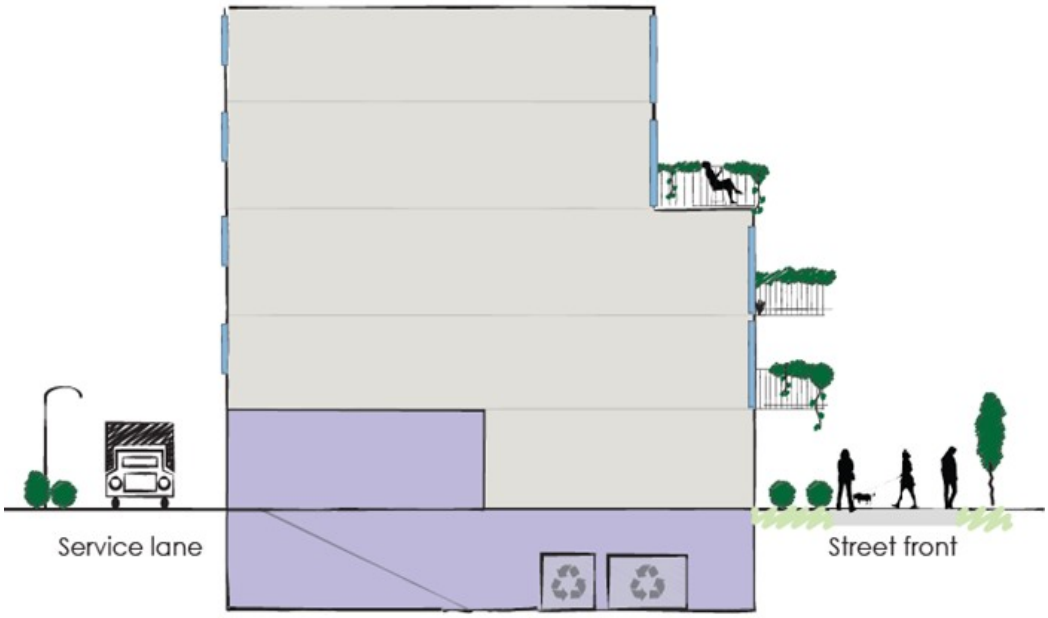


Diagram 6 - Service areas included in the design, away from people-focussed spaces

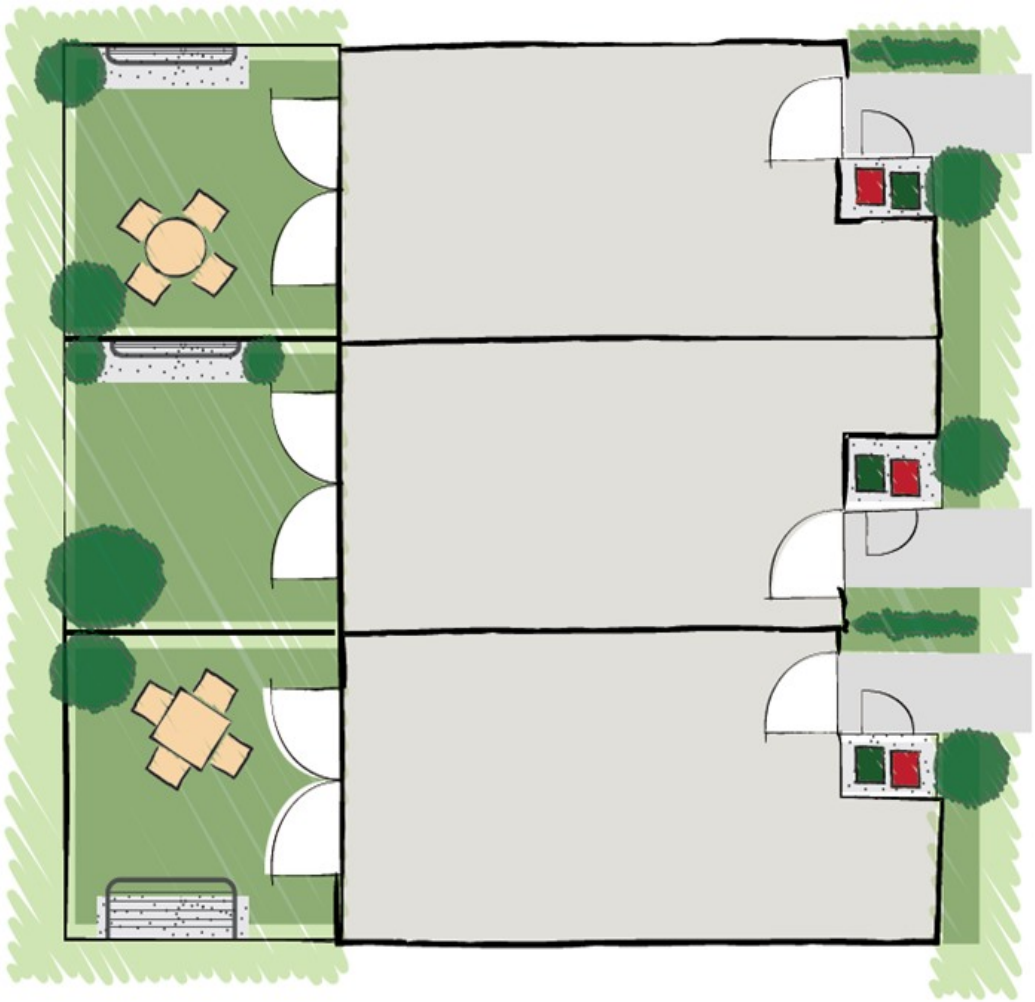


Diagram 7 - Bin storage area screened with fencing and landscape treatment, washing lines fold away to maximise usable outdoor space

6.2 BUILT FORM AND APPEARANCE

Building mass and height		V	I	A

Building height contributes to achieving more intensive residential development as it can enable more effective utilisation of a site while maintaining a low footprint. A visually attractive design can help to mitigate any potential adverse effects arising as a result of building mass and height.

In Kāpiti Coast a pattern of single dwellings on individual sites predominate. In light of the increased level of intensification anticipated by the District Plan it is important that the layout and form of any new, larger scale development considers its context and its relationship with the surrounding environment.

38. Building mass and height should be designed to:

    a. create visual interest;
    b. minimise physical dominance;
    c. minimise potential shading or privacy effects on neighbouring sites.

39. To minimise the effects of physical dominance, consider:

    a. breaking the form of the building up into a 'podium' and 'upper stories';
    b. stepping the upper stories back from the street;
    c. introducing variations in façade treatment (e.g. through balconies, shading devices or porches);
    d. the effective use of landscaping.

40. Reduce the effects of building mass by integrating the roof form with the design of the upper storey.

41. Reduce the effects of building mass by introducing variation into the roof line.

42. To reduce visual monotony long linear or blank walls without windows, doors or associated design features should be avoided.

43. Consider increasing building height on corner sites, where this would create a focal point that supports visual interest, legibility and wayfinding

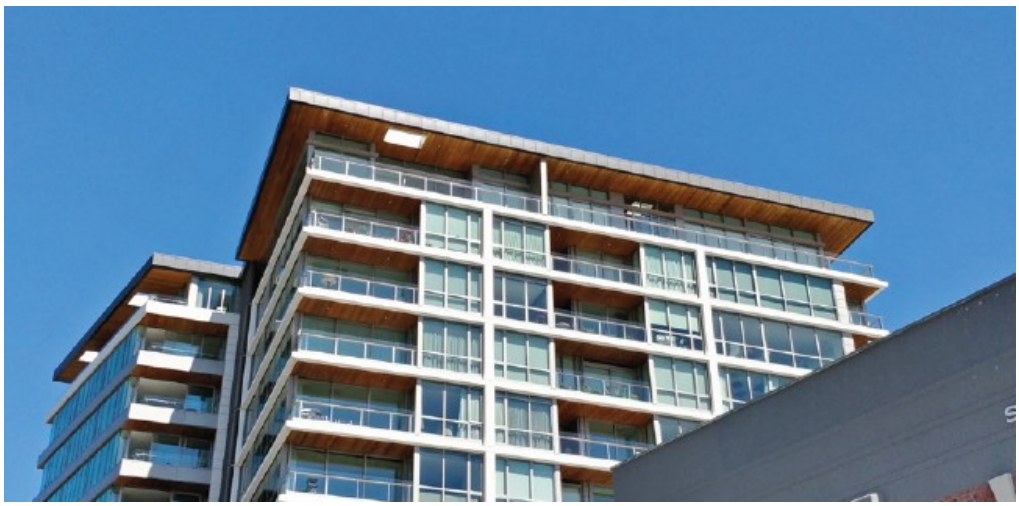


Photo 4 - Roof form integrated within the design of the top storey, Wellington

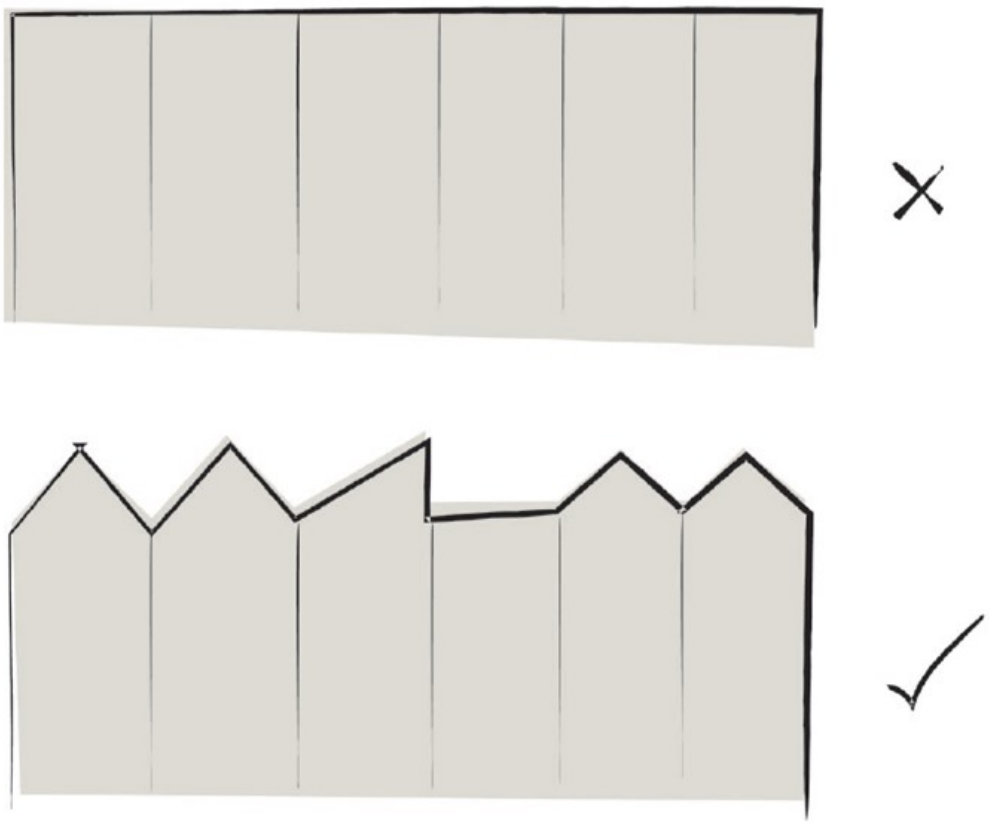


Diagram 8 - Reduce bulk by adding variety to the roofline of terraced housing

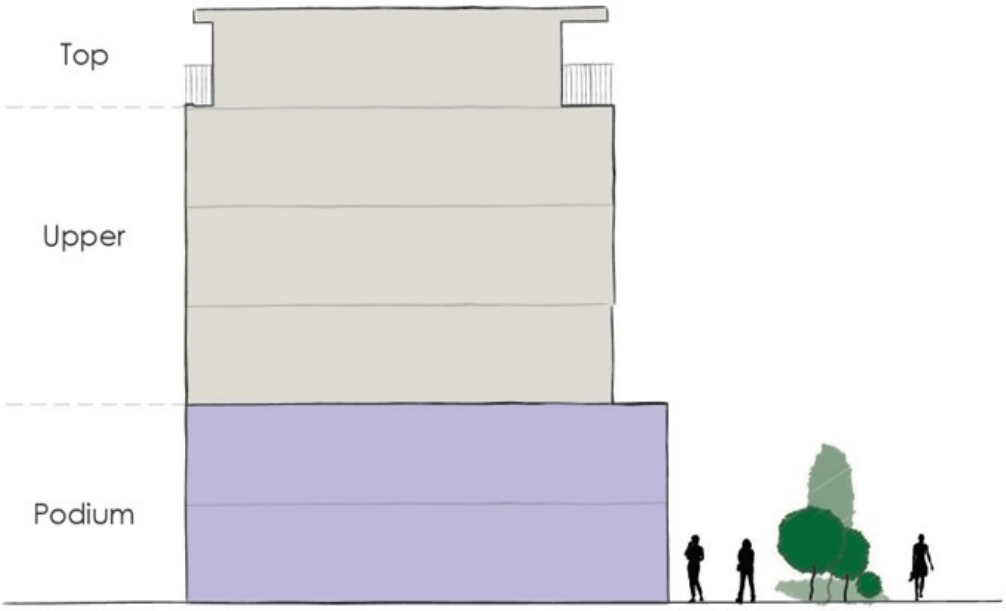


Diagram 9 - Building mass for tall buildings broken down into a 'podium' and 'upper storey' with a roof form that is integrated into the design of the upper storey

Materials and façade articulation		I	A	S

Building design and use of materials make an important contribution to the effective integration of higher density residential development into the street environment.

The main factors that influence the appearance of a building are scale, modulation and the articulation of its form and façade. The choice of materials used can also affect the appearance of a development, how well it performs and endures over time and its ongoing sustainability and resilience.

44. The design, type and location of the building on a site, as well as the choice of materials used, should recognise and reflect the level of intensification planned for the surrounding In particular, consideration should be given to:

    a. setback from the street;
    b. scale and bulk;
    c. roofline;
    d. complementary materials and colours;
    e. planting; and
    f. presence of distinct character or built heritage in the surrounding environment.

45. Building features and elements should be integrated and considered as part of a single, coherent design.

46. Consider lighting and signage elements as an integral part of the design.

47. Consider views of the rear and side façades of the building, particularly where there is a transition to a lower density environment.

48. Consider increasing the visual prominence of buildings on corner sites through the use of different materials, colours or roofline.

49. Use robust materials that are easy to maintain and retain their long term appearance. This is particularly important in areas that are prone to increased w such as communal spaces.

Photo 5 - Rooflines can provide a sense of identity and variation along the street front

Diagram 10 - Complementary design features and recessed buildings contribute to attractive and legible building design

Entrances		V	I	S

The entrance to a building makes an important contribution to the way a building is experienced. Balconies and entrances provide visual interest by breaking up a façade; they also add a human scale to intensive residential developments and can positively contribute to the overall appearance of a building when designed well. Visible activity on the ground floor and street facing façade enhances public safety through passive surveillance and creates opportunities for social interaction.

Balconies also offer a good way of providing outdoor living space on a street facing façade and contribute to reducing the effects of building mass.

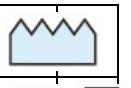
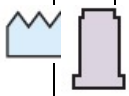
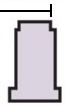
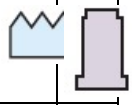
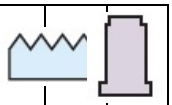
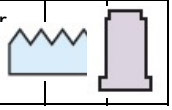
50. Consider subtle variation to entrances (e.g. colour, design), or enable occupants to personalise in order to differentiate units and increase legibility.	
51. Ensure entrances (as well as address and letterbox) are clearly defined and visible from the street to enable them to be easily located and accessed.	
52. Entrances that serve high density development should provide sufficient space for people to gather (e.g. entry plaza) and include signage and landscape treatment that enhances the legibility of the entrance location. Indoor lobby spaces should have a clear visual and physical connection to the street.	
53. Entrances should be designed to provide all weather shelter (e.g. canopies or overhangs) with suitable lighting incorporated into the design.	

Photo 6 - Provision of a clear entrance and balcony fronting the street (Northwood, Christchurch)

Building Diversity		**V**	**I**	**S**

Providing diversity of dwelling type and size offers increased accommodation choice catering to a variety of needs ranging from income level and household size through to demographic and cultural requirements. Units that appeal to a broad range of ages and stages are also more likely to withstand significant changes in the market. Additionally, diversity provides improved opportunities for existing residents to move within their local community as and when their housing needs and requirements change.

The development of apartments or multi-unit housing can be an effective way of achieving higher density while retaining sufficient space for outdoor use, particularly on sites with size constraints.

54. Consider providing a variety of dwelling sizes and types to cater for a range of financial, demographic or accommodation needs.	
55. Consider developing buildings that are adaptable and that can be flexibly used or reconfigured over time without the need for major change.	

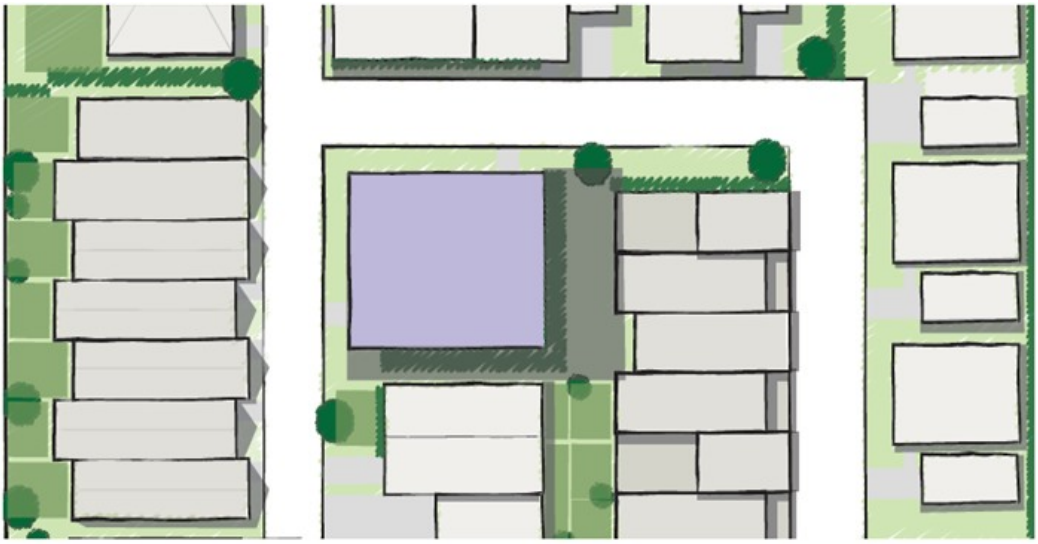


Diagram 11 - Variation in building size and type

Responding to Context		V	I	A

Good design is not only about height and/or building type but also focuses on creating connections between new and old, between people, places and activities. This is why the quality of design also needs to be assessed in relation to its immediate surroundings and the wider context.

New development should aim to respond to the unique characteristics that exists in the surrounding environment and contribute to the collective quality of the urban environments of the Kāpiti Coast.

The Kāpiti Coast is a diverse district that whose urban environments exhibit a range of unique characteristics that contribute to a local sense of place. These unique characteristics include:

- the positioning of Kāpiti's urban environments between the Tararua Ranges and the sea;
- the relationship between urban areas and the coastal environment;
- views to Kāpiti Island;
- the underlying dune landscape, the Tararua Range, and other prominent landforms;
- areas of remnant indigenous vegetation;
- areas of significant established vegetation;
- an extensive network of waterways and waterbodies, including the Ōtaki and Waikanae rivers, streams, tributaries and wetlands;
- historical beach settlement patterns;
- the presence of heritage buildings and sites;
- the presence of sites and areas of significance to the iwi and hapū of the district.

The presence of these and other unique characteristics will vary depending on location, and any development will need to consider the range of unique characteristics that contribute to the local context within which the development is situated.

56. Identify the range of unique characteristics that contribute to the local context of the development.	
57. Any new development should respond to the unique characteristics in its surroundings and contribute to a cohesive streetscape.	
58. New buildings should ensure that any visual links to unique and/or prominent features in the surrounding environment will be retained where practical.	
59. If developing adjacent to a heritage building, consideration should be given to: a. aligning the setback from the street with the adjacent building; b. relating the scale of the development to the scale of the adjacent building; c. relating the form and facade treatment to those of the adjacent building; and d. placement and size of windows	
60. If developing near to a site or area of significance to Māori, consideration should be given to: a. minimising the degree to which the development overlooks the site or area b. minimising the obstruction of existing views between the site or area of significance and surrounding maunga.	

Diagram 12 - Transitioning from adjacent heritage

6.3 AMENITY AND SUSTAINABILITY

Landscape treatment and design			I	S

Landscape design can greatly improve the amenity, experience and integration of intensive residential development into a street or neighbourhood. The implementation of carefully considered landscape design can help to enhance different design elements, such as the screening or softening of hardstanding areas (driveways, parking, services areas), mitigate the effects of building bulk and offer amenity and environmental benefits.

Coordinating landscaping and water management early in the building and site design process can increase opportunities to more effectively integrate landscape treatment into outdoor living space, traffic circulation routes, service locations and the interface between the public and private domain.

61. Where possible, existing mature and healthy vegetation should be retained and integrated into the site development.

62. Use planting to improve the outlook from dwellings and the street and to soften hard surface areas such as car parks, service areas or along internal site boundaries and driveways/shared accessways.

63. Use hedges or climbing plants where space is constrained and larger vegetation where sufficient space and access to rainwater is available.

64. Choose plants that are appropriate to the climatic conditions and character of the area; planting species that require low maintenance and attract local bird life is a encouraged.

65. Deciduous trees provide shade in summer and light in winter, but careful consideration should be given to species selection in heavily shaded areas to ensure survivability.

66. Use of hard landscape elements such as low walls, kerbs or raised beds is encouraged as these can provide protection to plants and, where integrated into the site design, can add to the visual amenity of outdoor spaces.

67. Minimise the use of impermeable surfaces to manage and dispose of on-site stormwater. The use of permeable paving in locations such as parking spaces/areas is encouraged.

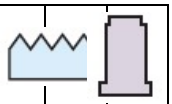
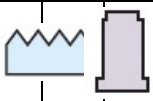
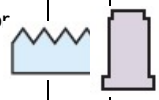
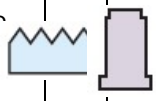
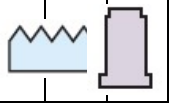
Photo 7 - Appropriate landscaping can help to mitigate negative effects of fencing or blank walls (Regent Park, Wellington)

Diagram 13 - Landscape treatment used to soften hard edges and improve outlook, different concrete material delineates pedestrian and vehicular spaces

Sunlight and daylight		I	A	S

Adequate access to natural light is an important consideration in designing the layout of a site, particularly any opportunities to capitalise on a northern aspect.

It is also a key consideration in siting and designing the internal layout of associated dwellings as it not only provides a warm and pleasant internal living environment but helps to increase energy efficiency.

68. Design dwellings with habitable spaces facing north, west or east to maximise sunlight access.	
69. Buildings that are relatively deep and narrow, or that have limited north facing frontage, benefit from larger floor-to-ceiling heights; where this occurs consider use of taller windows to ensure deeper sunlight penetration.	
70. On narrow sites place balconies and windows in habitable spaces to the front or the rear of the building to allow for daylight access, outlook and privacy.	
71. Consider the use of skylights, atriums or light wells to provide sunlight access to internal spaces with no external walls.	
72. In order to maintain sunlight access, high level windows or louvres should be considered where privacy is an issue.	

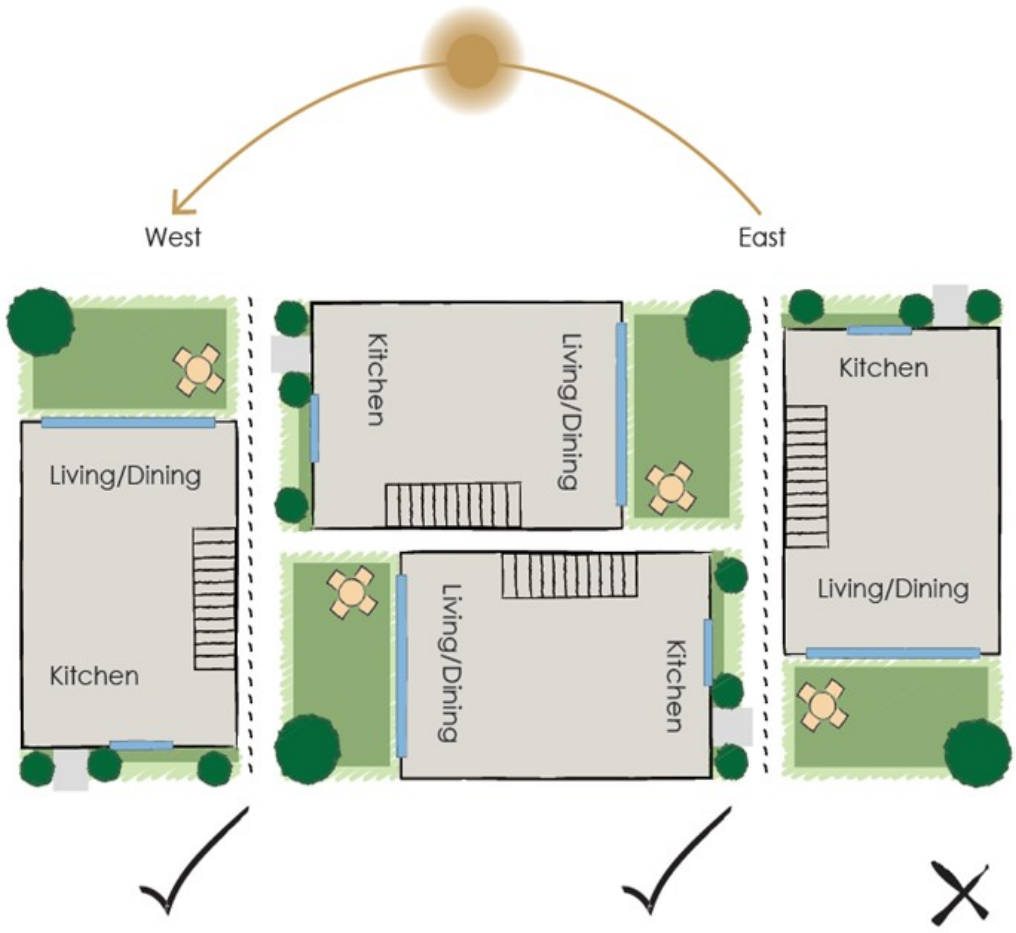


Diagram 15 - Orientation to maximise sunlight access

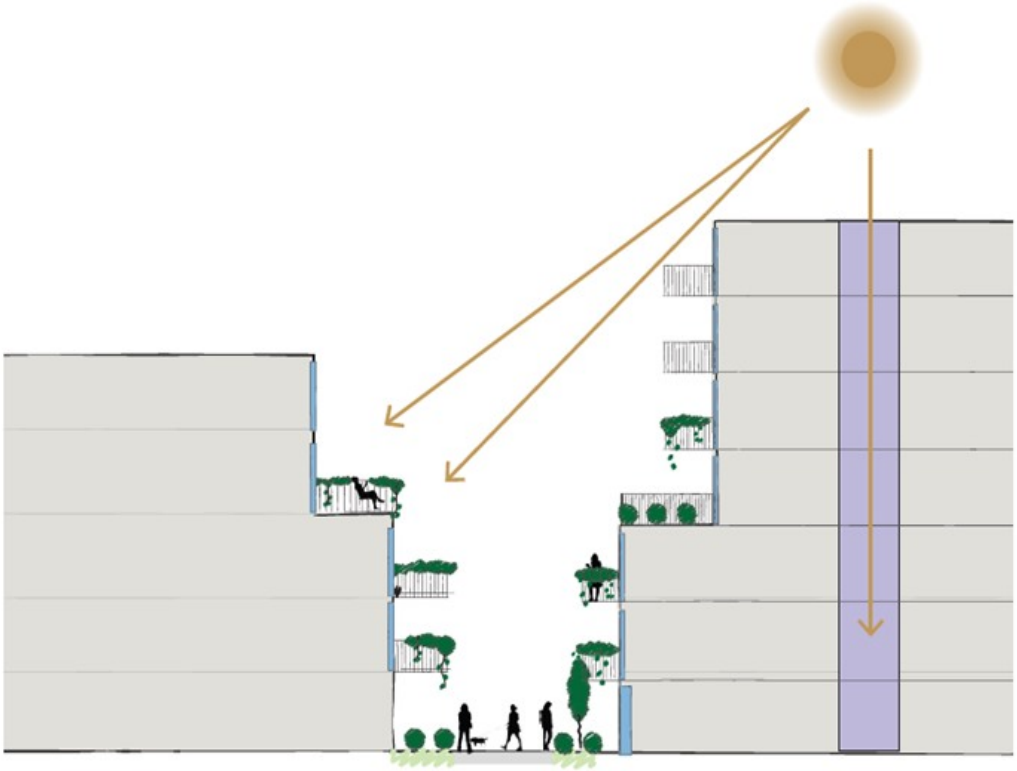


Diagram 16 - High level windows, skylights and/or atriums can improve sunlight penetrations

Energy efficiency			A	S

An energy efficient home promotes sustainable living, limits the impact on the environment by relying on sustainable energy sources and can produce long term cost savings to residents.

Integrating efficient passive design into a building contributes to a more comfortable indoor environment by increasing the thermal stability, reducing indoor condensation and promoting natural ventilation; it also helps reduce energy usage.

Energy efficiency should be considered during all phases of development, from planning and design (e.g. internal layout and building systems) through to construction (e.g. minimising waste) and long term maintenance (e.g. using durable materials).

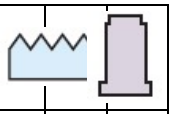
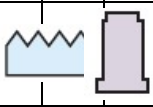
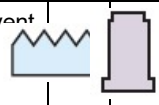
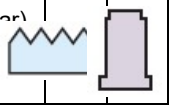
73. Where possible, site long buildings on an east-west axis, with living areas orientated to the north to optimise solar access.	
74. Consider locating opening windows on opposite sides of a dwelling to enable natural cross ventilation.	
75. The total window surface on south facing façades should also be limited to prevent heat loss in winter	
76. Use of eaves is encouraged as they can help limit the duration of sunlight penetration in summer, preventing indoor spaces (particularly those with a north aspect) from becoming too warm.	
77. When designing large scale developments, consider installing a communal (solar) hot water heating facility as it has the potential to offer greater efficiencies compared to heating sources in individual units.	

Photo 10 - Overhanging balconies provide shade in summer (Clearwater Gold Resort, Christchurch)

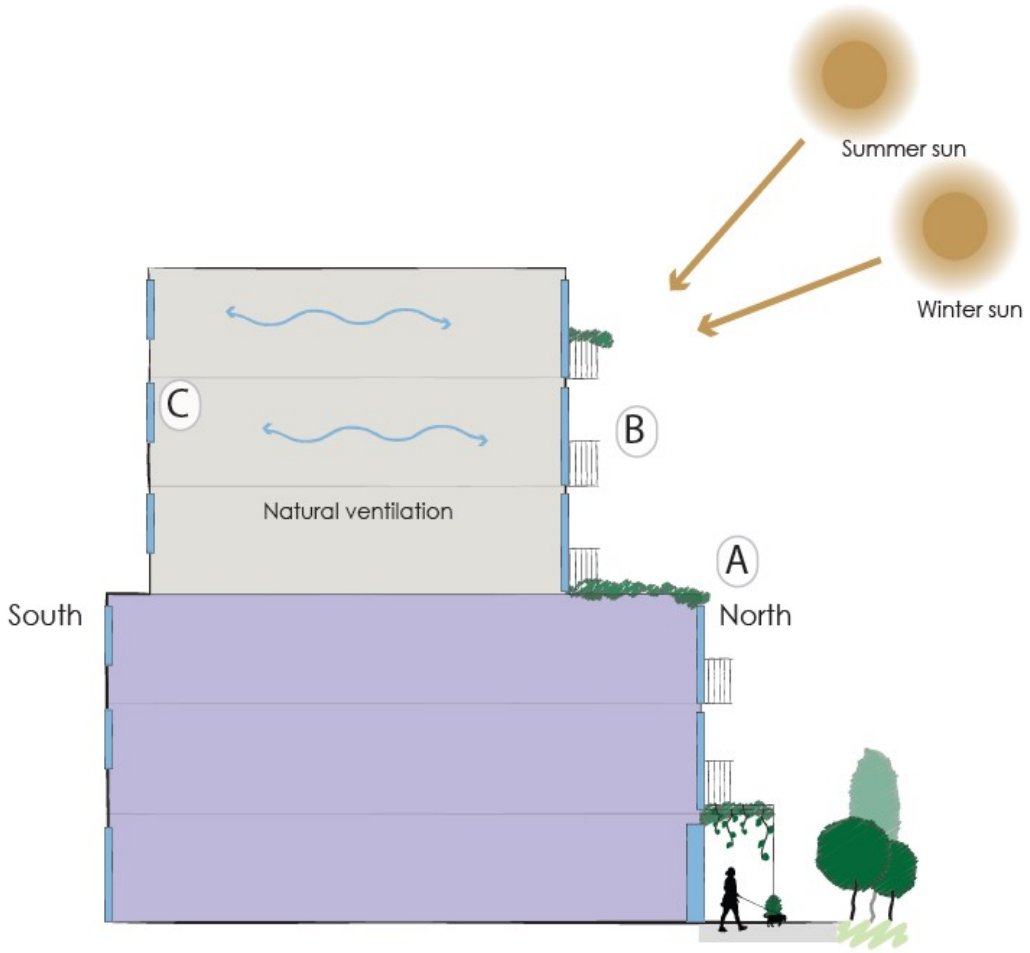


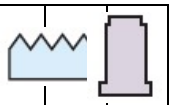
Diagram 17 - Sunlight access, eaves and internal ventilation

A. Large windows on the sunny side, smaller windows on the side that gets the least sun hours
B. Balconies blocking intense sunlight in the summer while allowing sunlight access in winter months
C. Windows in opposite sides of the building allow for natural ventilation

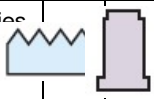
Privacy and safety	**V**	**I**	**A**	**S**

The orientation of dwellings and their interface with public and communal open spaces are important safety and privacy considerations. In designing for safety and privacy, adequate account needs to be taken of the relationship of new and adjoining buildings to ensure a successful balance is achieved between protecting private amenity and providing opportunities for passive surveillance.

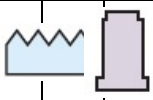
78. Where possible, locate rooms such as kitchen, dining or lounge in multi-unit developments to face the street or an adjoining open space as this will enable passive surveillance of these areas.



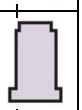
79. Maintain privacy between dwellings by screening upper level windows or balconies to limit opportunities for residents to directly overlook adjacent properties.



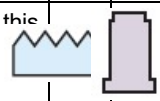
80. Consider staggering window locations in buildings that face each other, to limit direct views into adjacent habitable rooms.



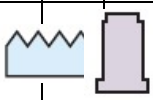
81. Consider a larger setback between taller buildings to improve privacy for residents (and also to contribute to daylight access and outlook).



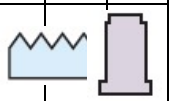
82. Clearly delineate boundaries between private, communal and public spaces as this increases user perceptions of safety and helps to identify intruders.



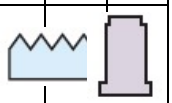
83. Use lighting, planting and fencing to enhance the safety of residents and visitors and incorporate these elements into the design process.



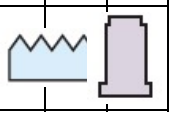
84. Consider low level planting or trees with higher canopies to minimise the risk of light sources becoming obscured by landscape elements, particularly around sensitive areas.



85. Where dwellings are located close to the street, elevate the ground floor of the dwelling slightly above the street level to provide outlook into the street while maintaining privacy for residents.



86. Strategically locate communal open space to encourage passive surveillance within the development and of adjoining sites.



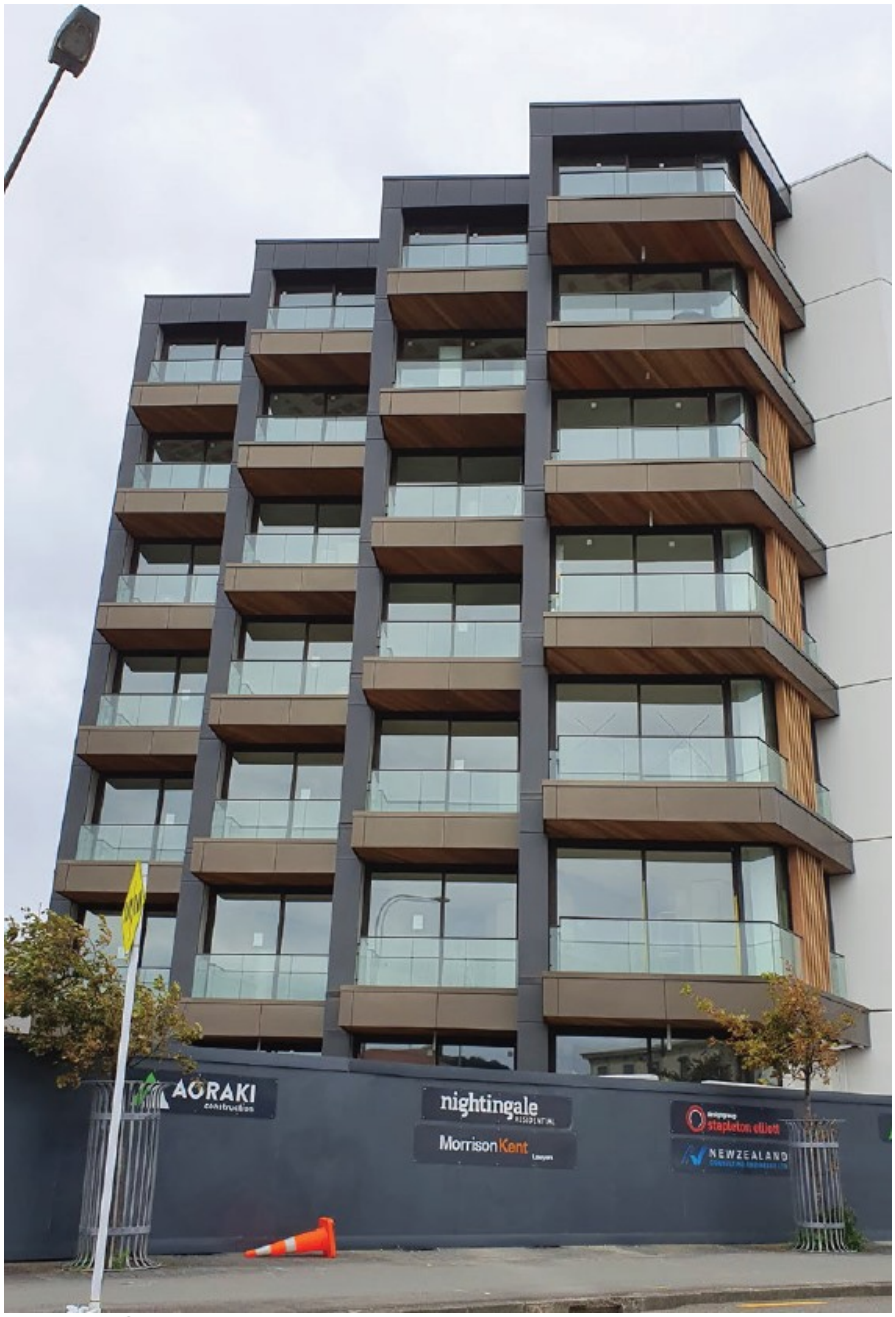


Photo 11 - Staggered balconies maximise privacy while retaining outlook and sunlight access (Wellington)

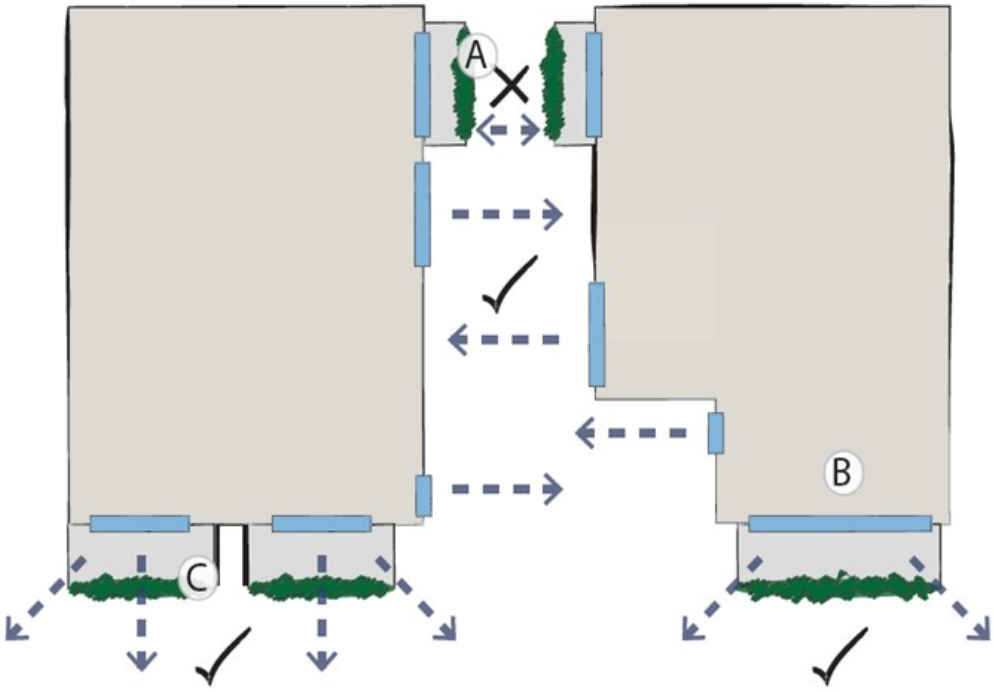


Diagram 18 - Balance Privacy and natural surveillance

A. Prevent placing windows immediately opposite windows in a neighbouring property
B. Living areas with large windows in the front of the building to provide for natural surveillance
C. Soft landscaping or porous fencing to create natural surveillance while retaining privacy